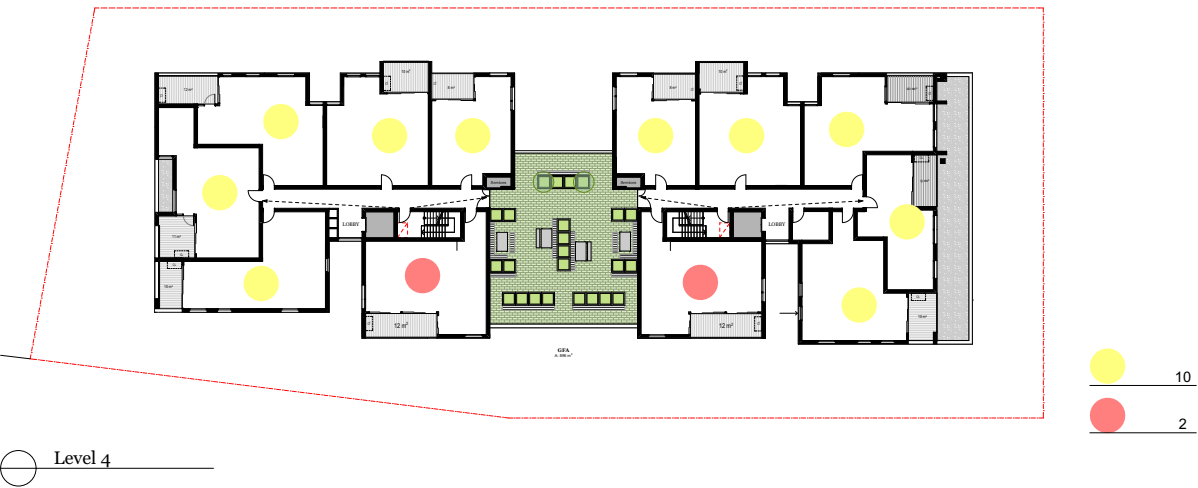
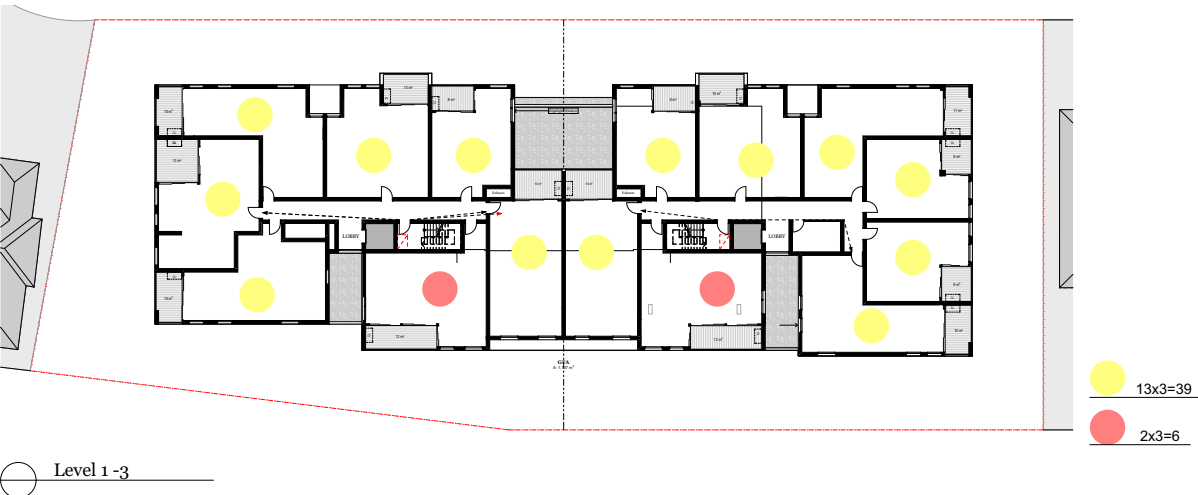
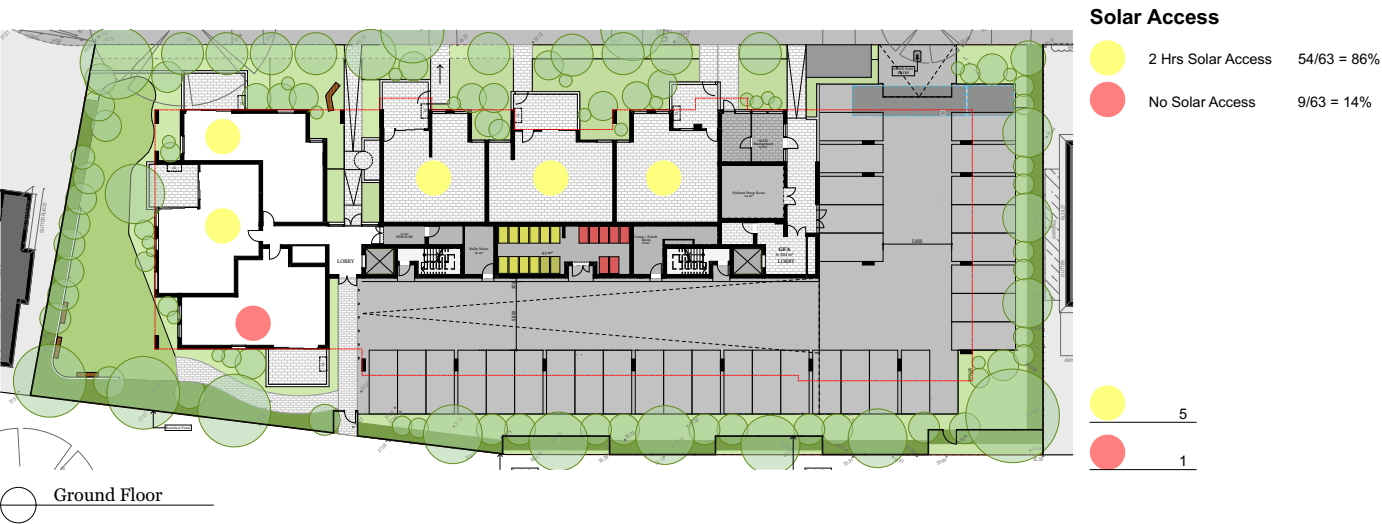
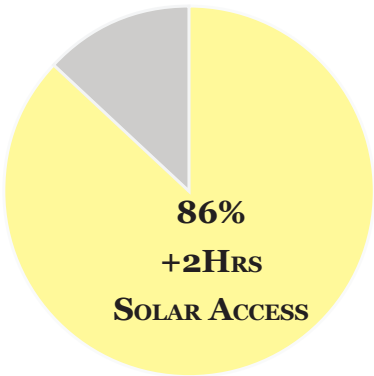
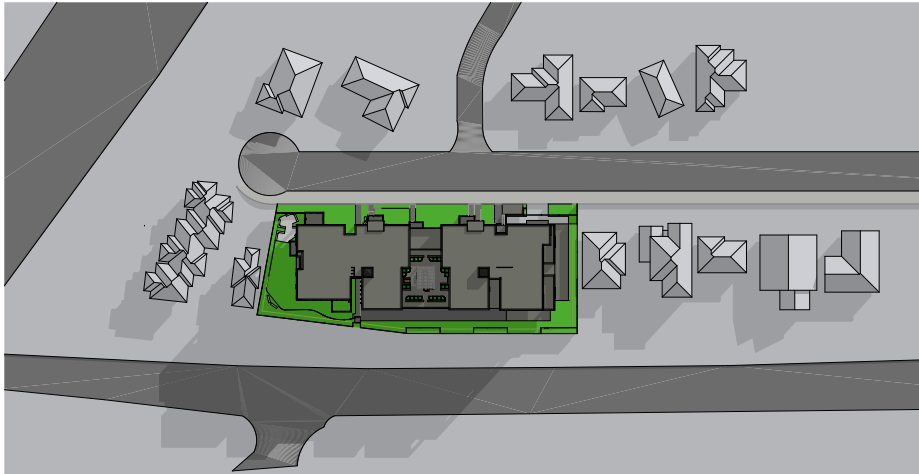
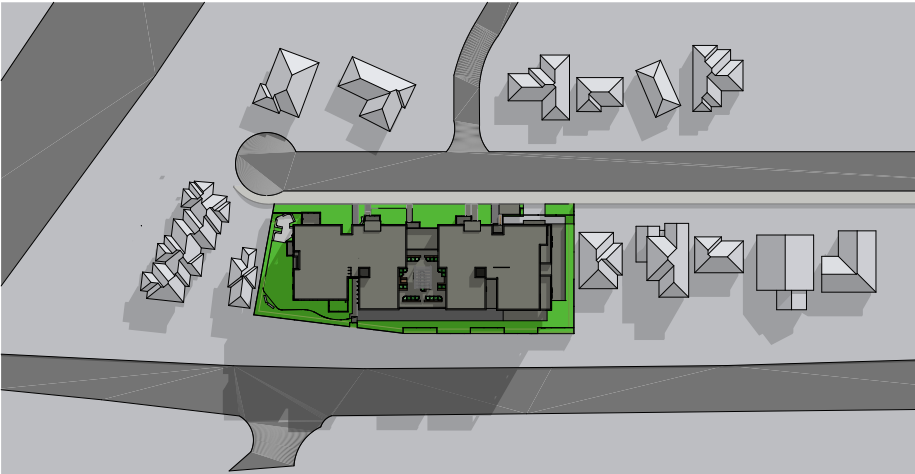


The proposed development is designed to provide the maximum amenity to a majority of the dwellings, with most units having northern aspects. The design maximises the daylight to each unit. The proportion of all units that achieve a minimum 2 hours of sunlight into living room windows between 9 am and 3 pm during mid winter is 86%.

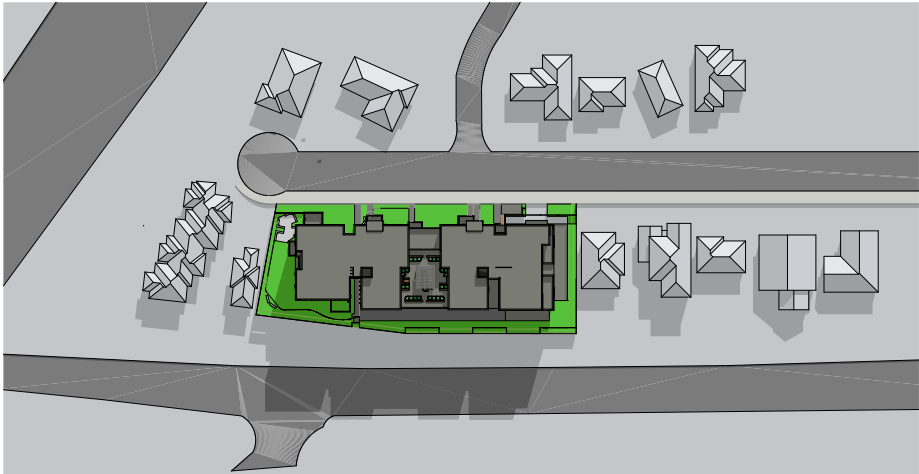




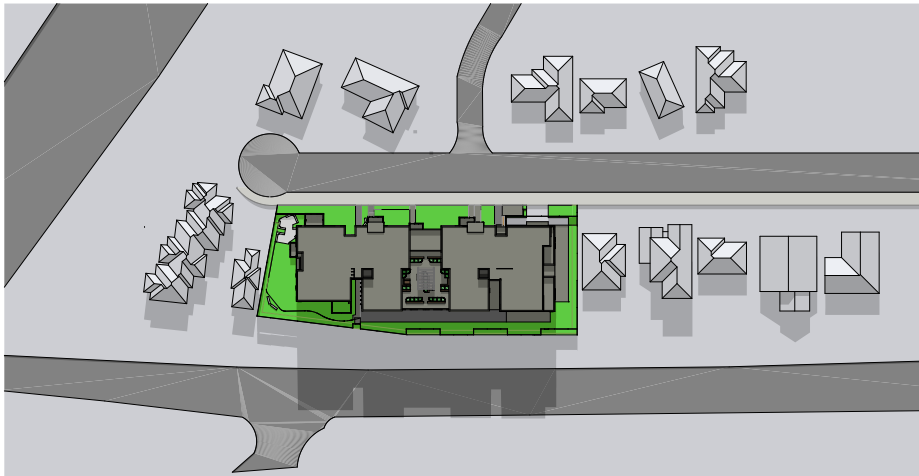
9:00am



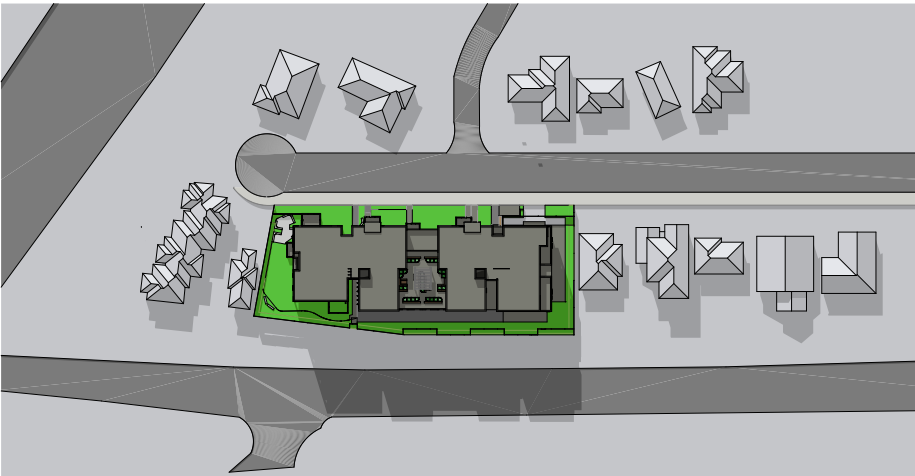
10:00am



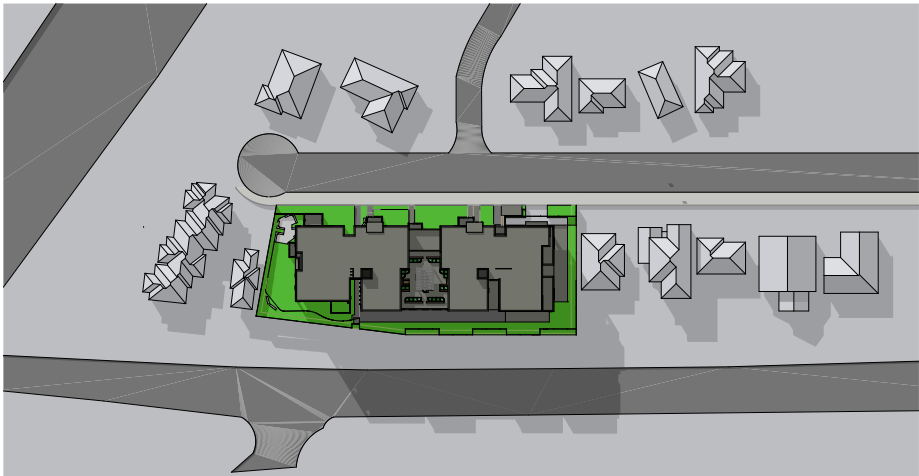
11:00am



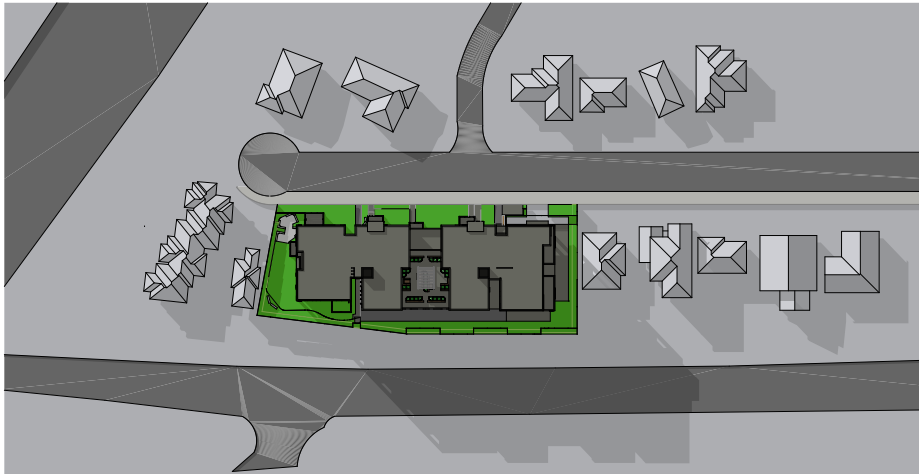
12:00 noon



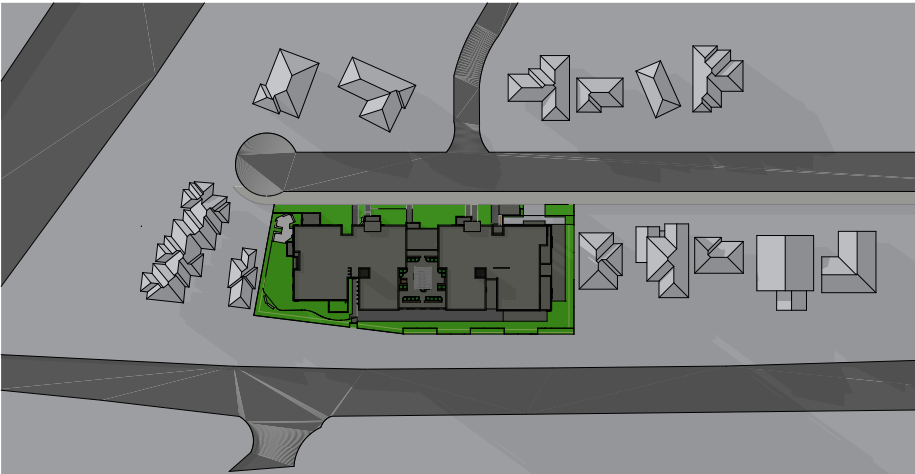
1:00pm



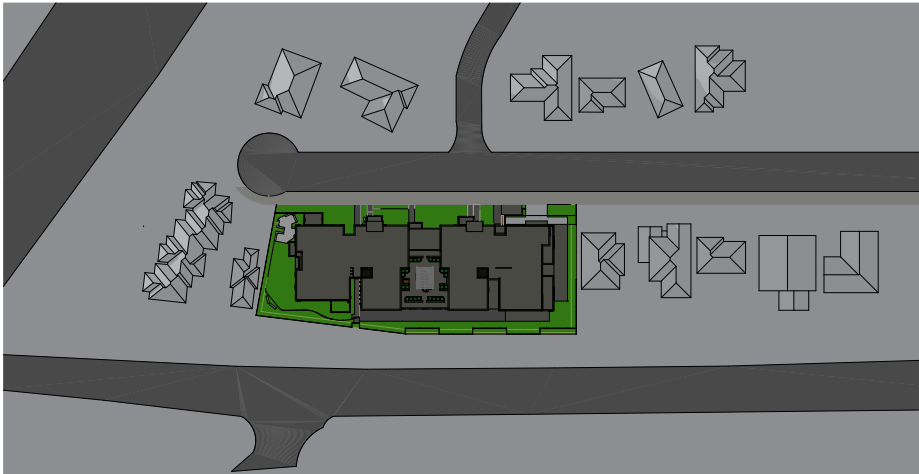
2:00pm



3:00pm

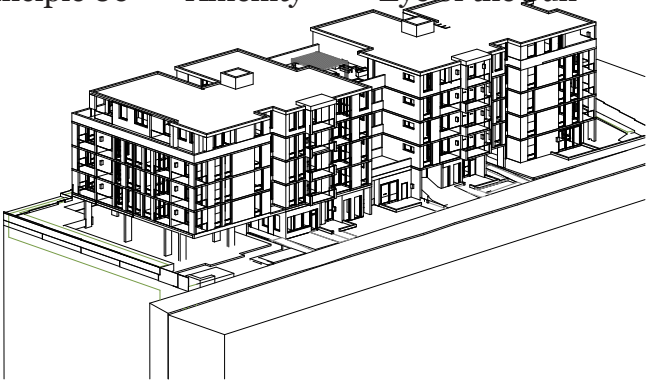


4:00pm



5:00pm

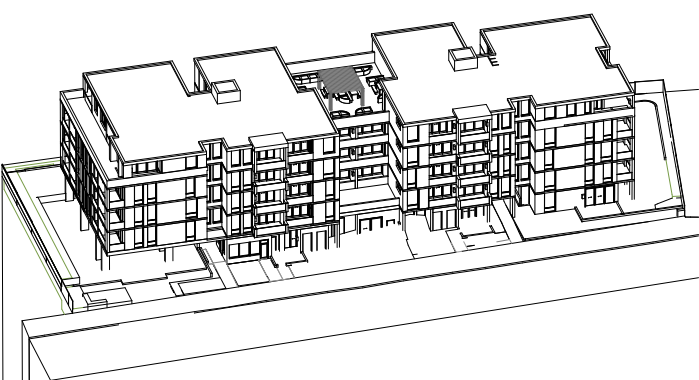
SEPP65 Design Quality Principles
2.06 Principle 06 - Amenity - Eye of the Sun



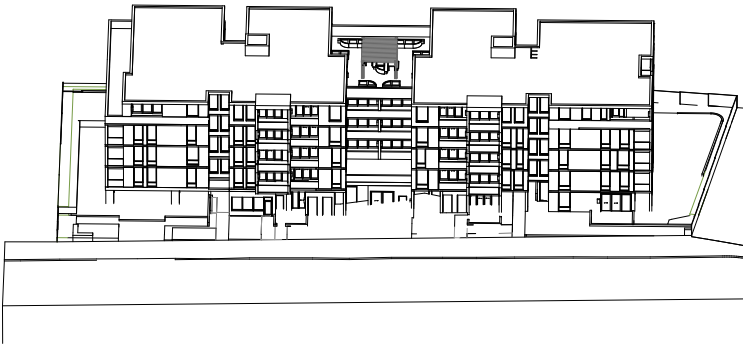
21th of June 9am



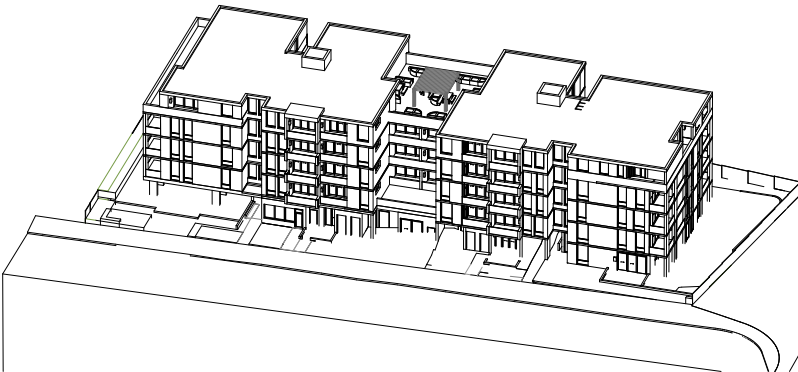
21th of June 10am



21th of June 11am



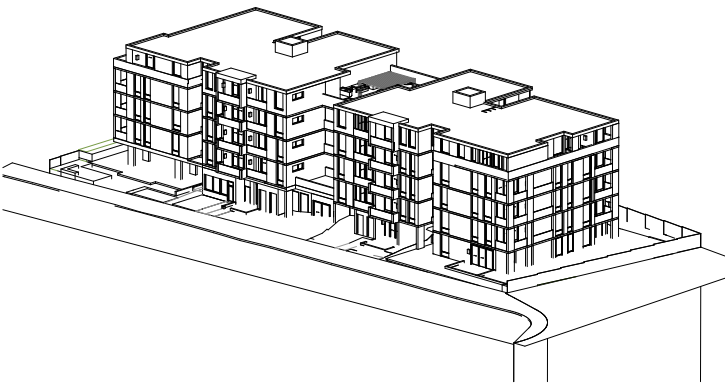
21th of June 12pm



21th of June 1pm



21th of June 2pm

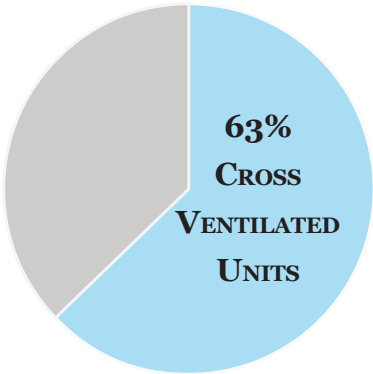


21th of June 3pm

Apartment Design Guide (ADG)
Natural ventilation is the movement of sufficient volumes of fresh air through an apartment to create a comfortable indoor environment. Sustainable design practice incorporates natural ventilation by responding to the local climate and reduces the need for mechanical ventilation and air conditioning. To achieve adequate natural ventilation, apartment design must address the orientation of the building, the configuration of apartments and the external building envelope.

Natural cross ventilation has been a key aspect of the design resolution. DKO has followed the ADG definition to ensure compliance.

The design response uses traditional methods of natural cross ventilation by having the majority of apartments being dual aspect.



Storage is provided internally to each apartment.
All units have been provided with required storage internally.

Ironbark Avenue Casula					
Apartment Type			Storage m3		
Apartment #	1B	2B	in apartment	Storage room	total
G01		72	8	1	9
G02		73	9	0	9
G03		70	9	0	9
G04		70	9	0	9
G05		76	9	0	9
G06		70	9	0	9
101		74	15	0	15
102		72	8	1	9
103		70	9	0	9
104		70	9	0	9
105		70	9	0	9
106	51		7	0	7
107		75	10	1	11
108		75	10	1	11
109	51		7	0	7
110		70	9	0	9
111		70	8	0	8
112	50		6	0	6
113	50		6	0	6
114		70	8	1	9
115		74	15	0	15
201		74	15	0	15
202		72	8	1	9
203		70	9	0	9
204		70	9	0	9
205		70	9	0	9
206	51		7	0	7
207		75	10	1	11
208		75	10	1	11
209	51		7	0	7
210		70	9	0	9
211		70	8	0	8
212	50		6	0	6
213	50		6	0	6
214		70	8	1	9
215		74	15	0	15
301		74	15	0	15
302		72	8	1	9
303		70	9	0	9
304		70	9	0	9
305		70	9	0	9
306	51		7	0	7
307		75	10	1	11
308		75	10	1	11
309	51		7	0	7
310		70	9	0	9
311		70	8	0	8
312	50		6	0	6
313	50		6	0	6
314		70	8	1	9
315		74	15	0	15
401		74	15	0	15
402		70	9	1	10
403		70	10	1	11
404		71	8	0	8
405		70	9	0	9
406	51		7	0	7
407	51		7	0	7
408		70	9	0	9
409		70	8	0	8
410	50		7	1	8
411		70	8	0	8
412		74	15	0	15

Apartment Design Guide (ADG)

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

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

Response

Furthermore, all external spaces will have multiple clear sight lines without obstacles, low shrub planting will reduce the number of places to hide and all paths will be well-lit at night time and designed to meet relevant Australian Lighting Standards.

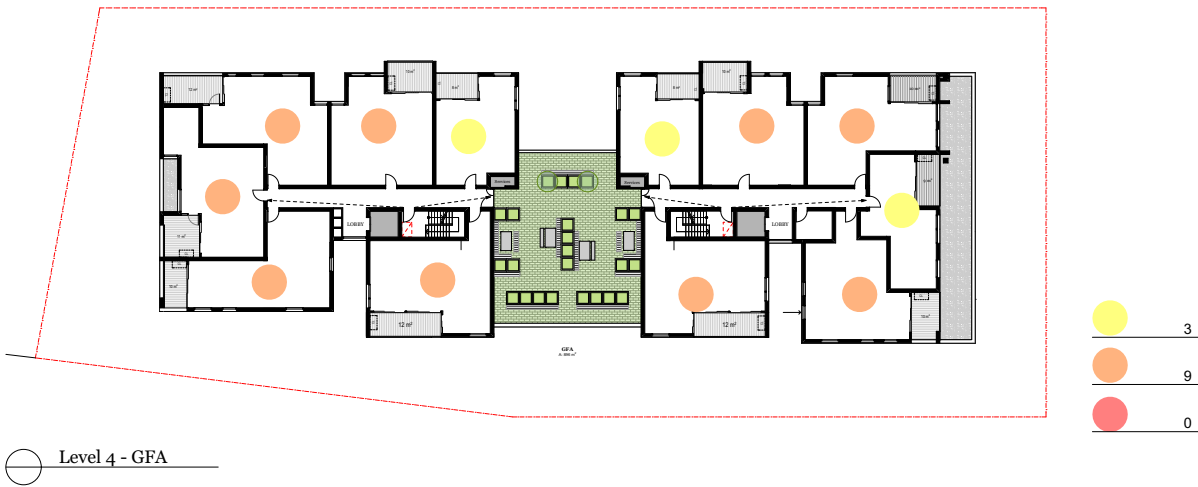
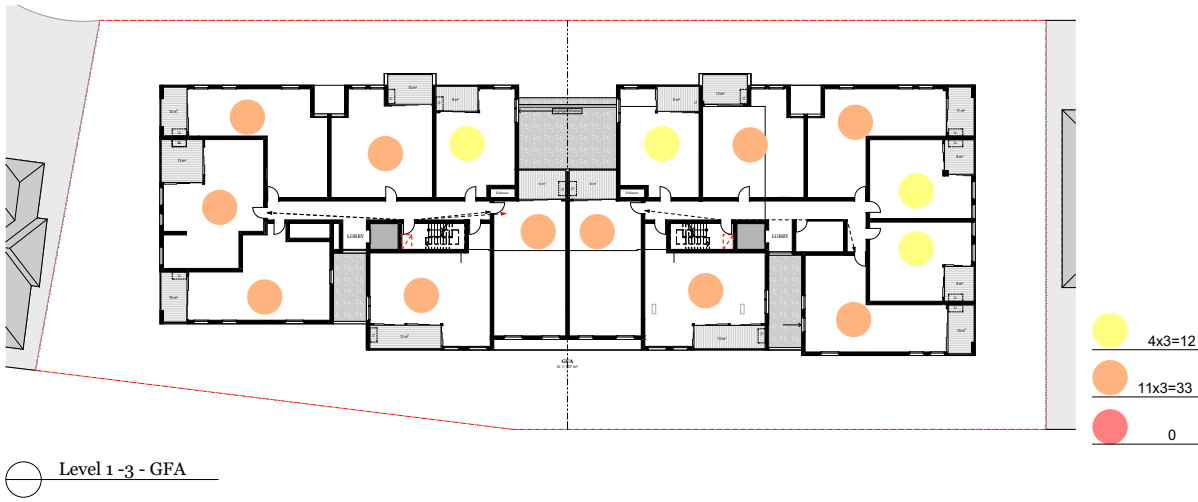
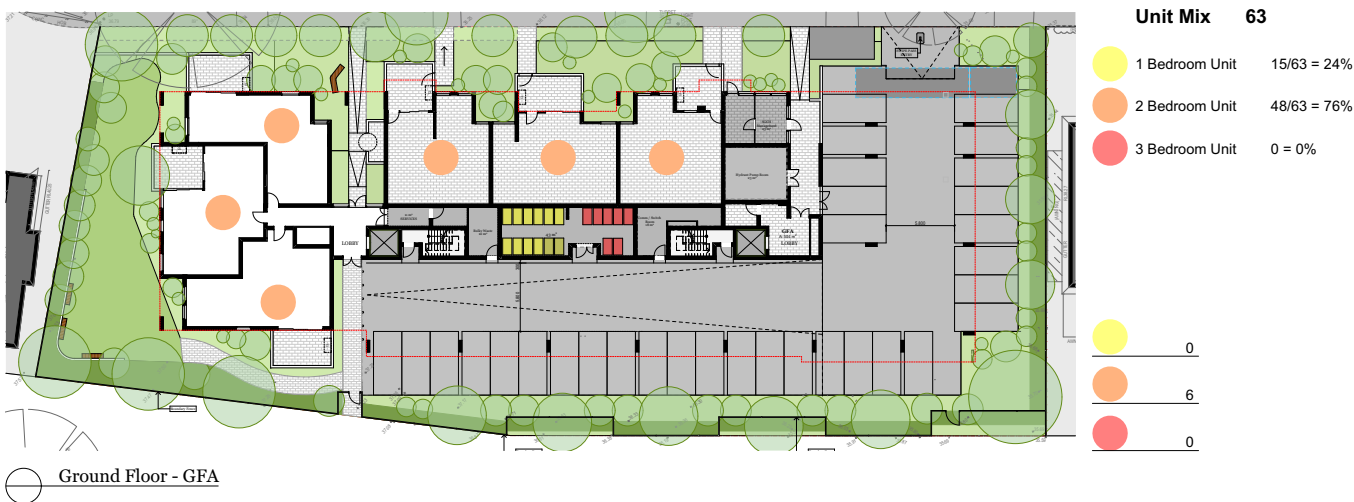
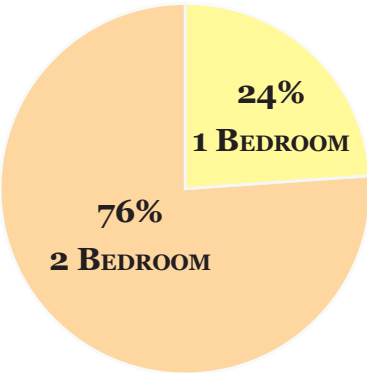
Casual Surveillance of Open Spaces: Casual surveillance entrances and exits on the site are possible from the units. Corner balconies and windows provide a wider degree of casual surveillance along the street.

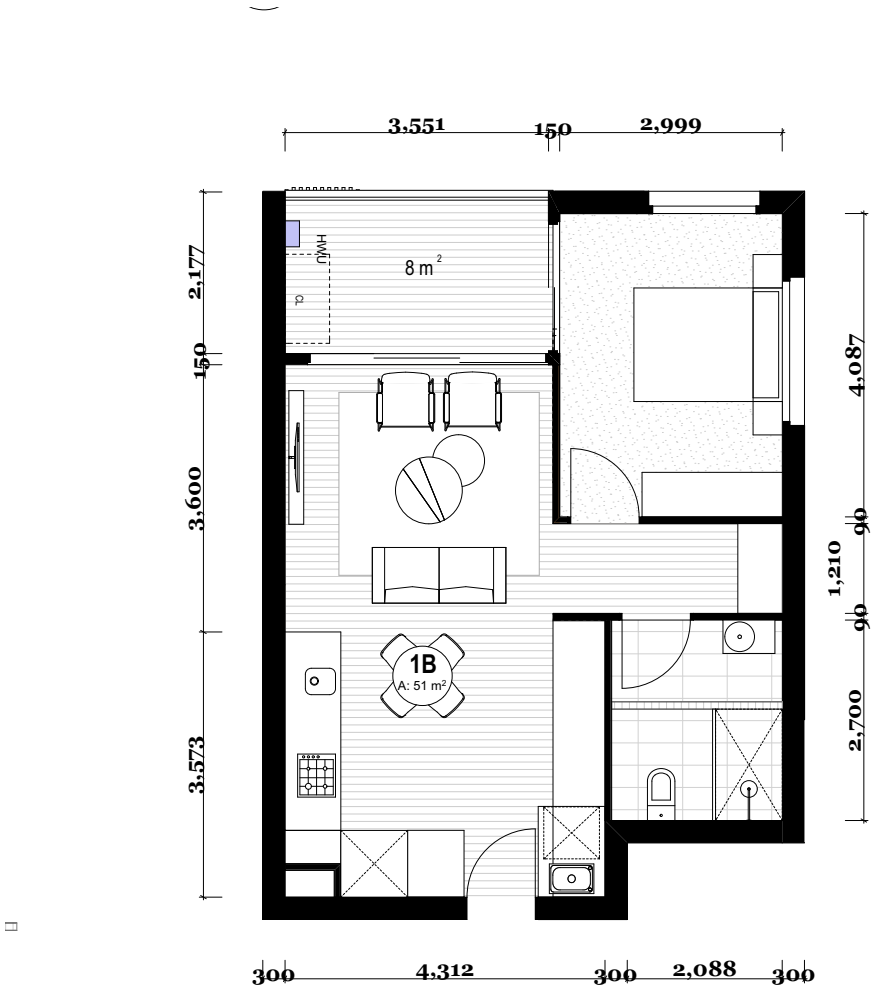


Apartment Design Guide (ADG)
Good design responds to the social context and needs of the local community in terms of lifestyles, affordability, and access to social facilities. New developments should optimise the provision of housing to suit the social mix and needs in the neighbourhood or, in the case 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.

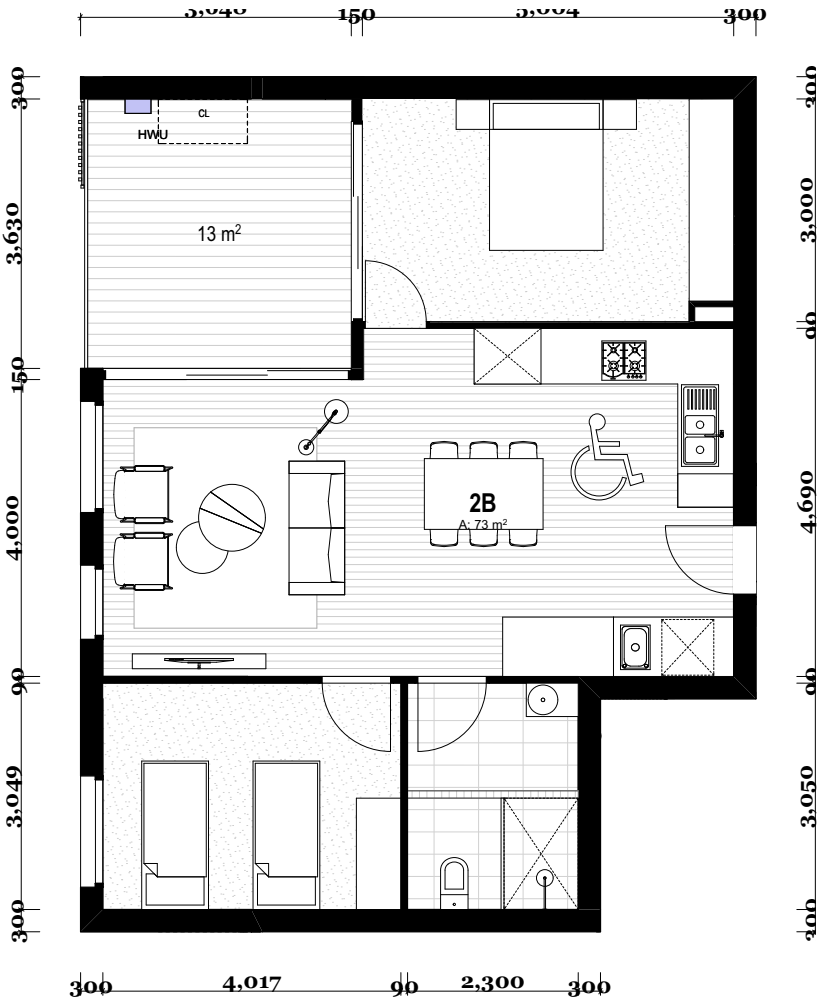
Response
On ground level, a safe and activated area for visitors and residents to meet and interact will be provided.
The proposal includes a variety of different housing typologies that will be offered in different sizes and layouts. The mix in housing typologies will help diversify the residents in the development.

ABS population projections showed an unexpected increase in population numbers while the Department of Planning’s discussion paper “Sydney over the next 20 years” calls for increases in the number of small units (1 and 2 bedroom) to meet future needs of the metropolitan area. The proposed development will assist in meeting this demand. The proposed development meets this trend by providing 100% 1 and 2 bedroom units.





1 Bedroom Unit



2 Bedroom Unit

SEPP65 Design Quality Principles

2.08 Principle 08 - Housing Diversity and Social Interaction - Apartment Mix

Apartment Design Guide (ADG)
Universal design is an international design philosophy that enables people to continue living in the same home by ensuring that apartments are able to change with the needs of the occupants. Universally designed apartments are safer and easier to enter, move around and live in. They benefit all members of the community, from young families to older people, their visitors, as well as those with permanent or temporary disabilities.

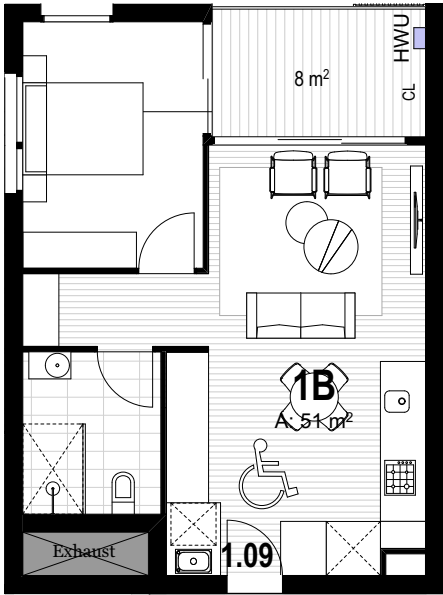
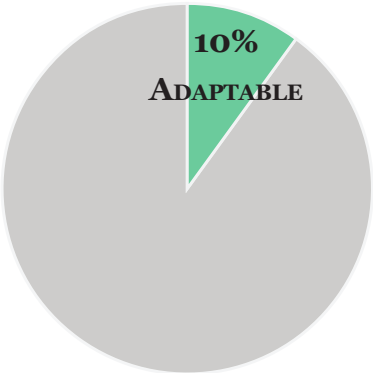
Response

The proposed development has been designed to provide 10% of the total dwellings as adaptable units

The units are designed and constructed so that they may be readily re configured to allow residence for persons with a disability, in accordance with the requirements of AS4299-1995 for a Class A building.

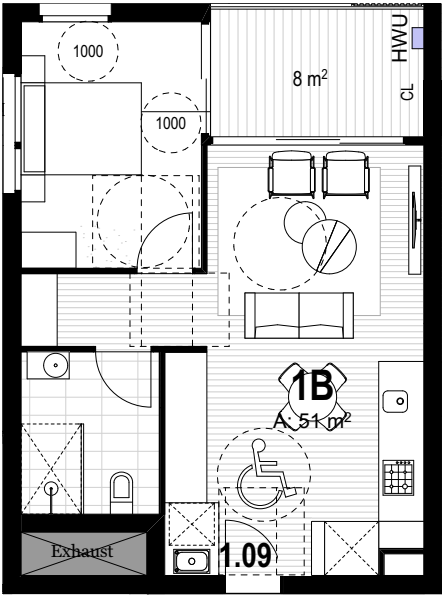
Careful consideration has been undertaken to ensure that adequate circulation spaces are made available to living areas, kitchens, bathrooms, bedrooms and door approaches post adaptation.

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



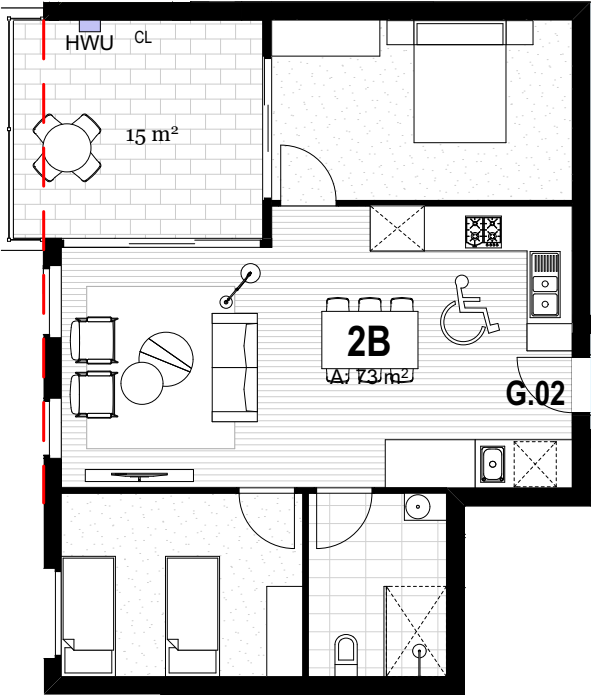
○

Pre - Adapted - 1B



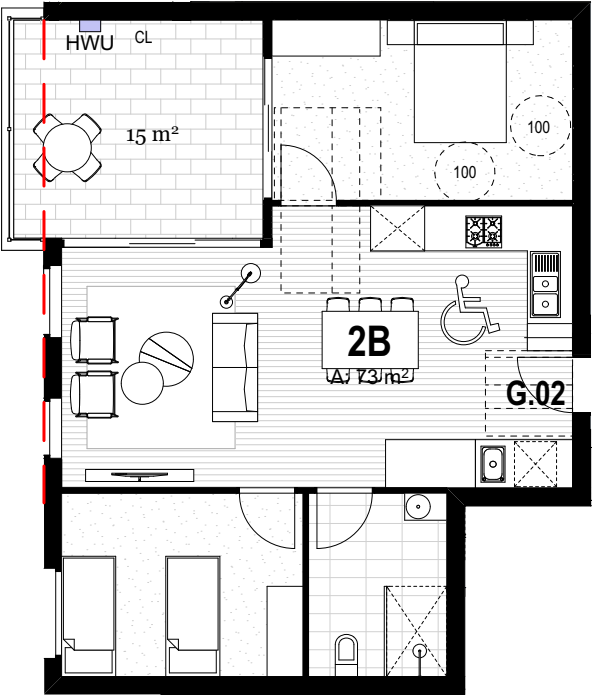
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Post - Adapted - 1B
(Units 1.09, 2.09 and 3.09)



○

Pre - Adapted - 2B



○

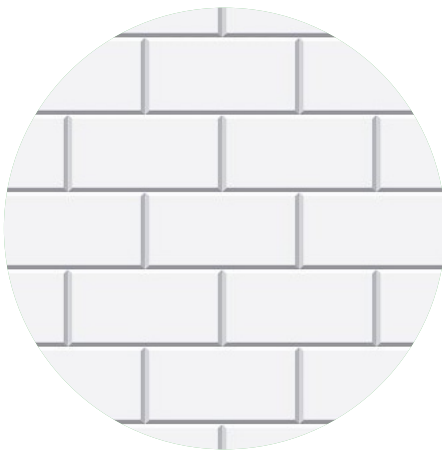
Post - Adapted - 2B
(Units G.02, 1.03, 2.03 and 3.03)

Apartment Design Guide (ADG)
Good design achieves a built form that has good proportions and a balanced composition of elements, reflecting the internal layout and structure. Good design uses a variety of materials, colours and textures.
The visual appearance of well designed apartment development responds to the existing or future local context, particularly desirable elements and repetitions of the streetscape.

Response
The development proposes a 5 storey building surrounded by landscaped gardens and communal open space. The building’s main entrance is positioned on the North along Ironbark Avenue. Residents and visitors enter the building along a path at street level; the main entrance is accentuated by communal areas, ornamental trees and planting that line the walkway up to the entrance door of the ground floor lobby (refer to landscape architect’s drawing). Motor vehicle and service access is via Ironbark Avenue. This ramp entrance is at the right of the site.

The massing of the proposal has been broken into two volumes to ensure an interesting and appropriate overall proportion is achieved. This reduces the bulk and scale to the building. A combination of glazed balustrades and full height vertical screen create a visually dynamic and articulated façade.

Materials, Colours and Textures
The colour choices utilise light colour framings with dark colour underlay to create strong contrast and to sculpt the building, giving a sense of depth to the façade presentation. The façade is composed primarily of brick, which varies in tone throughout the buildings. This reinforces the articulation of the façade achieved through varied setbacks and step downs in building mass. The brick element contributes to the texture and materiality of the façade and is in-keeping with the surrounds and the general character of the surrounding buildings.



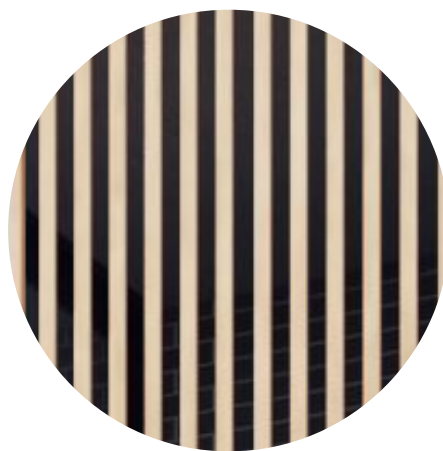
White Brick



Middle Grey Brick



Dark Grey Black



Metal Screen



SEPP65 Compliance Table

Table 1. Summary of compliance with the key Apartment Design Guide 'Design Criteria'		
Control	ADG Design Criteria	Compliance
3D Communal Open space	Minimum of 25% of the site area should be devoted to communal open space.	Site area: 2,782m ² Required Communal open space: 417m ² (25%) Proposed Communal open space: 713m ² (26%) The proposed design is within 1% off of the total communal open space required. Communal open space is provided at both the ground Level and the Podium level. A high level of solar access is achieved to both communal open spaces achieving a high level of amenity. Compliance is achieved with regards to ADG Design Guidance
	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)	As the main communal open space is located North of the main tower form, it receives unobstructed solar access, easily exceeding the minimum requirements. Compliance achieved
3E Deep Soil Zones	Minimum of 7% of a site should be a deep soil zone with the following minimum dimensions: greater than 1,500m² – 6m	Site area: 2,782m ² Required Deep soil: 195m ² (7%) Proposed deep soil zone: 761m ² (28%) Compliance achieved
3F Visual Privacy Building separation	Up to four storeys/12 meters 6 meters to the boundary between habitable rooms/balconies 3 meters to the boundary between non-habitable rooms Five to eight storeys /up to 25 meters 9 meters to the boundary between habitable rooms/balconies 4.5 meters to the boundary between non-habitable rooms Nine storeys and above/ over 25 meters 12 meters between habitable rooms/balconies 6 meters between non-habitable rooms	The proposal complies with R4 High Density Residential Zoning Controls under the Liverpool LEP 2008. The proposed buildings are highly articulated and have been visually broken down into volumes. Compliance is achieved with regards to ADG Design Guidance
3J Bicycle and Car Parking	The maximum car parking rates are as follows: Residential 0.4 Spaces per 1 Bed 0.5 Spaces per 2Bed	Car parking rates comply with the Liverpool Development Control Plan 2008 requirements. 30 spaces are provided with 7 adaptable. Compliance achieved
4A Solar + Daylight Access	Living rooms and private open spaces of at least 70% of apartments in a building receive a minimum of 2 hours direct sunlight between 9 am and 3 pm at mid-winter in the Sydney Metropolitan Area and in the Newcastle and Wollongong local government areas. 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.	Minimum number of apartments with 2hrs solar access required: 44 Proposed: 54 (86%) Compliance achieved

Summary of compliance with the key Apartment Design Guide 'Design Criteria'	
ADG Design Criteria	Compliance
3.6m for studio and 1 bedroom apartments 4m for 2 and 3 bedroom apartments	
The width of cross-over or cross-through apartments are at least 4m internally to avoid deep narrow apartment layouts.	Compliance achieved
Apartments are to have the following balcony dimensions: 1br – 8sqm with min.2m depth 2br – 10sqm with min. 2m depth 3br – 12sqm with min. 2.4m depth	Compliance achieved
Ground level apartments should contain a minimum of 15m ² of open space, with a minimum dimension in one direction of 3m.	Compliance is achieved with regards to ADG Design Guidance
The maximum number of apartments off a circulation core on a single level is eight.	The proposal has a maximum of 8 units off a single core per level. All lobbies are designed to have natural light and ventilation; with direct access to the communal gardens on Compliance achieved
For buildings of 10 storeys and over, the maximum number of apartments sharing a single lift is 40.	Compliance achieved
- Studio apartments require 4m² of storage area - One bedroom dwellings require 6m³ of storage area - Two bedroom dwellings require 8m³ of storage area. - Three bedroom dwellings require 10m³ of storage area.	Where storage is not wholly provided within the unit itself, the remainder is provided in the carpark via stora instance where storage cages are required, at least 50% of the apartments storage is provided within the apar Compliance is achieved with regards to ADG Design Guidance

Table 1. Summary of compliance with the key Apartment Design Guide 'Design Criteria'		
Control	ADG Design Criteria	Compliance
	A maximum of 15% of apartments in a building receive no direct sunlight between 9 am and 3 pm at mid-winter.	9 Units (14%) do not receive solar access Compliance is achieved with regards to ADG Design Guidance
4B Natural Ventilation	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. Overall depth of a cross-over or cross-through apartment does not exceed 18m, measured glass line to glass line.	Number of Apartments in the first 9 storeys: 63 Cross Ventilated Apartments: 40/63 apartments (63%) Compliance achieved No cross over or cross through apartments proposed Compliance achieved
4C Ceiling heights	Minimum ceiling heights are as follows: 2.7m for habitable rooms 2.4m for non-habitable rooms - double storey apartments – 2.7m for main living area, 2.4m for second floor where its area does not exceed 50% of the apartment area - attic spaces – 1.8m at edge of room with a minimum 30degree slope in mixed use areas – 3.3m for ground and first floor	Proposed 2.7m habitable– Compliance achieved Proposed 2.4 m non habitable – Compliance achieved
4D-1 Apartment Size + layout	Minimum Apartment sizes: 50m² for ONE bedroom; 70m² for two bedrooms; and 90m² for three bedrooms. Add an 5m² for additional bathrooms Add an 12m² for additional bedrooms	Compliance achieved
	Every habitable room must have a window in an external wall with a total minimum glass area of no less than 10% of the floor area of the room. Day light and air may not be borrow from another room	Compliance achieved
4D-2 Apartment Size + layout	Habitable room depths are limited to a maximum of 2.5 x the ceiling height. Open plan layouts (where living, dining and Kitchen are combined habitable room depth form the window is 8m	Compliance achieved
4D-3 Apartment Size + layout	Master bedrooms have a minimum area of 10m2 and other bedrooms 9m2 (excluding wardrobe space).	Compliance achieved
	Bedrooms have a minimum dimension of 3m (excluding wardrobe space).	Compliance achieved
	Living rooms or combined living/dining rooms have a minimum width of:	Compliance achieved

23th August 2018

Council of Submission:

Liverpool City Council
Ground floor, 33 Moore street
Liverpool, NSW 2170

Re:

Ironbark – 30-38 Ironbark Avenue, Casula, Nsw 2170

SEPP 65 Design Statement

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 principals as set out in Part 1 of the ‘State Environmental Planning Policy No.65- Design Quality of Residential Apartment Development’;

I have provided further detail on the Designs compliance with all ten of the principals in SEPP 65 Design Compliance Table accompanying this development application

Yours Faithfully



Ian Lim
Senior Design Architect
Registration No: 8473 (NSW)



DKO