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15th September 2014

Penrith City Council
601 High Street
Penrith NSW 2750

Re: DA 1 – Thornton Central - Lord Sheffield Circuit, Thornton

To whom it may concern,

Pursuant to Clause 50(1A) of the Environmental Planning and Assessment Regulation 2000, effective from July 26, 2003;

I hereby declare that I am a qualified designer, which means a person registered as an architect in accordance with the Architects Act 1921 as defined by Clause 3 of the Environmental Planning and Assessment Regulation 2000.

I directed the design of the residential development stated above and I affirm that the design achieves the design quality principles as set out in Part 2 of the State Environmental Planning Policy No 65 – Design Quality of Residential Flat Development. I have provided further detail on the design's compliance with the design principles in a S.E.P.P.65 Design Statement which has been included in the Statement of Environmental Effects prepared by Andrew Harvey and Peter Strudwick of Urbis accompanying this development application.

Yours faithfully,

Nick Byrne
Associate Director

Registration #: 7806 (NSW)

LORD SHEFFIELD CIRCUIT,

DA 1 & DA 2

SEPP 65 report

contents

LORD SHEFFIELD CIRCUIT, DA 1 & DA 2

the concept

1.0 Design Statement

Thornton Centre is not just a new development, it's a whole new way of living in Penrith.

Thornton Village Centre brings the people of Penrith into the heart of the city. It is about being part of a connected, thriving urban village.

It is about spending less time in the car (or maintaining a big house and yard) and having more time to do the things that are important to you.

Thornton Centre will be a world class development that will provide a vital link between two previously disconnected parts of the Penrith CBD. It will ensure that Penrith continues to make its mark as a regional city with limitless opportunities. It will continue Penrith's City Centre's growing urban amenity past the railway into Thornton Estate to the north. It will balance this development with the areas striking natural beauty being located on the edge of the World Heritage listed Blue Mountains National Park and the Nepean River.

The Master plan concept creates a neighbourhood hub for the residents of Thornton and Penrith, offering a high street style mixture of small retail, medical, childcare, convenience and fitness. It also offers a new home to suit almost everyone, from hi-rise apartments, garden apartments all on the doorstep to Penrith's CBD and station.

There is a tremendous opportunity for the development to contribute meaningfully to the local community through a new integrated urban design footprint. The Station Plaza and adjacent pedestrian plaza links can contribute substantially to the social, economic and cultural fabric of the surrounding neighbourhood and those communities beyond, in the greater Penrith area.

This design theme will:

- Create an optimistic public open space for the people of Thornton and surrounding neighbourhoods with distinct landscape themes – Central Station Plaza, Pedestrian Plaza Links, Café Terraces and Promenades, pedestrian priority streetscapes and Podium Sky Gardens.
- Facilitate opportunities for passive, active, programmed and un-programmed activities.
- Generate a strong sense of 'place' – that befits the location
- Promote ecological corridors – creating 'Urban Lungs' to improve the value of the natural environment through water re-use and filtration and promoting green links.
- Integrate a public transport corridor with pedestrian and cycleway connections to provide a truly multi-modal transport hub.

SEPP 65

principles

2.1 Principle 01 - Context

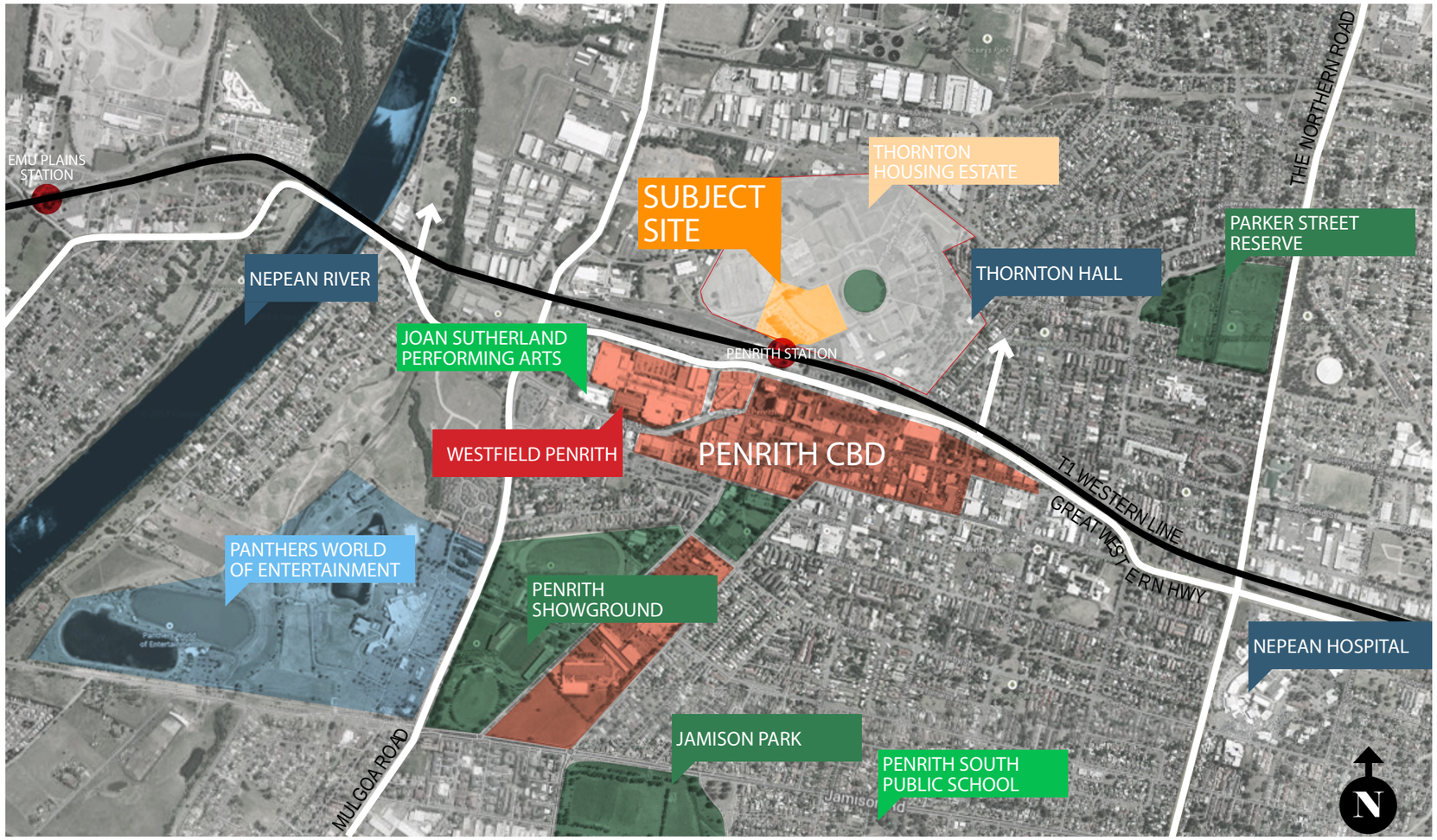
Good Design responds and contributes to its context. Context can be defined as the key natural and built features of an area. Responding to context involves identifying the desirable elements of all location's current character or , in the case of precincts undergoing a transition, the desired future character as stated in planning and design policies. New buildings will thereby contribute to the quality and identity of the area.

Penrith is a commercial centre located within the Greater Western Sydney. It is designated as a regional city under the NSW Metropolitan Strategy, and is located 50 kilometres west of the Sydney CBD. The city is bisected by the T1 Western line and the Great Western Highway. These physical barriers create significant connection issues between the Penrith City Centre and North Penrith. The City is bounded on the west by the Nepean River and contains attractions such as Panthers World of Entertainment and Penrith Showground which is home to the Penrith Panthers.

Thornton Centre sits directly to the north of Penrith Station and provides a vital pedestrian link between the future Thornton Estate and the Penrith CBD.

The existing context is largely responding to the desired future character of the Thornton precinct. The context of the immediate built form is fresh, innovative and continually evolving. The design reponds to this desired character by providing bold, highly articulated forms, which provides an interesting patterned facade. The design will be visually attractive, yet functionally responsible.

site aerial



2.1 Principle 01 - Context, Site Features

Whilst there are no immediate site features, the design responds to the broader Thornton conext by expressivly articulating the facade. This design feature is the catalyst for the future stages in the precinct. This design will set the benchmark for apartment living in Penrith.

2.2 Principle 02 - Scale

Good design provides an appropriate scale in terms of the bulk and height that suits the scale of the street and the surrounding buildings.
Establishing an appropriate scale requires a considered response to the scale of existing development. In precincts undergoing a transition, proposed bulk and height needs to achieve the scale identified for the desired future character of the area.

The design proposal provides a scale in terms of bulk and height which has been carefully considered to respond to the ameinty of the surround context.

To the North -West larger scale built form fronts the park. This scale responds to the large open space and frames the park with andappropriate height. The 8 and 7 storey buildings front the park in a definitive and formal edge.

The South Eastern edge of the site contains 4 storey built form which responds to the scale and character of the new central street. The desired character of this street is more human, and less formal in scale, something akin to a main street in a country town.

Whilst the scale of the built form responds to the immediate context, the base of the building has been cleverly considered to ensure a human, comfortable scale at the street edge. The design provides a place for interaction, gathering and banter amongst the community. The scale of the architecture responds to this by providing finer, more tactile elements at the street edge. The screens are finer and the brickwork planter walls all provide a sense of familiarity of the street level.

2.3 Principle 03 - Built Form

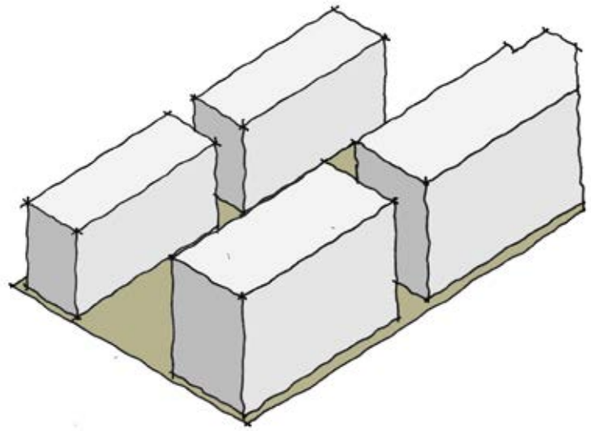
Good design achieves an appropriate built form for a site and the building's purpose, in terms of building alignments, proportions, building type and the manipulation of building elements.

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

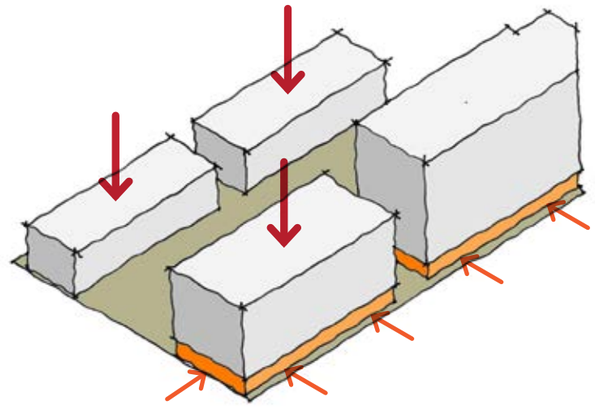
The project is comprised of four buildings enclosing a courtyard. The courtyard is envisaged as a private extension to the landscape green link and public domain network as well as an outdoor foyer for distributing people to the individual building lobbies.

The built form is split into four buildings. This is primarily derived from providing opportunity for through site links (East to West). The resultant built form determines a scale and permeability to the architecture.

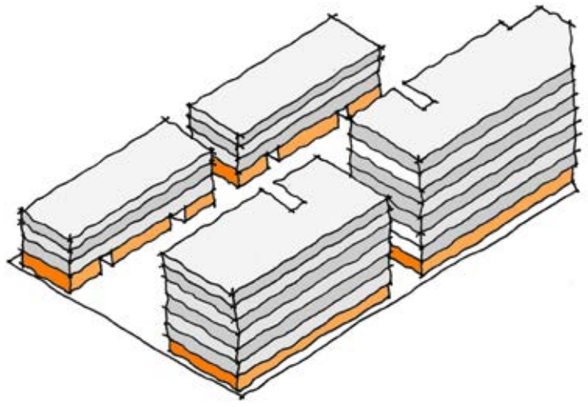
The buildings have been designed to provide optimum efficiency in terms of environmental performance. The narrow floor plates of the building maximises solar access and cross ventilation. The facade has been carefully articulated to provide privacy as well as promoting key views out from the apartments.



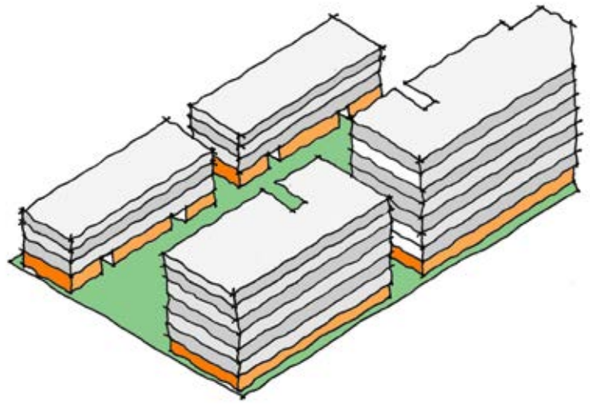
1. Resultant form derived from plan studies



2. Vary heights, introduce stoops and human scale to street edges



3. Celebrate corne, pattern the facade



3. Embellish the landscape zones

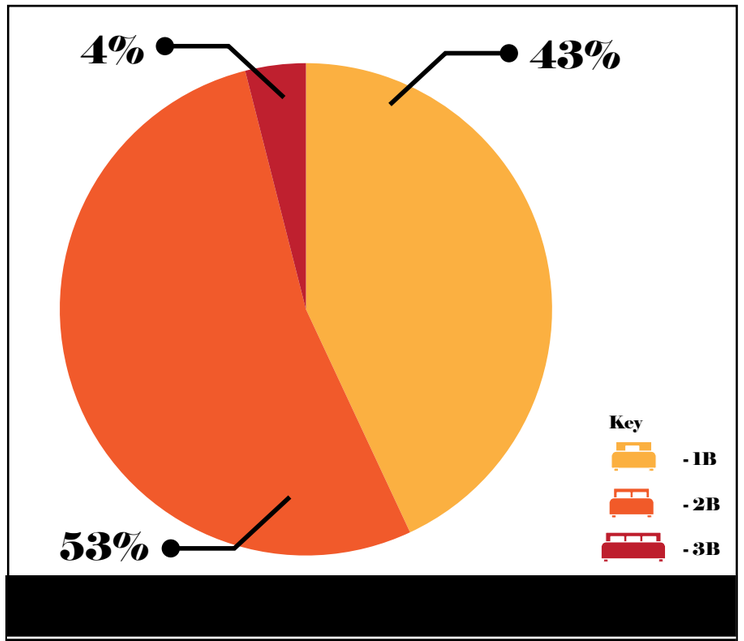
2.4 Principle 04 - Density

Good design has a density appropriate for a site and its context, in terms of floor space yields (or number of units 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.

Density has a direct relationship to context and desired context. In this situation the site is located in a new and emmerging suburb within close proximity to a vast array of public transport and amenity options.

2.4 Principle 04 - Density, Apartment Types



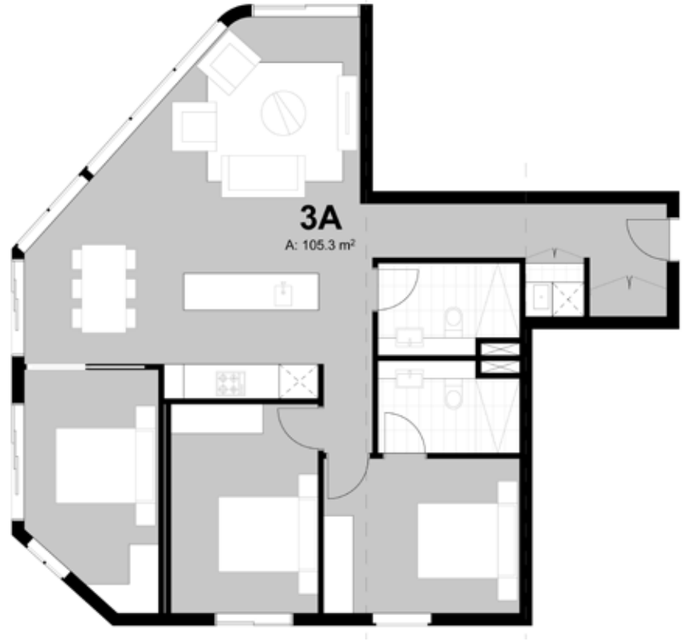
	Mix			Total Apartments
Level	1B	2B	3B	
Level 1	7	16		23
Level 2	11	14		25
Level 3	11	13	1	25
Level 4	11	13	1	25
Level 5	7	7	1	15
Level 6	7	7	1	15
Level 7	7	7	1	15
Level 8	4	3	1	8
Total	65	80	6	151
%	43	53	4	

Typical One Bedroom Apartment

1 Bed – 50-55m²

Typical Two Bedroom Apartment

2 Bed - 77-80m²



Typical Three Bedroom

3 Bed – 105m²

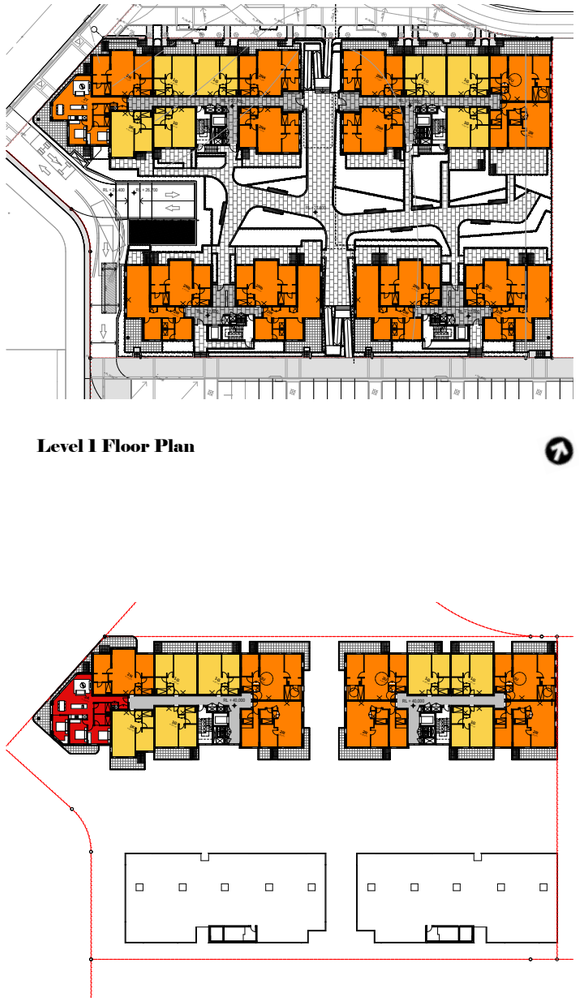
Design development sought to maximise opportunities on the site for the preferred apartment product. Initial studies involved planning the configuration of apartment types within given variable envelopes. This process of 'pressure testing' options was an invaluable first step to developing the project's form and program.

The apartment product and location focusses upon placing as many apartments in high amenity locations. The internal layouts of apartments are efficient and well thought out. Apartment frontages have also been maximised to ensure the future occupants have flexibility both to furnish and to rent.

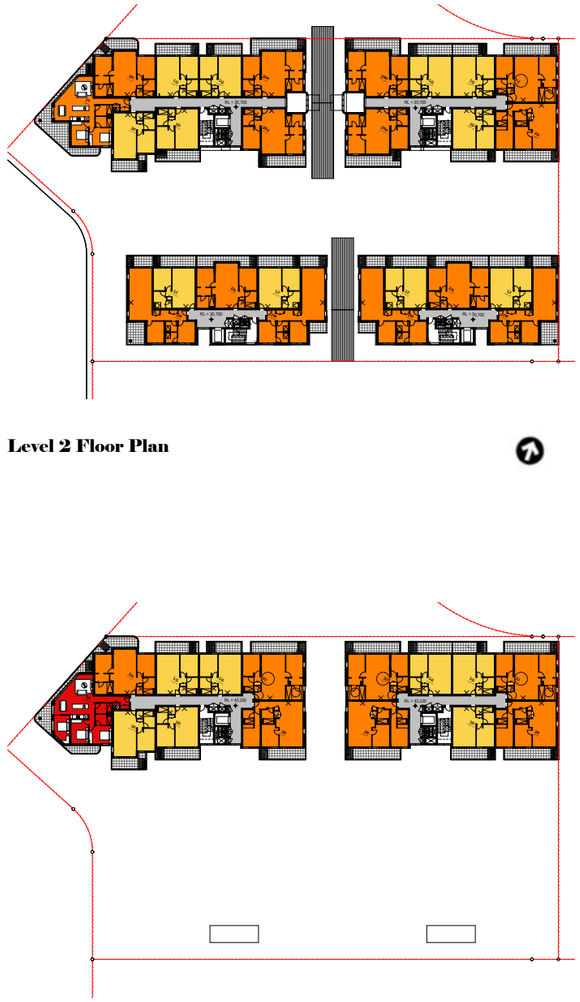
2.4 Principle 04 - Density, Plans

Key

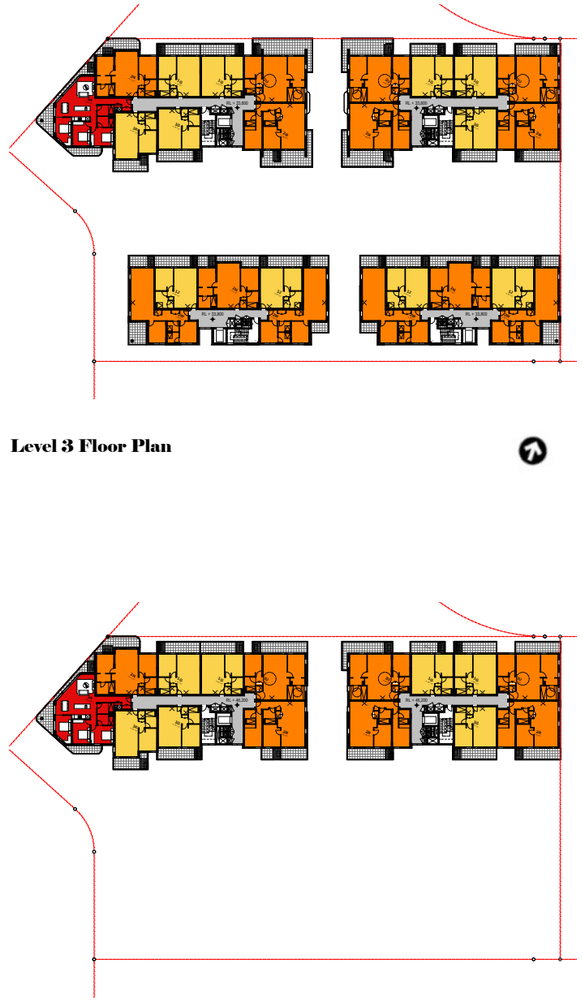
- 1B
- 2B
- 3B



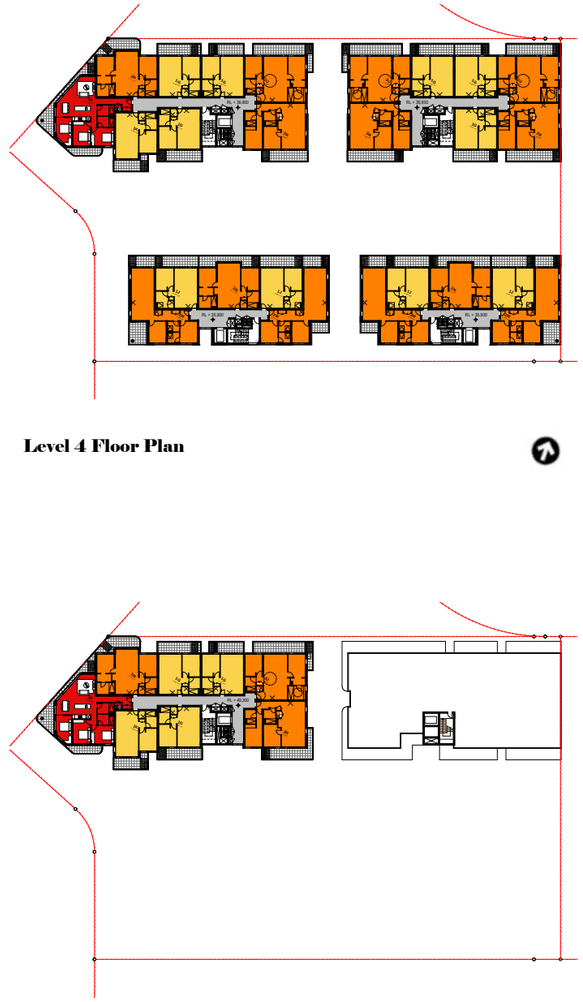
Level 1 Floor Plan



Level 2 Floor Plan



Level 3 Floor Plan



Level 4 Floor Plan

Level 5 Floor Plan

Level 6 Floor Plan

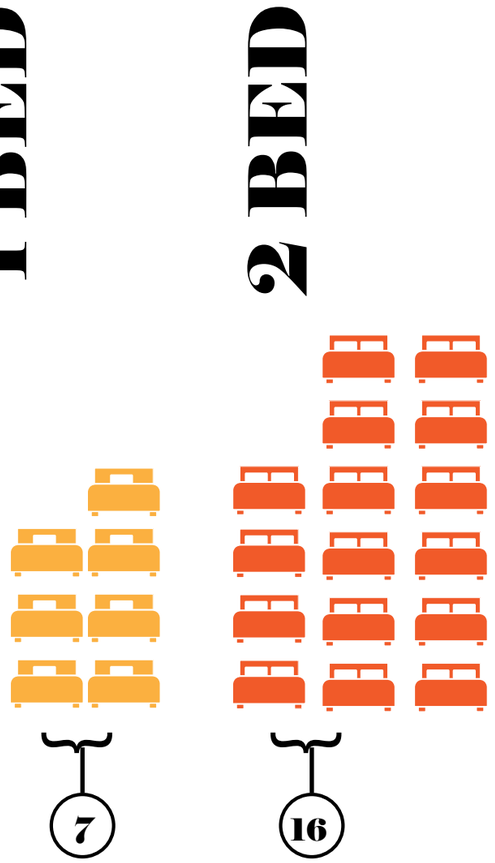
Level 7 Floor Plan

Level 8 Floor Plan

2.4 Principle 04 - Density

Level 1

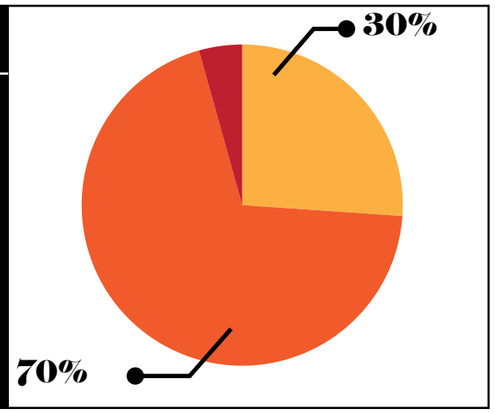
numerical mix



percentage

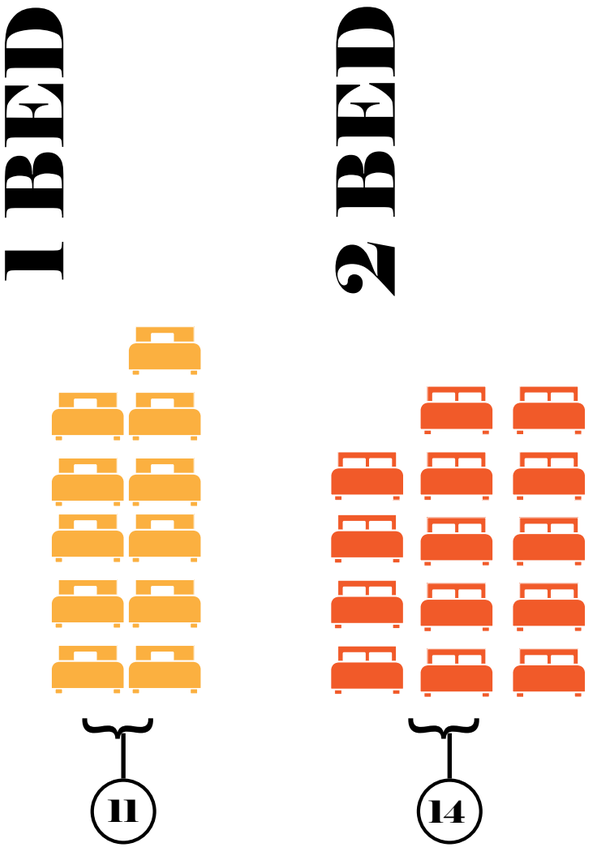
Level 1

		%
1 Bed	7	30%
2 Bed	16	70%
3 Bed		0%
Total	23	



Level 2

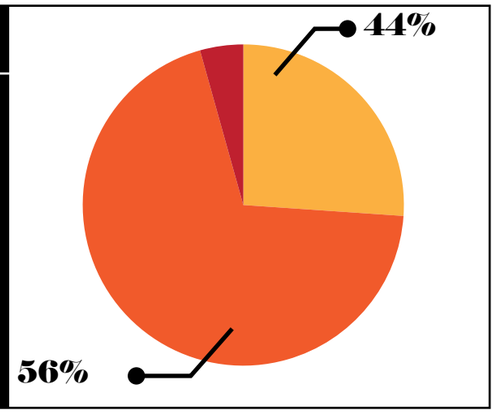
numerical mix



percentage

Level 2

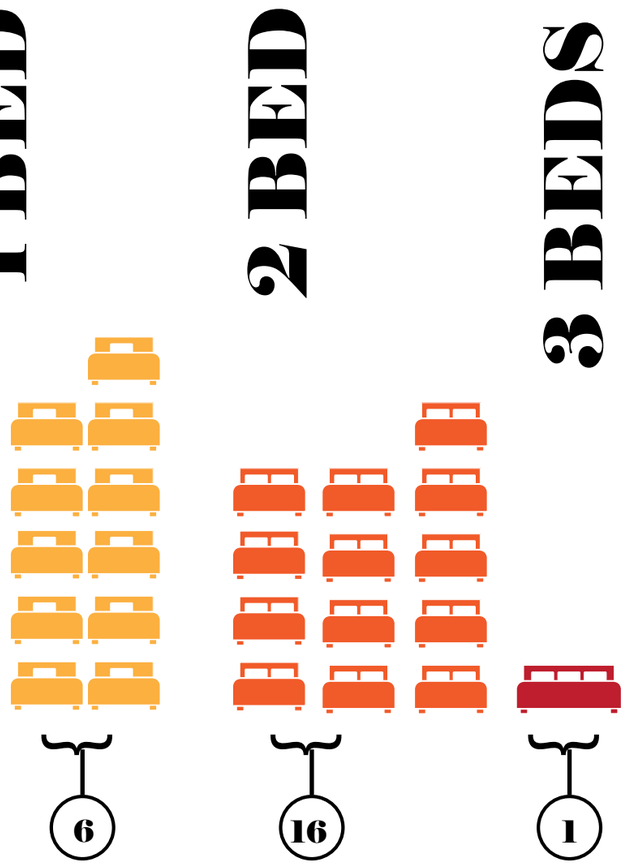
		%
1 Bed	11	44%
2 Bed	14	56%
3 Bed		0%
Total	25	



2.4 Principle 04 - Density

Level 3

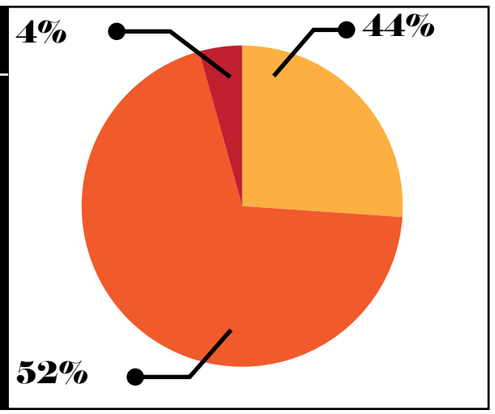
numerical mix



percentage

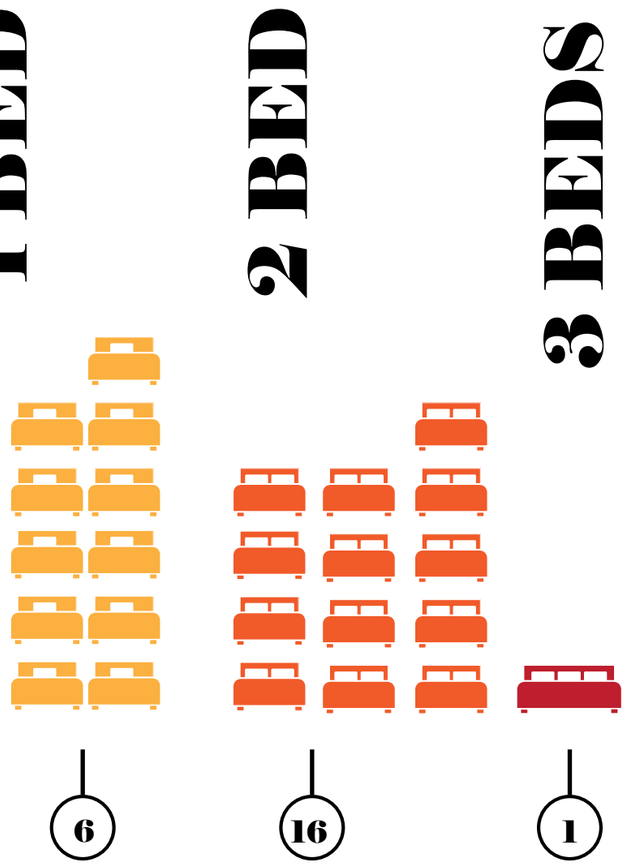
Level 3

		%
1 Bed	11	44%
2 Bed	13	52%
3 Bed	1	4%
Total	23	



Level 4

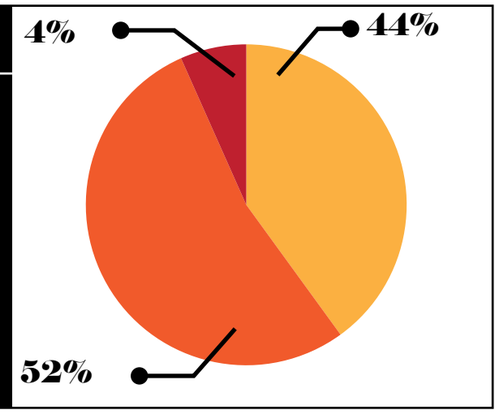
numerical mix



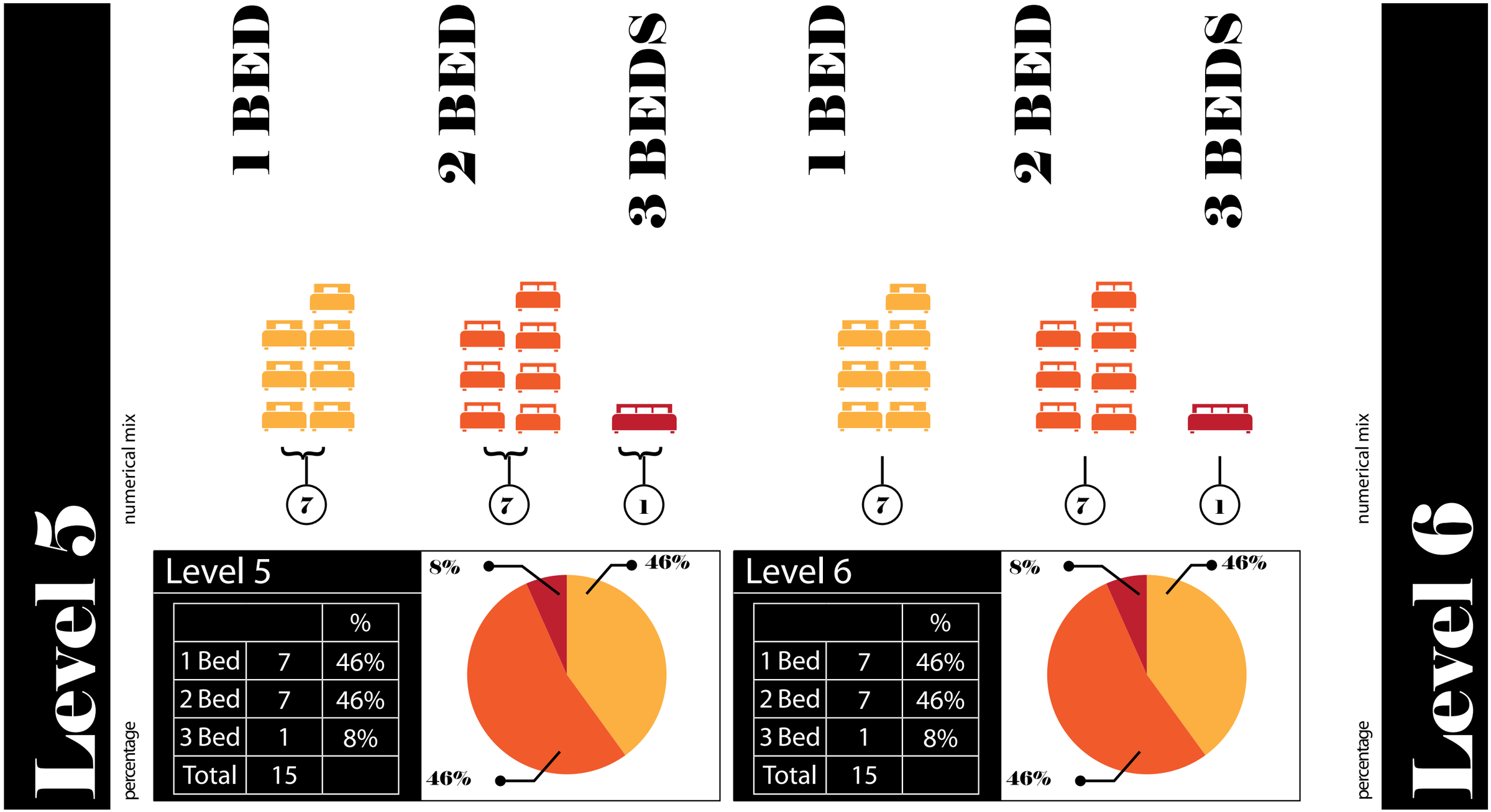
percentage

Level 4

		%
1 Bed	11	44%
2 Bed	13	52%
3 Bed	1	4%
Total	25	



2.4 Principle 04 - Density



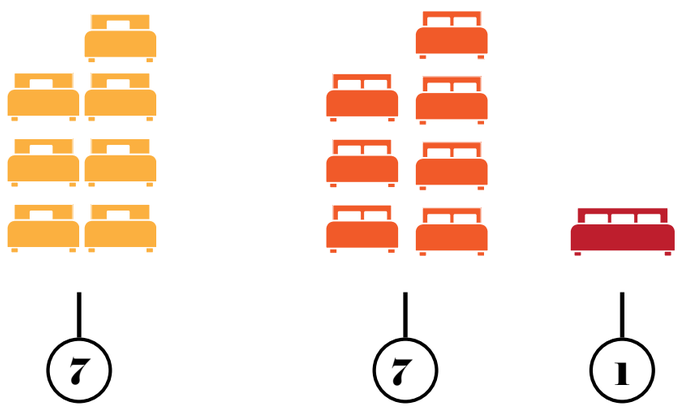
2.4 Principle 04 - Density

[redacted]

1 BED | 2 BED | 3 BEDS | 1 BED | 2 BED | 3 BEDS

Level 7

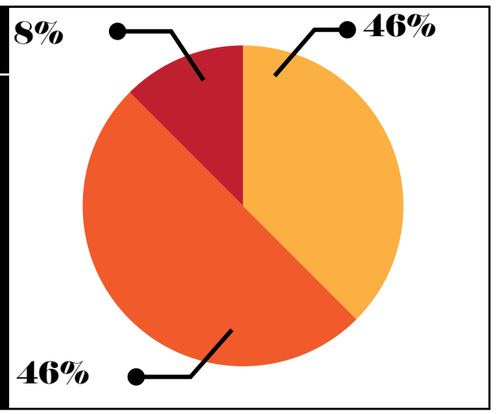
numerical mix



percentage

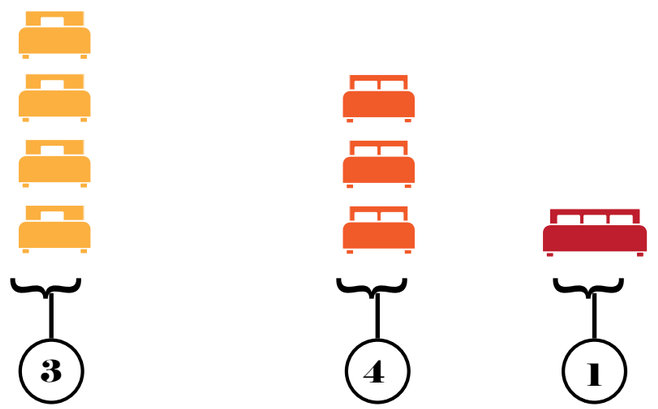
Level 7

		%
1 Bed	7	46%
2 Bed	7	46%
3 Bed	1	8%
Total	15	



Level 8

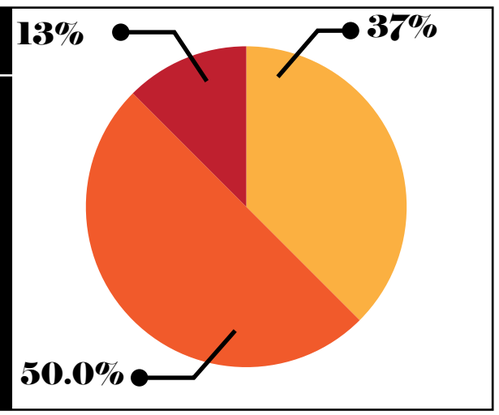
numerical mix



percentage

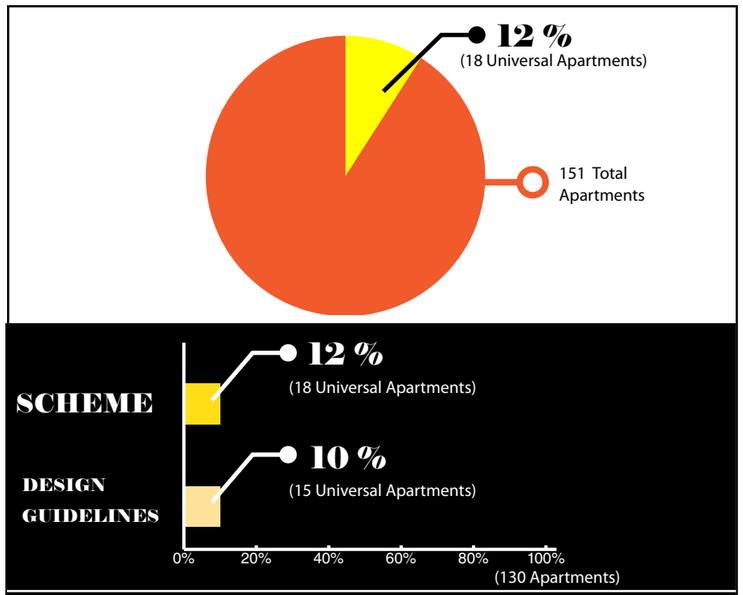
Level 8

		%
1 Bed	4	50%
2 Bed	3	37%
3 Bed	1	13%
Total	8	



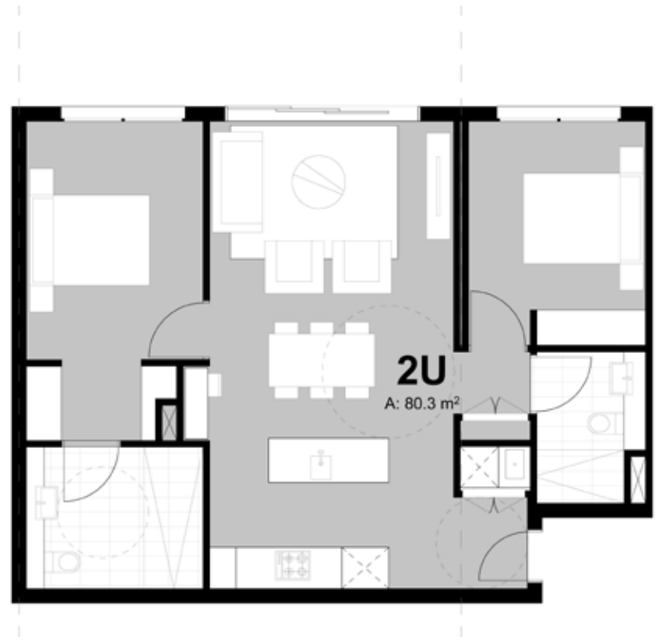
[redacted]

2.4 Principle 04 - Density, Universal Apartments



Universal Apartments

	Block				Total Apartments
	A	B	B	D	
Level 1	0	0	1	0	1
Level 2	0	0	1	0	1
Level 3	1	0	2	0	3
Level 4	1	0	2	0	3
Level 5	1	0	2	0	3
Level 6	1	0	2	0	3
Level 7	1	0	2	0	3
Level 8	1	0	0	0	1
Total					18
Percentage			(18 / 151) x 100		12 %



Typical 2 Bed Adaptable Unit

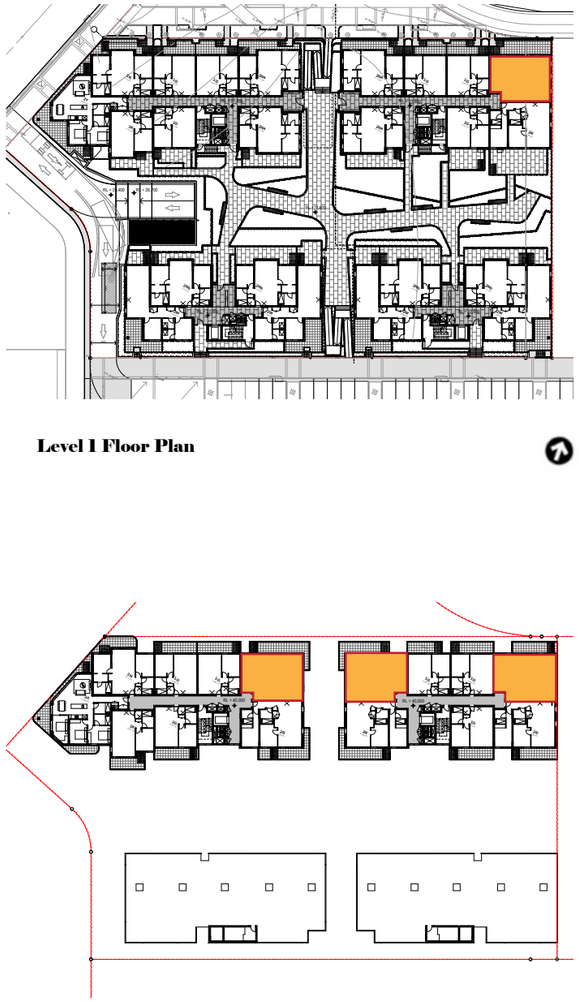
The proposed development has been designed to provide 12 % of the total dwellings as a "Universal" units, as outlined within the North Penrith Design Guidelines.

".....Universal housing refers to homes that are practical and flexible, and which meet the needs of people of different ages and abilities over time. A universally designed home generally avoids barriers that may discriminate against people living in or visiting the home. Universal housing is designed to be useable by most people over their lifetime without the need for major adaptation or specialised design. Universal design includes many of the features specified in the Australian Standard for Adaptable Housing....."

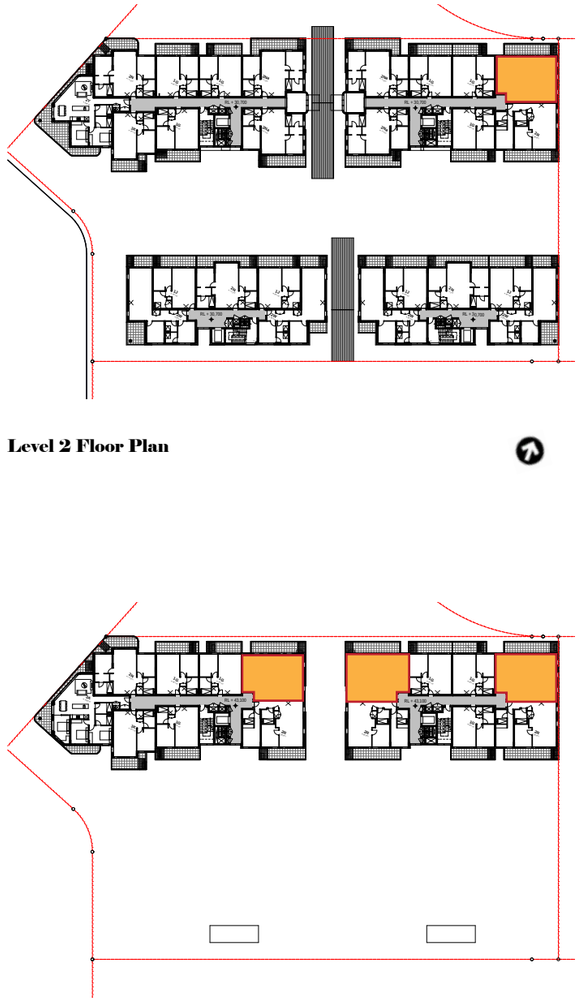
Careful consideration has been undertaken to ensure that adequate circulation spaces are made available to living areas, kitchens, bathrooms bedrooms and door approaches post adaptation.

Provision has also been made to allow for easy adaptation to bathrooms in adaptable units at minimal cost.

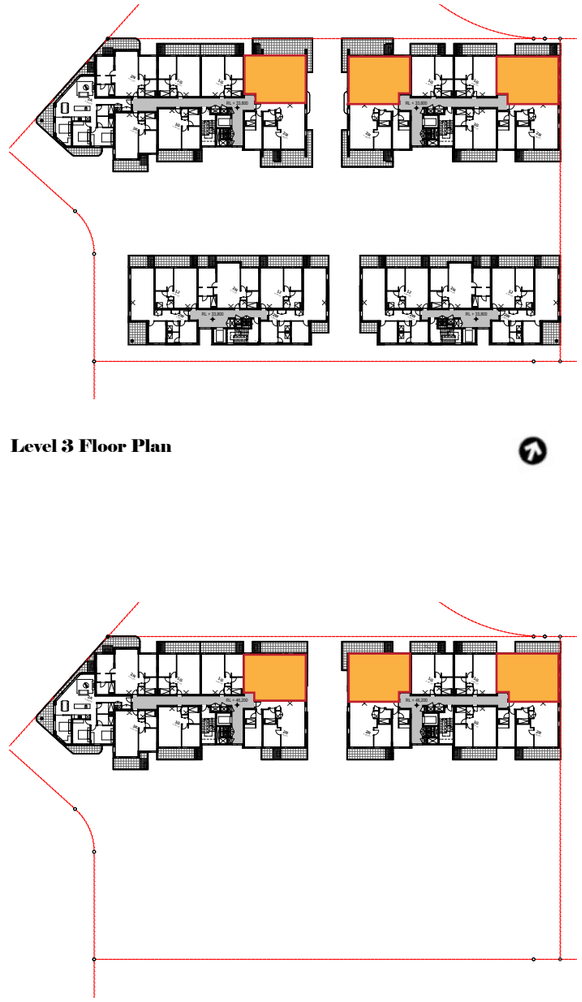
2.4 Principle 04 - Density, Universal Apartments - Plans



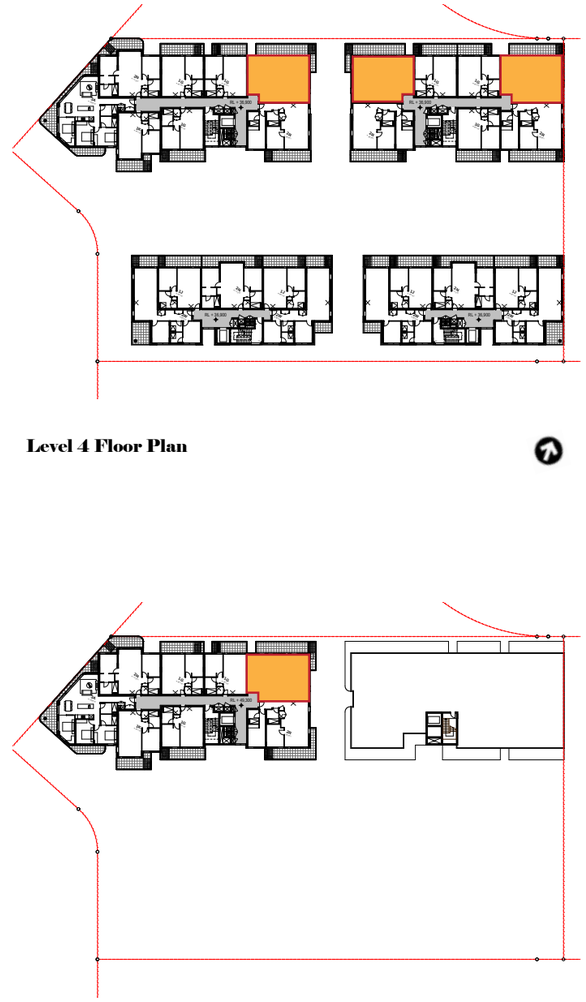
Level 1 Floor Plan



Level 2 Floor Plan



Level 3 Floor Plan



Level 4 Floor Plan

Level 5 Floor Plan

Level 6 Floor Plan

Level 7 Floor Plan

Level 8 Floor Plan

2.4 Principle 05 - Resource, Energy & Water Efficiency

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.

Energy efficient design and sustainability is one of the key considerations of the design proposal . Passive solar design strategies- orientating the building and designing the floor plates so to ensure more than 77.5% of the apartment receives more than 2 hours of direct solar access, reduces the energy required for lighting. Passive climatic design strategies such as the use of natural ventilation and thermal mass reduces the energy required for heating and cooling, as well as enhancing the thermal comfort of the residence.

The courtyard forms an integral part of the strategy. The courtyard will provide a heat sink effect and modifies the microclimate of the site, so the development will be cooled during the day and warmed at night.

Corridors will be naturally ventilated through extensive glazing at lobbies and between builtform elements.

The proposal's proximity and connections to public transport nodes will decrease the reliance on cars, thereby reducing green house emissions. Bike parking and showers facilities will be provided in the basement to promote a greener mode of transport.

The proposed development will exceed BASIX target for energy, water and thermal comfort and complies with SEPP 65 rule of thumbs through good apartment orientation, apartment depth and cross ventilation.

To meet the ESD requirements for this site, the following strategies are proposed:

Water

The target will be achieved through the provision of a combination of the following:

- Large rainwater tank
- Low water use vegetation on site (including native and endemic species)
- 4-5 star water taps, dishwashers and washing machines to be supplied in the apartments by the developer.

Energy

The energy target will be achieved largely through the inherent mass of the concrete structure and the use of landscaped rooftop and courtyard as a heat sink to reduce heating and cooling energy requirement. Additional savings could be provided through the provision of:

- Low energy lighting fixtures
- White goods with high energy efficiency star ratings (fridge, dishwasher, dryer) supplied by the developer.
- Balcony and terrace areas complying with SEPP 65 size guidelines allowing outdoors clothes drying.

Thermal comfort

Improved thermal comfort will be achieved through careful orientation, floor plate layouts, apartment locations and planning.

- Solar orientation – minimise the numbers of south facing apartments and maximising apartments with more than 2 hours of solar access per day. It can lower the humidity of the apartments and provide passive solar heating in winter.
- Cross ventilation – 84.7% of the apartments are cross ventilated to increase air movement through the apartments and allow evaporation of moist air by opening windows and doors.
- Courtyard – acts as a heat sink to the building to minimise the variation of temperature throughout the day. The landscaped courtyard prevents radiant heat from being reflected from the ground into the apartments.

2.6 Principle 06 - Landscape

Good design recognises 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, microclimate, tree canopy and habitat values. It contributes to the positive image and contextual fit of development through respect for streetscape and neighbourhood character, or desired future character.
Landscape design should optimise usability, privacy and social opportunity, equitable access and respect for neighbours' amenity, and provide for practical establishment and long term management.

The landscape design is integral to this design proposal. The interface between stoops along the ground level and the street has been a key consideration to this development. A series of raised terrace gardens with highly textured plants softens the level change required between the street level and the development due to the risk of flooding. The desire is to create a green, active edge that will promote life on the street and engages the building with the community.

The nature of the courtyard is fluid and natural, providing a lush, soft edge to the buildings and an area for passive recreation as well as a calming outlook for the residents.

2.7 Principle 07 - Amenity

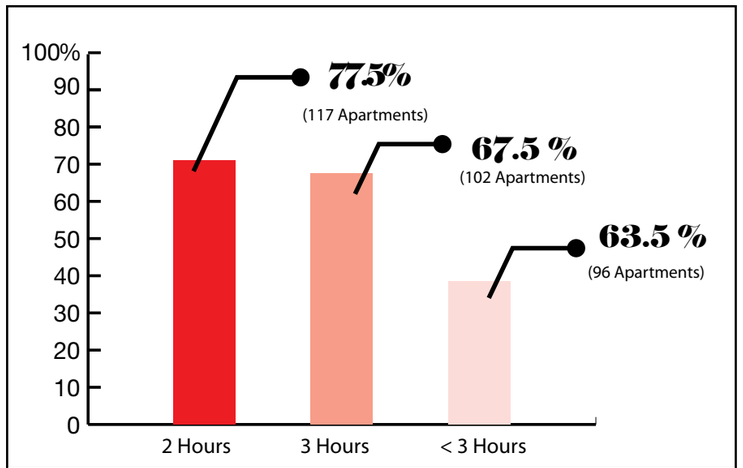
Good design provides amenity through the physical, spatial and environmental quality of a development.
Optimising amenity requires appropriate room dimensions and shapes, access to sunlight, natural ventilation, visual and acoustic privacy, storage, indoor and outdoor space, efficient layouts and service areas, outlook and ease of access for all age groups and degrees of mobility.

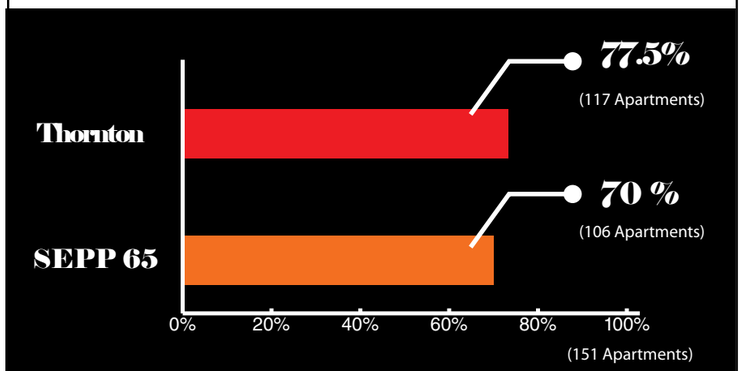
The design proposal complies with SEPP 65 and provides a high level of amenity to each apartment. Due consideration has been given to solar access, cross ventilation, indoor and outdoor spaces, visual and acoustic privacy, efficient layouts, outlook and storage areas. Parking, recycling and waste storage areas are provided in the basement. Bicycle storage facilities promotes a greener mode of transport.

Balconies are designed to provide a usable outdoor space while maintaining privacy between units by limiting opportunities for overlooking.

Landscape Plan

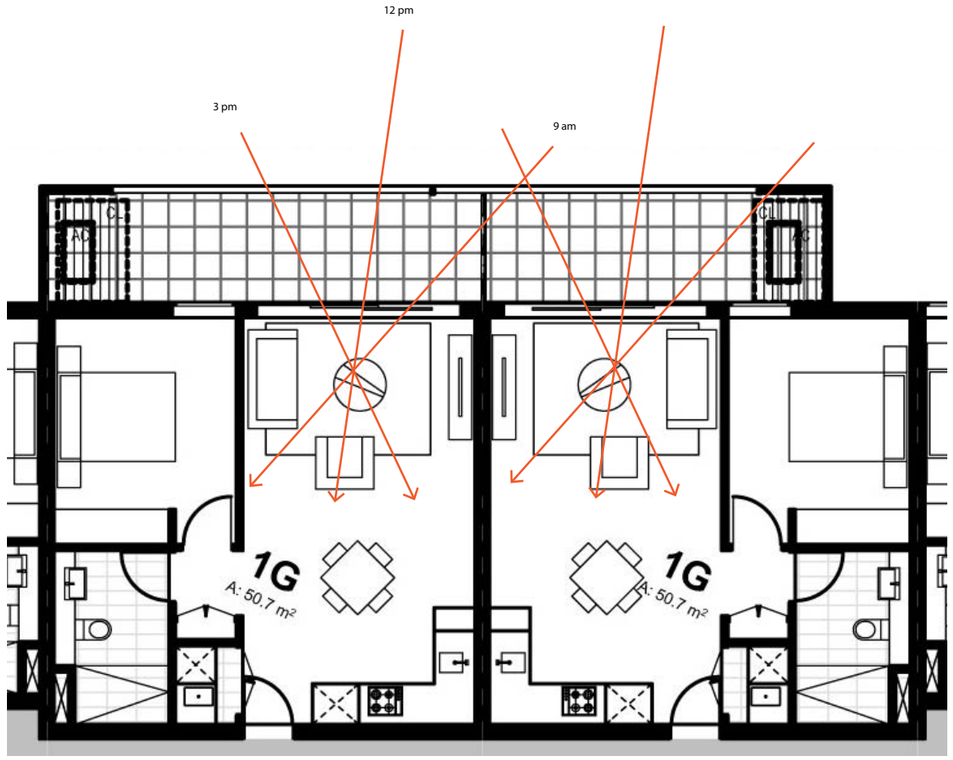
2.7 Principle 07 - Amenity , Solar Access



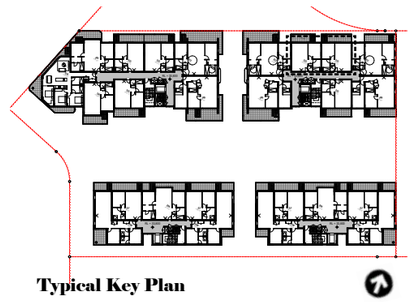


Solar Access

	Total Apartments	%
2 Hours	117	77.5
3 Hours	102	67.5
< 3 Hours	96	63.5



Typical North Facing Apartment

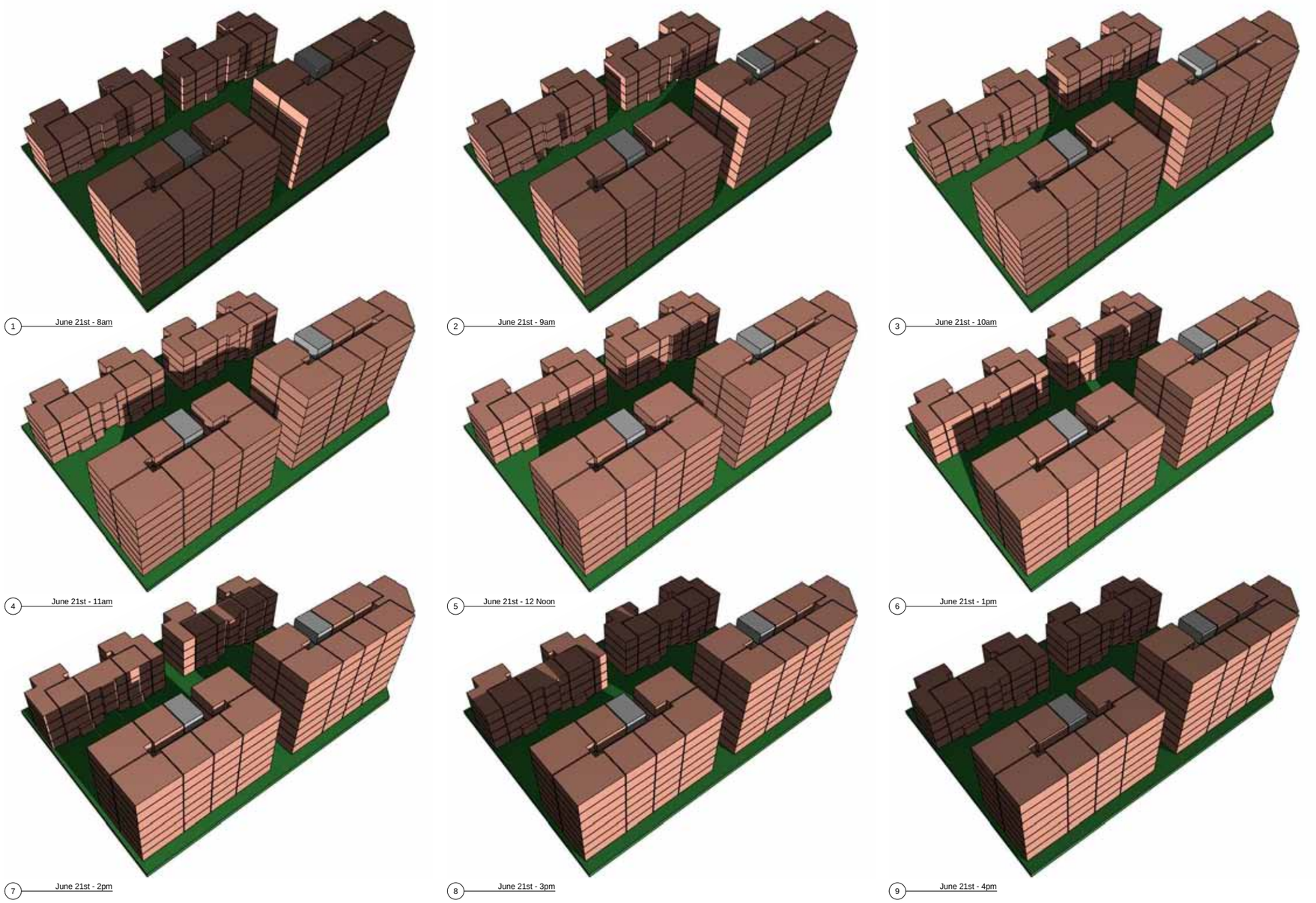


Typical Key Plan

The proposed development is designed to provide the maximum amenity to a majority of the dwellings, with most units having northern aspects, while south facing units on the upper levels are made more attractive by using skylights to allow daylight in.

The design maximised the daylight to each unit and the proportion of all units that achieve minimum 2 hours of sunlight into living room windows between 8 am and 4 pm during mid winter is 77.5%. This is considered acceptable in this instance due to the size of the development and the urban density proposed. 67.5% of the development will achieve minimum 3 hours of sunlight while 63.5 % will attain more than 3 hours of sunlight.

2.7 Principle 07 - Amenity - Solar Access



2.7 Principle 07 - Amenity, Solar Access - Compliance Tables

Block A

		HOURS								2 hours	3 hours	< 3 Hours
APT #	800	0900	1000	1100	1200	1300	1400	1500	1600			
A101										1	1	1
A102										1	1	1
A103										1	1	1
A104										1	1	1
A105										1	1	1
A106												
A107												
A108										1		
A201										1	1	1
A202										1	1	1
A203										1	1	1
A204										1	1	1
A205										1	1	1
A206												
A207												
A208										1		
A301										1	1	1
A302										1	1	1
A303										1	1	1
A304										1	1	1
A305										1	1	1
A306												
A307												
A308										1		
A401										1	1	1
A402										1	1	1
A403										1	1	1
A404										1	1	1
A405										1	1	1
A406												
A407												
A408										1		
A501										1	1	1
A502										1	1	1
A503										1	1	1
A504										1	1	1
A505										1	1	1
A506												
A507												
A508										1		
A601										1	1	1
A602										1	1	1
A603										1	1	1
A604										1	1	1
A605										1	1	1
A606												
A607												
A608										1		
A701										1	1	1
A702										1	1	1
A703										1	1	1
A704										1	1	1
A705										1	1	1
A706												
A707												
A708										1		
A801										1	1	1
A802										1	1	1
A803										1	1	1
A804										1	1	1
A805										1	1	1
A806												
A807												
A808										1		
Total										48	40	40

Block B

		HOURS								2 hours	3 hours	< 3 Hours
APT #	800	0900	1000	1100	1200	1300	1400	1500	1600			
B101										1		
B102												
B103												
B104										1		
B201										1		
B202										1		
B203										1		
B204												
B205												
B301										1	1	1
B302										1	1	1
B303										1	1	1
B304										1	1	1
B305										1		
B401										1	1	1
B402										1	1	1
B403										1	1	1
B404										1	1	1
B405										1	1	1
Total										15	9	9

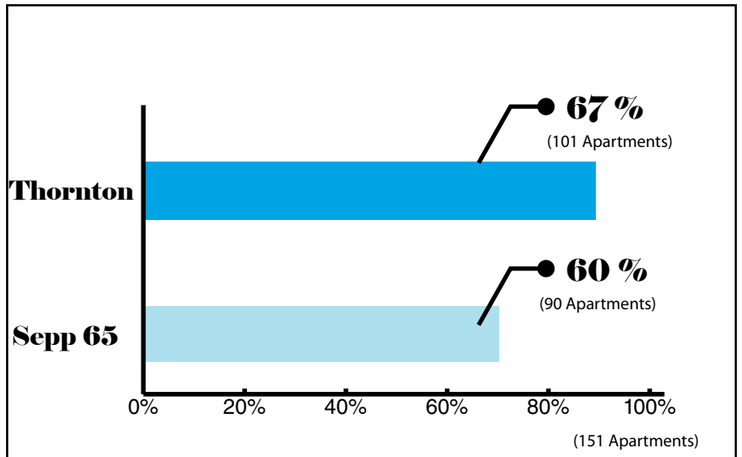
Block C

		HOURS								2 hours	3 hours	< 3 Hours
APT #	800	0900	1000	1100	1200	1300	1400	1500	1600			
C101										1	1	1
C102												
C103												
C104										1	1	1
C105										1	1	1
C106										1	1	1
C107										1	1	1
C201										1	1	1
C202												
C203												
C204										1	1	1
C205										1	1	1
C206										1	1	1
C207										1	1	1
C301										1	1	1
C302												
C303												
C304										1	1	1
C305										1	1	1
C306										1	1	1
C307										1	1	1
C401										1	1	1
C402												
C403												
C404										1	1	1
C405										1	1	1
C406										1	1	1
C407										1	1	1
C501										1	1	1
C502												
C503												
C504										1	1	1
C505										1	1	1
C506										1	1	1
C507										1	1	1
C601										1	1	1
C602												
C603												
C604										1	1	1
C605										1	1	1
C606										1	1	1
C607										1	1	1
C701										1	1	1
C702												
C703												
C704										1	1	1
C705										1	1	1
C706										1	1	1
C707										1	1	1
Total										35	35	35

Block D

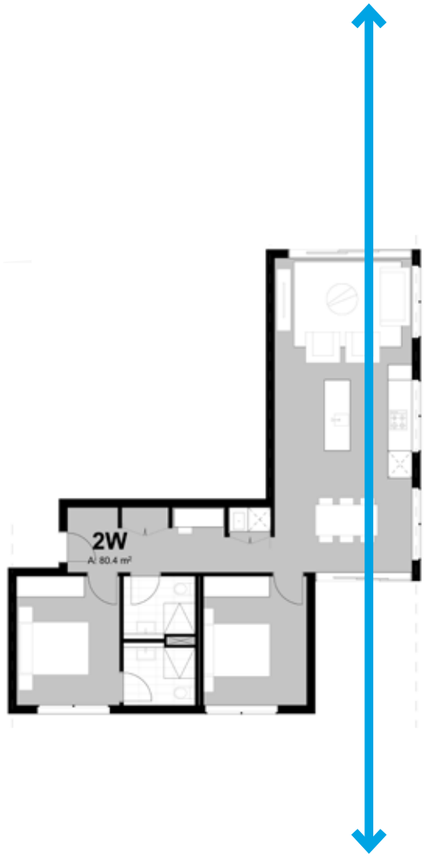
		HOURS								2 hours	3 hours	< 3 Hours
APT #	800	0900	1000	1100	1200	1300	1400	1500	1600			
D101										1	1	1
D102										1	1	
D103										1	1	
D104										1	1	1
D201										1	1	1
D202										1	1	1
D203										1	1	
D204										1		
D205										1	1	
D301										1	1	1
D302										1	1	1
D303										1	1	
D304										1	1	
D305										1	1	1
D401										1	1	1
D402										1	1	1
D403										1	1	1
D404										1	1	1
D405										1	1	1
Total										19	18	12

2.7 Principle 07 - Amenity, Cross Ventilation

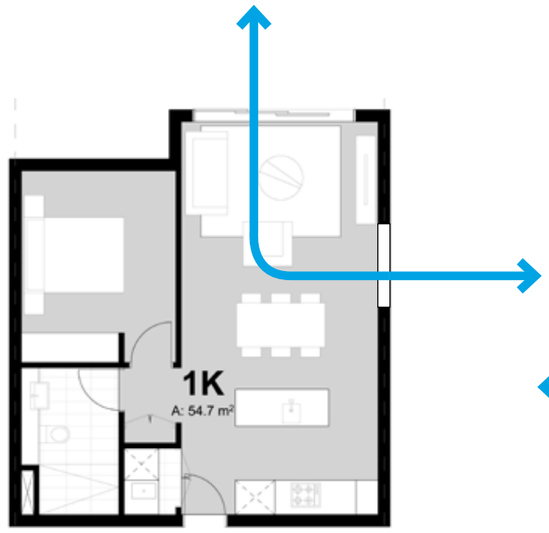


Cross Ventilation

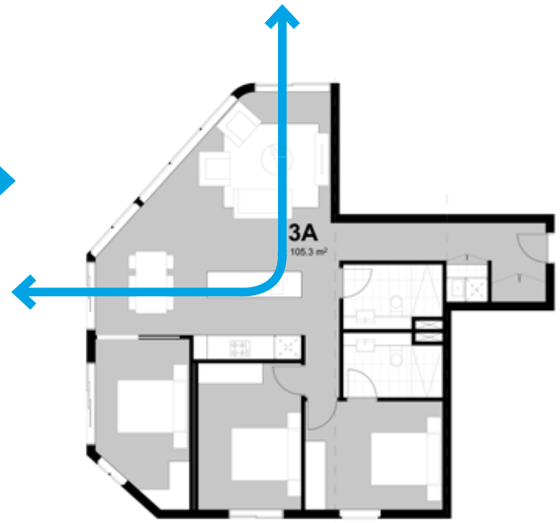
	Block				Total Apartments
	A	B	C	D	
Level 1	5	4	4	4	17
Level 2	5	2	4	2	13
Level 3	5	2	4	2	13
Level 4	5	5	4	5	19
Level 5	5	0	4	0	9
Level 6	5	0	4	0	9
Level 7	5	0	8	0	13
Level 8	8	0	0	0	8
Total					101



Typical Cross Through Apartment



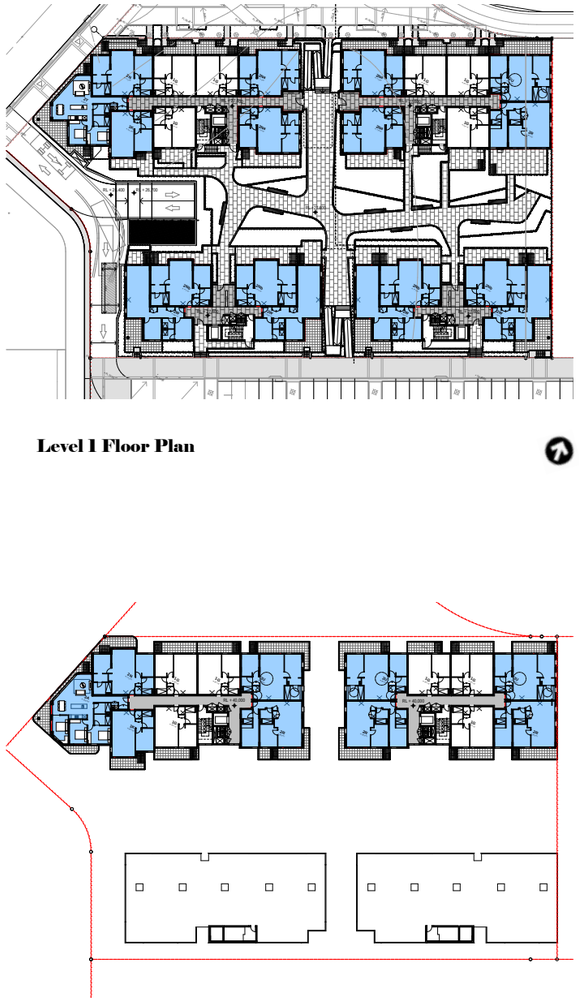
Typical Mid Block Unit



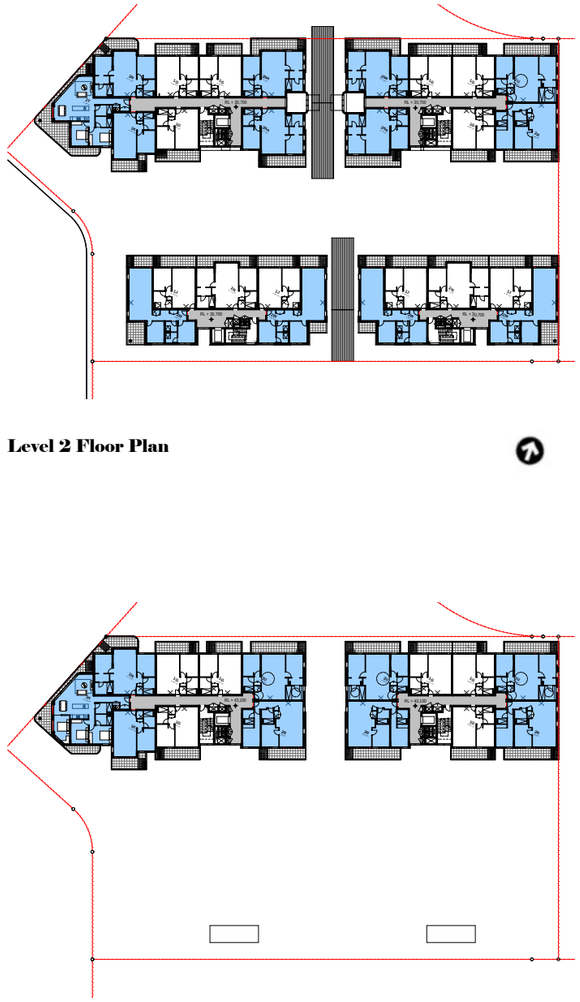
Typical Corner 3 Bed Apartment

The development consists generally of open plan units with relatively shallow apartment depths which facilitates good ventilation to all habitable rooms. A high number of cross through and corner apartments within the development also allow the proposed design to achieve a high percentage of well ventilated units.

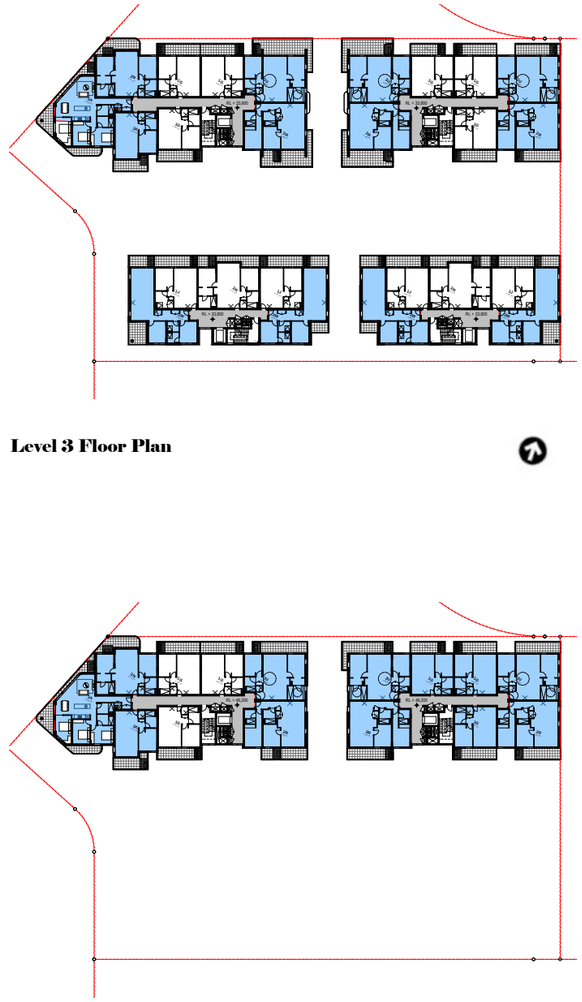
2.7 Principle 07 - Amenity, Cross Ventilation - Plans



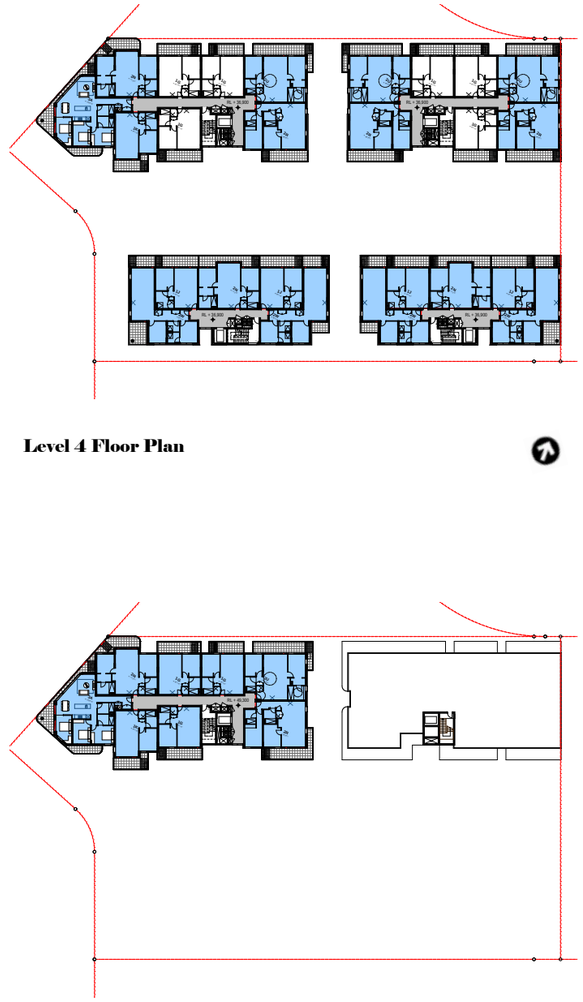
Level 1 Floor Plan



Level 2 Floor Plan



Level 3 Floor Plan



Level 4 Floor Plan

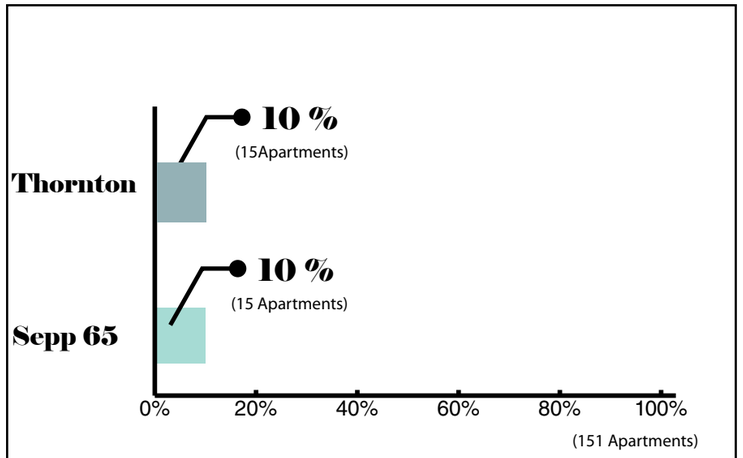
Level 5 Floor Plan

Level 6 Floor Plan

Level 7 Floor Plan

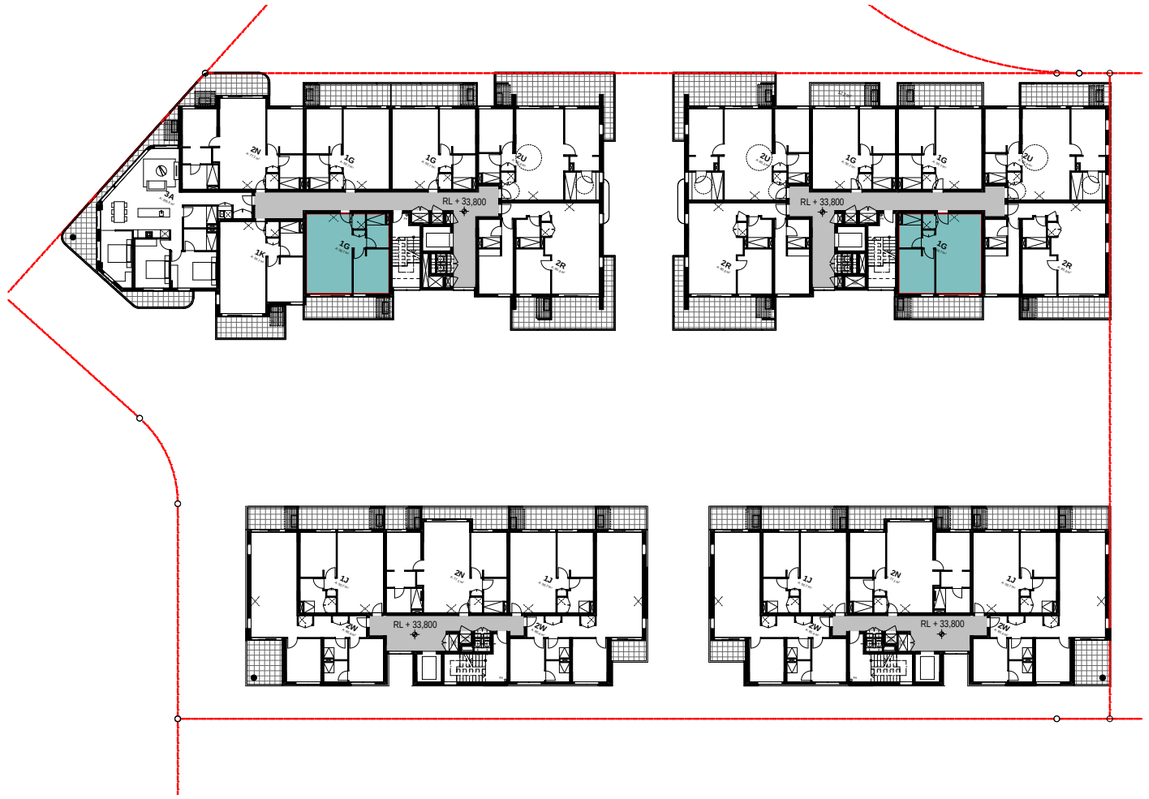
Level 8 Floor Plan

2.7 Principle 07 - Amenity, South Facing Apartments



South Facing Apartments

	Block				Total Apartments
	A	B	C	D	
Level 1	1	0	1	0	2
Level 2	1	0	1	0	2
Level 3	1	0	1	0	2
Level 4	1	0	1	0	2
Level 5	1	0	1	0	2
Level 6	1	0	1	0	2
Level 7	1	0	1	0	2
Level 8	1	0	0	0	1
Total					15

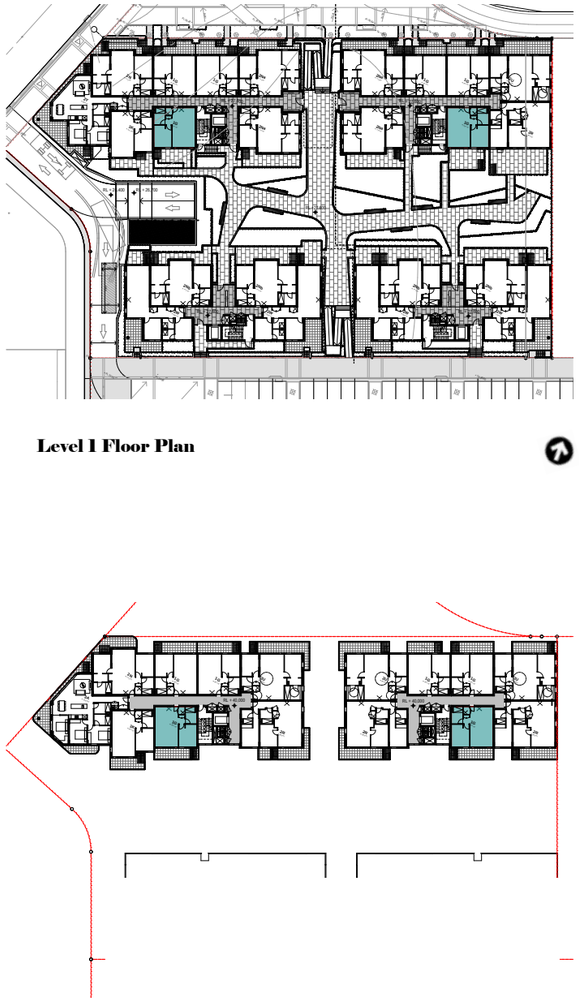


Typical Floor Plan

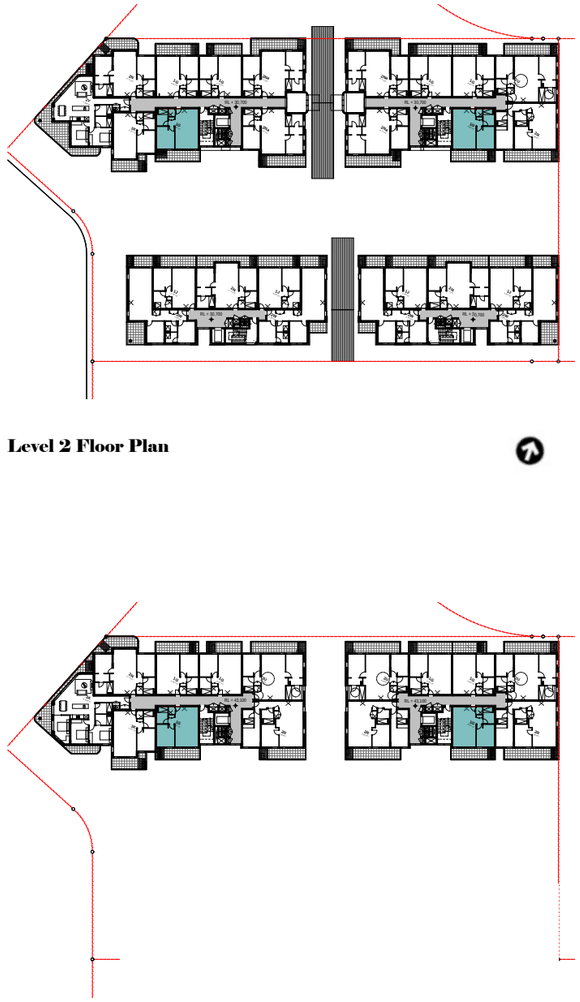
In the proposed development, south facing apartments are kept at a minimum of 10 %.

Where possible apartments have dual orientation to capture both solar access and cross ventilation.

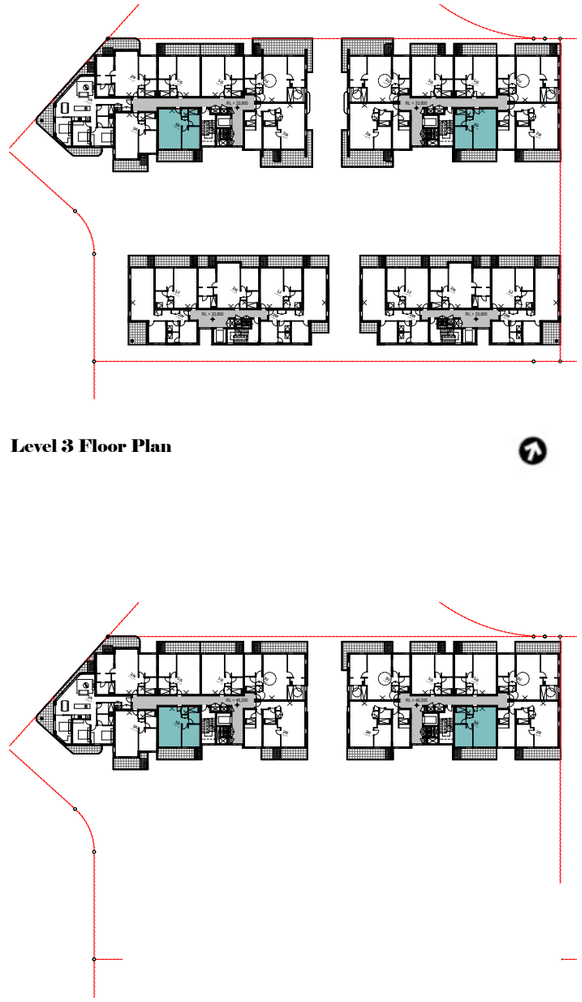
2.7 Principle 07 - Amenity, South Facing Apartments - Plans



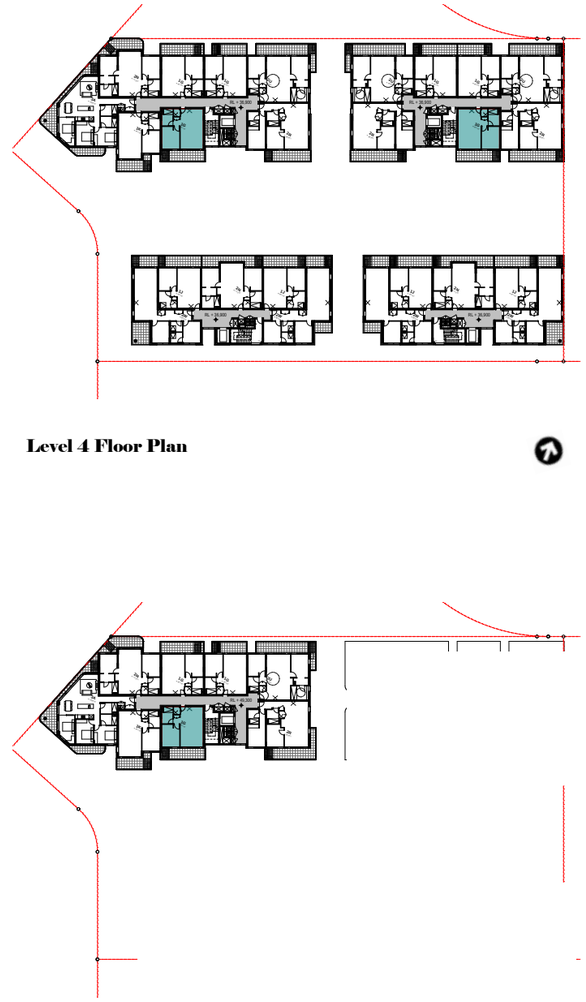
Level 1 Floor Plan



Level 2 Floor Plan



Level 3 Floor Plan



Level 4 Floor Plan

Level 5 Floor Plan

Level 6 Floor Plan

Level 7 Floor Plan

Level 8 Floor Plan

2.8 Principle 08 - Safety & Security

Good design optimises safety and security, both internal to the development and for the public domain.
This is achieved by maximising overlooking of public and communal spaces while maintaining internal privacy, avoiding dark and non-visible areas, maximising 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.

The design proposal provides clear and well defined lobby entries to each building in the development. These lobby entries will be secure, lockable and be well lit for the resident's safety. They will also have clear and unobstructed views to the street.

Through site links, courtyard and entry areas have excellent passive surveillance from the apartments.

Lighting and surveillance will be provided in the basement carpark area to enhance security.

2.9 Principle 09 - Social Outcomes

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 optimise the provision of housing to suit the social mix and needs in the neighbourhood 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.

The proposed development will be a positive contribution to the neighbourhood. The raised gardens on the ground floor provide a green edge that contributes to the landscaped and green character of the precinct. The location of the development, with easy access to transport and entertainment precinct provides an ideal lifestyle to the residents. Easy access to retail provides convenience.
A mix of 1 , 2 and 3 bedroom apartments are being proposed, with 43% 1 bed, 53 % 2 bed and 6 % 3 bed apartments. The proposal incorporates a variety of apartment types, all with a high level of amenity.

- Affordable housing

- Equivalent amenity to nearby residential houses, but significantly more affordable.

- Proximity to public transport

- Walking distance to shops

- On grade carparking

- Suitable for large demographic

- Proper gardens or balconies with ample storage

2.10 Principle 10 - Aesthetics

Quality aesthetics require the appropriate composition of building elements, textures, materials and colours and reflect the use, internal design and structure of the development. Aesthetics should respond to the environment and context, particularly to desirable elements of the existing streetscape or, in precincts undergoing transition, contribute to the desired future character of the area.

The design proposal is strongly based on the sites desired future character.

There are a number of key material aims for this project.

A conceptual fit – Brick and metal are proposed as key materials within the overal palate, informed by the qualities of adjacent buildings. However here, these vernacular materials are reinvented in new contemporary forms.

Durability – A robust palate of materials is proposed throughout that will weather gracefully, allowing the building to change with time.

Positively Urban – To capture a sense of the energy and dynamism that once made this a manufacturing and industry hub. This must be a bold and confident building, not a precious one.

Texture and Tactility – The proposal acknowledges touch as an important sensory experience. Thornton central must successfully address the street both at a distance, as a contemporary landmark; as well as up close and intimate, as a home and a retreat.

2.10 Principle 10 - Aesthetics - Exterior Materials Sample Board

BRICKS

- BR01 DARK BRICK
- BR02 DARK RED BRICK
- BR03 WHITE BRICK
- BR04 RED BRICK

METAL CLADDING

- MC01 WHITE METAL CLADDING
- MC02 BLACK METAL CLADDING
- PMC01 BLACK PERFERATED METAL CLADDING
- PMC02 WHITE PERFERATED METAL CLADDING
- MS01 METAL SHEET

TIMBER CLADDING

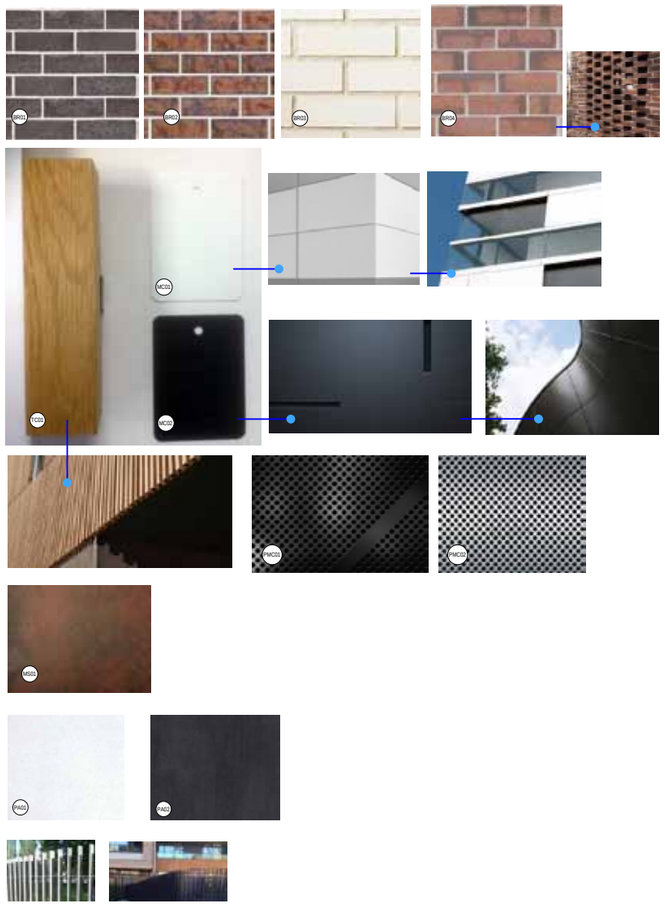
- TC01 DARK BRICK

PAINT / POWDERCOAT FINISH

- PA01 WHITE PAINT / POWDERCOAT FINISH
- PA02 BLACK PAINT / POWDERCOAT FINISH

OTHER

PALISADE FENCING



SEPP 65 compliance table

SEPP 65 Compliance Table

Attribute	SEPP 65 Guidelines	Comment	Compliance
Part 1 : Local Context			
Building Height	• To ensure the proposed development responds to the desired scale and character of the street and local area, and to allow reasonable daylight access to all developments and the public domain.	All proposed buildings have been designed to respond to the local LEP and DCP height controls. The building envelope incorporates downward transitions in height and scale to the existing neighbourhood.	Yes
Building Depth	• Generally, an apartment building depth of 10 – 18 metres is appropriate.	The proposed maximum building depth is 17 m while the typical living spaces are between 6 and 8 m deep. To ensure that satisfactory day lighting and natural ventilation is achieved, a significant proportion of corner-apartments, cross-through apartments and access to a communal landscaped courtyard is provided for all residents.	Yes
Building Separation	• As the building increases in height, differing separation distances are required. • For the section of the building up to 4 storeys / 12 m in height, separation between : - Habitable rooms / balconies - min 12 m - Habitable rooms / balconies and non habitable rooms - min 9 m - Non habitable rooms - min 6 m • For the section of the building up to 5 storeys / 25 m in height, separtaion between : - Habitable rooms / balconies - min 18 m - Habitable rooms / balconies and non habitable rooms - min 13 m - Non habitable rooms - min 9 m	Separation between habitable rooms / balconies between the North Western buildings and the South Eastern buildings is 19.4M (between external facade) and 15.3m balcony to balcony. Noting that the lower scale buildings are only 4 storeys in height this is approximately 3.3m overcompliant.	Yes
Street Setbacks	• To establish the desired spatial proportions of the street and define the street edge. To relate setbacks to the area's street hierarchy.	The design responds to the local neighbourhood character and the Design Guidelines desired future character by introducing an increased setback between the lower floors and the upper floor of the proposed buildings.	Yes
Side and rear setbacks	• To minimise the impact of development on light, air, sun, privacy, views and outlook for neighbouring properties, including future buildings.	Side and rear setbacks are based on the DCP controls.	Yes
Floor Space Ratio	• To ensure that development is in keeping with the optimum capacity of the site and the local area. FSR is not specified in the Design Code.	Not applicable	Yes
Part 2 : Site Design			
Deep Soil Zones	A minimum of 25% of the open space area of a site should be a deep soil zone.	Not applicable. Design guidelines require no deep soil landscaping.	Yes

SEPP 65 Compliance Table

Attribute	SEPP 65 Guidelines	Comment	Compliance
Landscape Design	To add value to residents' quality of life within the development in the forms of privacy, outlook and views, and provide habitat for native indigenous plants and animals	A Concept landscape plan has been prepared by URBIS. The concept plan illustrates various design initiatives to be implemented that will both enhance the quality of the resident's life within the development and provide habitat for native indigenous plants and animals.	Yes
Open Space	Communal open space may be accommodated on a podium of roof in a mixed-use building, provided it has adequate amenity	A communal landscaped courtyard of approximately 1000 m^2 is proposed on the ground floor to enhance the amenity of this residential development.	Yes
Orientation	To protect the amenity of existing development, and to optimise solar access to residential apartments within the development and adjacent development	The site design has been configured so as to ensure adequate solar access to apartments whilst maintaining optimum orientation to available views. Primary living areas have been configured to gain full benefit of available views and light. A large communal courtyard between the apartment buildings is located on the ground floor. The courtyard is oriented north to achieve maximum solar access.	Yes
Planting on Structures	To ensure sufficient soil depth is provided to facilitate adequate planting	The concept design drawings prepared by URBIS addresses requirements for planting on structures.	Yes
Stormwater Managment	To ensure adequate stormwater management	Location for storm water detention has been proposed. See the Soil and Water Management Plan issued with the application.	Yes
Visual Privacy	To provide reasonable levels of visual privacy externally and internally, during the day and at night. To maximise outlook and views from principal rooms and private open space without compromising visual privacy	All care has been taken to ensure that all of the residential apartments enjoy the best possible amenity. Windows and balconies to primary living areas to the north have been set back in plan, to allow balconies to function as a visual buffer. Privacy / sun screens are fitted to sensitive areas.	Yes
Building Entry	To create entrances with identity and assist in orientation for visitors	The principle entry is via the split between the buildings where an expressive awning punches through the gap to signify the entrance.	Yes
Parking	To minimise car dependency, whilst still providing adequate car parking	Adequate car spaces are provided on site to accommodate the residents, visitors and commercial uses.	Yes

SEPP 65 Compliance Table

Attribute	SEPP 65 Guidelines	Comment	Compliance
Pedestrain Access	Connect residential development to the street. Provide barrier free access to 20% of dwellings	The main principal pedestrian access points are located between the building with secondary access from the street (South Eastern buildings only). All apartments have barrier free access to the front door.	Yes
Vehicle Access	Limit width of driveways. Locate driveways away from main pedestrian entries, and on secondary streets	The primary vehicular entrance is from a shared lane in the Southern portion of the site.	Yes
Part 3: Building Design			
Apartment Layout	Depth of single aspect apartment – 8 metres Back of the kitchen not more than 8 metres from a window Width of cross through apartments over 15 metres deep should be min. 4 metres Housing Affordability suggests the following sizes: Studio apt – 38.5m2 1 B/R apt – 50m2 2 B/R apt – 70m2	Units have been designed to incorporate a deep balcony which aids in achieving living areas with dual-aspect, i.e. a glazed outlook on one corner of the façade, and access to the balcony on the other. This typology affords daylight from 2 directions and encourages natural ventilation through the living space. The apartments have been designed to provide a range of affordability options, with a mix of 1 bed, 2 bed and 3 bed apartments.	Yes
Apartment Mix	To provide a diversity of apartment types, which cater for different household requirements now and in the future.	There is a significant variety of apartment types and sizes: Studio units (40-45m2) 0 % 1 bed units (50-65m2) 43 % 2 bed units (70-90m2) 53 % 3 bed units(100-120m2) 6 % Of the total building stock 10 % of apartments are universal.	Yes
Balconies	Balcony shall be provided with min. 2 metres in depth	A large proportion of balconies have been designed with a minimum 2m depth.	Yes
Ceiling Heights	FFL to FCL (Minimum only) Residential flat buildings or residential floors: In general min 2.7m to all habitable rooms on all floors 2.4m for all non-habitable rooms	The proposed design has a floor to floor height of 3150 mm and all habitable rooms have a minimum ceiling height of 2700 mm with reduced bulkheading. All service areas will have a 2400 mm bulkhead clearly shown on architectural plans.	Yes
Flexibility	Encourage housing design that meet the broadest range of the occupants' needs	All apartments have been designed with an open plan that affords a high degree of flexibility. 10 % of the proposed units are universal to accommodate an ageing demographic.	Yes
Ground floor apartments	Design front gardens which contribute to spatial and visual structure of the street by promoting ground floor entry to apartments Ensure adequacy and privacy of ground floor apartments located in urban areas with no setbacks by: Stepping up the ground floor from the level of the footpath by max. 1.2 Optimize the number of ground floor apt with separate entries and consider requiring an appropriate percentage of accessible units Provide ground floor apartments with access to private open space, preferably as a terrace or garden	A range of design strategies are applied to ensure privacy to ground floor apartments that interface with surrounding streets and the internal communal courtyard. Apartments on the ground floor are provided with screening devices at the edge of their patio. Internal separation between communal courtyards and private courtyards has been addressed by a combination of path locations, landscaping, planter boxes and fencing. Where possible, apartments have direct access to the courtyard through their patio.	Yes

SEPP 65 Compliance Table

Attribute	SEPP 65 Guidelines	Comment	Compliance
Internal Circulation	Where units are arranged off a double-loaded corridor, the number of units accessible from a single core/corridor should be limited to 8	There are no more than 8 apartments served by each corridor.	Yes
Mixed Use	To ensure that the design of mixed use developments maintains residential amenities and preserves compatibility between uses • Building layout which promotes variable uses or tenancies; • Optimal floor to ceiling heights, e.g. 3.3-4m for active public uses such as retail, etc • Optimal building depths such as 10-18m for residential or other smaller commercial uses; • Extra care when larger uses of commercial spaces – cinemas, supermarkets etc integrated with residential uses		N/A
Storage	To provide adequate storage for everyday household items within easy access of the apartment, and to provide storage for sporting, leisure, fitness and hobby equipment. At least 50% of required storage should be within each apartment.	Apartments have been designed to contain adequate storage requirements. Additional storage areas have been created within the basement to accommodate any extra storage requirements.	Yes
Acoustic Privacy	To ensure a high level of amenity by protecting the privacy of residents within residential flat buildings both within the apartments and in private open spaces	The building facade fronting the roads has been designed to minimize traffic noise to the apartments. Maximising the depth of balconies and combining them with planter boxes reduces the total impact of traffic sounds to the apartments. An Acoustic Report is included with this submission to further address these issues.	Yes
Daylight Access	Min. 2 hours direct sunlight in dense urban areas between 9am, and 3pm midwinter to living rooms and private open space to at least 70% of units. Single aspect apartments with SW-SE aspect limited to 10%	A minimum of 2 hours direct sunlight has been achieved between 8am, and 4pm and is evidenced in the solar access diagrams. South facing apartments have been limited to 10% of the total number of apartments as indicated in south facing calculations.	Yes
Natural Ventilation	Limit building depth from 10 to 18 metres 70% should be naturally cross ventilated 25% of kitchens should have access to natural ventilation	The proposed buildings do not exceed the depth of 18 m. 66 % of apartments achieve good cross ventilation	Yes
Awning + Signage	To provide shelter, and ensure awnings are consistent with streetscape	The large inviting awning between both groups of buildings helps signify the entrances. .	Yes
Facades	Facades should define and enhance the public domain	Facades have been designed to be articulated and modulated in such a way as to reduce the perceived bulk and scale of the development.	Yes
Roof Design	To integrate the design of the roof into the overall façade	The roofs have been considered and dealt with differently for different facade conditions. A variety of parapet heights help break-up the façade to reinforce the concept of creating an ensemble of buildings.	Yes

SEPP 65 Compliance Table

Attribute	SEPP 65 Guidelines	Comment	Compliance
Energy Efficiency	To reduce the necessity for mechanical heating and cooling Limit number of single aspect apartments with a southerly aspect (SW-SE) to a max of 10% of total units. Maximise thermal mass. Insulate roof/ceiling to R2.0, external walls to R1.0 and floor including separation from basement carparking to R1.0	Potential single aspect apartments facing south have been minimised in the planning of the design and equates to 10% of the building stock. It is envisaged that the external skin of the building will be insulated to required standards and to achieve minimal necessity on heating and cooling.	Yes
Maintanence	To ensure long life and ease of maintenance for the development	All effort has been made to ensure that building elements, fixtures and fittings are of a high quality and robust in nature, able to withstand reasonable wear and tear	Yes
Waste Management	Supply WMP Allocate storage area	Garbage rooms have been located on each lobby corridor of each residential floor and service the day to day waste and recycling needs of the occupants. Garbage collection occurs within the loading dock. Provision has been made for garbage collection vehicles to enter the site to collect waste with minimal disruptions to residents & traffic. In addition, a bulky waste store has been included in this area to further service the needs of the residents. A waste management plan has been prepared and will be submitted with this application.	Yes
Water Conservation	Reduce mains consumption, and reduce the quantity of stormwater runoff Use AAA rated appliances Encourage use of rain water tanks	Allowances have been made for detention tanks and rainwater recycling tanks. Every effort will be made to ensure an appropriate level of environmental efficiency is met by the specified fixtures fittings and appliances.	Yes