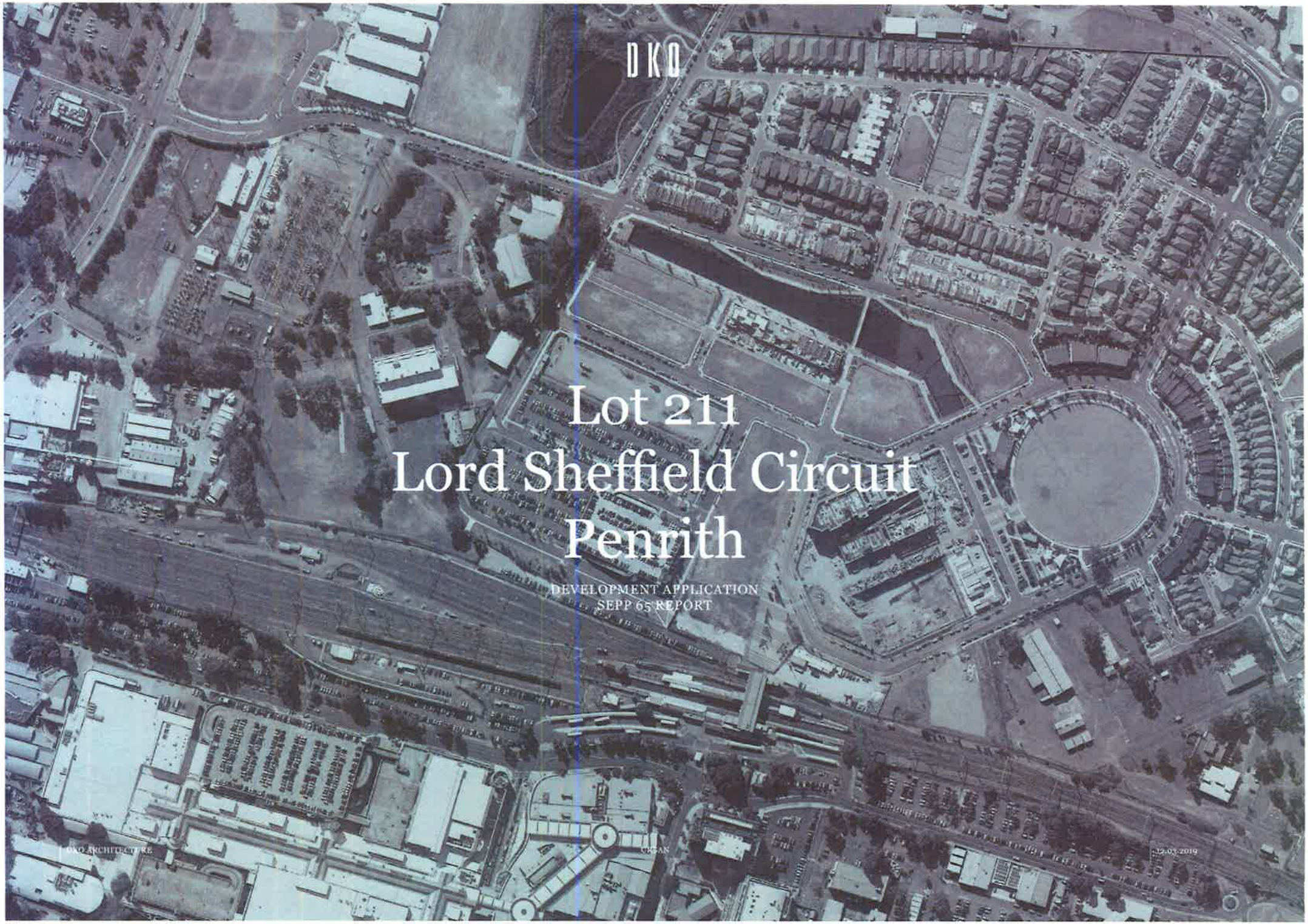


DKO

Lot 211
Lord Sheffield Circuit
Penrith

DEVELOPMENT APPLICATION
SEPP 65 REPORT

CONTENTS

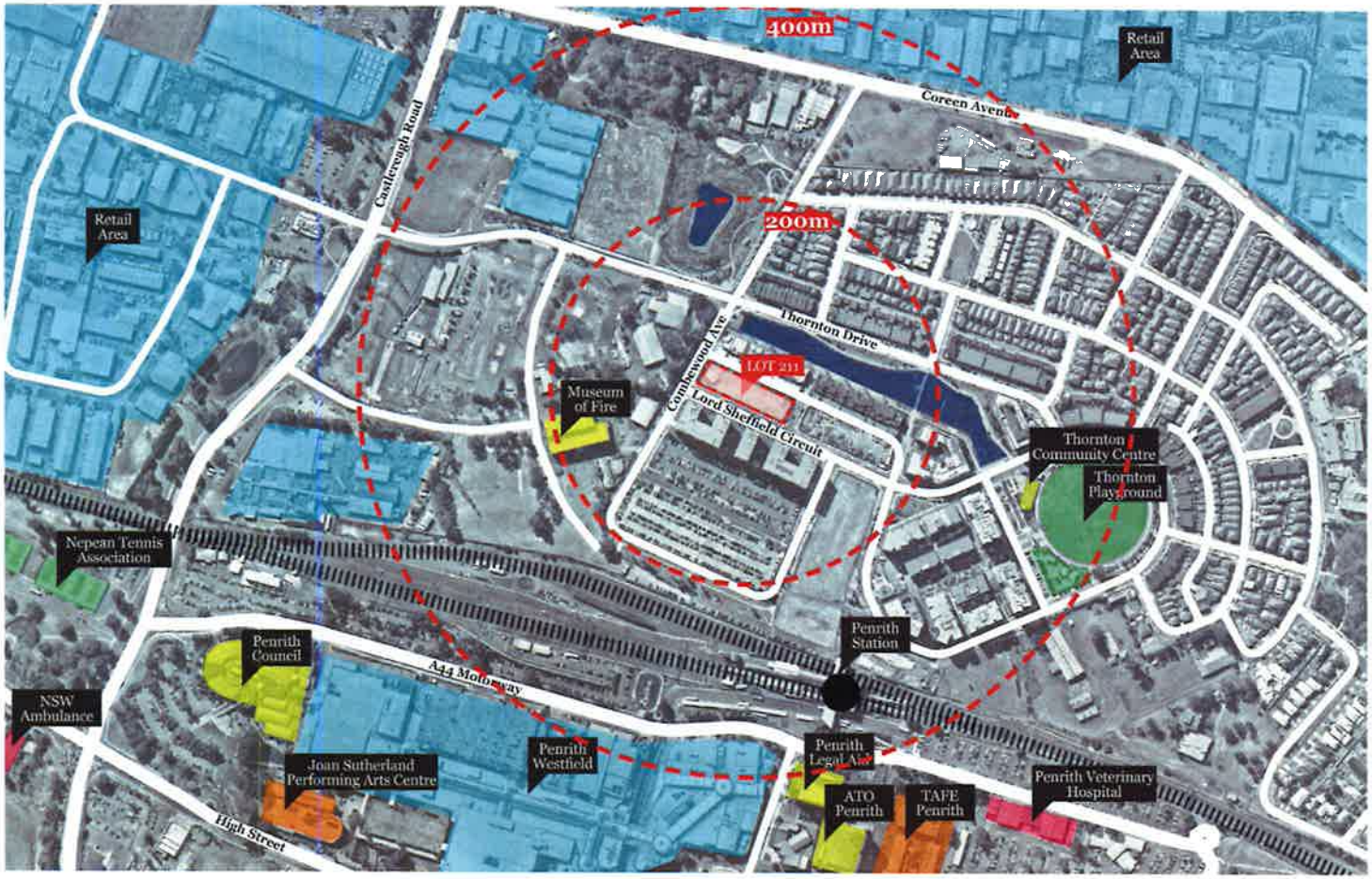
The development responds intelligently and sensitively to its location and future urban context. The role of DKO's architecture is to mediate between the existing condition and the future urban context.

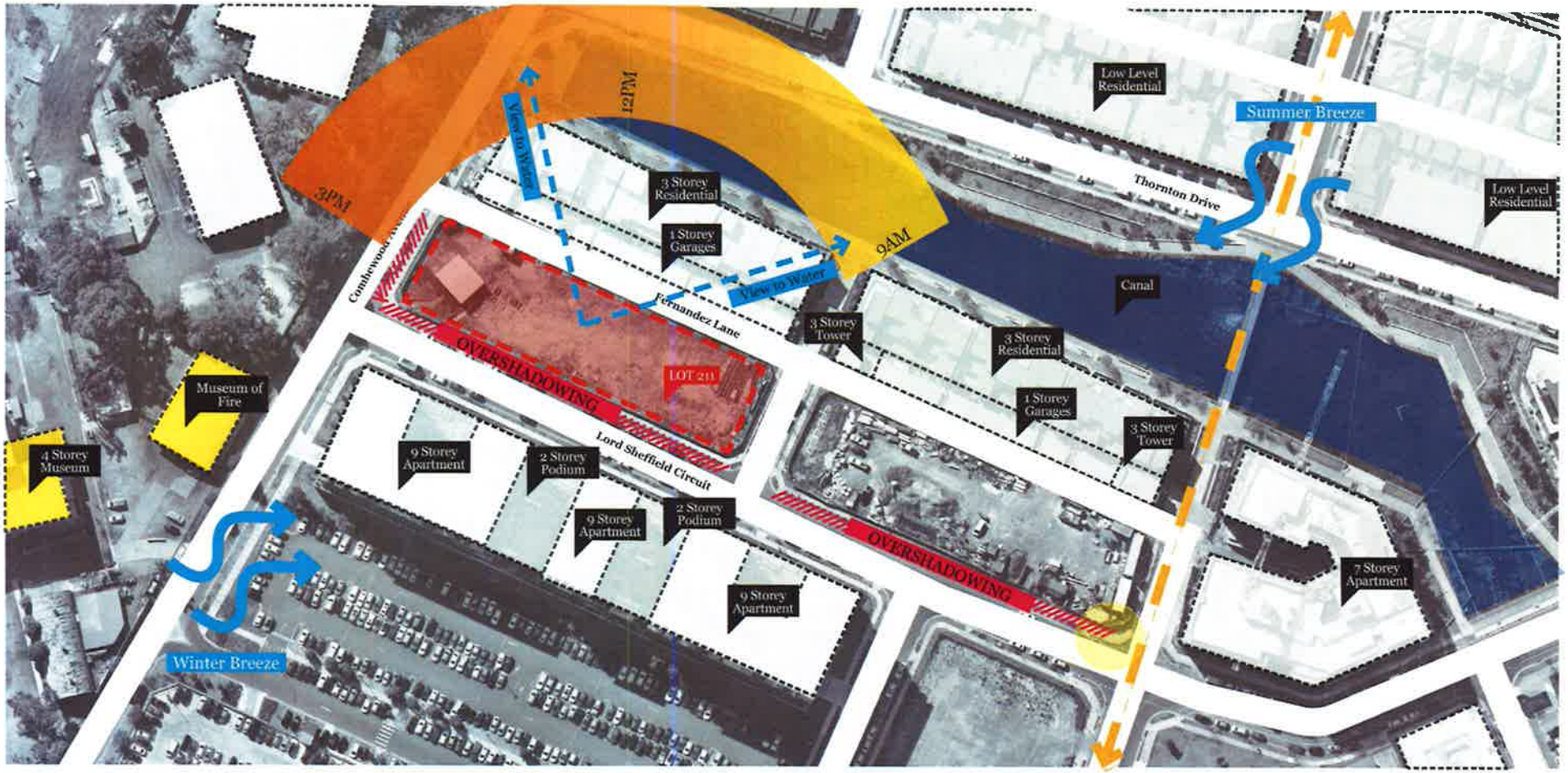
As Penrith evolves further to meet changing conditions, it is vital that its architecture and built fabric changes in order to preserve and improve on its identity while responding to the needs of a new generation.

The subject site is within the growing suburb of Penrith of Penrith City Council. An area that will undergo a significant transformation in terms of urban density. The precinct encompasses both existing and planned public transport connections that will help provide a diverse and sustainable community.

This urban design report has been prepared in support of the submitted planning proposal. It is intended to supplement the Sepp65 Report and assist council in determining the submitted development application.

The report evaluates the site in relation to the proposed architecture, the urban interface, the public realm, building mass and scale, pedestrian and vehicle connectivity, and amenity to the residents and public.




12PM
3PM
9AM
View to Water
View to Water
Low Level Residential
Summer Breeze
Thornton Drive
Low Level Residential
3 Storey Residential
1 Storey Garages
Canal
Fernandez Lane
3 Storey Tower
3 Storey Residential
OVERSHADOWING
LOT 211
Museum of Fire
1 Storey Garages
3 Storey Tower
4 Storey Museum
9 Storey Apartment
2 Storey Podium
Lord Sheffield Circuit
9 Storey Apartment
2 Storey Podium
OVERSHADOWING
7 Storey Apartment
9 Storey Apartment
Winter Breeze
Key corner
Connection from train station


1


2


3


4


5


6


1
6
5
4
Subject Site
2
3

Apartment Design Guide (ADG)

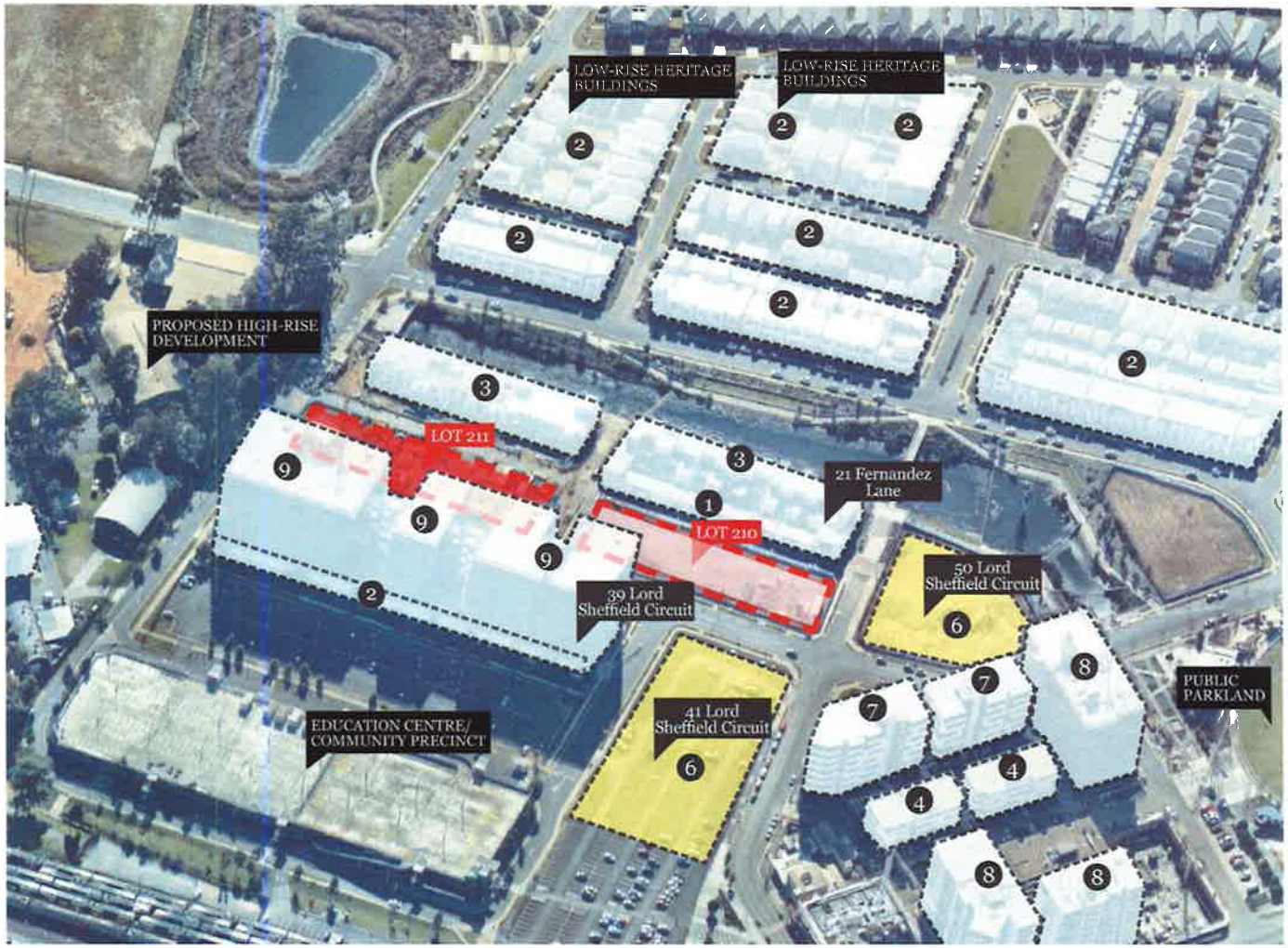
Good design responds and contributes to its context. Context is the key natural and built features of an area, their relationship and the character they create when combined. It also includes social, economic, health and environmental conditions. Responding to context involves identifying the desirable elements of an area's existing or future character. Well designed buildings respond to and enhance the qualities and identity of the area including the adjacent sites, streetscape and neighbourhood. Consideration of local context is important for all sites, including sites in established areas, those undergoing change or identified for change.

Response

The proposal complies with B2 Local Centre Zoning Controls under the Penrith LEP and will therefore complement the desired future character of the area by providing ground-floor retail and various other multi-use communal spaces.

The proposed buildings are highly articulated and have been visually broken down into volumes. The massing will sensitively respond to existing conditions and is aligned with Council's future plans for the area.

The proposed development complies with ADG building separation requirements. The proposal incorporates attractive landscape areas that surround the built form on ground and upper levels. Generous private open spaces are provided to ground floor units as well as upper level terraces as rooftops gardens, allowing for an activated and dynamic street character. The proposed development is compatible with the built form context of the site.



Apartment Design Guide (ADG)
Good design achieves a scale, bulk and height appropriate to the existing or desired future character of the street and surrounding buildings.

Good design also achieves an appropriate built form for a site and the building's purpose in terms of building alignments, proportions, building type, articulation and the manipulation of building elements. Appropriate built form defines the public domain, contributes to the character of streetscapes and parks, including their views and vistas, and provides internal amenity and outlook.

Response

The development responds to its location and future urban context. The role of DKO's architecture is to mediate between the existing conditions and the future urban context.

The bulk and height of the design proposal has been carefully considered to respond to Penrith's transition into a future growth area. As opposed to having a single linear building, the proposed scheme breaks up the massing on site through incorporating multiple buildings. These buildings are designed as distinctive families of building elements that respond sensitively to the architectural character and expression of the existing and proposed surrounding buildings within its vicinity. The visual bulk of the buildings are softened further as a result of material selection, massing techniques and landscaping that is located at the base and upper levels of each building.

Apartment Design Guide (ADG)
Good design achieves a high level of amenity for residents and each apartment, resulting in a density appropriate to the site and its context.

Appropriate densities are consistent with the area's existing or projected population. Appropriate densities can be sustained by existing or proposed infrastructure, public transport, access to jobs, community facilities and the environment.

Response

The proposal delivers a total of 173 dwellings. These apartments range in sizes to promote a diverse mix of unit types that respond to the controls of Penrith City Council.

As part of a developing neighbourhood, the proposed building matches several existing and proposed residential flat buildings around the site around 8-9 storeys.

The proposal takes in consideration factors of overshadowing, amenity and privacy impacts between existing and future buildings, open space patterns, existing vegetation, demand for new public domain elements, variety of lot sizes and shapes and changing streetscape and scale.

The residential density of the proposal is sustainable, suitable, and supports this developing nature. The proposal fits in the context and possesses the ability to be supported by existing and future infrastructure.

Apartment Design Guide

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

Other elements include recycling and reuse of materials and waste, use of sustainable materials, and deep soil zones for groundwater recharge and vegetation.

Response

The proposed development will reduce the necessity for mechanical heating and cooling with 61% of units being cross ventilated.

The depth of the proposed balconies, ranging from 2 m to 2.5 m to the North contributes to passive solar performance by the balconies of the units above blocking high angle hot summer sun and allowing low angle winter sun to penetrate the unit. Screening and shading devices are also incorporated into the facades to provide additional control over solar access.

The accessibility of the site to public transport decreases the carbon footprint of the development by reducing the need for private motor vehicle usage. Providing a viable alternative is vital to changing patterns of travel behaviour.

Minimising the apartments that receive no solar access to only 14% reduces the heating energy load in winter.

Low-energy Lighting

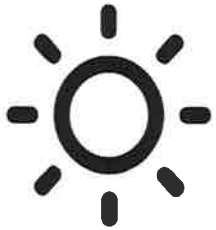
Low-energy lighting will be used throughout the building. Energy Efficient water heaters will also be integrated into the development. Additionally, the proposal will use water saving fixtures and fittings as well as energy efficient lighting, air-conditioning, lifts, and appliances to minimise water and energy loads.

Rainwater Collection

All rainwater on site will be captured and stored in water tanks located on-site. These water tanks will be plumbed to garden taps and landscape irrigation to support public and private gardens throughout the development.

Sustainability & Accessibility

Being located within a few hundred metres to the train station, the site is quite accesible by public transport. By incorporating bicycle parking on the ground floor of the building, the proposal aims to reduce its carbon footprint by encouraging residents and visitors travel by bicycle and public transport.



Passive Solar Design

Apartments subjected to excessive solar gain and heat loss will be recessed behind balconies to minimise summer solar heat gain and shield apartments from harsh summer sun. Winter daylight will penetrate deep into the interior of by ways of balconies.

Apartment Design Guide (ADG)

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.

Response

Landscaping of private and communal open spaces wrap around the building at ground level to provide a visual buffer that enhances the streetscape character and establishes a clearly identifiable, engaging and welcoming entry for residents.

The podium top is utilised for a generous double-storey communal open space on levels 7-8 with a variety of uses that caters for a diverse range of residents and activity levels. The space is divided into three main zones; passive zone, recreation zone and outdoor wellness.

The final layer of green spaces in the proposed design is a series of private rooftop retreat gardens which are accessed by and associated with the dwellings below them.

Level 7

Level 8

Level 7 Communal Open Space: 392 sqm

Level 8 Communal Open Space: 460 sqm

COMMUNAL OPEN SPACE - LOT 211
Level 7: 392 sqm
Level 8: 460 sqm
TOTAL: 852
27.6% of the Site Area

Calculated on Lot 211 Site Area of 3,084m²

DEEP SOIL - LOT 211
Basement Level: 646sqm
TOTAL:
20.9% of the Site Area

Calculated on Lot 211 Site Area of 3,084m²

Apartment Design Guide (ADG)
Good design positively influences internal and external amenity for residents and neighbours. Achieving good amenity contributes to positive living environments and resident well being.
Good amenity combines appropriate room dimensions and shapes, access to sunlight, natural ventilation, outlook, visual and acoustic privacy, storage, indoor and outdoor space, efficient layouts and service areas, and ease of access for all age groups and degrees of mobility.

Response

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 for residential, recycling and waste storage areas are provided in the basement.

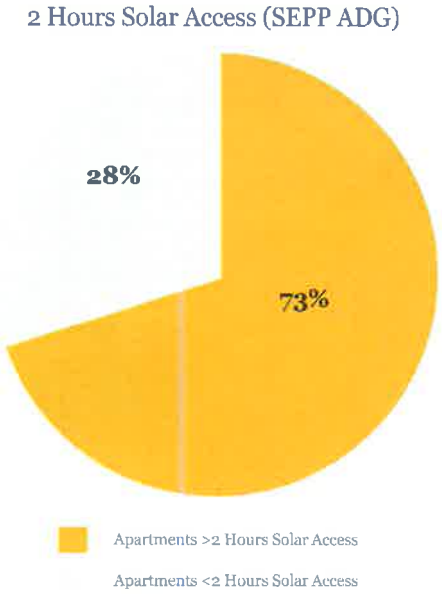
Generally the proposed development is aligned on a east-west axis to provide the maximum amenity to a majority of the dwellings, with most units having northern or eastern aspect. The proposal maximises the daylight to each unit. The proportion of all units that achieve minimum 2 hours of sunlight into living room windows between 9am and 3pm during mid winter complies with constraints outlined in the ADG. In terms of natural cross ventilation, the development reaches a compliance at 61%. Balconies are designed to provide usable outdoor space while maintaining privacy between units as sufficient private open spaces ensure good solar penetration and ventilation to each unit.

The design proposal complies with SEPP 65 criteria and thus provides a high level of amenity to all apartments.

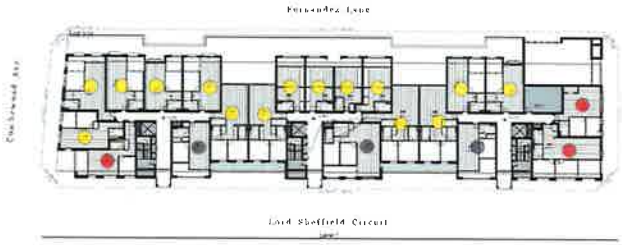
Solar Access

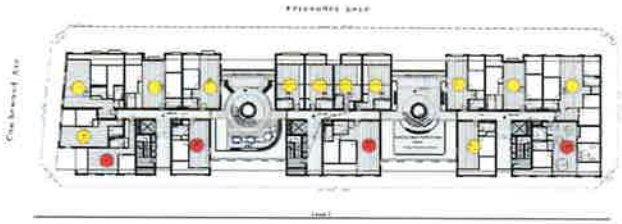
The proposed development is designed to provide the maximum amenity to a majority of the dwellings, with most units possessing northern-eastern aspects.

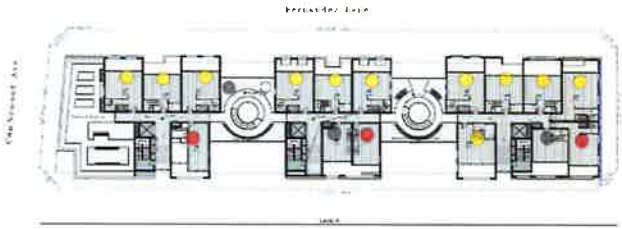
The design maximises the amount of natural daylight received by each unit. The proportion of all units that achieve a minimum 2 hours of sunlight into living room windows between 9 am and 3 pm during mid winter is 73%



Lot 211

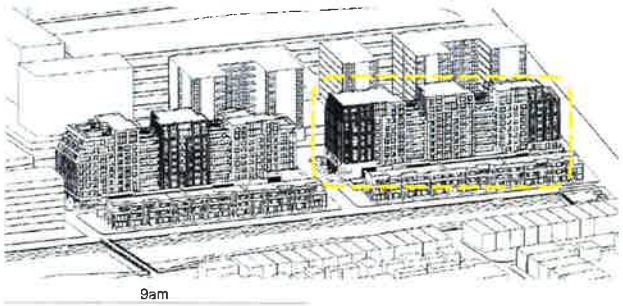




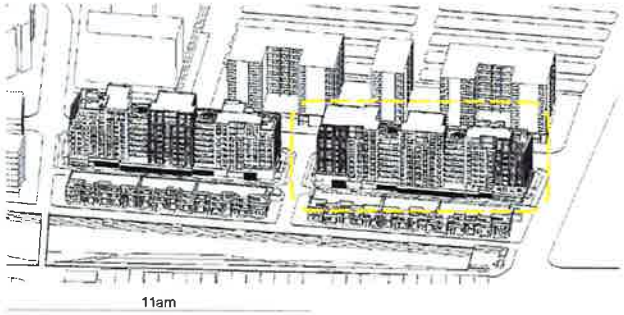


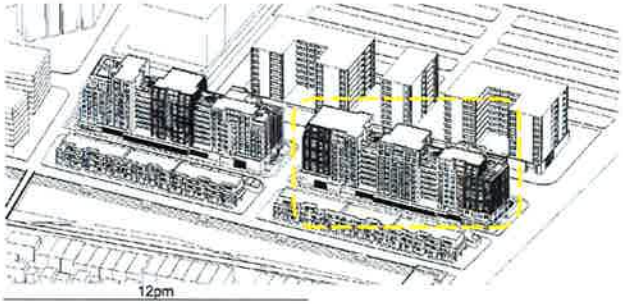
- 2+ HR SOLAR ACCESS
- <2 HR SOLAR ACCESS
- 0 HR SOLAR ACCESS

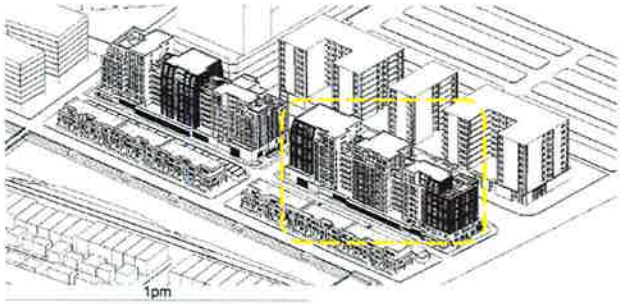
SOLAR ACCESS CALCULATION		NO SOLAR ACCESS CALCULATION	
Ground Floor	3/10	Ground Floor	5/11
Level 01	15/21	Level 01	3/21
Level 02-06	(17/22)x5	Level 02-06	(3/22)x5
Level 07	12/16	Level 07	0/16
Level 08	11/16	Level 08	2/16
Total	**126/173 (73%)**	**Total**	**25/173 (14%)**

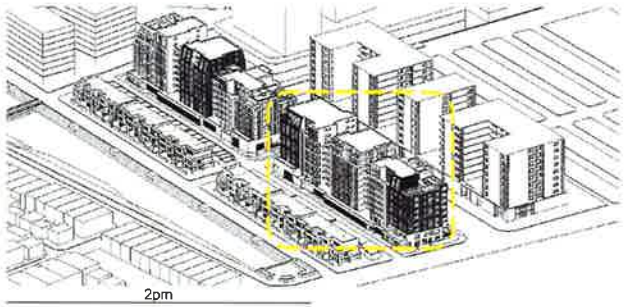

9am


10am


11am


12pm


1pm


2pm


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..

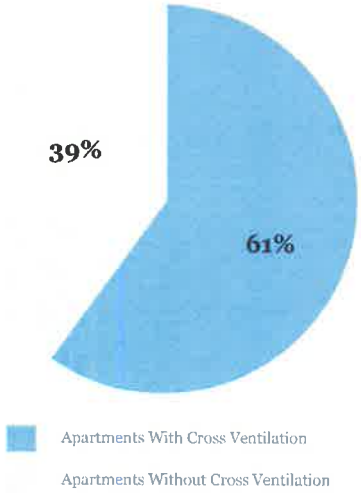
Response

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.

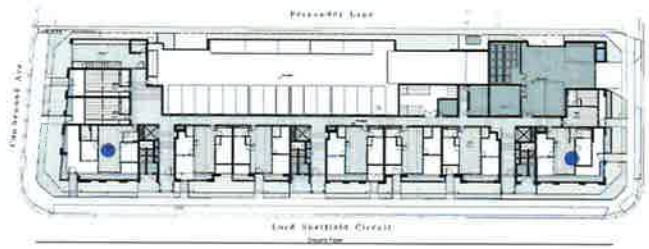
Outlined by the State Environmental Planning Policy No.65 - Apartment Design Guide, a minimum of 61% of total apartments within the first 9 storeys (173 units) require cross-ventilation.

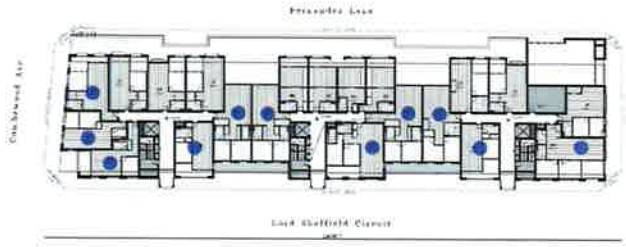
The building's orientation take full advantage of prevailing breezes to maximize the movement of fresh air to create a comfortable indoor environment. Large openable windows and doors are to be effectively incorporated to reduce the need for mechanical ventilation and air conditioning.

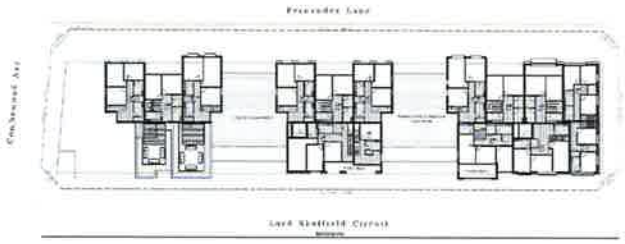
Cross Ventilated Apartments (SEPP ADG)



Lot 211





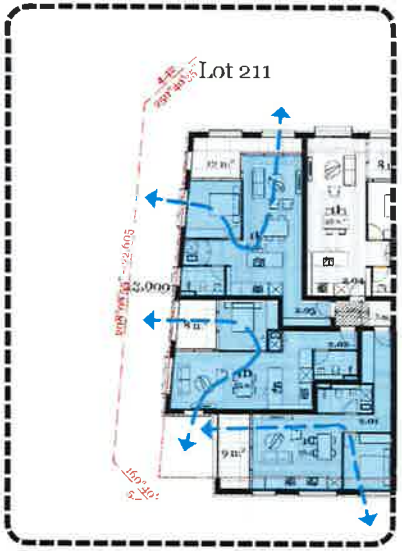


NATURALLY CROSS-VENTILATED UNITS

CROSS VENTILATION CALCULATION

Ground Floor	2/10
Level 01	11/21
Level 02-06	(14/22)x5
Level 07	12/16
Level 08	10/16
Total	**105/173 (61%)**

CROSS VENTILATION FLOW DIAGRAM
Building Lot 210 - Typical level (Level 2)



Response

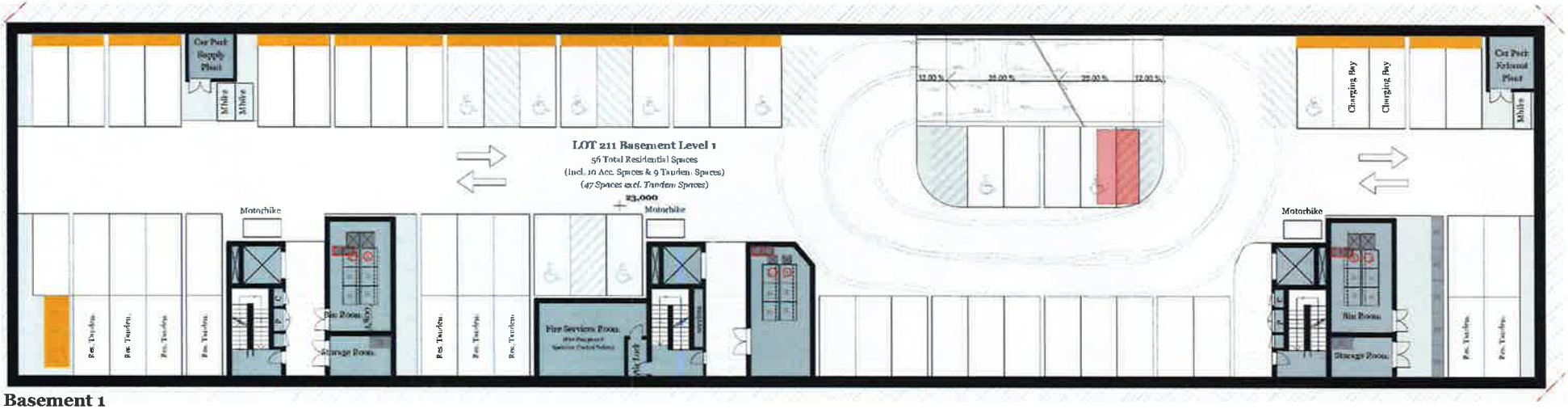
A minimum 6m³ of storage is required for 1 Bedroom Units. 8m³ for 2 Bedroom Units and 10m³ for 3 Bedroom Units.

A minimum of 50% of the storage required is provided in each unit through storage cupboards with the remainder 50% provided in storage cages located within the basement, easily accessible from the lift cores.

Studio Unit

1 Bedroom Unit

2 Bedroom Unit



Basement 1

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

The design proposal provides clear and well defined lobby entries coming off Lord Sheffield Circuit. These lobby entries will have clear and unobstructed views from the main street and will be secure, lockable and well-lit for the safety of the residents.

Along with the increased density in the area, a variety of landscaped areas are provided to increase the passive surveillance and safety to the development. Integrated activities in the landscape and large lobbies provide a vibrant area for fostering safety and interaction.

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.

All areas including entries and communal open spaces are highly visible providing great passive surveillance. Corner balconies and windows provide a wider degree of casual surveillance along the street and open spaces across the site.

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

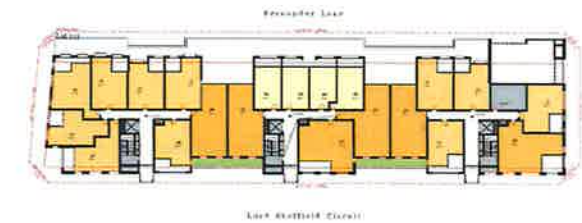
The proposed development has been designed with a high level of social contribution in mind, not only to its residents, but to the local community.

On ground level, safe and activated areas for visitors and residents to meet and interact will be provided. Below, basement levels will have a residential garage that also serves as a space for residential storage.

The communal gardens on Level 7 & 8 provide Family BBQ areas and other multi-use spaces, which are a common asset shared amongst the development's community. These shared facilities and spaces will foster social interactions between residents and promote a real sense of community.

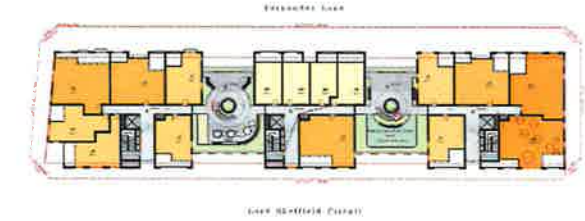
The proposal includes a variety of different housing typologies that will be offered in different sizes and layouts. The mix in housing typologies will cater for range of households and help diversify the residents of the development.

Ground Floor 1:400



Level 1 1:400

Level 2-6 1:400



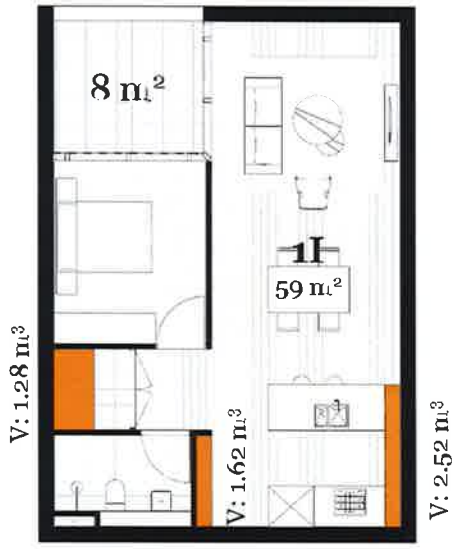
Level 7 1:400

Level 8 1:400

UNIT MIX

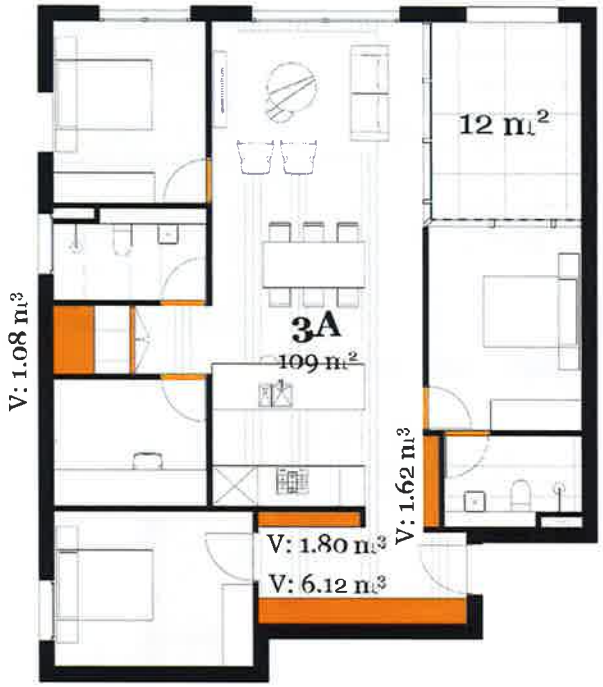
STUDIO	31/173=18%
1 BEDROOM	79/173=46%
2 BEDROOM	47/173=27%
3 BEDROOM	16/173=9%

Typical Studio Apartment
~41m²



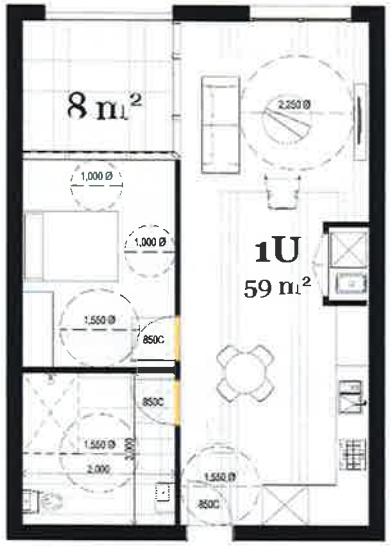
Typical 1 Bedroom Apartment
~59m²

Typical 2 Bedroom Apartment
~85m²



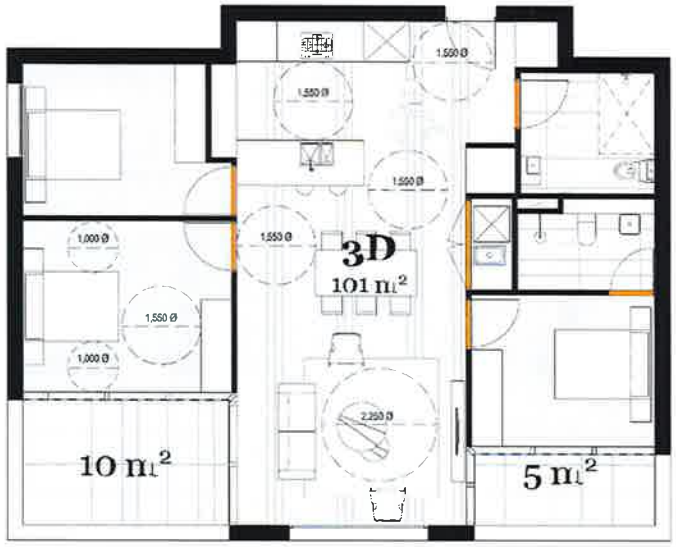
Typical 3 Bedroom Apartment
~109m²

Pre-Adaptable 1B Unit



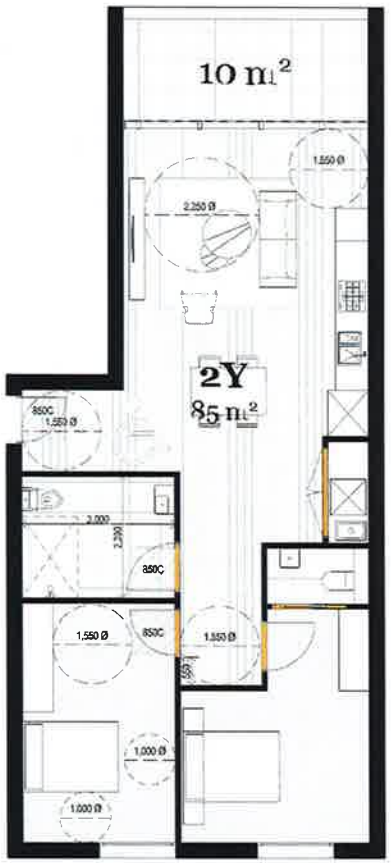
Post-Adaptable 1B Unit

Pre-Adaptable 3B Unit



Post-Adaptable 3B Unit

Pre-Adaptable 2B Unit



Post-Adaptable 2B Unit

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 9 storey building surrounded by landscaped gardens and communal open space across the ground floor and levels 7 and 8. The proposal establishes a clearly identifiable, engaging and welcoming main entrance for residents located on Lord Sheffield Circuit. Motor vehicle and service access is off the laneway accessed via Lord Sheffield Circuit, hidden from street view. This ramp entrance is at the left side of the site.

The massing of the proposal has been broken into several linear 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 screens create a visually dynamic and articulated façade.

Materials, Colours and Textures

The colour choices utilise different materials for different portions of the broken up massing, creating strong contrast and sculpting the building to give a sense of variety to the facade presentation. The façade is composed primarily of Pre-cast Concete of varying tones with highlights of black metal screens and window hoods. The brick element contributes to the texture and materiality of the façade and responds to the general character of the surrounding buildings.

White CFC

Bronze Metal Finish

Metal Window Hoods

Brick

E East Elevation_Lot 211 1:200

External Finishes Key

N North Elevation_ Lot 211 1:200

W West Elevation_Lot 211 1:200

External Finishes Key

EF-01 Reclaimed Brick
EF-02 Dark Brick
EF-03 White Lightweight finish
EF-04 Grey Lightweight finish
EF-05 Black Lightweight finish
EF-06 Light Grey Metal finish
EF-07 Bronze Metal finish
EF-08 Black Powdercoat finish
EF-09 Glass

S South Elevation_Lot 211 1:200

3.0 - SEPP 65 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: 3,084 m² Required Communal open space: 771 m² (25%) Proposed Communal open space: 880 ² (28 5%) Communal open space is provided at both the Level 7 and the level 8. A high level of solar access is achieved to both communal open spaces achieving a high level of amenity. Compliance achieved
	Developments achieve a minimum of 50% direct sunlight to the principal usable part of the communal open space for a minimum of 2 hours between 9 am and 3 pm on 21 June (mid-winter)	Communal open space on level 8 and majority of communal space on level 7 are receiving the required solar access between 9am and 3pm on June 21st. 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: 3,084 m² Required Deep soil: 216 m² (7%) Proposed deep soil zone: 524 m² (17%) 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 • 9 meters between non-habitable rooms	Compliance achieved.
3J Bicycle and Car Parking	The maximum car parking rates are as follows: Residential 0.5 Spaces per 1Bed 0.7 Spaces per 2Bed 1.2 Spaces per 3Bed Visitors: On street parking	Car parking rates comply with the requirements of the KMS parking rates. Parking rates do not exceed the maximum and minimum rates specified. Refer to Yield table for breakdown of car parking spaces. 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: 121 Proposed: 126 (73%) Compliance achieved

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.	A maximum of 25 apartments is provided that does not receive solar access. Proposed: 25 (14%) Compliance is achieved
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: 173 Cross Ventilated Apartments: 105/173 apartments (61%) Compliance achieved The overall depth of the proposed cross over or cross through apartments does not exceed 18m, maximum depth of a cross through apartment is 14 m 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: • 70m² for two bedrooms; and • 90m² for three bedrooms. Add an 5m² for additional bathrooms Add an 12m² for additional bedrooms 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 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). Bedrooms have a minimum dimension of 3m (excluding wardrobe space)	Compliance achieved Compliance achieved

Table 1	Summary of compliance with the key Apartment Design Guide 'Design Criteria'	
Control	ADG Design Criteria	Compliance
	Living rooms or combined living/dining rooms have a minimum width of: • 3.6m for studio and 1 bedroom apartments • 4m for 2 and 3 bedroom apartments The width of cross-over or cross-through apartments are at least 4m internally to avoid deep narrow apartment layouts.	Compliance achieved 3.6m and 4.0m are provided for 1 bed apartments 4.0m minimum provided for 2 & 3 bed apartments Compliance achieved Minimum width of cross over apartments are 4m
4E Private open space and balconies	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 Ground level apartments should contain a minimum of 15m² of open space, with a minimum dimension in one direction of 3m.	Compliance achieved Compliance achieved Ground level apartments and apartments located adjacent to the podium contain a minimum of 15m2 of private open space with minimum dimension of 3m
4F Common circulation and spaces	The maximum number of apartments off a circulation core on a single level is eight. For buildings of 10 storeys and over, the maximum number of apartments sharing a single lift is 40.	Compliance achieved Maximum number of apartments off a core is 8 units Not Applicable
4G Storage	• 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 10m² of storage area	Where storage is not wholly provided within the unit itself, the remainder is provided in the carpark via storage cages. In the instance where storage cages are required, at least 50% of the apartment's storage is provided within the apartment itself. The total combined storage areas provided for each dwelling meets the minimum areas required. Compliance achieved

5th April 2019

Penrith City Council

601 High Street,

Penrith

NSW 2750

Re: Lord Sheffield Circuit Penrith.

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 Design's compliance with all nine of the principals in SEPP 65 Design Compliance Table accompanying this development application

Yours Faithfully

Nick Byrne
Director
Registration No: 7806 (NSW)