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# DESIGN EXCELLENCE

## RESPONSE TO STATE DESIGN REVIEW PANEL COMMENTS


CORNER OF PACIFIC HIGHWAY, FALCON AND ALEXANDER STREETS, CROWS NEST NSW  
22.03.2024

|

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We acknowledge the Cammeraygal people of the Guringai Tribe of the Eora Nation, the traditional owners of the lands and waters around Crows Nest. We acknowledge their cultures, ancestors and Elders, and thank them for their ongoing custodianship.

Artwork by Yukupin



# 1.01 DESIGNING WITH COUNTRY

**Crows Nest is part of the traditional lands of the Cammeraygal people of the Guringai Tribe of the Eora Nation; the proposal uses initiatives to celebrate and strengthen culture**

## BRIEF HISTORICAL OVERVIEW

Their name Cammeraygal, derives from the Aboriginal word “camara” meaning “camp” or “meeting place” and “gal,” which signifies people. This suggests that they had cultural significance as a gathering point for Aboriginal communities.

The lifestyle of the Cammeraygal people was intimately connected with the natural environment. They were skilled hunters and gathers, relying on the abundance of resources provided by land and sea.

The proposal uses an integrated public art strategy to strengthen culture and connect to Country.

The clan relied on fishing mainly done by women, hunting and gathering for sustenance, utilising tools such as spears, nets, specially designed fish hooks, and boomerangs. The Sydney region provided a diverse range of flora and fauna allowing them to maintain a varied diet.

Their cultural practices and traditions were passed down through generations, ensuring the preservation of their heritage. The Cammeraygal people had a rich spiritual and ceremonial life which included rituals, ceremonies, and dance. Early colonist records in pictorial observations and texts wrote of their social status as leaders of ceremony within the harbour area.

In 1790 Governor Phillip reported

*'... About the north – west part of this harbour there is a tribe which is mentioned as being very powerful, either from their numbers or the abilities of their chief. This district is*

*called camera, the head of the tribe is named Cammerragal, by which name the men of that tribe are distinguished the opposite shore called Wallumetta, and the tribe, Wallumedgal ...'*

They had a profound spiritual connection to the land, believing that their ancestors created the landscape and endowed it with significant meaning. Their stories and history were recorded in intricate artwork, including rock engravings and petroglyphs which were re-carved through many generations.

This rich testament of their culture and their connection to the land can still be found in physical evidence around the North Shore in fire-charred caves, stencilled hand painted artwork on stone, engravings of animals and weapons on rocks, and middens of whitened seashells from ancient meals.

When the first European settlers arrived in the late 18th century, the lives of the Cammeraygal people were forever changed. Disease, displacement, and violence resulted in a significant decline in their population and cultural practices. Many Aboriginal people were forced off their lands and into missions or reserves, disrupting their traditional way of life. Today sadly, few if any of the Aboriginal people living in the Northern suburbs can trace their ancestry to Gamarragal tribe due to the overwhelming dissemination of this clan through colonisation.

Significant Aboriginal historical figures from early years of contact included:

- Bennelong and Barangaroo

- Mosquito
- Patyegarang

## THE PROPOSAL

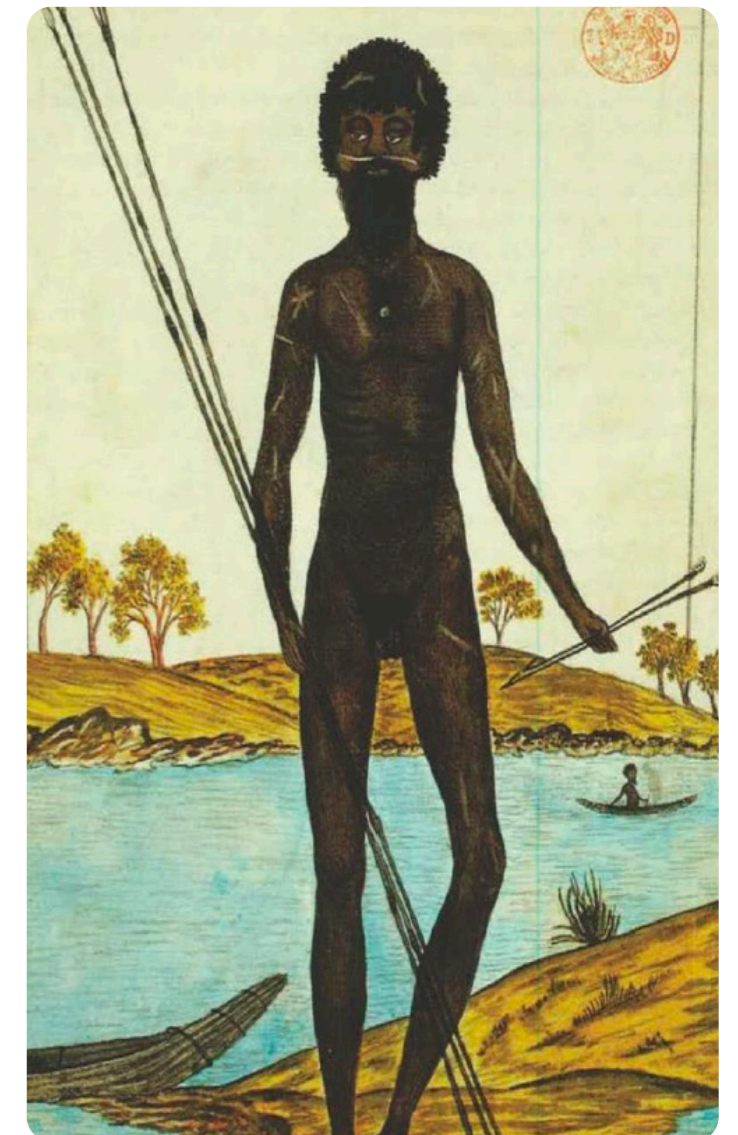
The ambition of establishing a connection with Country for all individuals involved in implementing government initiatives is to adopt and embrace the following remarks:

*'Through our projects, we commit to helping to support the health and wellbeing of Country by valuing, respecting, and being guided by Aboriginal people, who know that if we care for Country – it will care for us.'*

In response to this requirement, a First Nations Artist - Danny & Jamie Eastwood have been engaged by DEICORP to produce artworks and a Connecting to Country Aboriginal Heritage Interpretation Strategy.

This is described in the 'Connection to Country' Report.

Thomas Watling's depiction of a Cammeraygal man



# 1.02 DESIGN OPTIONS

## ALTERNATIVE DESIGN OPTIONS

VIEW NORTH ALONG PACIFIC HIGHWAY



OPTION 1 - BIFURCATED OVAL



OPTION 2 - INFLECTED TRIANGLE



OPTION 3 - Y-SHAPED



OPTION 4 - STEPPED Y



OPTION 5 - 2 BUILDINGS



OPTION 6 - WOVEN



OPTION 7 - INTERLOCKING TOWERS



OPTION 8 - L-SHAPED (TOWER & TAIL)



OPTION 9 - STEPPED

# 1.02 DESIGN OPTIONS

## ALTERNATIVE DESIGN OPTIONS

VIEW SOUTH ALONG PACIFIC HIGHWAY



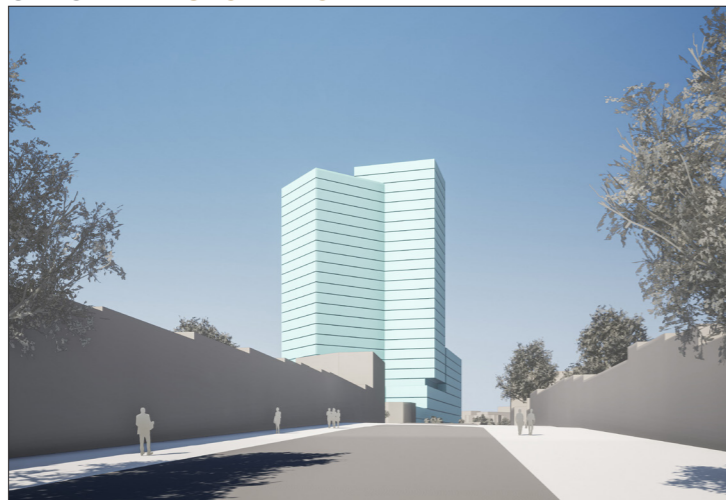
OPTION 1 - BIFURCATED OVAL



OPTION 2 - INFLECTED TRIANGLE



OPTION 3 - Y-SHAPED



OPTION 4 - STEPPED Y



OPTION 5 - 2 BUILDINGS



OPTION 6 - WOVEN



OPTION 7 - INTERLOCKING TOWERS



OPTION 8 - L-SHAPED (TOWER & TAIL)

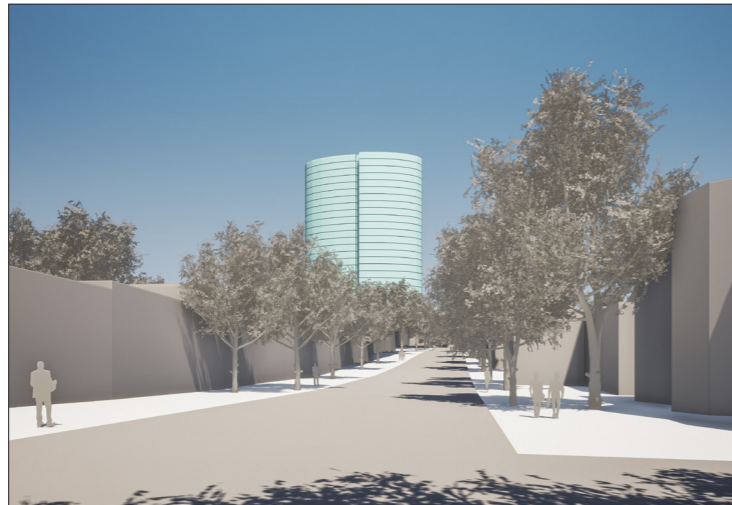


OPTION 9 - STEPPED

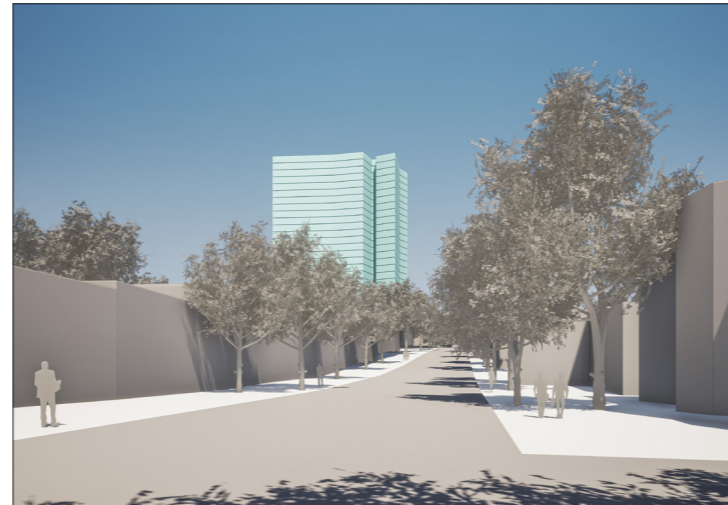
# 1.02 DESIGN OPTIONS

## ALTERNATIVE DESIGN OPTIONS

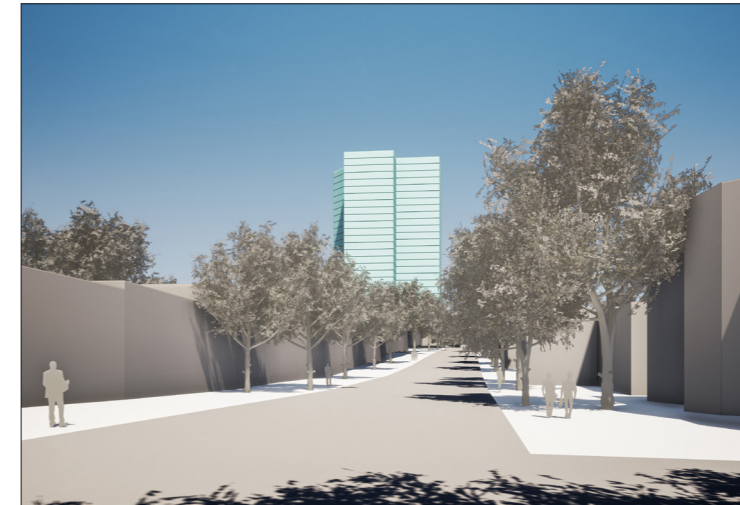
VIEW WEST ALONG FALCON STREET



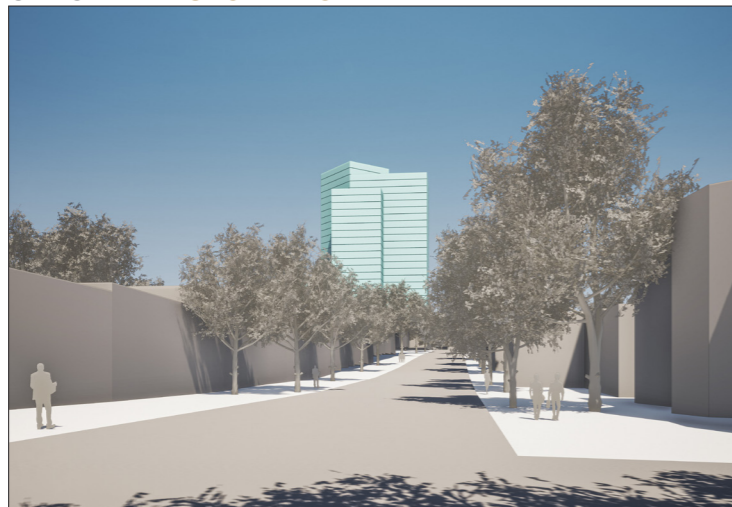
OPTION 1 - BIFURCATED OVAL



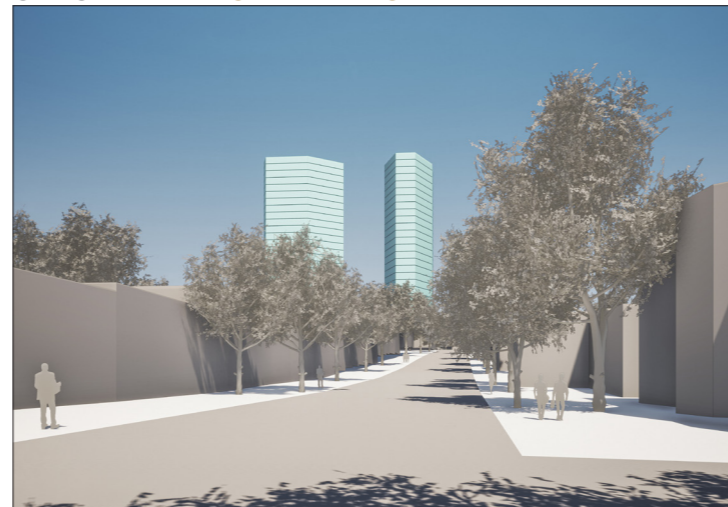
OPTION 2 - INFLECTED TRIANGLE



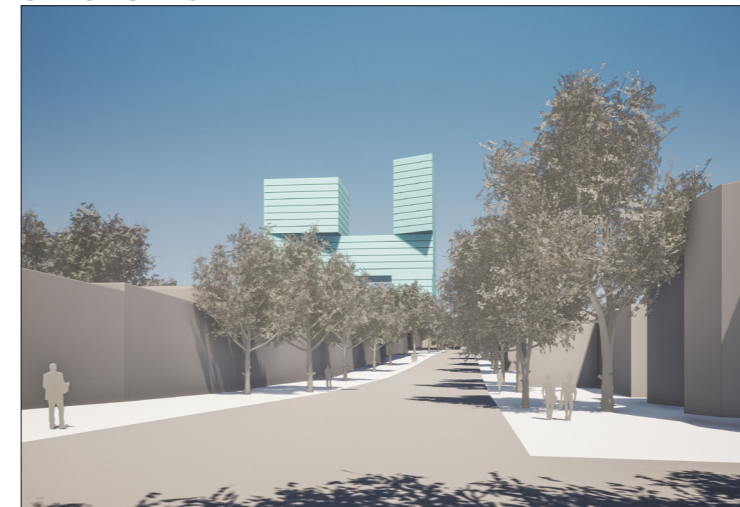
OPTION 3 - Y-SHAPED



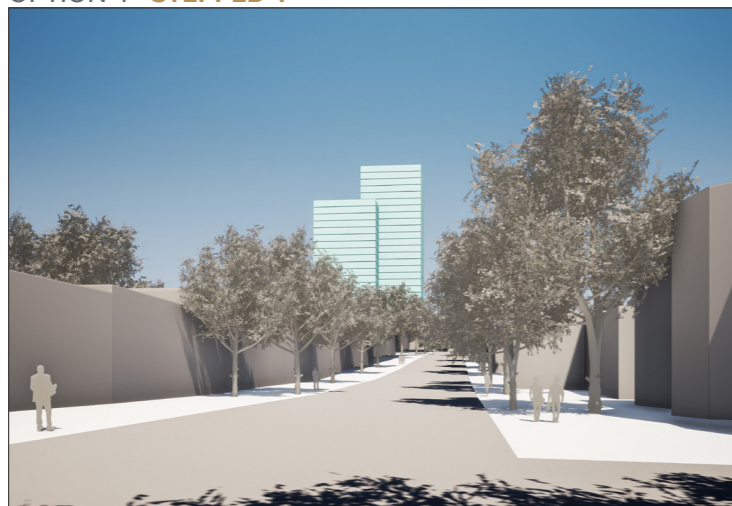
OPTION 4 - STEPPED Y



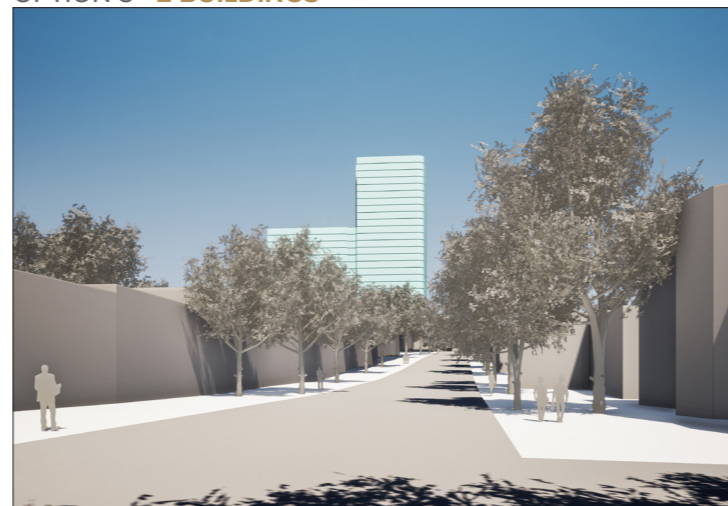
OPTION 5 - 2 BUILDINGS



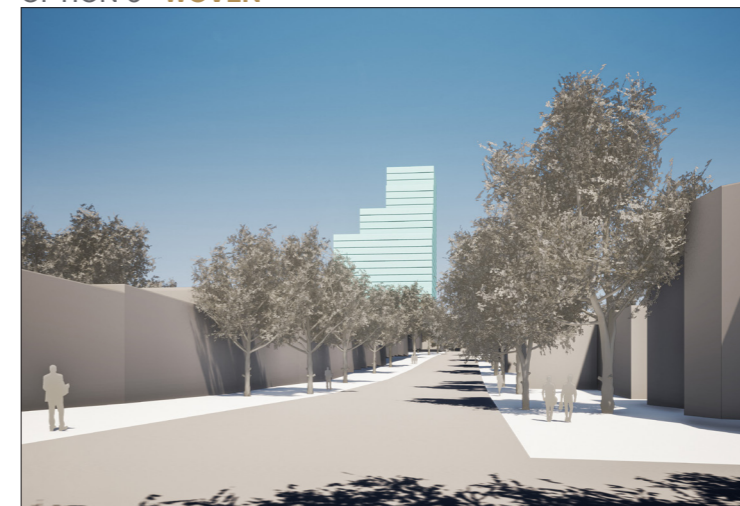
OPTION 6 - WOVEN



OPTION 7 - INTERLOCKING TOWERS



OPTION 8 - L-SHAPED (TOWER & TAIL)



OPTION 9 - STEPPED

# 1.02 DESIGN OPTIONS - CGIS

## ALTERNATIVE DESIGN OPTIONS

OPTIONS -

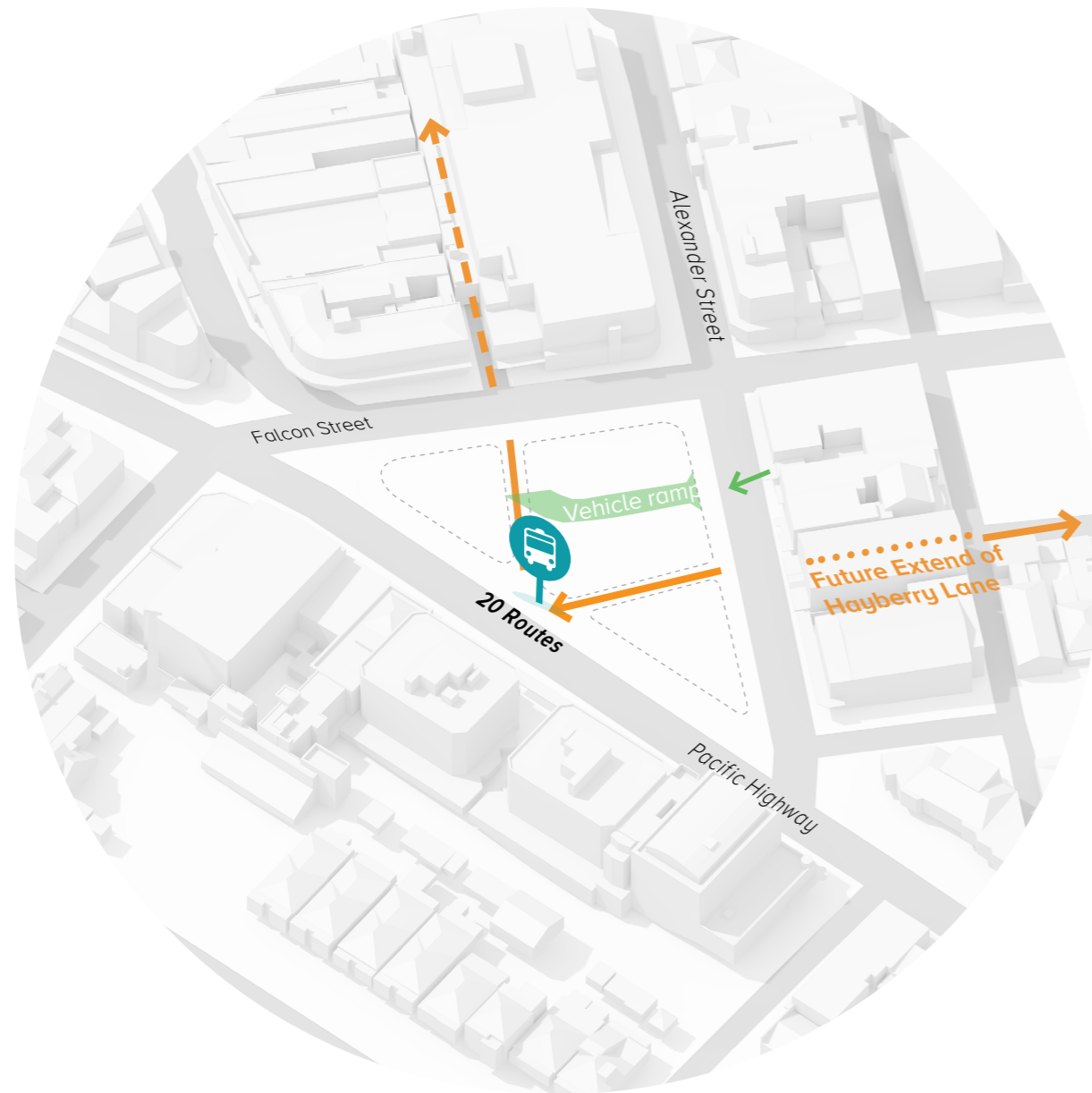


PROPOSED CGI -



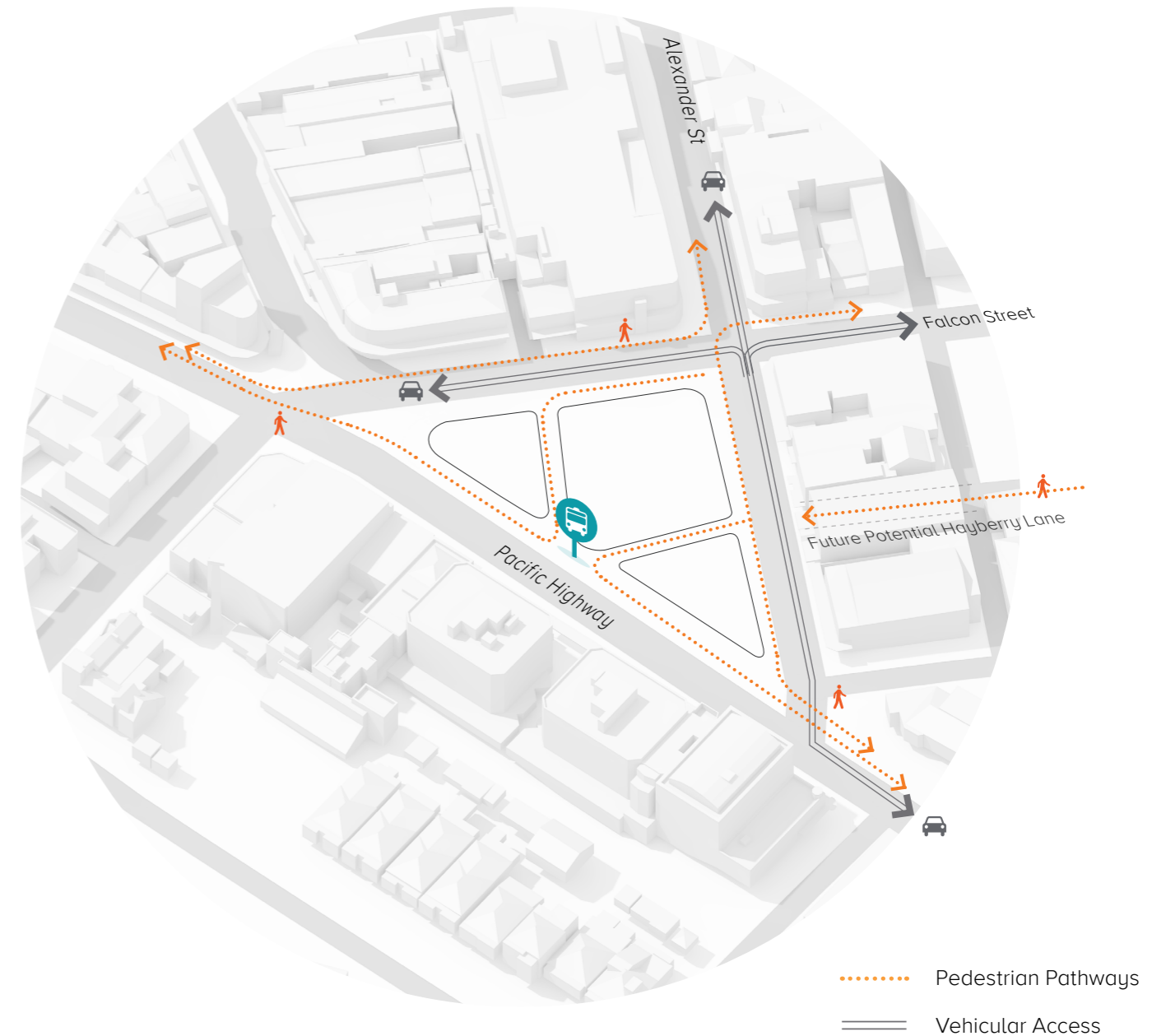
# 1.03 PEDESTRIAN / VEHICLE ACCESS

## BUS NETWORK



The location of the site allows convenient use of public transport via the bus stop, metro station, and St Leonards railway station. Along the Pacific Highway frontage there is an existing bus stop which provides access to over 20 routes to areas including the CBD, Inner West, North Shore, Northern Beaches, and Eastern Suburbs. The proximity to numerous public transport options assists to reduce private car usage.

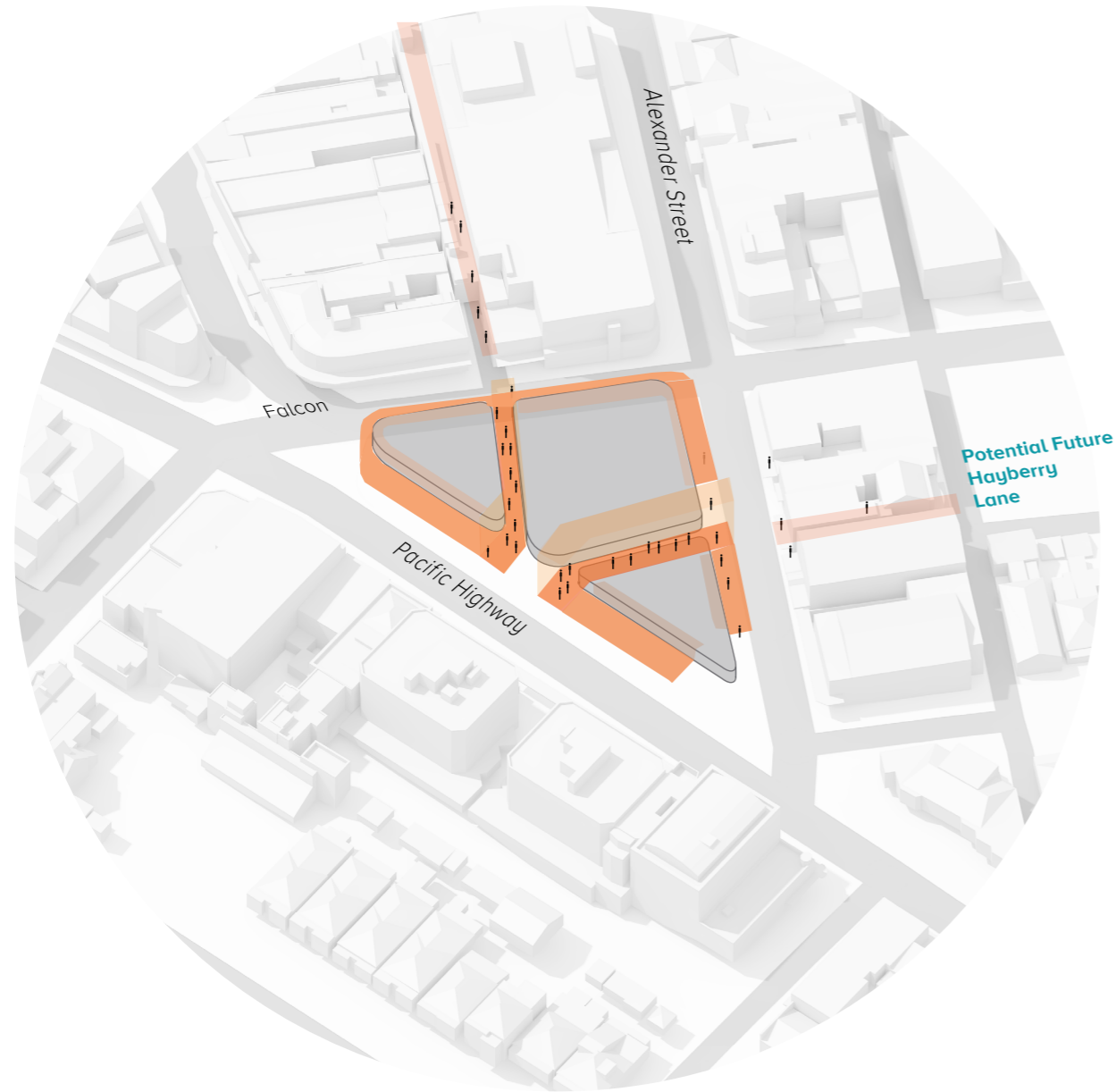
## SUSTAINABLE, WALKABLE & LIVABLE



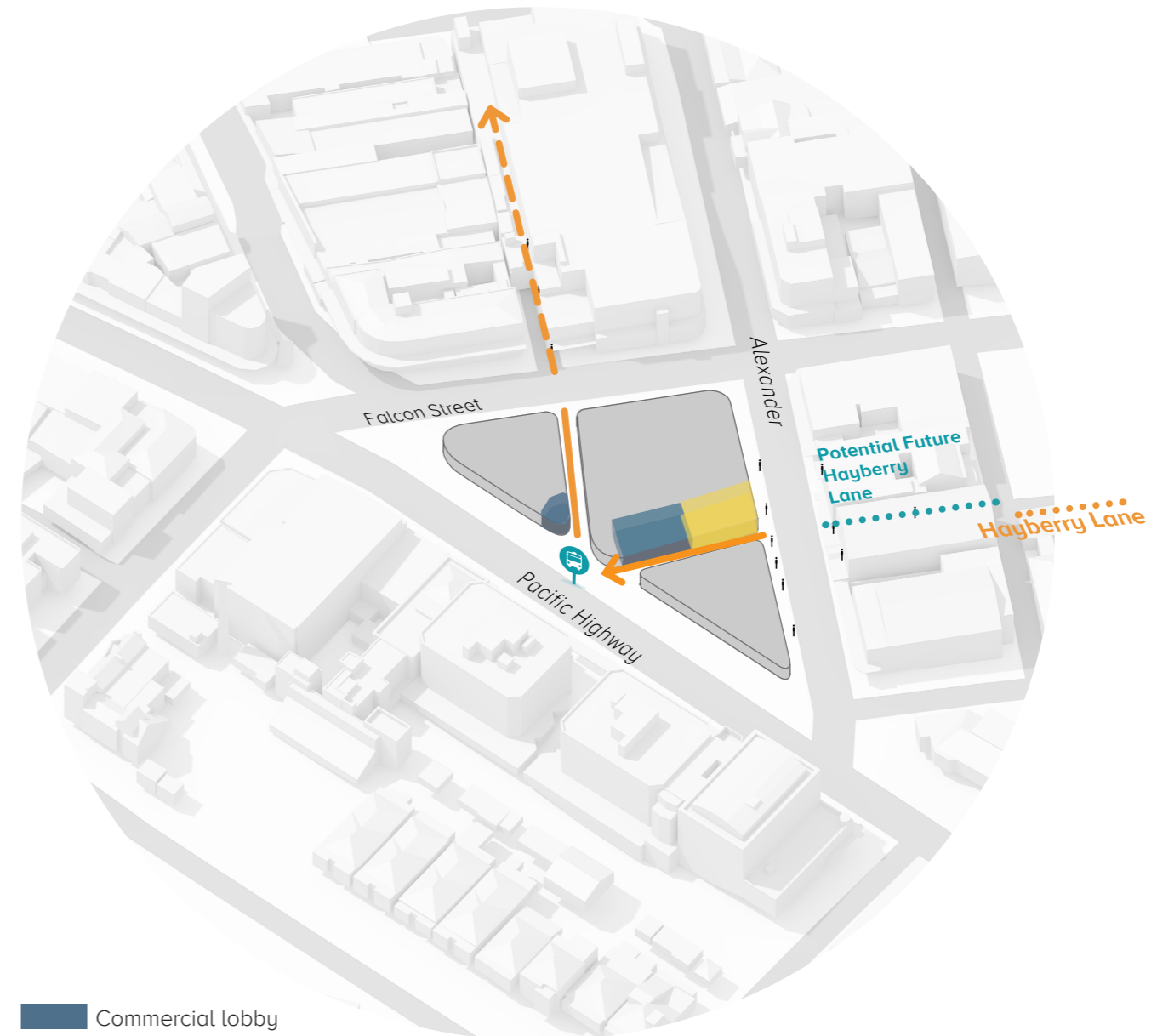
The division of the ground plane includes pedestrian walks connecting the bus stop with desire-lines that align the existing urban street-grid. The public walks provide sight to adjacent streets (and suggest a new connection from Alexander to Hayberry Lane). The location of the vehicle ramp and the falls on each street frontage are important considerations to the location and bearing of the public walks.

# 1.03 PEDESTRIAN / VEHICLE ACCESS

## STREET ACTIVATION



## LOBBY ACCESS



- Commercial lobby
- Residential lobby

Street level activation and contribution to the public domain with ground level setbacks and public walk connections through the site create a sense of 'place'. The new public walks increase site permeability, and create new retail frontages and interesting, active spaces protected from the street. The pattern of public walks increases retail frontage and activation by 134% compared to the existing frontages.

The residential and commercial lobbies are located centrally and have access to all surrounding streets and transport via the two public walks. The commercial lobby directly addresses the Pacific Highway frontage and the residential lobby the Alexander Street Frontage so each lobby has a distinctive frontage.

# 2.0 PODIUM LANDSCAPE

## LEVEL 3 PODIUM PLAN



The podium landscape level has been amended so that any planting in undercroft areas is minimised to limited to shade tolerant species.

Additional hard surfaces areas are now included in the central landscape area providing different areas for residents. The quantity of open space provided in the proposal allows a portion to of soft landscaping to be removed and allocated to other uses.



# 2.0 PODIUM LANDSCAPE

## PODIUM SECTION



### MATERIAL AND FINISHES LEGEND

- Metal Cladding Finishes**
- CLD1 Cladding Type 1: Profiled Vertical Cladding Finish to match PCF2
  - CLD2 Cladding Type 2: Aluminium Cladding Finish to match PCF1
  - PCF1 Powdercoat Finish Type 1: Dulux "Burnished Copper Kinetic"
  - PCF2 Powdercoat Finish Type 2: Dulux "light bronze"

KEY PLAN

The podium structural slab includes allowances for transfer structures between the podium and tower. These areas are also used for soil profile. Where soil is no longer required, levels have been amended to create additional clearance under the level 4 soffit.

# 2.10 FLOOR PLANS

## GROUND PLAN



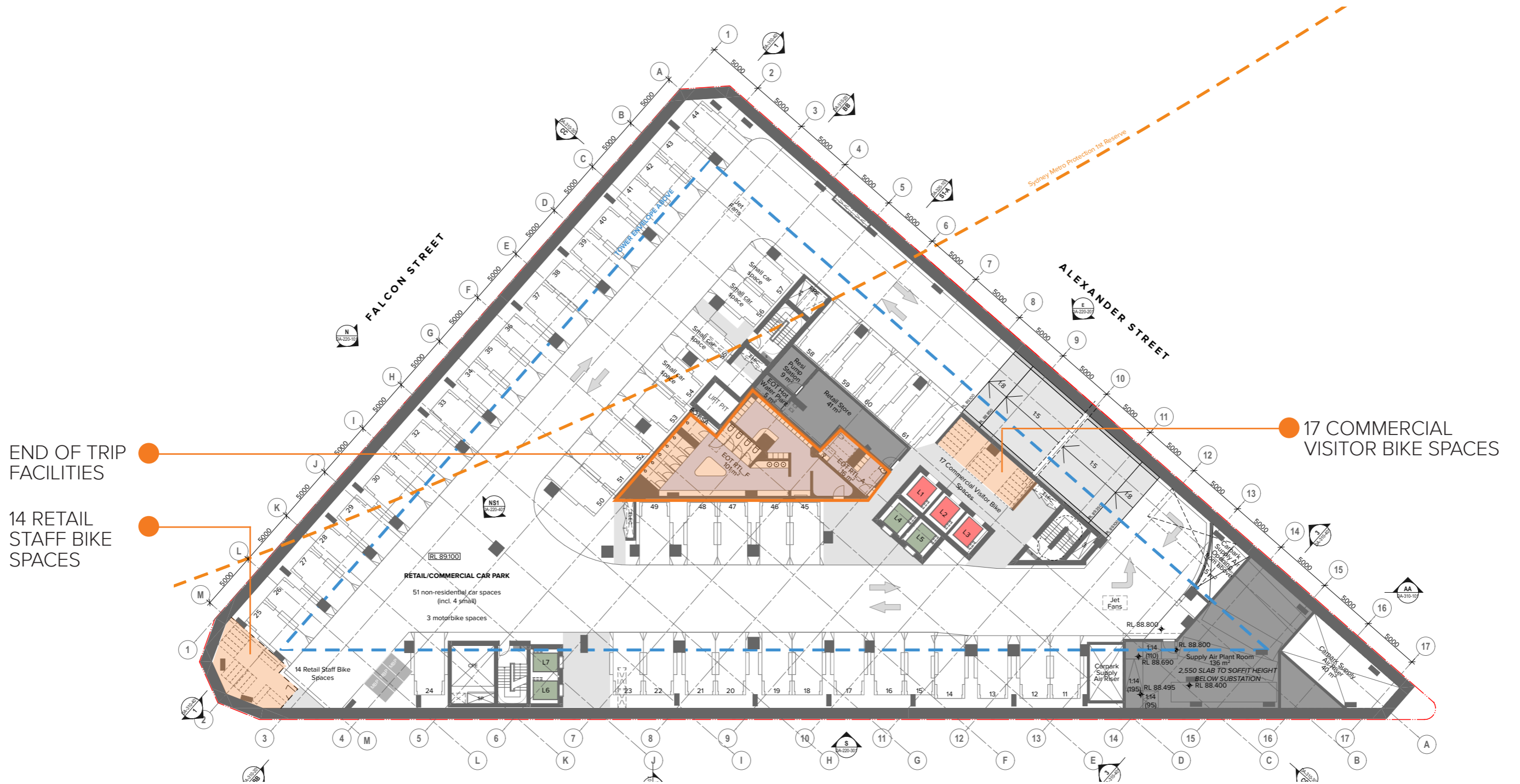
# 2.10 FLOOR PLANS

## BASEMENT 01 PLAN



# 2.10 FLOOR PLANS

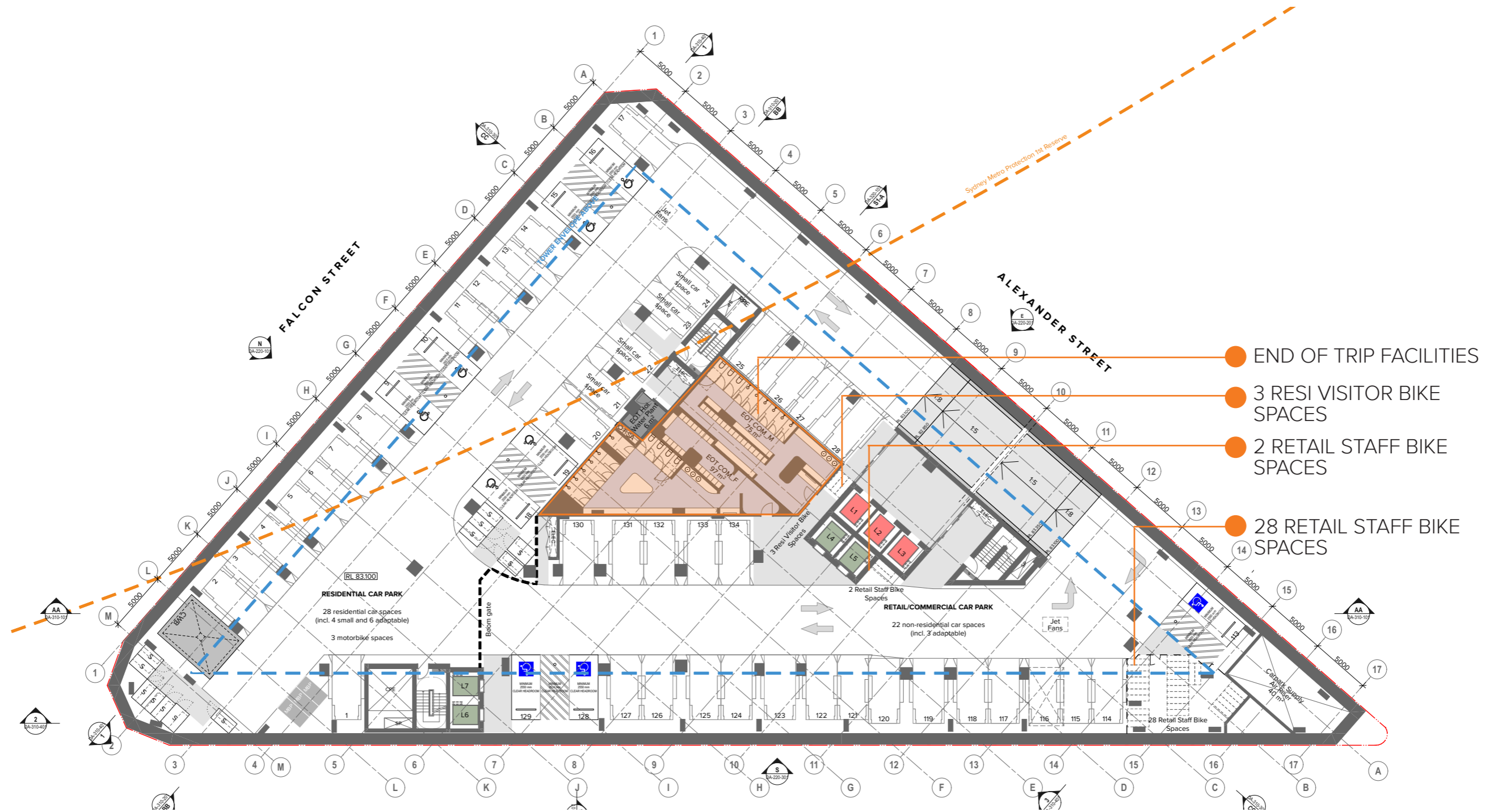
## BASEMENT 02 PLAN





# 2.10 FLOOR PLANS

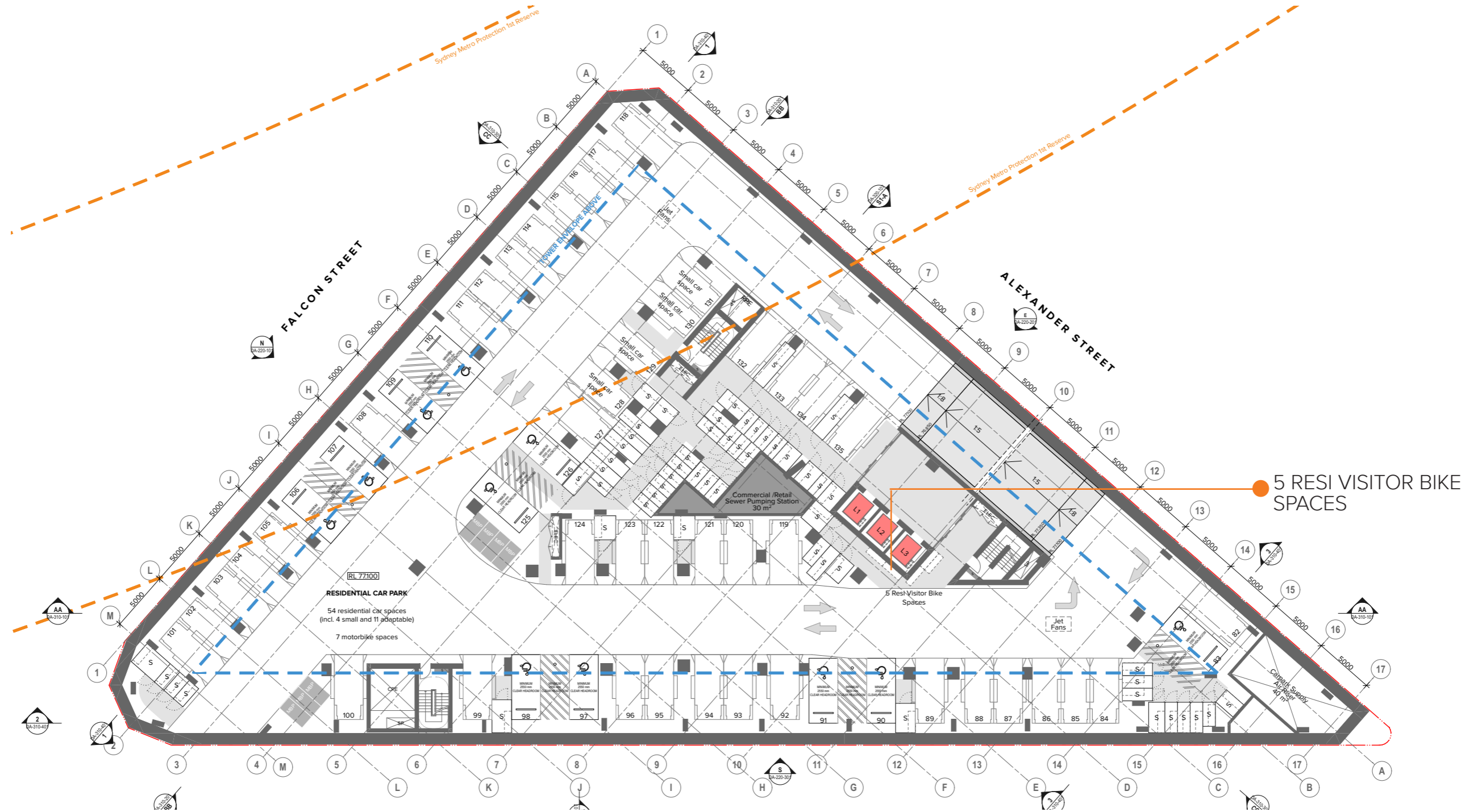
## BASEMENT 04 PLAN





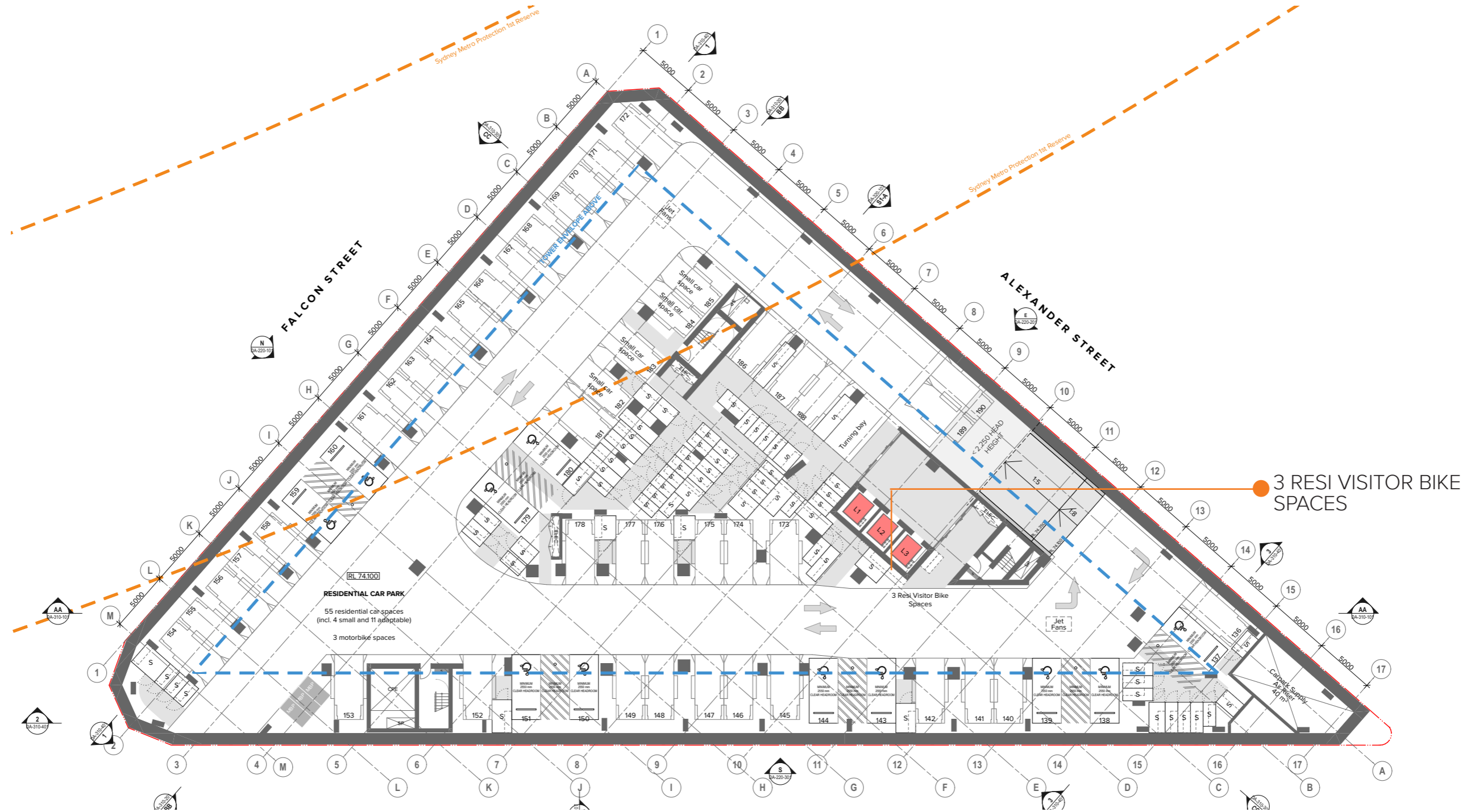
# 2.10 FLOOR PLANS

## BASEMENT 06 PLAN



# 2.10 FLOOR PLANS

## BASEMENT 07 PLAN





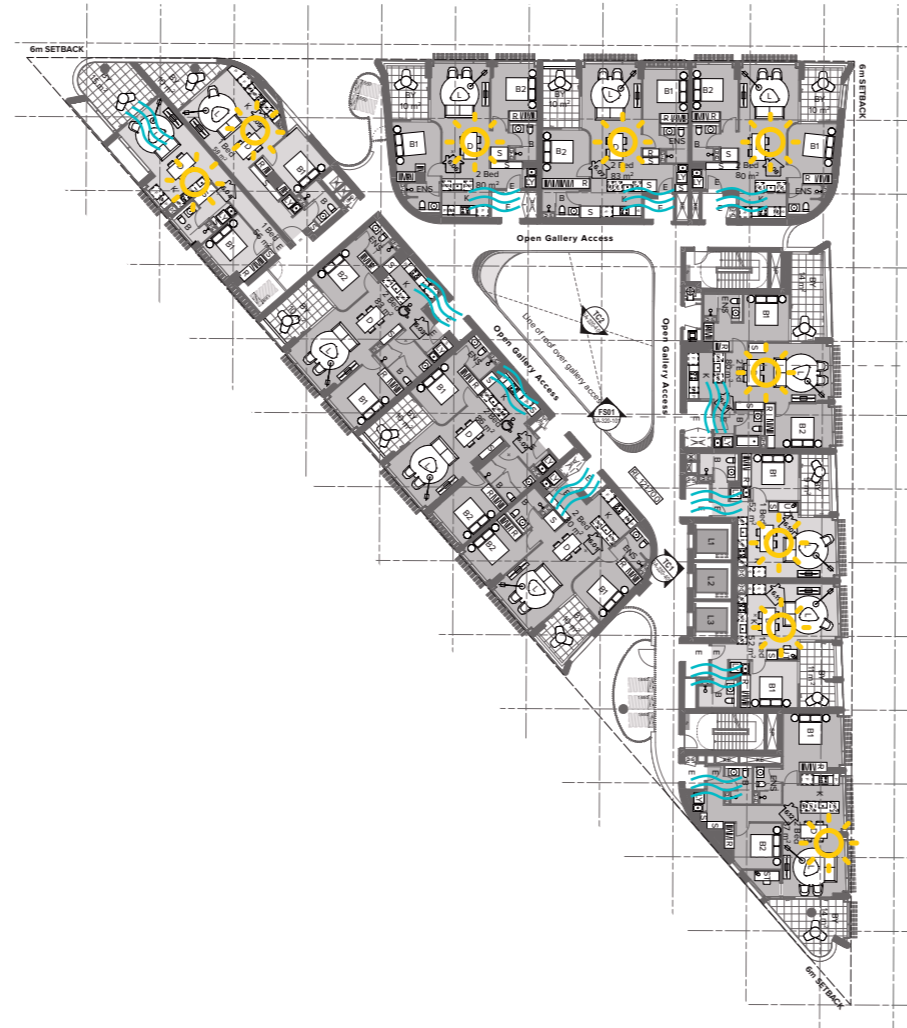
# 3.0 NATURAL VENTILATION

## TOWER AMENITY

### Apartment Design Guide - Natural Ventilation (Objective 4B -3, Design Criteria 1)

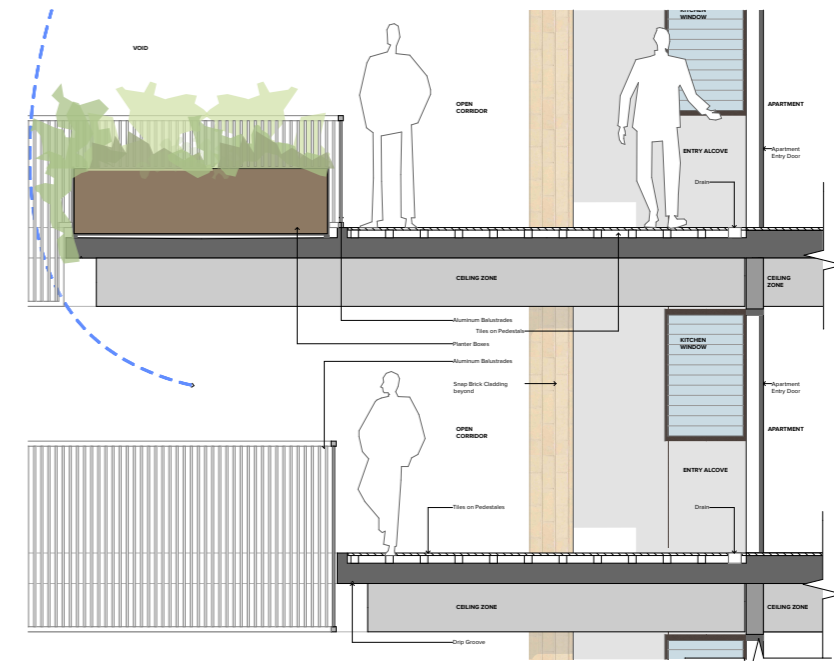
The tower form exceed the ADG design criteria natural cross ventilation (min 60%).

-  Apartments achieving minimum ADG solar access requirements
-  Apartments achieving minimum ADG cross ventilation requirements



## FACADE DETAIL APARTMENT TO CORRIDOR

Case Study - Illume Apartments, Little Bay Sydney  
Reference to common circulation strategy.



## GENERAL SUMMARY

Cross Ventilation (first 9 storeys) = 47  
Total Apartment Count = 191

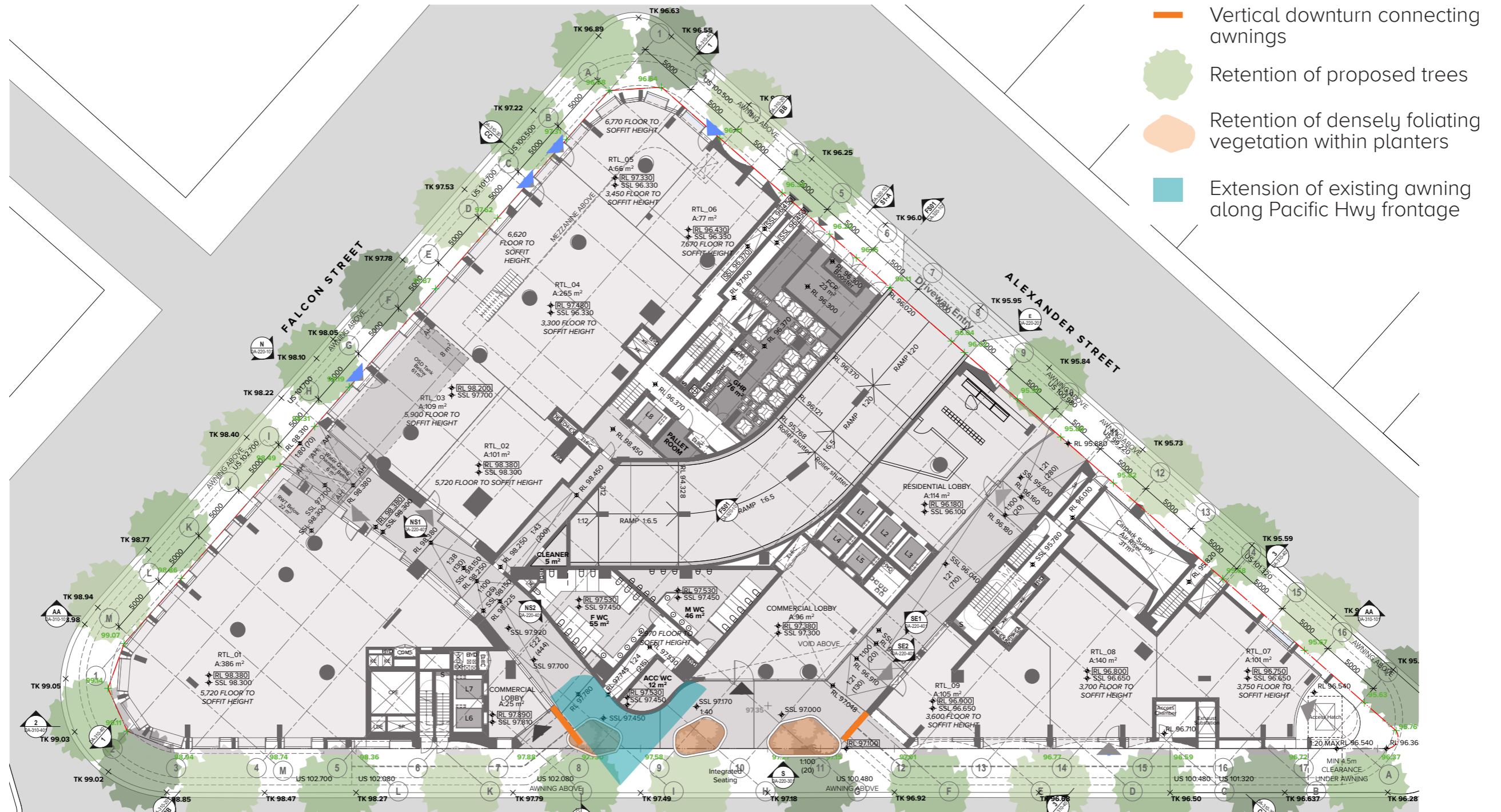
Total Apartments in first 9 storeys = 52

90% of apartments to be naturally cross ventilated.

# 4.0 NATURAL VENTILATION AND ACOUSTICS

## GROUND LEVEL PLAN

Amendments as per WINDTECH CONSULTANTS advice



# 4.0 NATURAL VENTILATION AND ACOUSTICS

## LEVEL 01 PLAN

Amendments as per WINDTECH CONSULTANTS advice

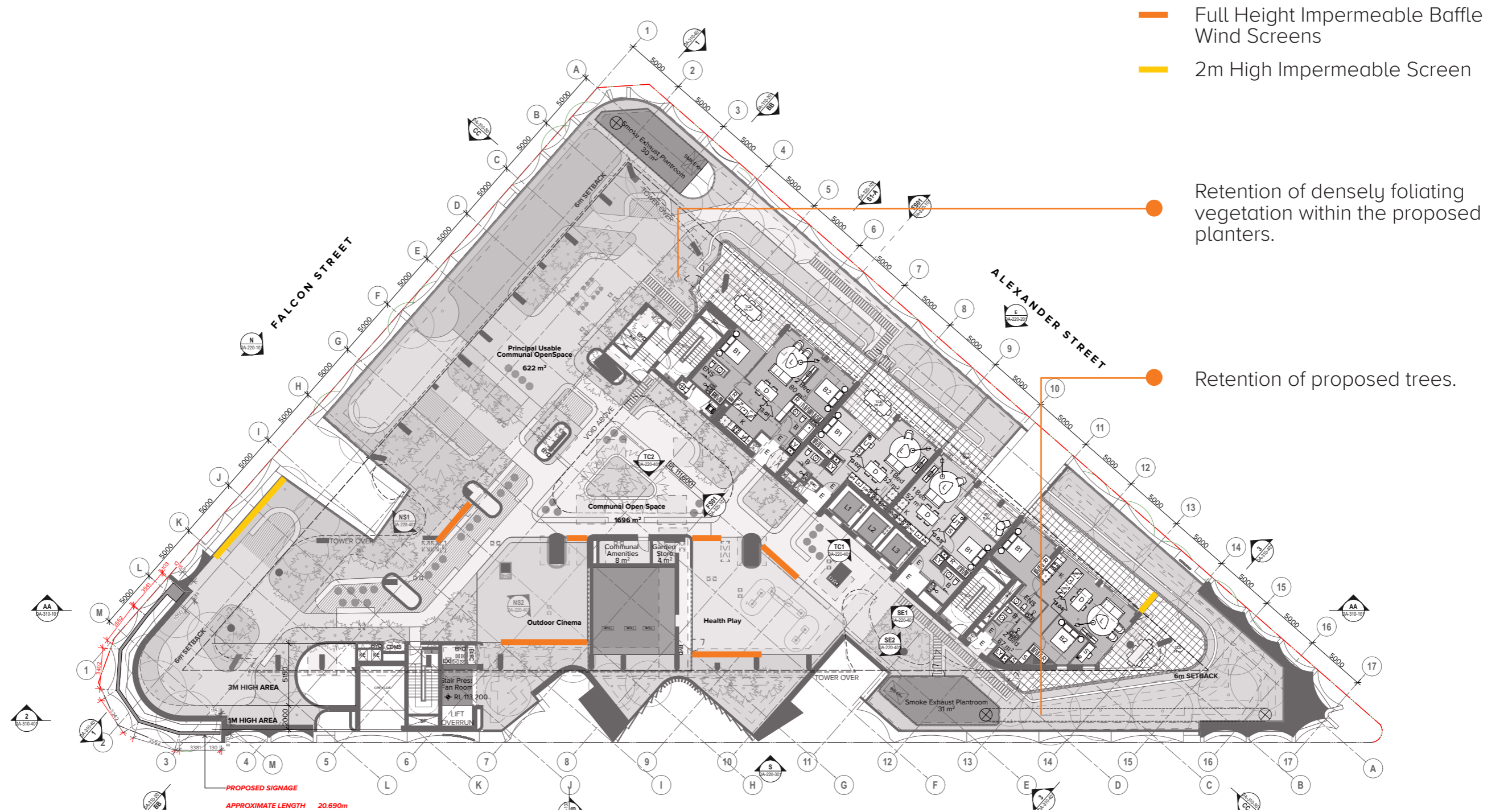
— 1.2m wide, full height vertical screen on top of awning - fabric / flag material



# 4.0 NATURAL VENTILATION AND ACOUSTICS

## LEVEL 03 PODIUM PLAN

Amendments as per WINDTECH CONSULTANTS advice



- Full Height Impermeable Baffle Wind Screens
- 2m High Impermeable Screen

Retention of densely foliating vegetation within the proposed planters.

Retention of proposed trees.

# 4.0 NATURAL VENTILATION AND ACOUSTICS

## LEVEL 13 PLAN (TYPICAL) LOWER BALCONIES

Amendments as per WINDTECH CONSULTANTS advice

— Additional Full Height Louvred Screen



# 4.0 NATURAL VENTILATION AND ACOUSTICS

Windtech and Acoustic Logic consultants were engaged to provide further analysis of the cross-ventilation strategy and acoustic outcomes.

Noise arising from Pacific Highway and Falcon Street was significant and therefore two solutions are recommended for controlling noise on the external southwest façade:

## Solution 1

Acoustically treated balconies. Openable windows to low level on balcony to prevent a direct route for noise.

## Solution 2

Acoustic plenum or trickle ventilation system on facade exposed to Pacific Highway and Falcon Street.

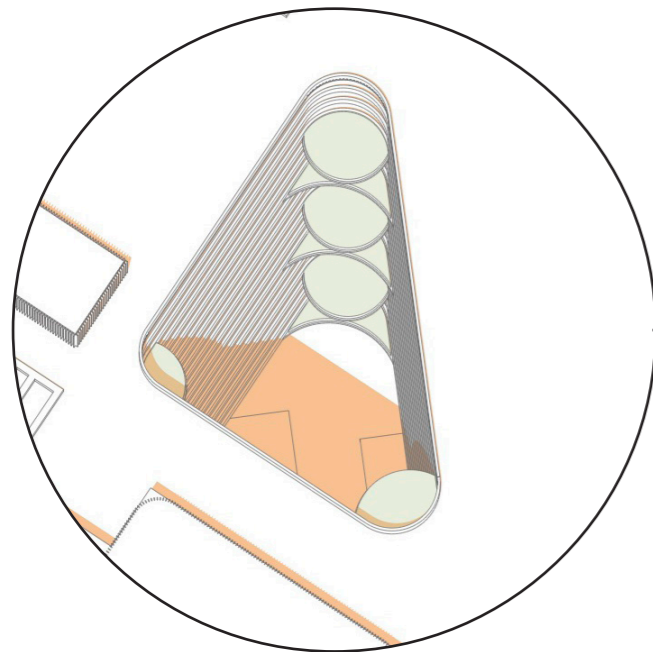
- Solution 01
- Solution 02



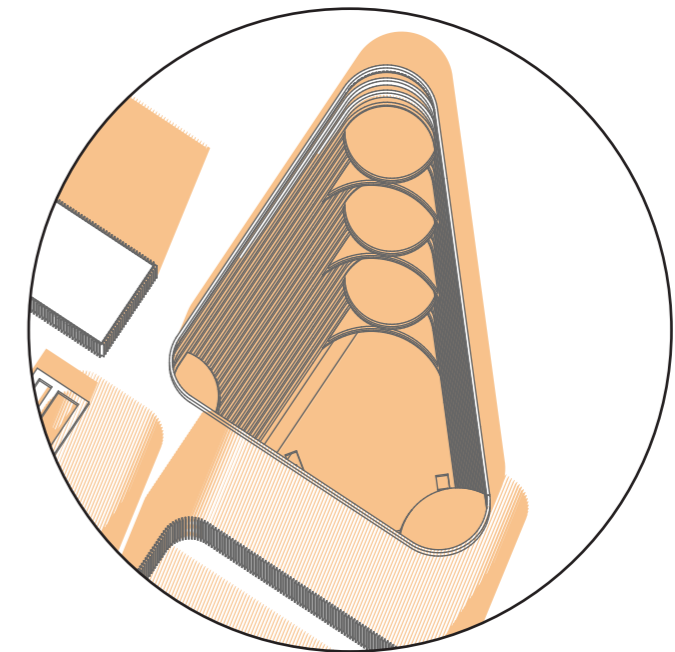
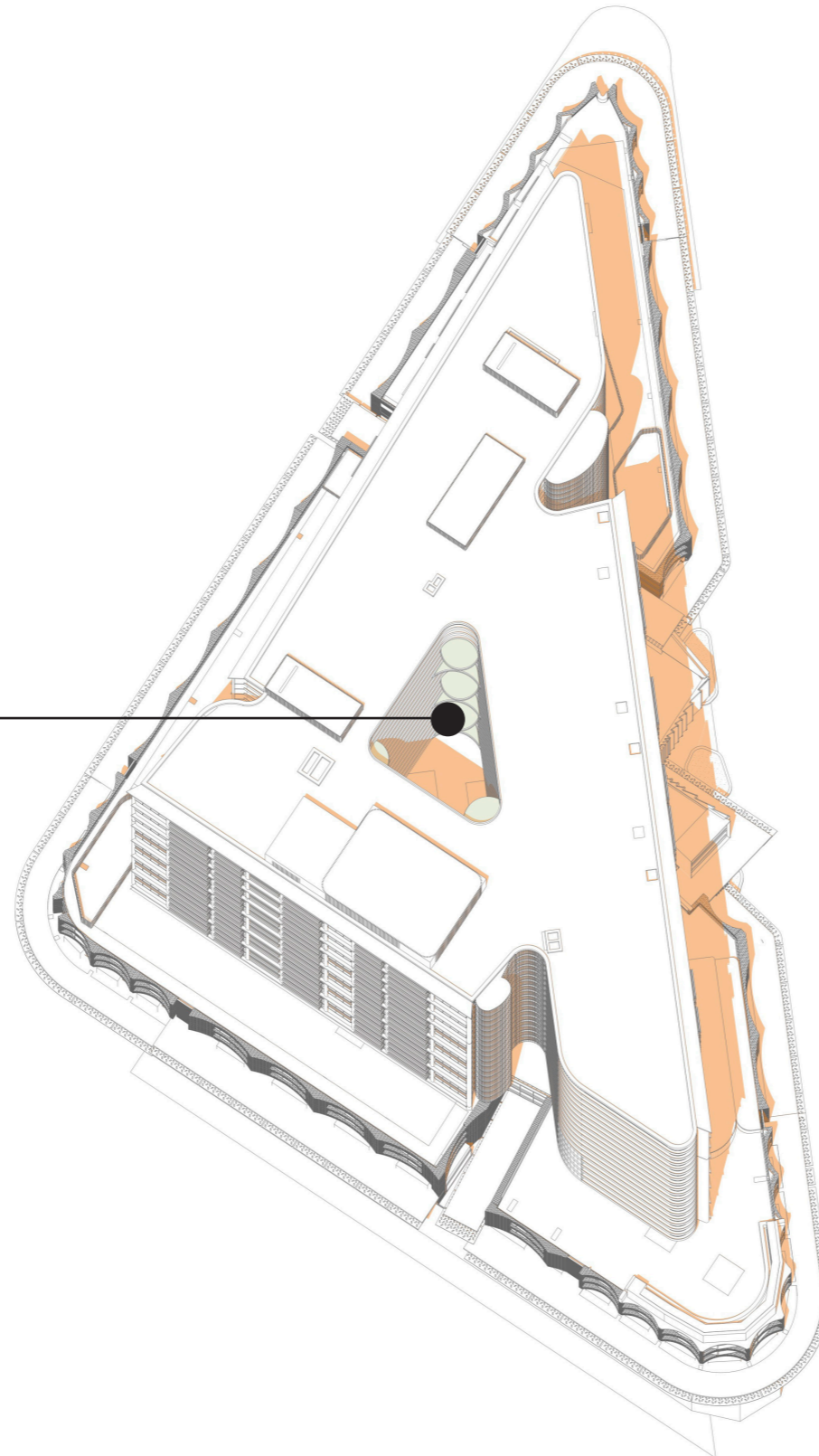
# 5.0 SOLAR VOID

## AERIAL VIEW INTO VOID

SHADOW EXTENT



SUMMER SOLSTICE  
21ST DECEMBER 12PM  
Sunlight to podium level



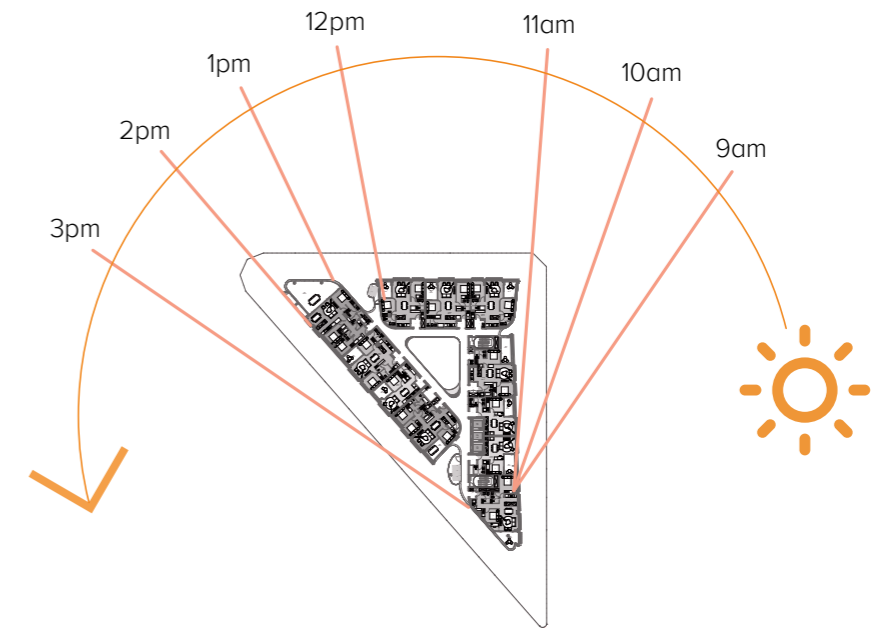
MID WINTER  
21ST JUNE 12PM  
Sunlight to Level 20

# 6.0 FACADE

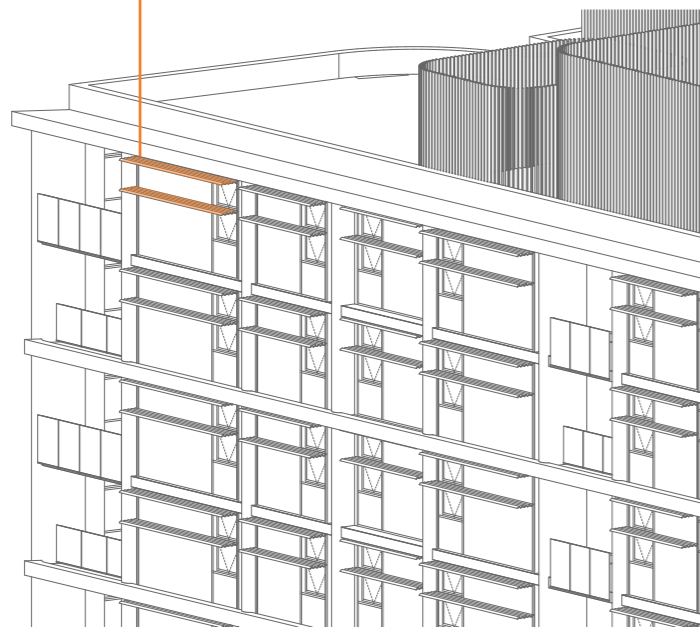
## FACADE SHADING STRATEGY

Each façade is designed to respond to the differing solar conditions of the façades. The northern and southwestern façades include two horizontal sunshades to reduce heat gain. The eastern façade has a single horizontal sunshade.

The solar shades are orientated in horizontal format to allow winter sunlight to reach the façade at more oblique angles.

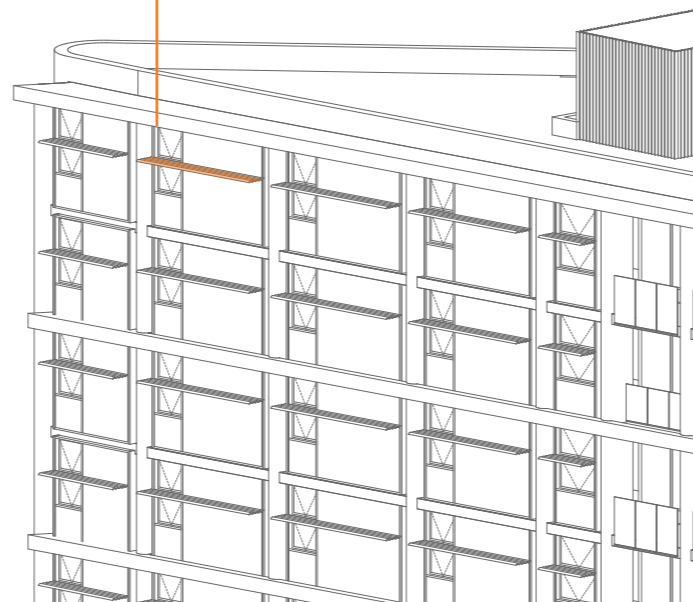


ADDITIONAL ALUMINIUM HORIZONTAL SUN SHADING TO FALCON STREET FACADE FOR SUN PROTECTION



**NORTH FACADE** FALCON STREET

TYPICAL ALUMINIUM HORIZONTAL SUN SHADING INTEGRATED WITH WINDOW SYSTEM



**EAST FACADE** ALEXANDER STREET

ADDITIONAL ALUMINIUM HORIZONTAL SUN SHADING TO PACIFIC HIGHWAY FACADE FOR SUN PROTECTION

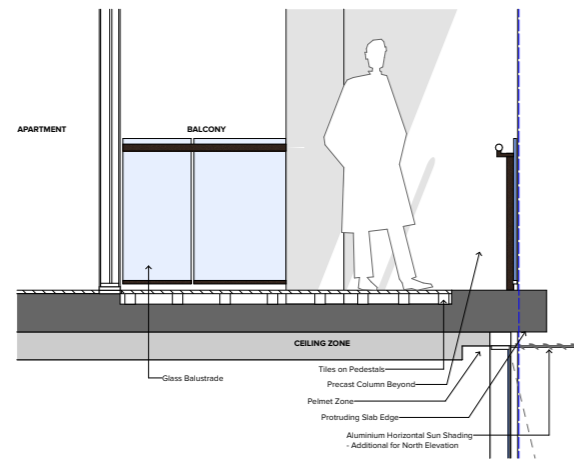


**SOUTH FACADE** PACIFIC HIGHWAY

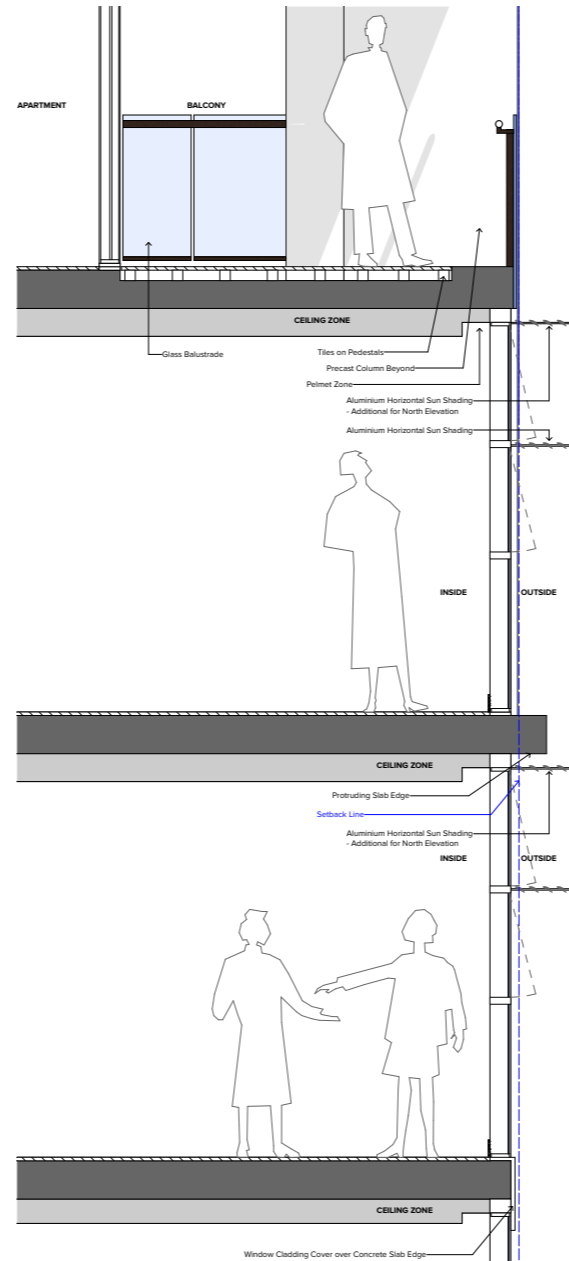
# 6.10 FACADE DETAIL

## FACADE SHADING DETAIL

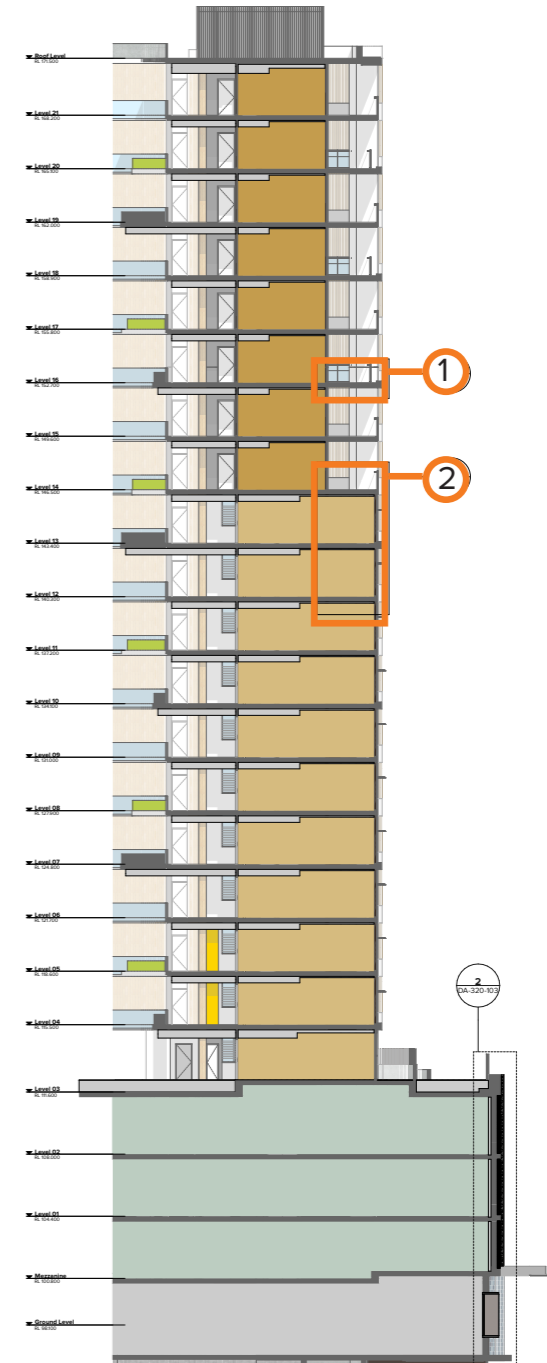
### ALUMINIUM HORIZONTAL SUN SHADING



FACADE DETAIL 01



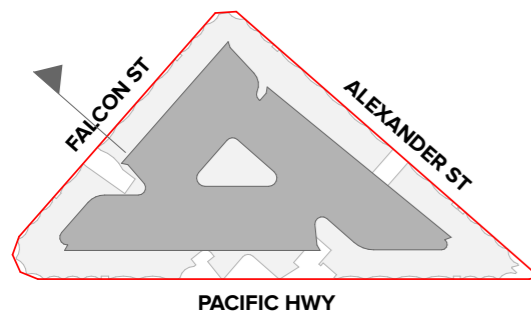
FACADE DETAIL 02



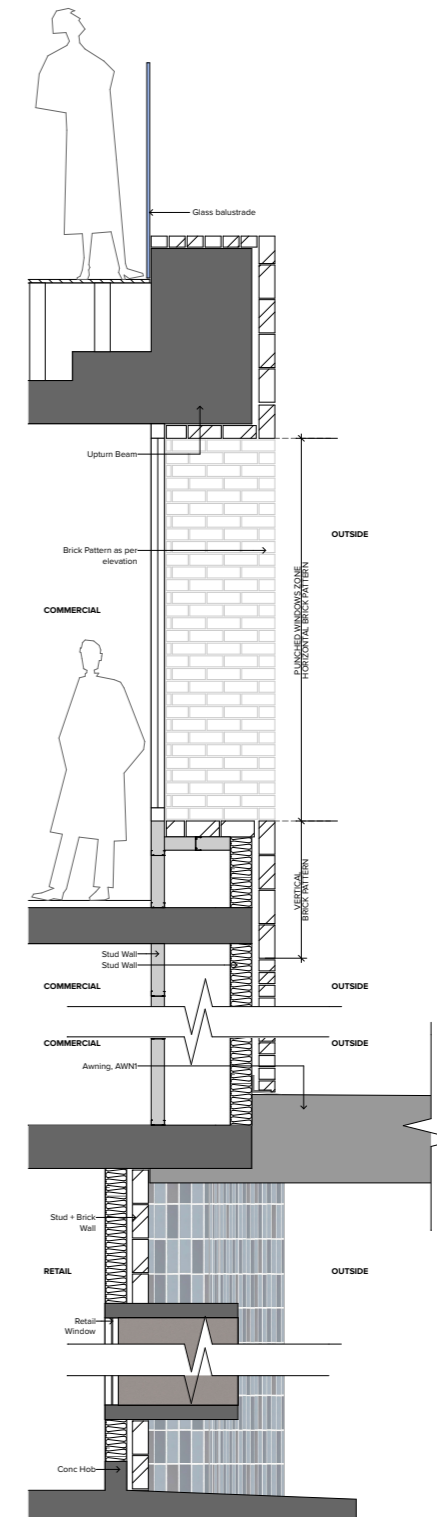
FACADE SECTION

# 6.20 FACADE SECTIONS

## FACADE SECTION 01 FALCON STREET

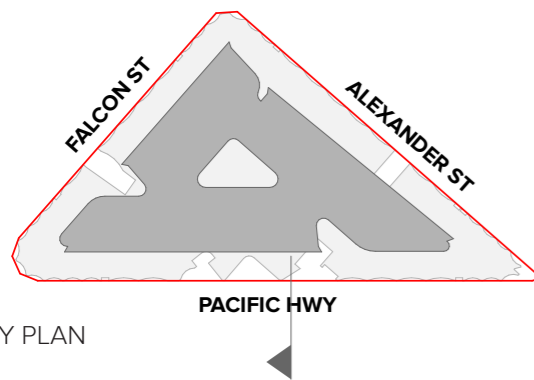


KEY PLAN



# 6.20 FACADE SECTIONS

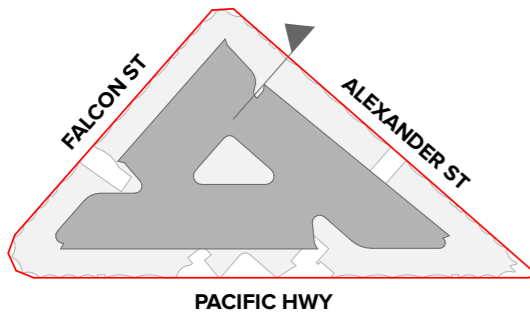
## FACADE SECTION 02 PACIFIC HIGHWAY



KEY PLAN

# 6.20 FACADE SECTIONS

## FACADE SECTION 03 ALEXANDER STREET



KEY PLAN

# 6.30 MATERIALITY

## MATERIALS

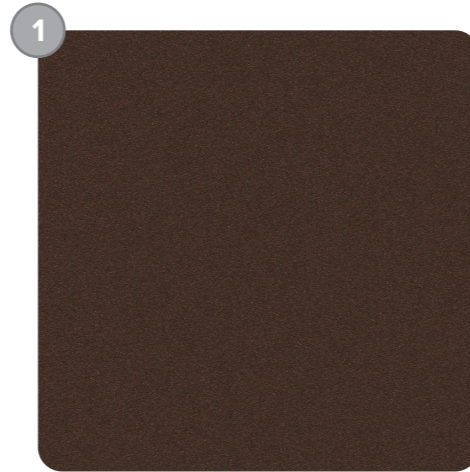
### MATERIALS WITH INTEGRAL FINISHES

In response to the use of the material in the Crows Nest area, the podium is designed as predominately a brick building. Brick allows fine-grain detail to be added to the facade through coursing, corbelling, and shape. The podium facade is divided into segments which create a rythm in the street similar to the high-street retail buildings in Crows Nest Village and along the Pacific Highway.

The materials for the tower are simple and refined. They consist of bronze aluminium-framed glazing, light metal-clad screens for privacy, and light bronze screens for the services areas. The lightness of the tower ensures it is less dominant and focus is retained on the fine-grained character of the podium.

Along the internal corridors, walls are also brick to emphasise the human-scaled village atmosphere.

### ALUMINIUM HIGHLIGHTS

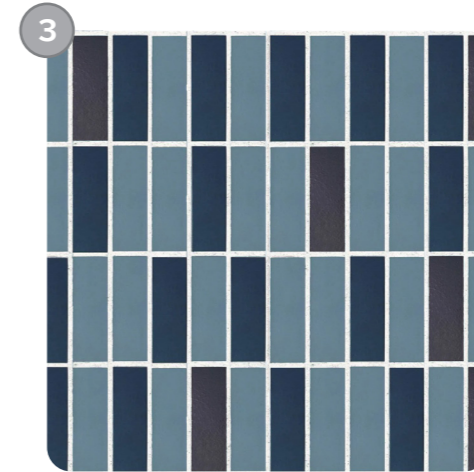


**Awnings, windows, louvres, screens**  
Material: aluminium  
Finish: powder coat  
Colour: bronze

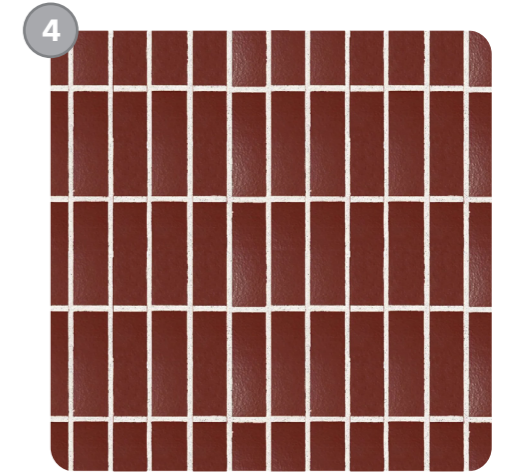
### PODIUM



**Brick (podium)**  
Material: brick  
Finish: pre-finished  
Colour: white



**Brick (retail)**  
Material: glazed brick  
Finish: glazed  
Colour: blue

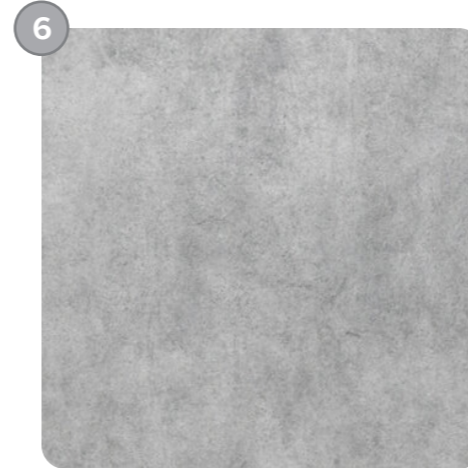


**Brick (commercial)**  
Material: glazed brick  
Finish: glazed  
Colour: red

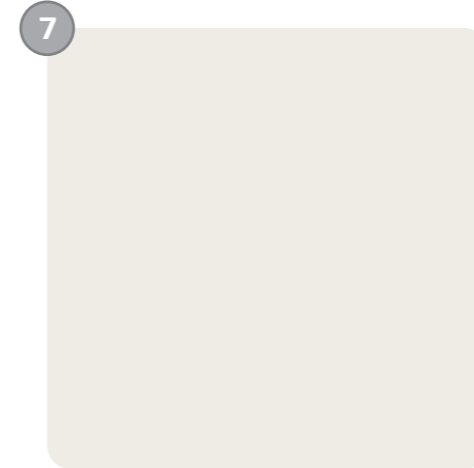
### TOWER



**Brick**  
Material: brick  
Finish: pre-finished  
Colour: cream



**Spandrels / soffits**  
Material: off-form concrete  
Finish: polished  
Colour: grey



**Metal cladding**  
Material: aluminium  
Finish: powder coat  
Colour: white



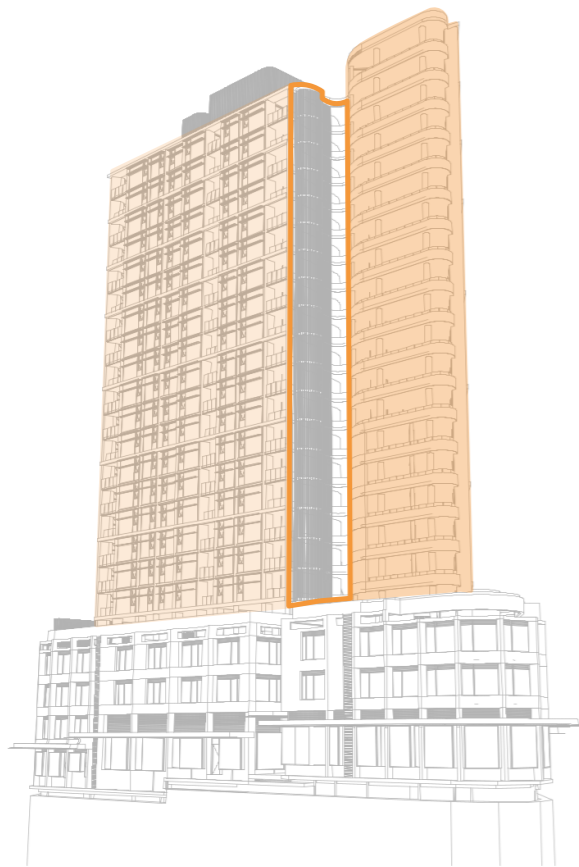
**Screens**  
Material: aluminium  
Finish: powder coat  
Colour: light bronze

# 7.0 VERTICAL RECESS

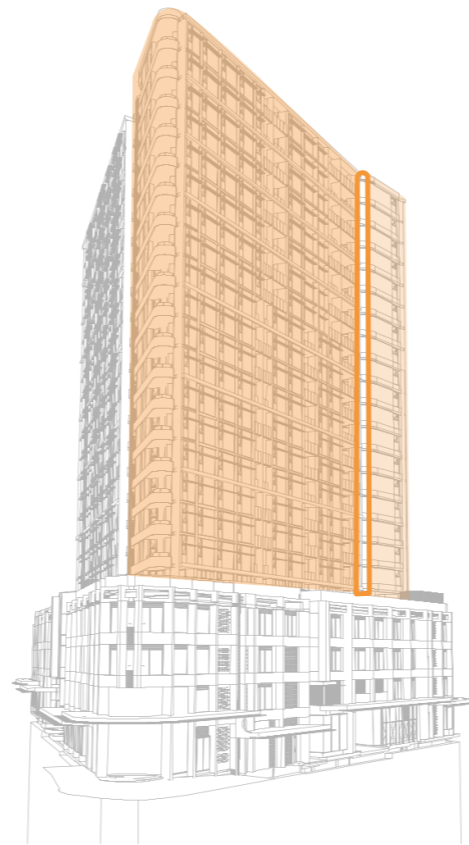
## FORM ARTICULATION

Each tower façade includes a vertical recess corresponding to the end of the access corridor. The maximum length of the tower before articulation is 4 apartments (approximately 45m). The façades are further articulated with the placement of balconies and varying façade treatment at the corners.

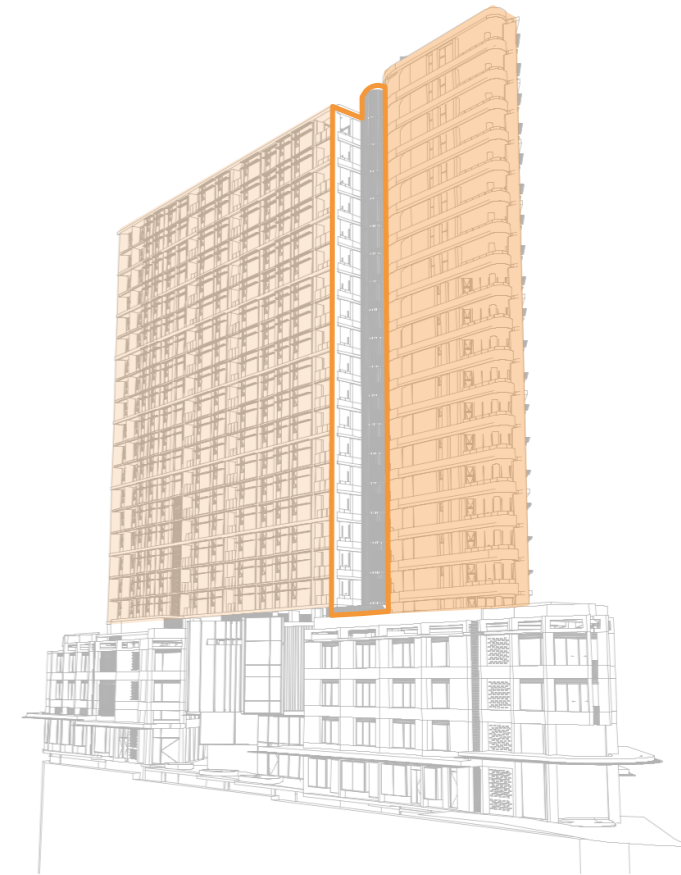
The podium is designed to respond closely the grain of the context and is aligned with building heights observed on the opposite sides of the streets bounding the site. The tower is a different building typology which is currently less representative of the Crows Nest context (besides Nos. 200-220 Pacific Highway and other tall buildings closer to St Leonards).



01. FALCON STREET VIEW



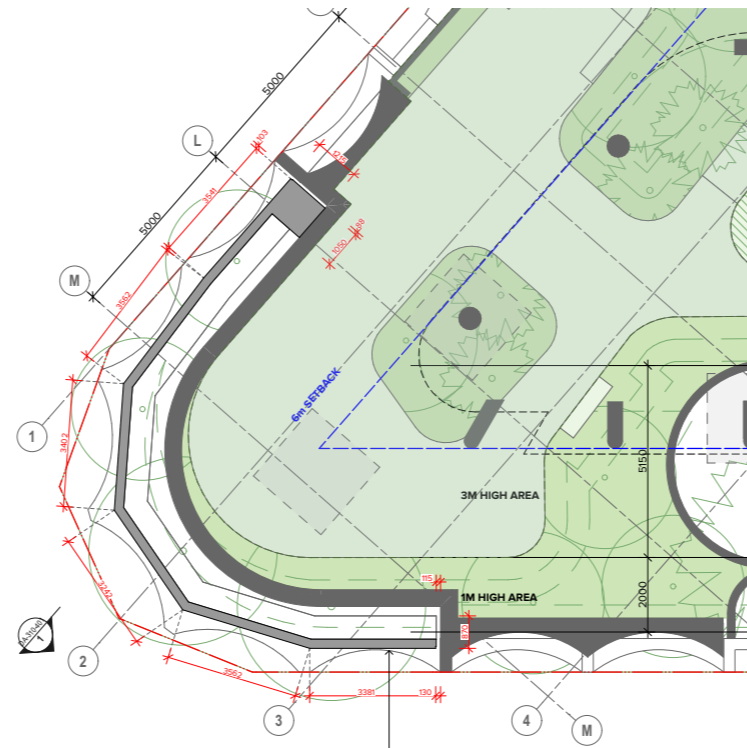
02. ALEXANDER STREET VIEW



03. PACIFIC HWY VIEW

# 8.0 BILLBOARD

## PROPOSED SIGNAGE



**LEVEL 3 PLAN**

PROPOSED SIGNAGE  
 APPROXIMATE LENGTH 20.690m  
 APPROXIMATE AREA 92.69m<sup>2</sup>



CGI VIEWS FROM FALCON STREET /  
 PACIFIC HWY INTERSECTION



**SOUTH ELEVATION**

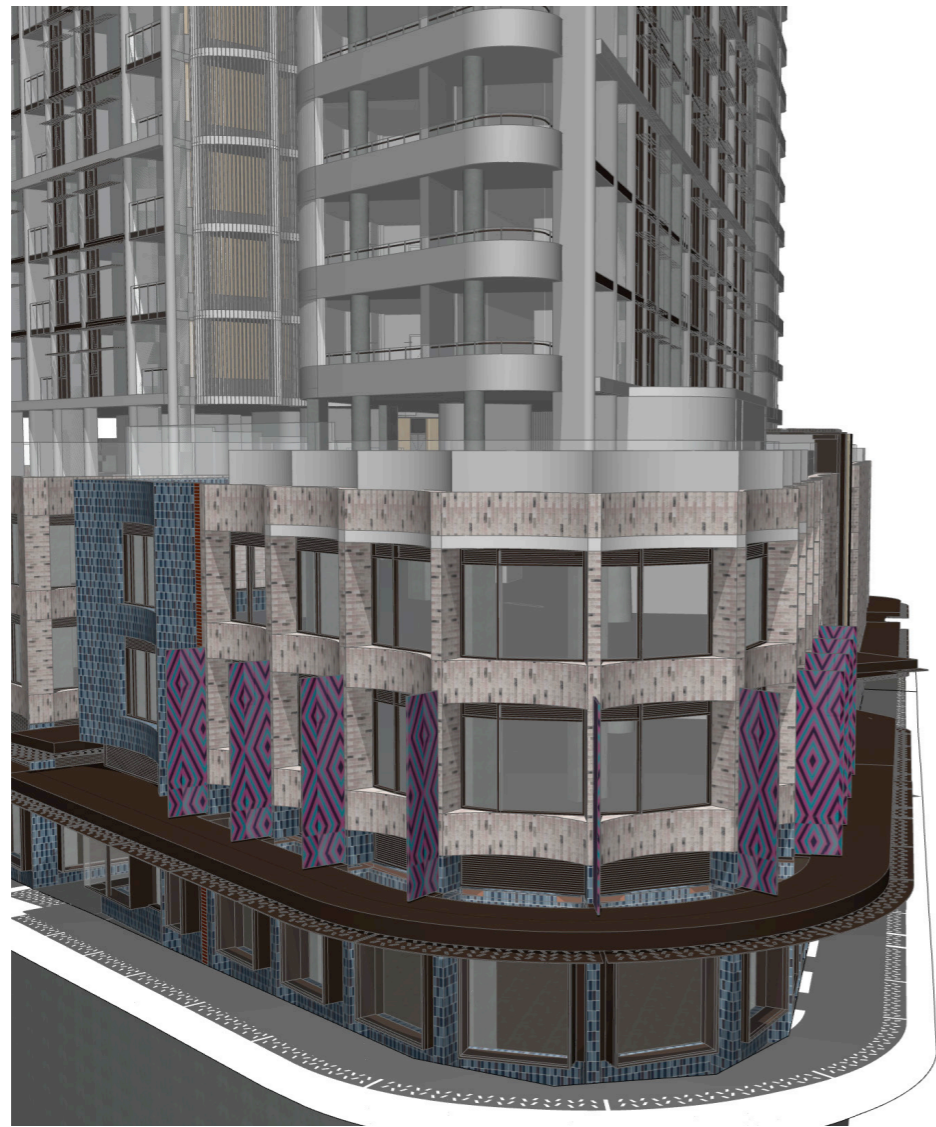


**NORTH ELEVATION**

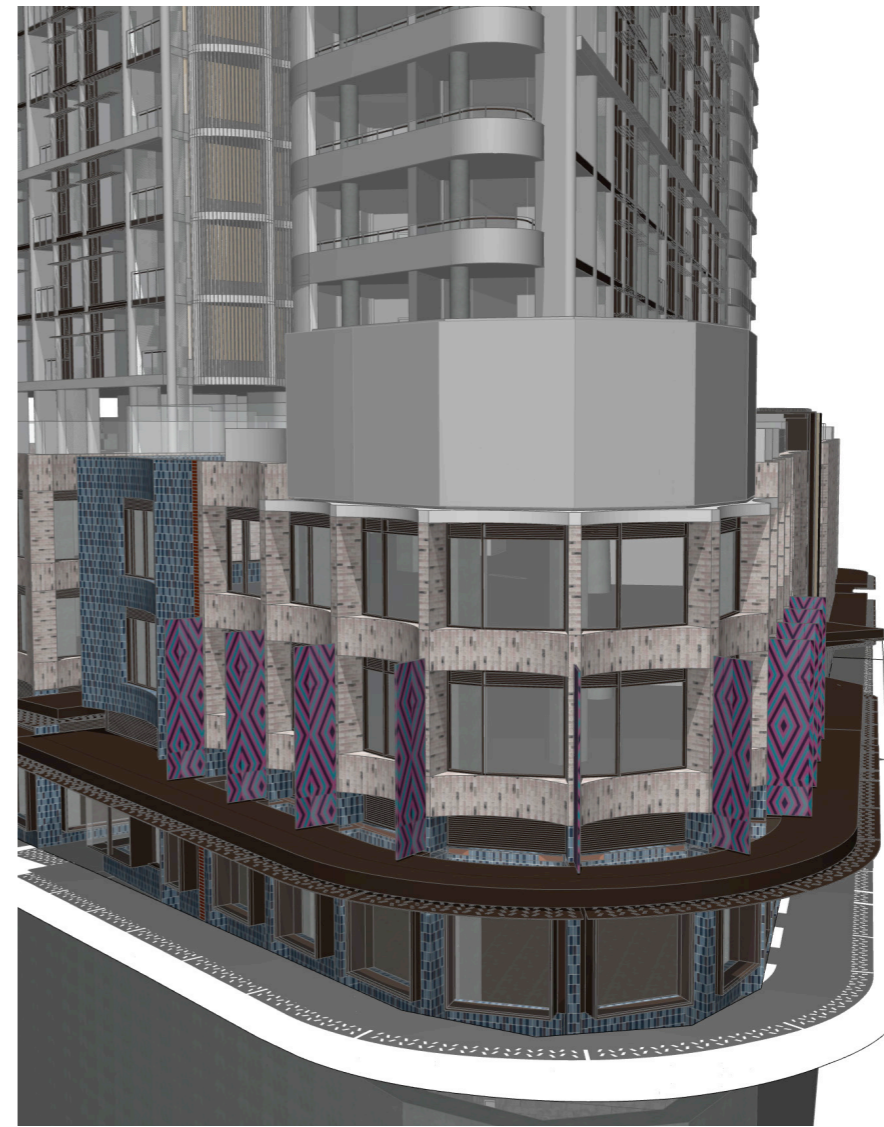


# 8.0 BILLBOARD

## PERSPECTIVE VIEWS



**PERSPECTIVE VIEW** | WITHOUT BILLBOARD

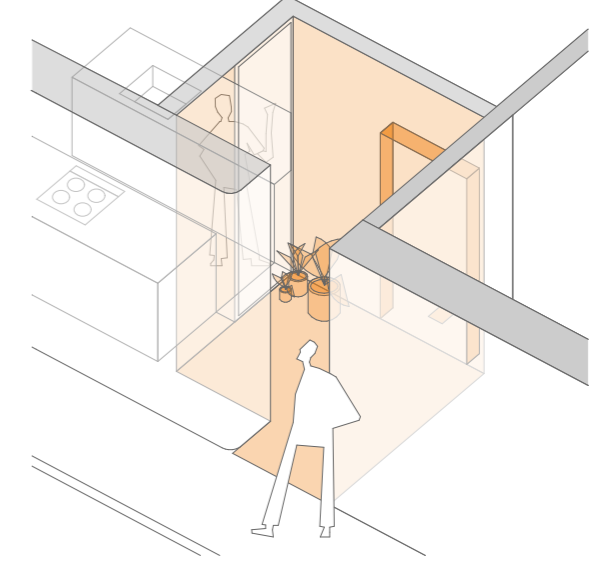
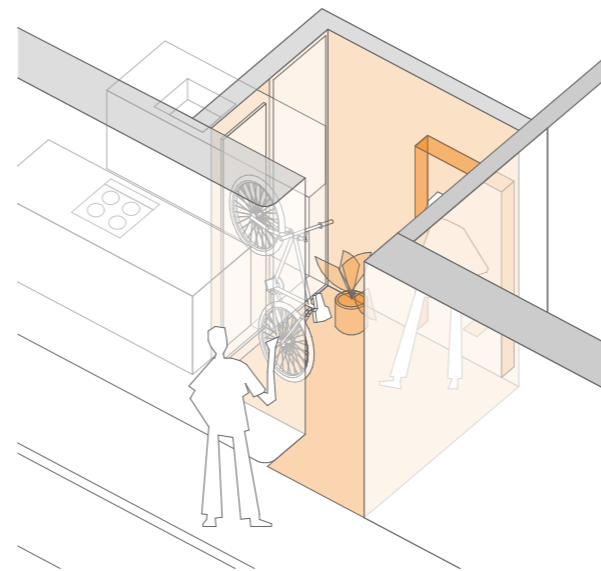
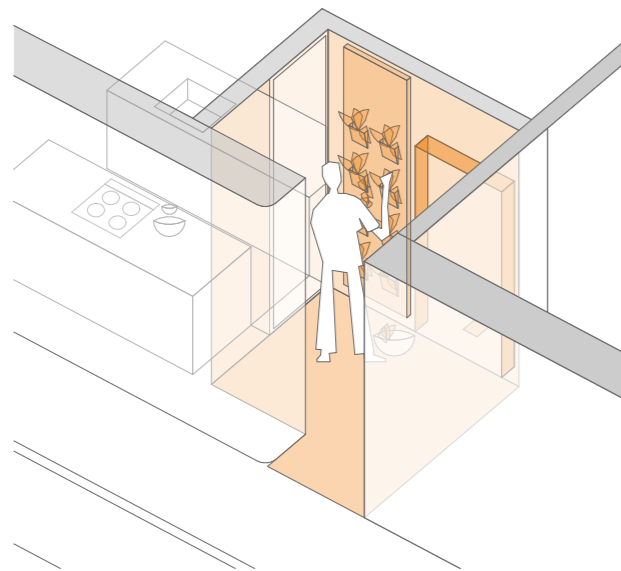
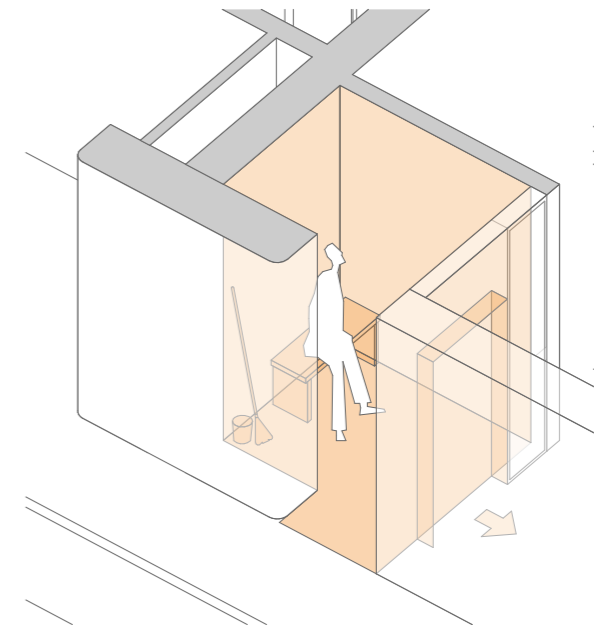
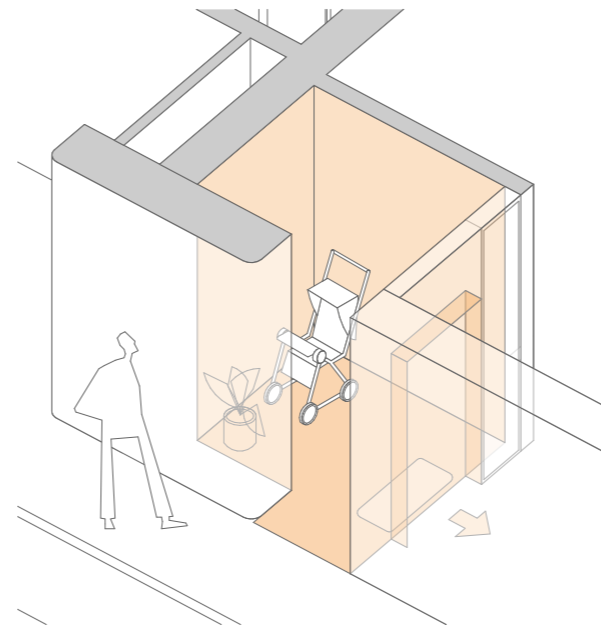
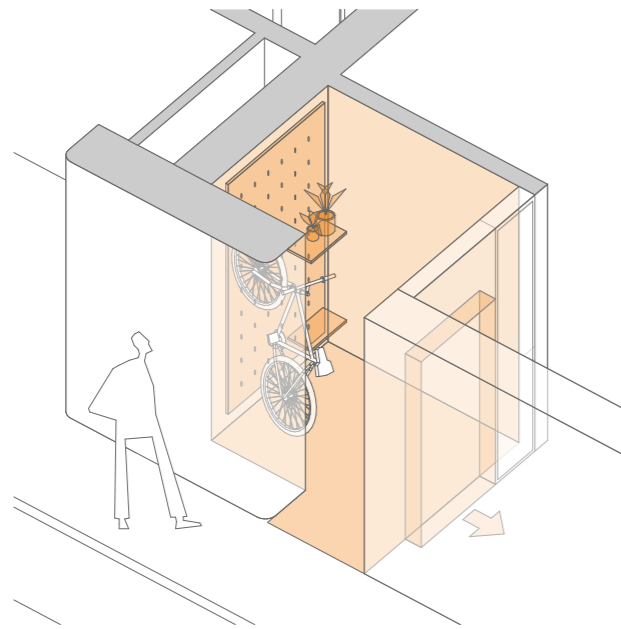


**PERSPECTIVE VIEW** | WITH PROPOSED BILLBOARD

# 9.0 ENTRY NOOKS

## FLEXIBILITY OF SPACE

Entry nooks to apartments provide extra space for the storage of bicycles, prams, seating etc.



# 10.0 LIFT STRATEGY

## Vertical Transportation Services

As per JHA's Vertical Transportation Advice.



RESIDENTIAL FLOOR PLAN TYPICAL

CIBSE Guide D provides a guideline for calculating the population for a residential building which is based on the number of units and bedrooms on each level.

**Table 3.12** Occupancy factors (persons) for residential buildings

Type	Luxury	Normal	Low income
Studio	1.0	1.5	2.0
1 bedroom	1.5	1.8	2.0
2 bedroom	2.0	3.0	4.0
3 bedroom	3.0	4.0	6.0

Therefore, the traffic simulations have used a calculated population of 560 people using the 'Normal' occupancy factor.

### TRAFFIC ANALYSIS

This information is then used as a basis for the traffic analysis.

CIBSE Guide D provides a guideline for the criteria to be achieved for the two peak periods in residential buildings.

**Table 4.3** Draft ISO recommendations for use with provisional ISO simulation method (ISO, 2015)

Building type and typical traffic mix	Typical range of required handling capacity (HC5) (%)	Typical range of required average waiting time (s)
<b>Residential:</b>		
— morning two-way (15% incoming, 85% outgoing)	6–8	30–65
— evening two-way (50% incoming, 50% outgoing)	6–8	30–65

### LIFT SYSTEM PARAMETERS USED

Capacity	1,500 kg	1,500 kg
Rating	20 passengers	20 passengers
Car width	1,500 mm	1,500 mm
Car depth	2,100 mm	2,100 mm
Door width	1,100 mm	1,100 mm
Door type	2PC	2PC
Speed	3.0 m/s	2.0 m/s
Acceleration	1.0 m/s <sup>2</sup>	0.8 m/s <sup>2</sup>
Jerk	1.0 m/s <sup>3</sup>	1.0 m/s <sup>3</sup>
Start Delay	0.0 s	0.0 s
Door Open	1.8 s	1.8 s
Door Close	2.9 s	2.9 s
Pre-open	0.0 s	0.0 s
Dwell 1	3.0 s	3.0 s
Dwell 2	1.0 s	1.0 s
Loading Time	1.0 s	1.0 s
Unloading time	1.0 s	1.0 s
Stair Factor	0 %	0 %

### RESULTS OF THE ANALYSIS

Parameter	Recommended	2 Lifts at 3 m/s	3 Lifts at 2 m/s
Morning	30s-65s	531s ✘	51s ✔
Evening	30s-65s	310s ✘	49s ✔

### CONCLUSION FOR RESIDENTIAL TOWER

Based on the information drawn from the architectural drawings received and the floor matrix above, the preliminary three-lift design will provide an acceptable level of service, meets the recommended waiting times.

Note the NSW Apartment Design Guide recommends a maximum of eight (8) apartments on each level, see extract below.

Any changes to the building configurations, population, or usage, the traffic analysis should be reassessed.

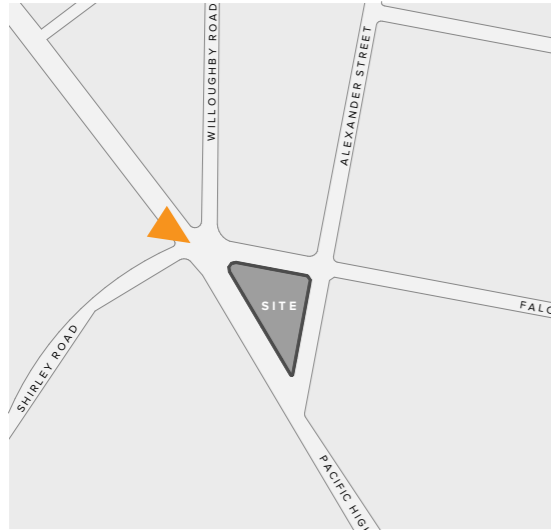
**Objective 4F-1**  
Common circulation spaces achieve good amenity and properly service the number of apartments

**Design criteria**

- 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

# 22.0 VISUAL ANALYSIS

**VIEW 01** | North west corner of Shirley Road and Pacific Highway, Crows Nest

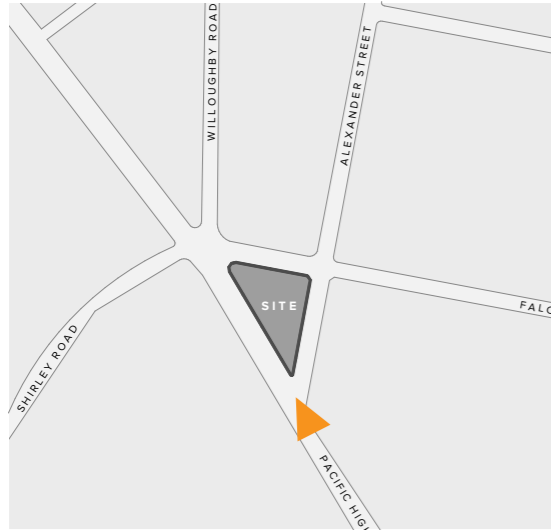


KEY PLAN



# 22.0 VISUAL ANALYSIS

**VIEW 02** | Pacific Hwy, south west side near intersection with David Street, Crows Nest

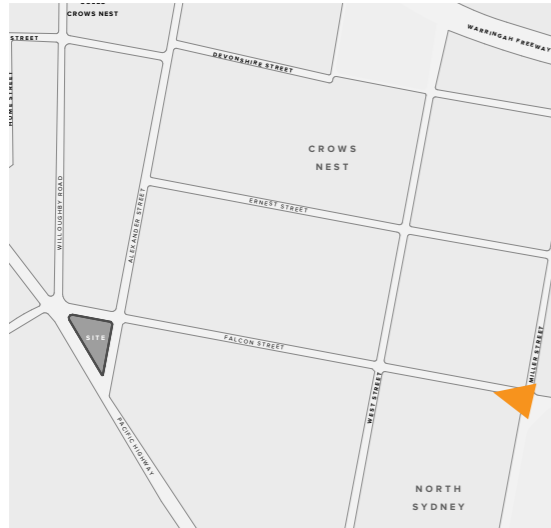


KEY PLAN



# 22.0 VISUAL ANALYSIS

VIEW 03 | Falcon St near corner of Miller Street North Sydney



KEY PLAN

