

Design Amendment Report - Pockley Island

State Significant Development Application

2 - 16 Pockley Avenue, Roseville, NSW



Client	Aqualand Prestige
Architect	Woods Bagot
Town Planner	Planning & Co
Landscaping	Ground Ink
Structure	Meinhardt
Facade	Meinhardt
Traffic	Varga
BCA/Access	Jensen Hughes
Building Services	Neuron
Fire	Neuron

Civil	Stantec
ESD	Stantec
Acoustics	Stantec
Waste	Elephants Foot
First Nations	JMP Aboriginal Consultancy
Flood	Kozarovski and Partners
Wind	Windtech

Woods Bagot acknowledges the Traditional Owners of the land, sky and waters. We pay our respects to Elders past, present, and to the future leaders of our community.

We honour the ongoing deep spiritual connection that the Traditional Owners have with this country. With respect, we tread gently to help reconcile and pave the way for a united and harmonious future for all people.

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Introduction

01.01	Project Overview
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Our vision for this residential development is to create a thoughtfully designed, sustainable community that not only enhances the local landscape but also contributes meaningfully to Ku-ring-gai’s evolving housing needs.

Recognising the challenges outlined in the Ku-ring-gai Affordable Housing Policy (December 2024), our proposal aims to support essential workers and young residents who are increasingly unable to secure housing within the area. With 23% of renters experiencing housing stress and 71.6% of essential workers commuting from outside the region, we see this project as an opportunity to provide high-quality, well-integrated housing solutions.

By incorporating a mix of dwelling types and affordability considerations, our design seeks to retain and attract young people who have feld this area for the past 10 years.

Beyond its architectural and landscape excellence, this project embodies a broader social responsibility—helping shape a more diverse, resilient, and connected community for the future.

Aqualand Prestige

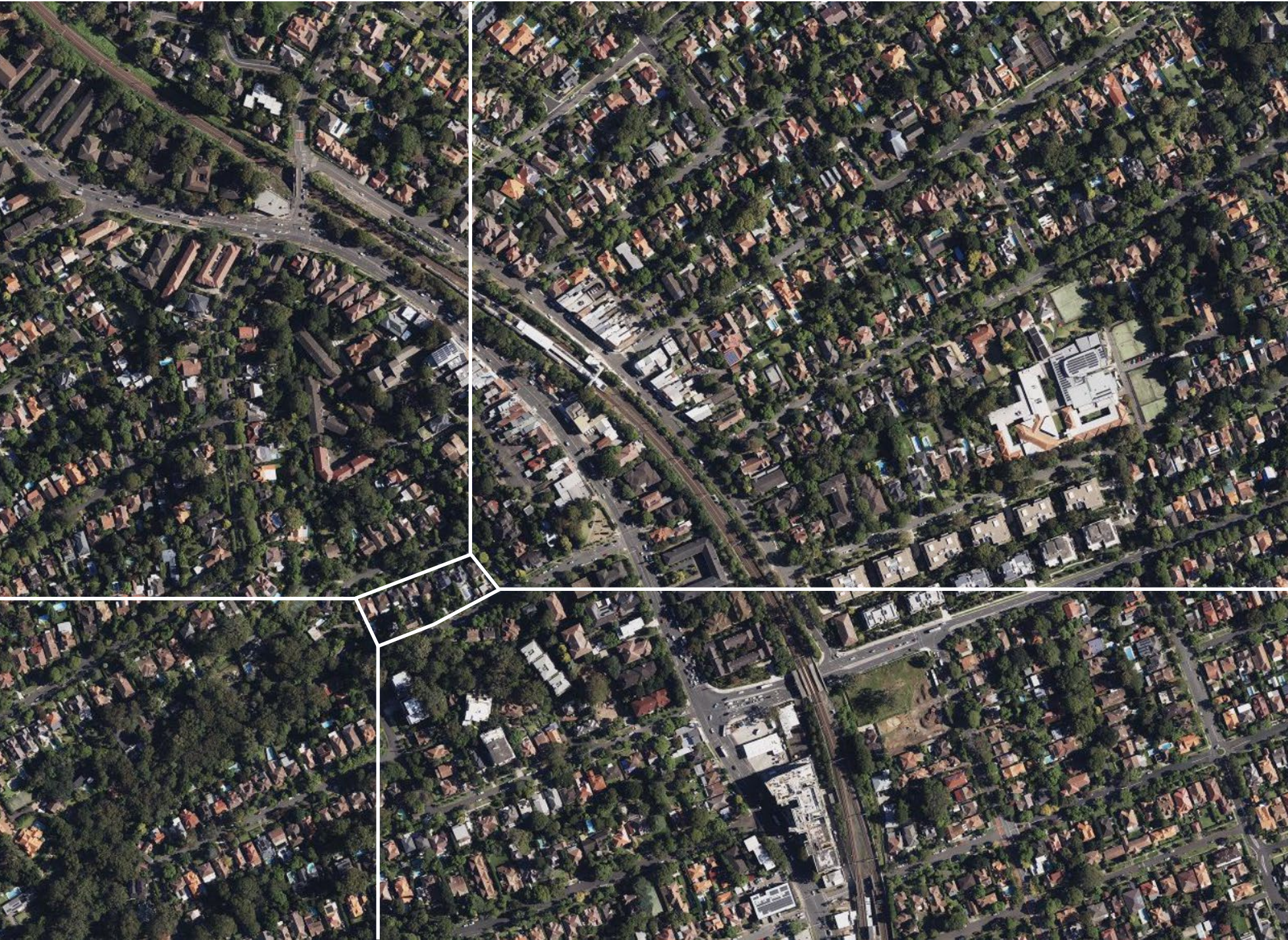
01.01 Project Overview
Project Description & Summary

The applicant seeks development consent under Division 4.7 State Significant Development of the Environmental Planning & Assessment Act 1979 (EP&A Act) for a new residential development comprising three residential flat buildings which includes the provision of in-fill affordable housing on the site at 2-16 Pockley Avenue, Roseville.

Specifically, this SSDA seeks approval for:

- Site preparation including demolition, excavation and tree removal of the site;
- Construction of a residential flat building containing 3 building elements of up to 9 storeys including:
 - **Part-3, part-4 and part 5-level combined basement** parking with the provision of 283 car parking spaces,
 - **180 dwellings including 46 affordable housing** dwellings above carpark;
- Ground level and on-building landscaping works including communal open spaces in Pavilion A
- Augmentation of, and connection to, existing utilities as required

Address	2-16 Pockley Avenue, Roseville, NSW
Council	Ku-ring-gai
LEP	Ku-ring-gai LEP
Lot Area	Combined area 6,539.9m²
Zone	R2 Low Density
	Residential (Housing SEPP 2024 override)
Height	22m
Height (IAH SEPP Bonus)	28.6m
FSR	2.50: 1
FSR (IAH SEPP Bonus)	3.25: 1
Heritage	No
Available GFA	21,254.7m²
Proposed GFA	21,254.7m²



“Beyond its architectural and landscape excellence, this project embodies a broader social responsibility—creating a diverse, resilient, and connected community. Aqualand Prestige in Roseville aims to deliver high-quality, well-integrated housing that supports essential workers and young residents while addressing Ku-ring-gai’s housing stress.”

Wayne Xiong, Executive Director, Aqualand Prestige

01.02 Project Introduction

Aqualand & Woods Bagot

Together, Aqualand and Woods Bagot will build on our shared successes in North Sydney and the Upper North Shore creating exemplary and iconic projects into the future.

Knowing Aqualand Brand

Our relationship over the past seven years has given us the opportunity to work with the Aqualand team, Jin and Helkin. This has reinforced for us a shared belief in outcomes that we can be proud of and a passion for excellence.

Knowing Build to Sell

WB being a global practice have experience in the BtS sector from across the globe and locally. This provides us a unique perspective and well established playbook for success.

Knowing Place

WB are experienced in North Sydney and have demonstrated relationships with stakeholders. We are constantly seeking to assist the critical stakeholders in striving for improvements across the city that all contribute to increased vibrancy, activity and shared political, commercial and social success.

Prepared for:

Prepared by:



ARCHITECTURE

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01.02 Project Introduction

Relevant SEARs

3. Design Quality Demonstrate how the development will achieve: - design excellence in accordance with any applicable EPI provisions. - good design in accordance with the seven objectives for good design in Better Placed. Demonstrate that the development: - where required by an EPI or concept approval, or where proposed, has been subject to a competitive design process, carried out in accordance with an endorsed brief and Design Excellence Strategy; or - in all other instances, has been reviewed by the State Design Review Panel (SDRP) consistent with the NSW SDRP: Guidelines for Project Teams. Recommendations of the jury and Design Integrity Panel (where a competitive design process has been held) or the SDRP are to be addressed prior to lodgement.	4. Built Form and Urban Design Explain and illustrate the proposed built form, including a detailed site and context analysis to justify the proposed site planning, design approach and application of the height and floor space bonuses under the Housing SEPP. Demonstrate how the proposed built form (layout, height, bulk, scale, separation, setbacks, interface and articulation) addresses and responds to the context, site characteristics, streetscape and existing and future character of the locality. Demonstrate how the building design will deliver a high-quality development, including consideration of façade design, articulation, activation, roof design, materials, finishes, colours, any signage and integration of services. Provide a floorplan outlining the gross floor area and units that are dedicated as affordable housing.	5. Environmental Amenity Address how good internal and external environmental amenity is achieved, including access to natural daylight and ventilation, pedestrian movement throughout the site, access to landscape and outdoor spaces. Assess amenity impacts on the surrounding locality, including lighting impacts, reflectivity, solar access, visual privacy, visual amenity, view loss and view sharing, overshadowing and wind impacts. A high level of environmental amenity for any surrounding residential or other sensitive land uses must be demonstrated. Provide a solar access analysis of the overshadowing impacts of the development within the site, on surrounding properties and public spaces (during summer and winter solstice and spring and autumn equinox) at hourly intervals between 9am and 3pm, comparing the proposed development, existing situation and a development with no bonuses applied.	7. Public Space Demonstrate how the development maximises the amount, access to and quality of public spaces (including open space, public facilities and streets/plazas within and surrounding the site), reflecting relevant design guidelines and advice from the local council and the Department. Demonstrate how the development: - ensures that public space is welcoming, attractive and accessible for all. - maximises permeability and connectivity. - maximises the amenity of public spaces in line with their intended use, such as through adequate facilities, solar access, shade and wind protection. - maximises street activation. - minimises potential vehicle, bicycle and pedestrian conflicts.
27. SEARs Industry Specific Cover Letter Provide a table which demonstrates how each apartment, including affordable apartments, addresses the key Apartment Design Guide design criteria to inform the assessment of the development, against the Design Quality Principles within State Environmental Planning Policy (Housing) 2021 and the Apartment Design Guide.			
6. Visual Impact Provide a visual analysis of the development from key viewpoints, including photomontages or perspectives showing the proposed and likely future development.			

I Jason Fraser, Registered NSW Architect #8431, confirm this Design Report addresses the requirement of SEAR No. SSD-77825469 and relevant State and local legislation, policies, and guidelines including SEARs, Better Places, Apartment Design Guide, Build-to-rent housing and flexible design Fact sheet. I further confirm that none of the information contained in the Design Report is false or misleading.

Signed: 

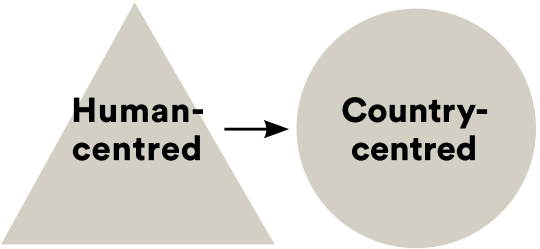
01.03 Project Context - Relevant GANSW Policy

Connecting with Country Framework

Guided by
Aboriginal
community

The Commitment

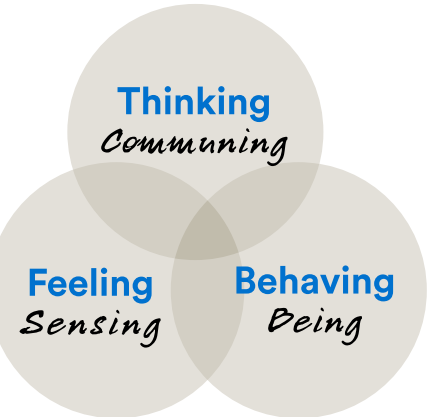
All NSW built environment projects will be developed with a Country-centred approach guided by Aboriginal people, who know that if we care for Country, Country will care for us.



Practices

• Reframing our way of working

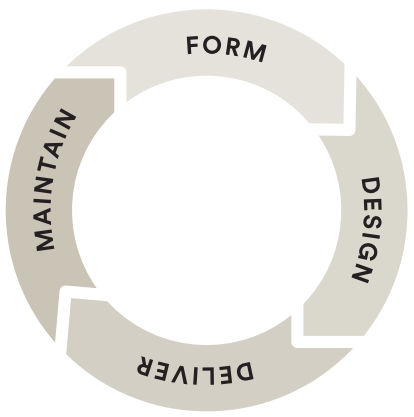
• Changing our approach and processes to support a Country-centred approach



Actions

• Implementing the framework

• Project life cycle from an Aboriginal perspective



Outcomes for Country

• Healthy Country

• Healthy community

• Protecting Aboriginal cultural heritage

• Cultural competency

• Better places

Alongside *The Better Placed policy*, *The Connecting with Country Framework*, written by the Government Architects is a comprehensive guide underscoring the importance of responding to and preserving Aboriginal cultural heritage in urban planning and design endeavours. The guide is for good practice, helping architects respond to Country when planning, designing and delivering built environment projects. The ambition of the framework is that everyone involved in delivering built environment projects will adopt the following commitment: All NSW built environment project will be developed with a Country-centred approach guided by Aboriginal people, who know that if we care for Country, Country will care for us.

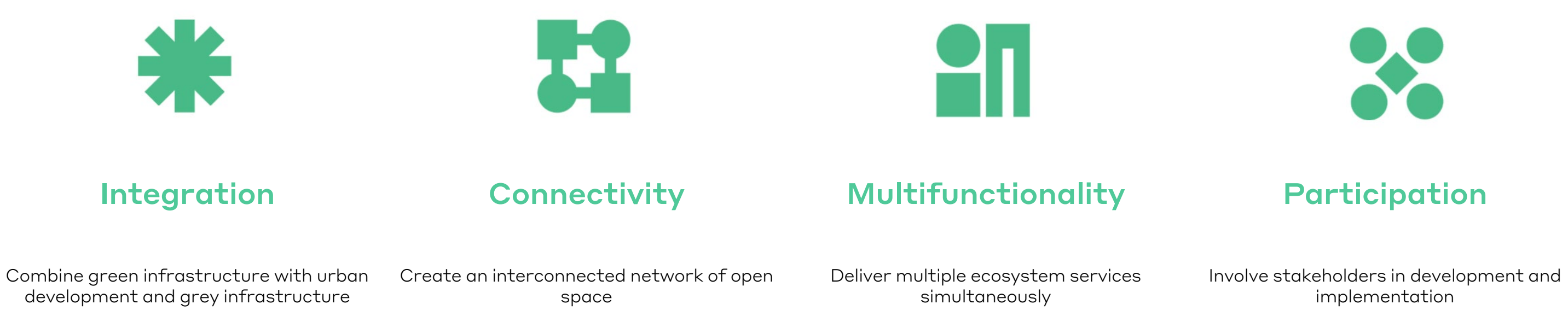
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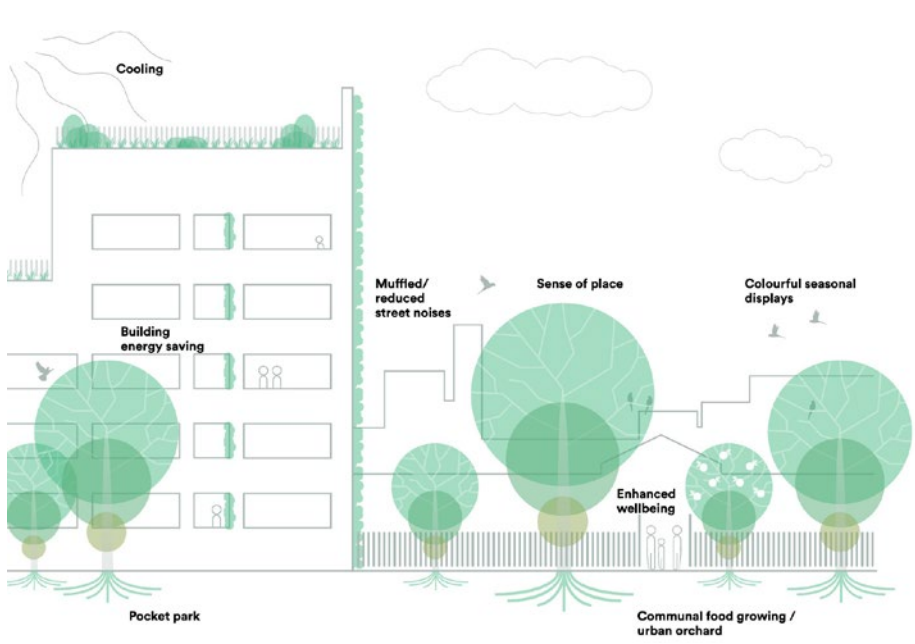
01.03 Project Context - Relevant GANSW Policy

Greener Places Design Guide Principles for NSW

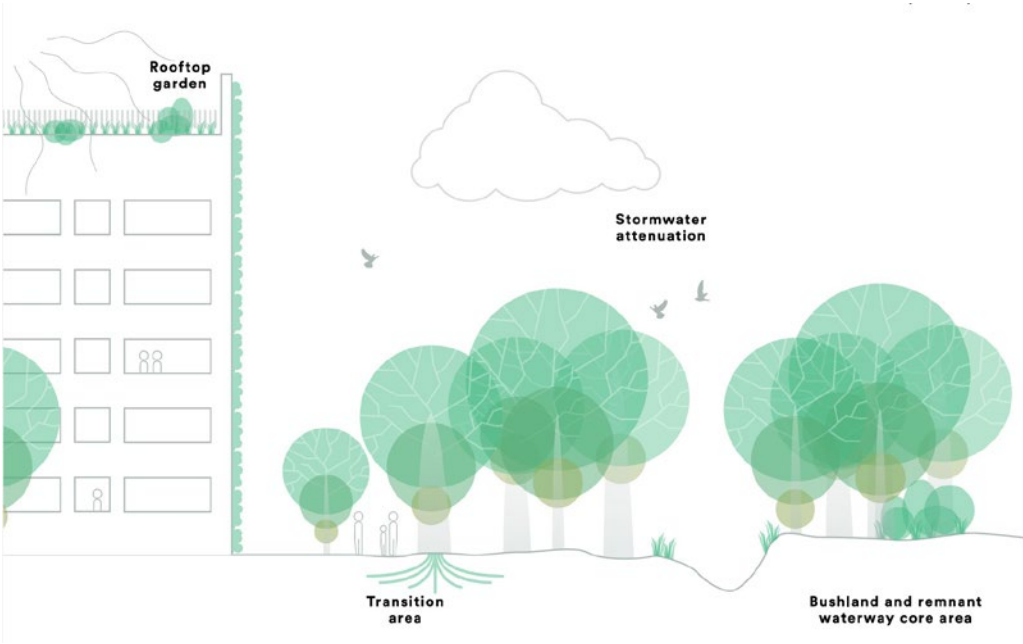


The Draft Greener Places Design Guide, written by Government Architect NSW, provides information on how to design, plan and implement green infrastructure in urban areas throughout NSW. The guide provides a methodology to help local and State government, as well as industry to create a system of green infrastructure. The guide explains green infrastructure and the benefits of implementing it. The major components fall into three categories: open space for recreation - green infrastructure for people, urban tree canopy - green infrastructure for climate adaptation and resilience and bushland and waterways - green infrastructure for habitat and ecological health. The plan envisions improved public open spaces that are accessible, high quality and evolve with the growing population; increased urban canopies and improved connectivity between people and the natural environment. It is intended that the four principles above will help deliver green infrastructure in NSW.

From the Draft Greener Places Design Guide by:



Urban Tree Canopies



Connecting to Parklands

01.03 Project Context - Relevant GANSW Policy

Better Placed



Better Placed, Government Architect New South Wales, 2016.

The Better Placed policy, written by Government Architect NSW, collates aspirations, expectations and requirements for the design of the built environment of NSW. The guide sees the potential that new development holds in impacting quality of life, stimulating the economy and improving the environment. It is envisioned that all aspects of our urban environment should be enhanced to create better places, spaces and buildings to achieve better cities, towns and suburbs. The plan states that good design needs to be at the centre of all development processes to achieve this and address the complexity of our rapidly changing social and economic environment. Better Placed asks industry to challenge their design thinking, problem solving and analysis to enhance the design quality of our built environment to ultimately create better environments that will define the future heritage of NSW.

The seven distinct objectives above define the key considerations in the design of the built environment. Better Placed, depicts that achieving these objectives will ensure cities and towns, our public realm, landscapes, buildings and public domain will be responsive, healthy, integrated, resilient and equitable.

From the Draft Greener Places Design Guide by:



Discover - Create - Deliver

01.03 Project Context

Ku Ring Gai Strategies



Community Strategic Plan

This long-term plan reflects the community's vision and aspirations, addressing environmental, social, economic, and civic leadership issues to shape Ku-ring-gai's future

Key Themes

- 1. Community, people, and culture
- 2. Natural environment
- 3. People, places, and infrastructure
- 4. Access, traffic, and transport
- 5. Local economy
- 6. Leadership



Local Strategic Planning Statement (LSPS)

The LSPS outlines the economic, social, and environmental land use needs for the next 20 years (2016-2036), guiding future housing locations, center identities, community facilities, transport infrastructure, and environmental management.

Local Planning Priorities

- Infrastructure and Collaboration
- Livability
- Productivity
- Sustainability



Housing Strategy

This strategy addresses current and future housing needs, ensuring a diverse and sustainable housing supply that aligns with community expectations and demographic trends.

Ku-ring-gai's Housing Future: liveable for life

Housing in Ku-ring-gai will support connected communities by providing sustainable, diverse, and well-designed homes to accommodate a changing community, close to key infrastructure and aligned with the local character.

Diversity

Diversity

Provide a variety of housing types and sizes to suit the changing needs of the community.

Affordability

Enable people to live in the area through changing life stages and circumstances.

Accessibility

Enable people of all ages and abilities to continue to live independently, close to networks and age in place.

Liveability

Liveability

Locate housing to create connected communities living in healthy neighbourhoods with amenity, safety and open space.

Mobility

Provide new housing within a 10 minute walk to frequent train and bus services, close to cycle routes, and having regard to traffic flow and parking.

Social & Cultural Infrastructure

Provide key services and facilities to support and engage our community.

Quality

Design

Provide high quality, well designed homes that consider streetscape, context and building scale.

Character

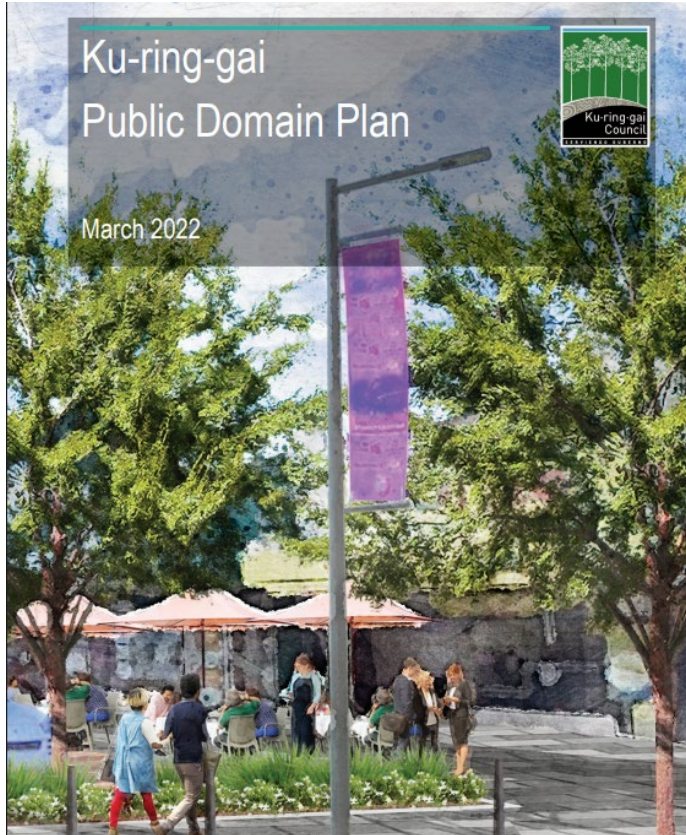
Ensure housing respects local character, and is compatible with heritage and biodiversity values

Sustainability

Deliver environmentally sustainable homes that are resilient to a changing climate.

01.03 Project Context

Ku Ring Gai Strategies



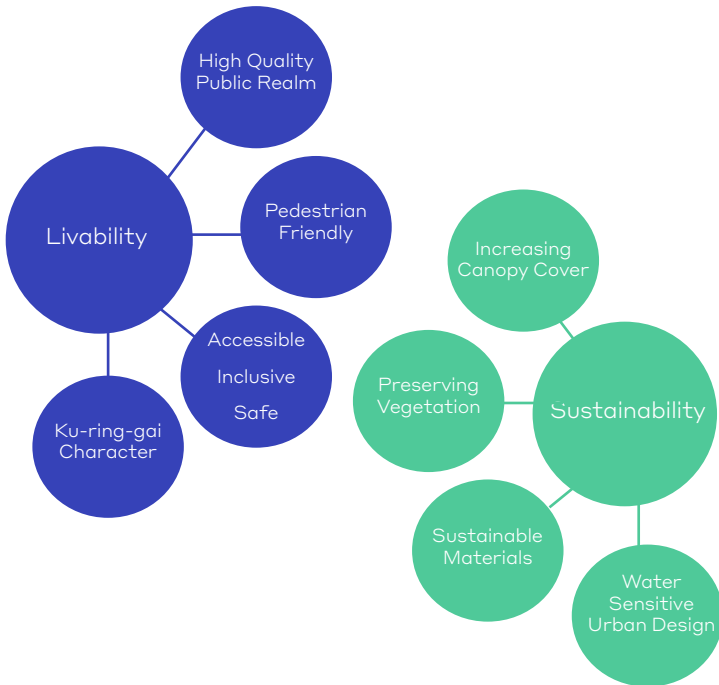
Public Domain Plan

Guiding the design of streets and public spaces within and around town centers, this plan aims to enhance the functionality and aesthetic appeal of public domains.

Key Objectives

- The key objectives of the Ku-ring-gai Public Domain Plan reflect the Priorities in the Greater Sydney Commission's North District Plan and the Ku-ring-gai Local Strategic Planning Statement – Liveability and Sustainability. Consequently, the objectives of the Ku-ring-gai Public Domain Plan are to
- deliver a high quality public realm;
 - provide a consistent positive image for Ku-ring-gai with acknowledgement and retention of local character for each Local Centre;

- improve legibility and wayfinding;
- develop pedestrian focused places with improved walking experience;
- ensure an accessible, inclusive, and safe public domain;
- create vibrant streetscapes and public areas with enjoyable experiences including outdoor dining, public art installations and flexibility for events;
- promote a consistent materials palette and consistent design elements to unify and identify Ku-ring-gai LGA;
- respond to climate change by providing shelter through planting and structures / built form with canopies to reduce heat, and other cooling methods such as water features;
- preserve and enhance vegetation and landscape character of Ku-ring-gai;
- encourage sustainable design using robust, long lasting materials; and
- encourage sustainable water usage design such as water capture, water re-use and cleansing, and water efficient planting.



01.04 Local Context

Ku Ring Gai Demographics

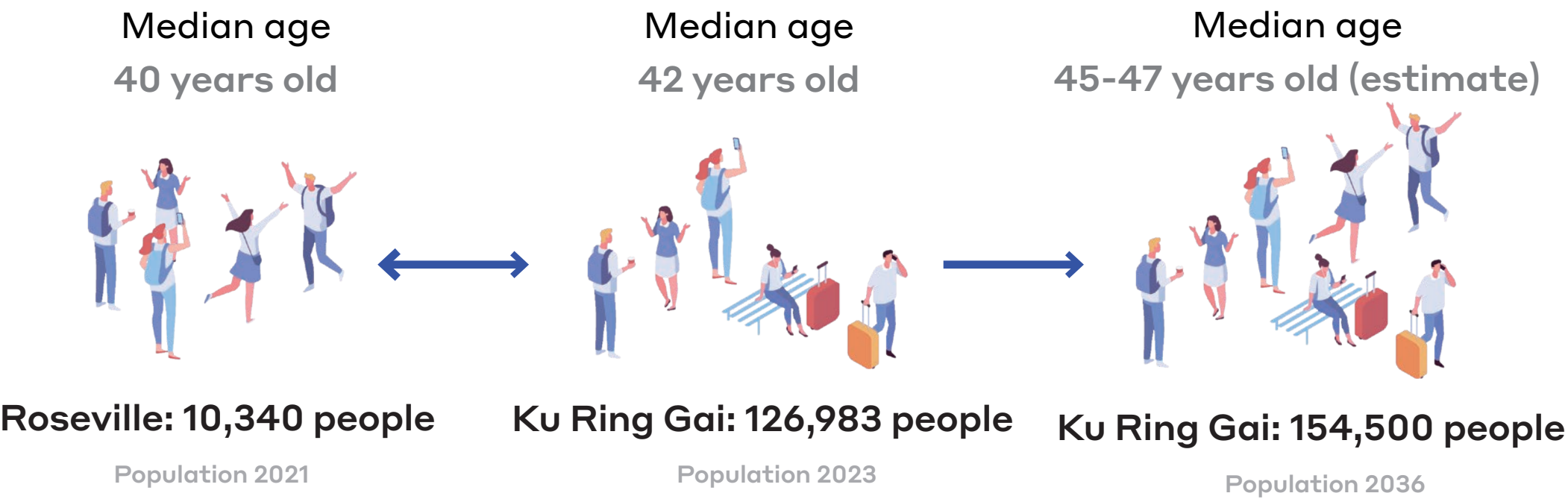
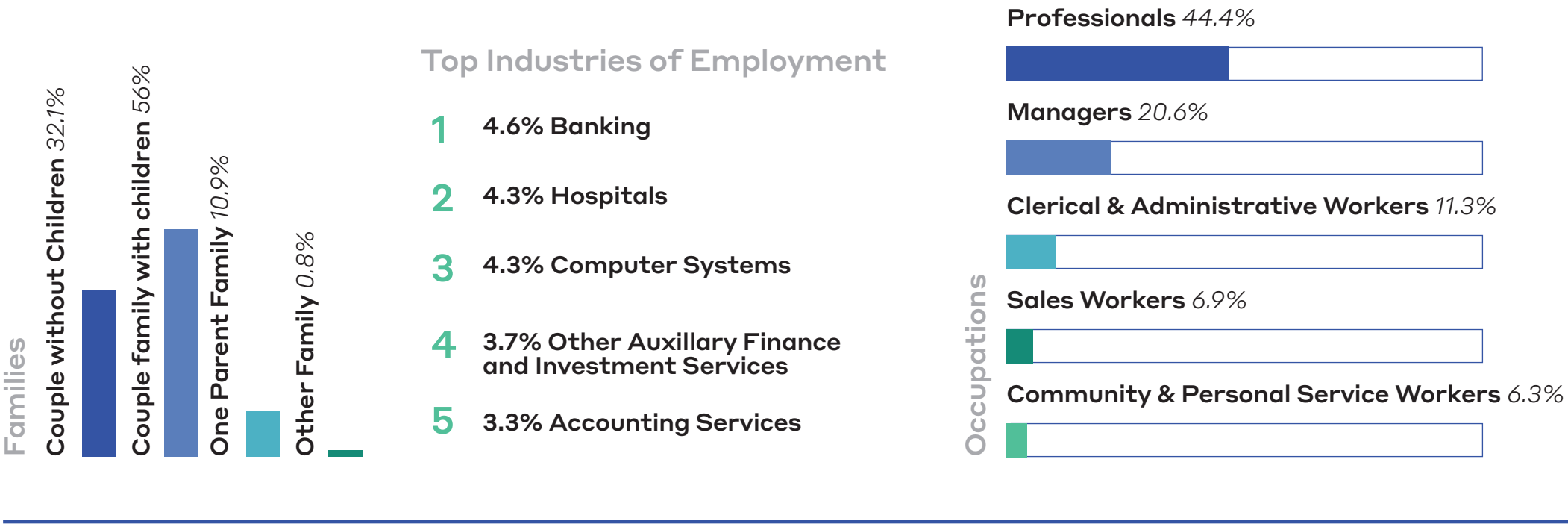
Need for diverse housing for a growing and evolving community

With a median age of 40, Roseville has a relatively mature demographic. Higher-density housing can provide suitable living options for older residents who may want to downsize or seek homes closer to public transport, services, and social hubs. Roseville's housing needs are evolving, with the demographic largely composed of couples without children (32.1%), couples with children (56%), and one-parent families (10.9%). Increasing density through a mix of apartments and townhouses can provide more suitable housing options for a diverse range of households, from young professionals and downsizing empty nesters to growing families seeking well-connected, amenity-rich neighborhoods. Higher-density housing near transit and local services can enhance convenience, reduce commute times, and support a more vibrant, community-oriented lifestyle while ensuring Roseville remains an attractive and accessible place to live for all life stages.

While it's difficult to predict the exact median age of Ku-ring-gai in 2036, we can estimate based on current trends. With a median age of 42 years in 2021 and the area's relatively high proportion of older residents, it's likely that the median age will continue to rise over the next 15 years, reflecting an aging population.

If current trends persist, the median age in 2036 could be around 45 to 47 years. This increase would be influenced by factors such as longer life expectancy, lower birth rates, and the aging of the large Baby Boomer generation in the area.

To address this shift, increasing housing density and offering a mix of housing options would be essential for catering to both older residents and younger, growing families.



01.04 Local Context

Ku Ring Gai Demographics

An underserved transport hub

Located just 12 km from Sydney's CBD, Roseville's train station offers residents convenient access to employment opportunities in the city and nearby hubs like North Sydney. However, the 2021 Census revealed that most residents either drive to work or work from home, resulting in the station being underutilized. Increasing residential density around the station, along with introducing mixed-use developments, would stimulate the local economy, reduce car dependence making the area more sustainable, improving accessibility to key services and employment hubs, and provide much-needed housing with easy access to public transport.

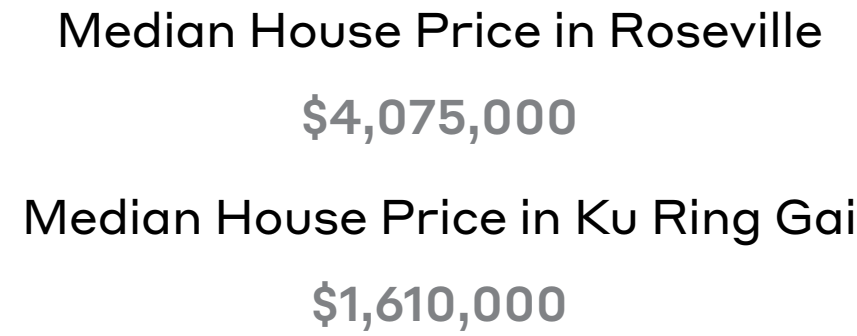
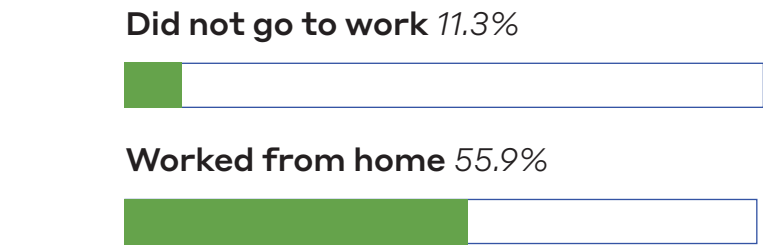
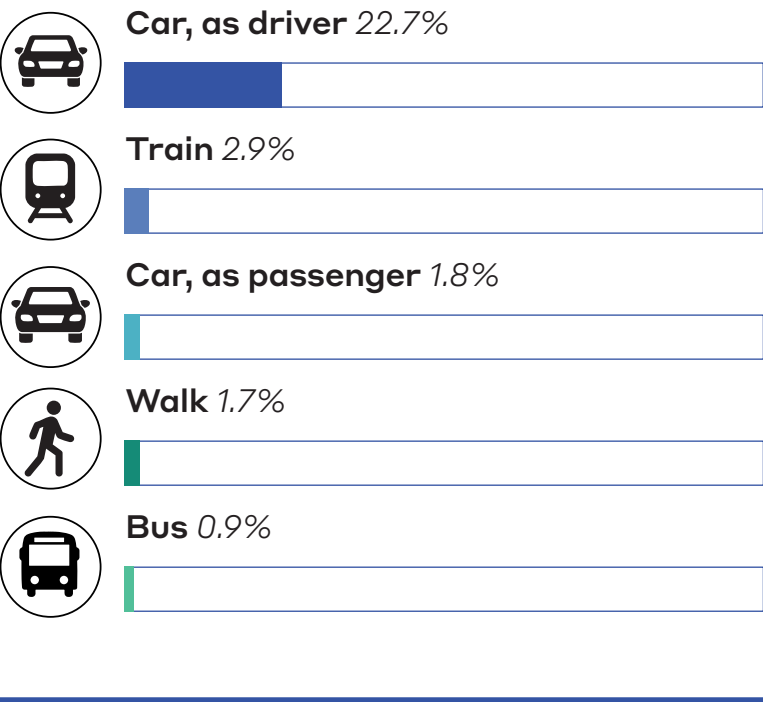
Lack of affordability

Like many areas in Sydney, housing affordability in Roseville may become a growing concern as demand increases. By increasing density, more affordable housing options can be introduced to the market, ensuring that people from various income levels can continue to live in the area.

Median House Price in Roseville: The median house price in Roseville is approximately \$4,075,000.
Median Household Income in Roseville: According to the 2021 census, the median household income in Roseville is around \$2,000 per week or about \$104,000 per year.

Given these figures, the median house price in Roseville is roughly **39 times** the median household income. This indicates that housing in Roseville is relatively unaffordable for many local residents, particularly for first-time homebuyers or those with lower incomes. This disparity is a common trend in high-demand areas of Sydney, making it more difficult for residents to enter the housing market without significant financial support or equity. Increasing housing density and introducing more affordable housing options could help address this issue, providing opportunities for a broader range of income levels to live in the area.

Method of travel to work (on the day of the census)



Increasing density for a more connected and sustainable Roseville

Roseville's current housing composition, with 68.8% separate houses, 28.5% apartments, and only 2.8% townhouses, highlights a need for greater housing diversity and increased density, particularly around the center.

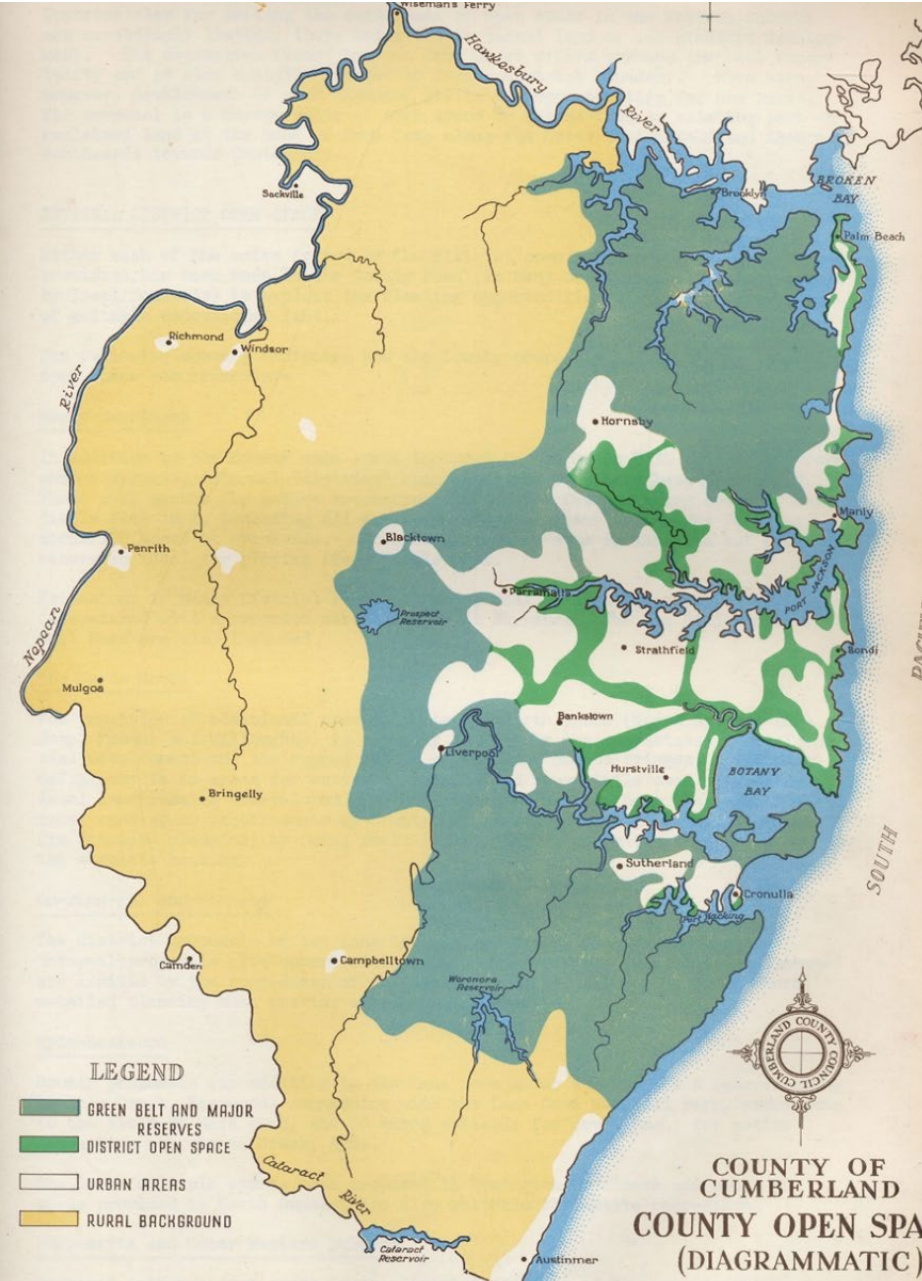
Transit-Oriented Development (TOD) presents a vital opportunity to create a more sustainable and accessible urban environment by focusing growth around key transport nodes. By increasing density near transit hubs, Roseville can improve housing affordability, reduce car dependency, and support local businesses through a more vibrant and walkable community. Encouraging a mix of mid-rise apartments and townhouses will not only cater to changing demographics but also enhance public transport usage, ultimately fostering a more efficient and environmentally friendly urban fabric.

Context and Analysis

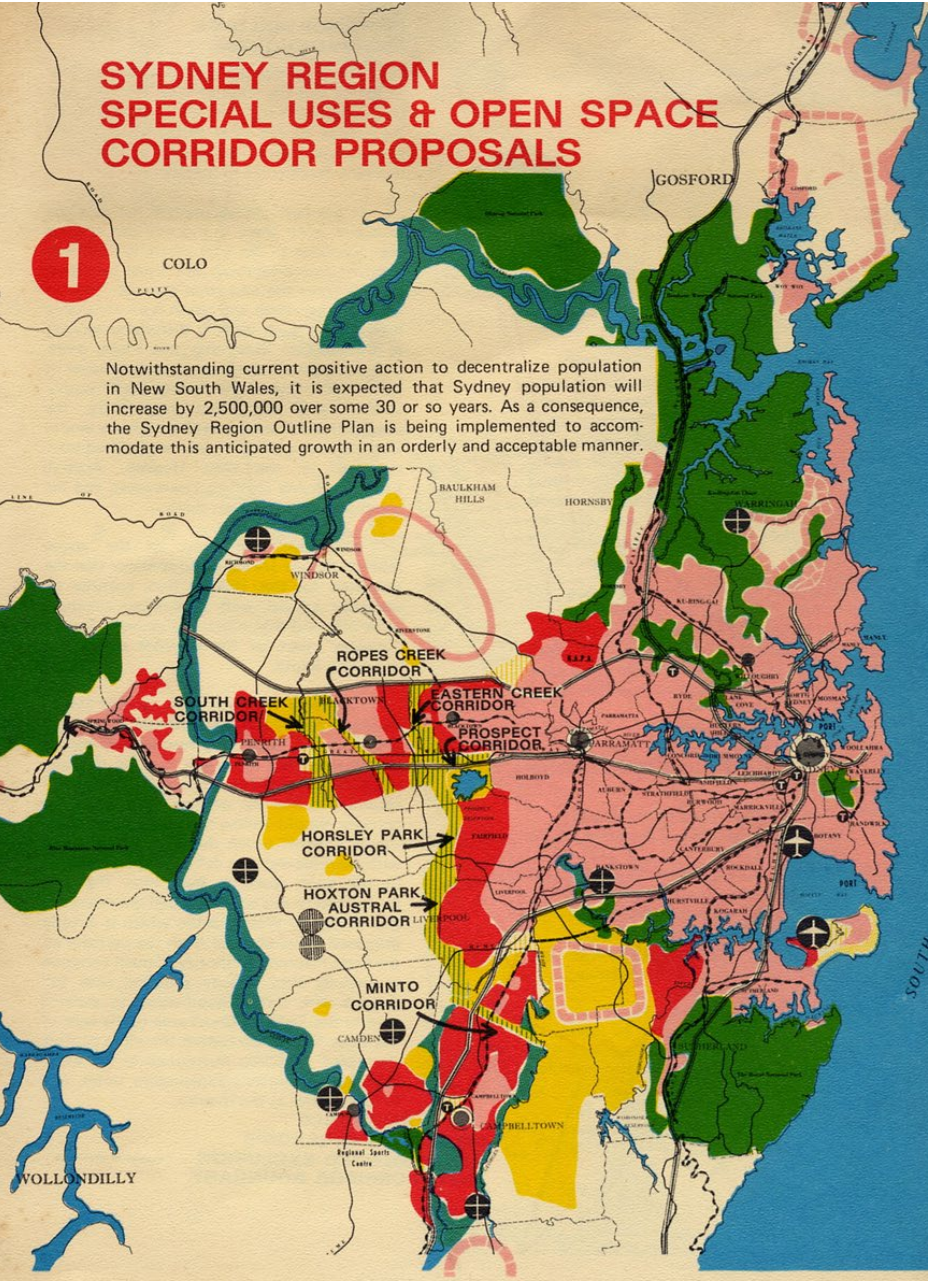
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02.01 Strategic Context

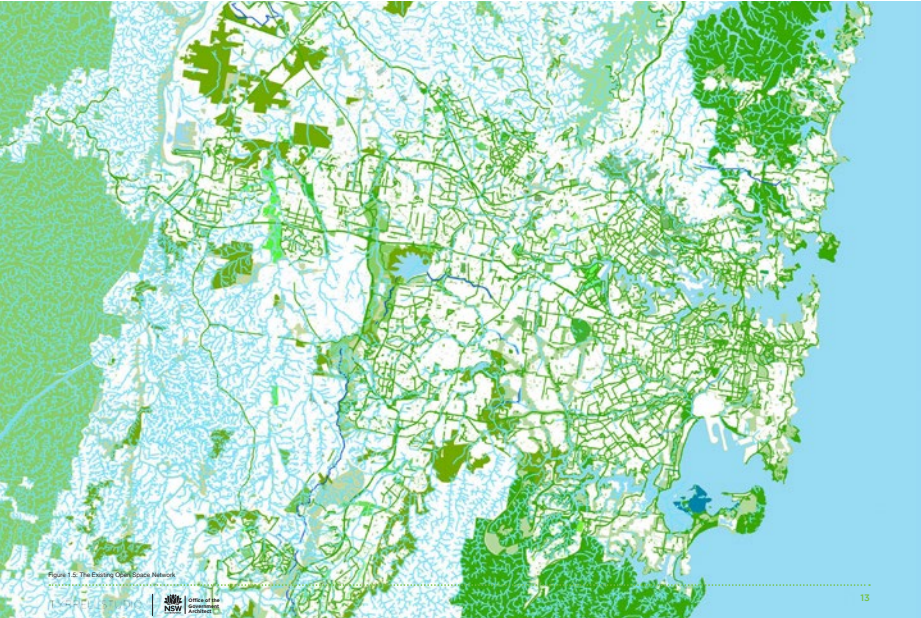
Connectivity to Greater Sydney's Intent for Greening Initiatives



Sydney Green Belt & Green Web (1957)



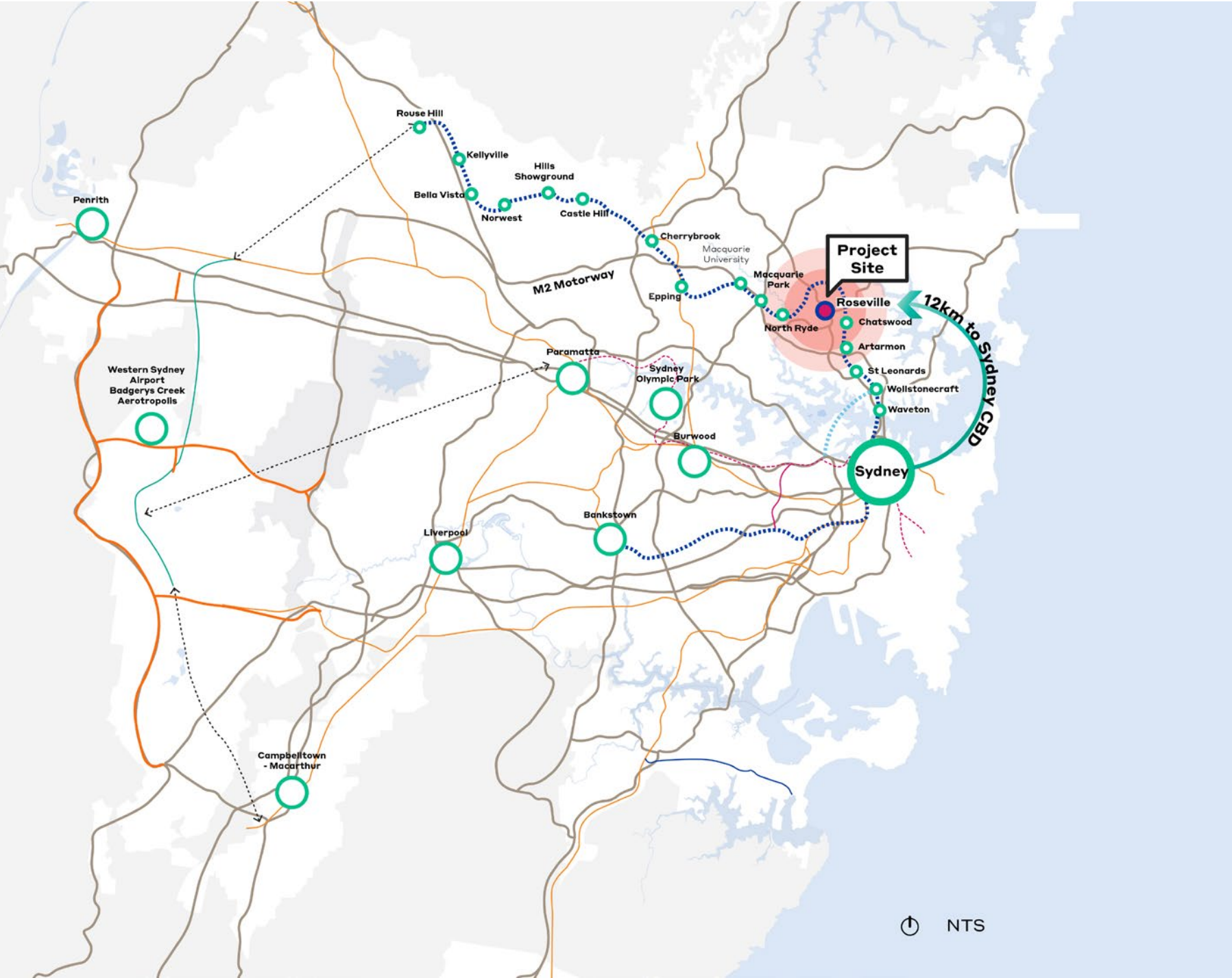
Special Use and Open Space Corridors (1968)



Sydney Green Grid (2017)

02.01 Strategic Context

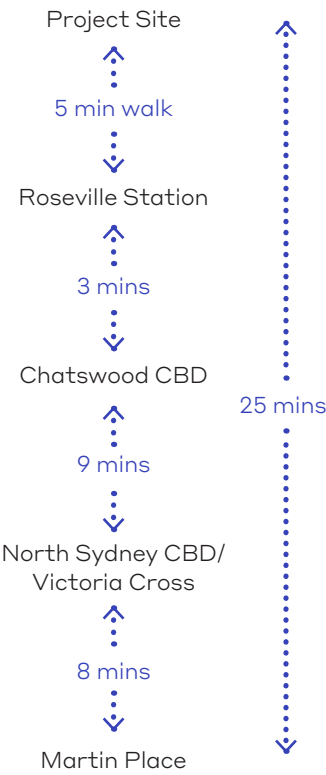
Accelerated TOD Precincts



02.02 Urban Context

Proximity to Sydney CBD

Travel Times



Distance to National Parks

Blue Gum Reserve	2 min walk
Lane Cove NP	6 min drive
Garigal NP	18 min drive
Ku-Ring-Gai NP	26 min drive
Berowa Valley NP	40 min drive



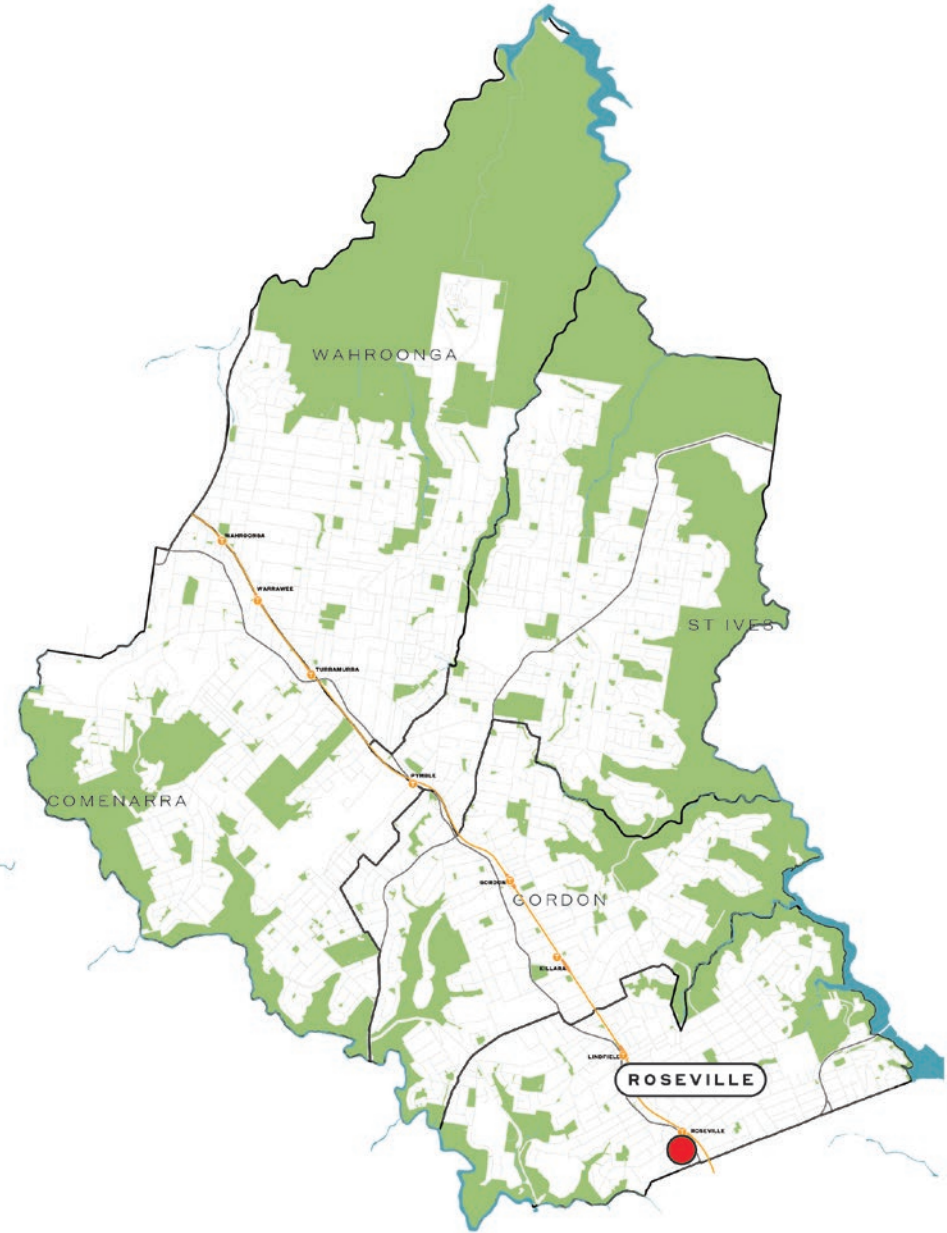
02.02 Urban Context

Roseville in Ku Ring Gai

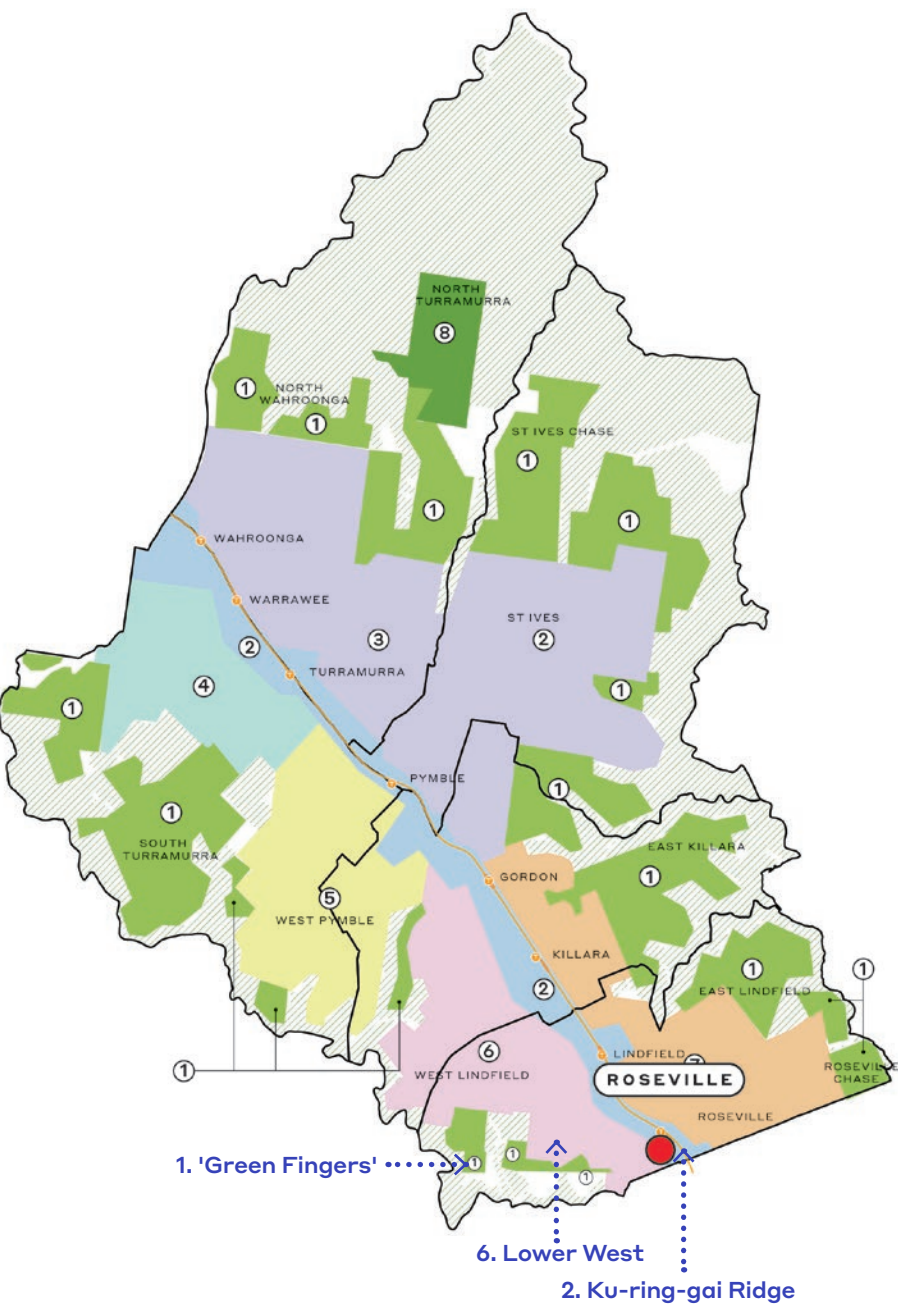
Within the context of broader Ku-ring-gai, Roseville is situated in what is identified as the "Lower West" Character area. Within this specific area, the site is also sandwiched between the "Ku-ring-gai" ridge (Pacific Highway) - a major transport corridor situated towards the East at a higher elevation, and the "Green Fingers" - which is a biodiversity / natural reserve zone towards the West at a lower elevation.

These characteristics are noted as a high and low point with the site located in between elevationally, with the high elevation to the East (Pacific Highway) being a highly active and sub-urban area, and the low elevation (natural landscaping / parks) to the West being a much less active and natural area.

This is also later noted during Designing With Country sessions that have been held and facilitated by JUMP Aboriginal Consultancy.



- Ku-ring-gai 5 Council Wards:
- › Roseville is located at the Southern most point of Ku-ring-gai



- Ku-ring-gai Local Character Area Statements (2021)
- › Roseville is located in the 'Lower West' Character Area, sandwiched between the 'Ku-ring-gai Ridge' and the 'Green Fingers' area

02.03Site Context

Roseville, Ku-ring-gai

- 01 Subject Site
- 02 Roseville Train Station
- 03 Roseville Town Centre
- 04 Roseville Lawn Tennis Club
- 05 Ku-ring-gai Art Centre
- 06 St Andrews Anglican Church
- 07 Roseville Preschool Kindergarten

Sites Under Construction & Approved Developments

A	Lord Street	Multi Storey Residential
B	4-10 MacLaurin Parade	Multi Storey Residential
C	1-3 Corona Avenue	Multi Storey Residential
D	130-138 Archer Street	Multi Storey Residential
E	27-37 Bancroft Avenue	College Sports



02.03Site Context

Transition between Nature & Suburbia

The sites sit within the 400m Transport Oriented Development SEPP Zone set out by the NSW Gov.

There is direct access to the Blue Gum Reserve via the Rifleway bridge at the top of Site A, Larkin Street.

Between the station and the sites, along the Pacific Highway, is a variety of community amenities, including Roseville Cinema, convenience stores and restaurants, all within a 5 minute walk.

Excerpt from Ku-ring-gai Council Submission on Transport Oriented Development Program, 2024.



02.03 Site Context

Movement, Access, & Views



02.03 Site Context

Climate & Orientation



02.04 Planning Controls

Summary

Address	2-16 Pockley Avenue, Roseville, NSW
Council	Ku-ring-gai
LEP	Ku-ring-gai LEP
Lot Area	Combined area 6,539.9m ²
Zone	R2 Low Density
	Residential (Housing SEPP 2024 override)
Height	22m
Height (IAH SEPP Bonus)	28.6m
FSR	2.50: 1
FSR (IAH SEPP Bonus)	3.25: 1
Heritage	No
Available GFA	21,254.7m ²
Proposed GFA	21,254.7m ²

Permissibility

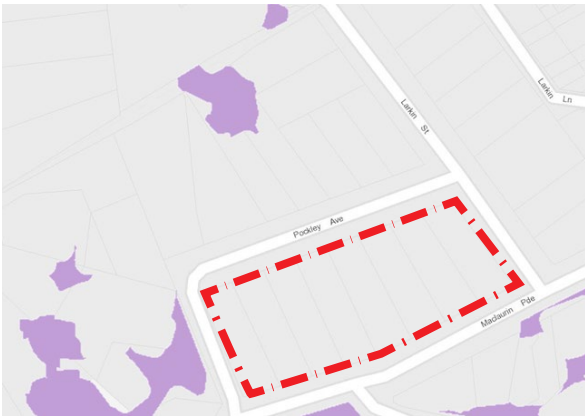
- Development permitted with Consent per Ch2, Part 2, Div 1, s15C:
 - a) development permitted under Ch5, and
 - b) affordable component at least 10% GFA, and
 - c) within Six Cities Region, in an accessible area
- Within 800m walking distance of the public entrance to Roseville Railway station (sch10).

Affordable Housing Requirements

- TOD: Min. 2% affordable housing in perpetuity
- Infill Bonus (to unlock +30% HOB and FSR) : Min. 15% affordable housing for 15 years
- Total: 17% total affordable housing GFA required (2% TOD + 15% infill bonus)

Biodiversity

- Sites have been identified as having biodiversity values. The proposal must show minimal impact on significant existing trees and vegetation

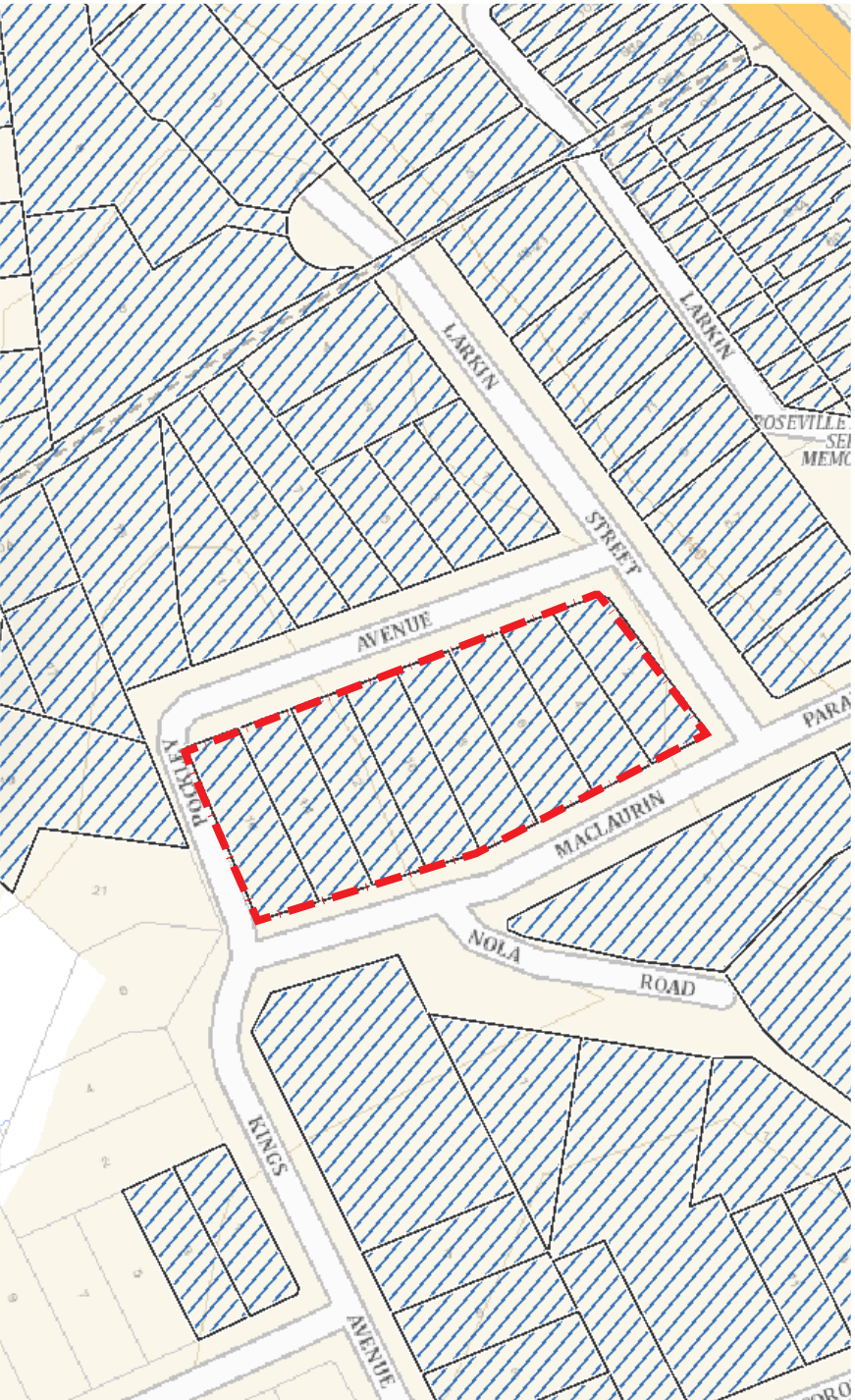


Source: NSW Government Biodiversity Values Map and Threshold Tool



02.04 Planning Controls

SEPP (TOD) & LEP



TOD Sites

Zones hatched are nominated TOD Sites and fall under the Housing SEPP

Site Boundary



Greenweb Map

Support for Core Biodiversity Lands

Landscape Remnant

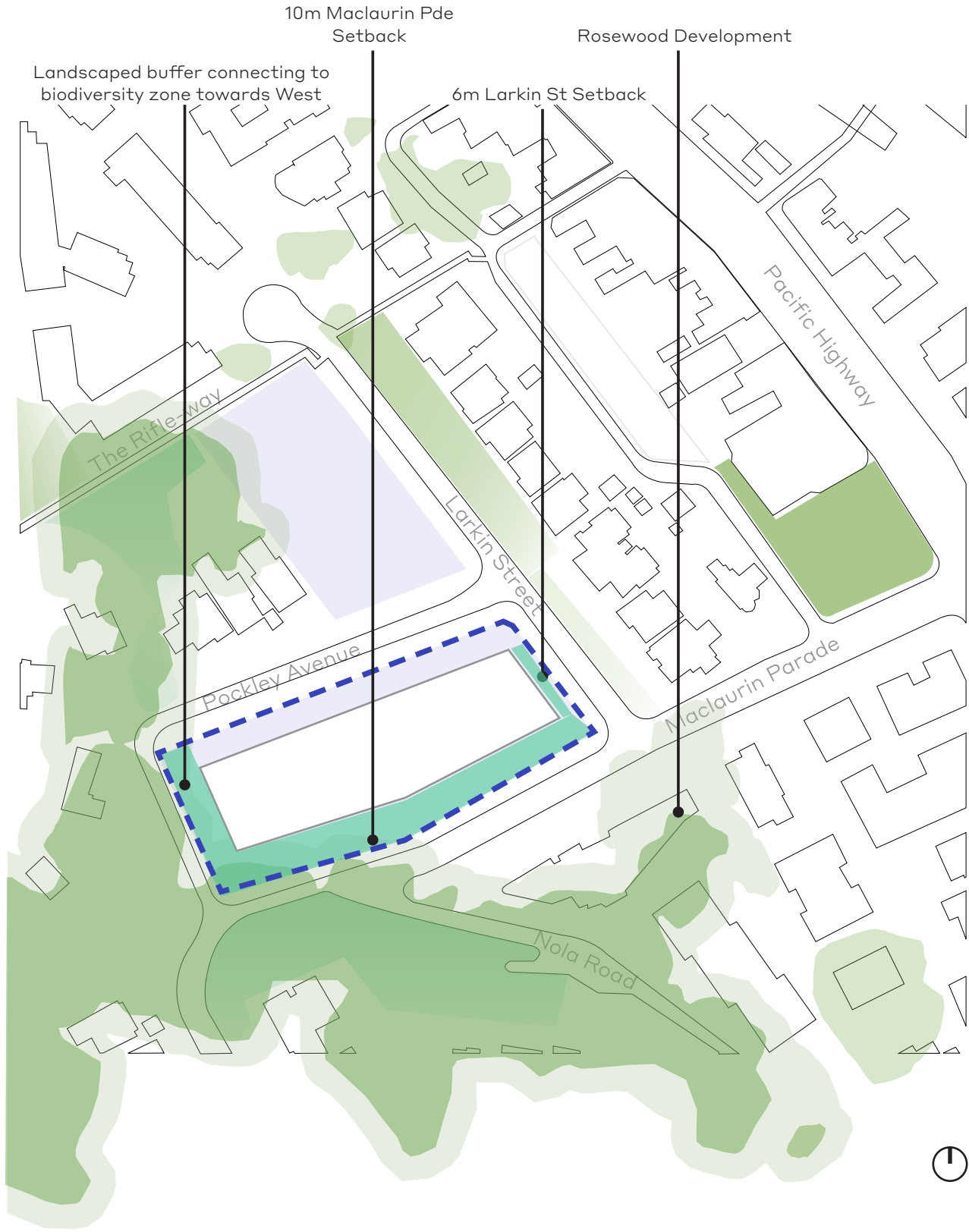
Biodiversity Corridors and Buffer Areas

Canopy Remnant

Site Boundary

02.05 Site Opportunities

Opportunities



02.06 Historical Timeline



Then

First Nations /
Traditional Owners

Agricultural /
Industrial Land Use

1890 North Shore
Railway Line Opens

Increase In
Single Dwelling
Residential Density

Major Transport
Infrastructure
Growth & Upgrades

View of the upgraded station entry
and new lift on Hill Street

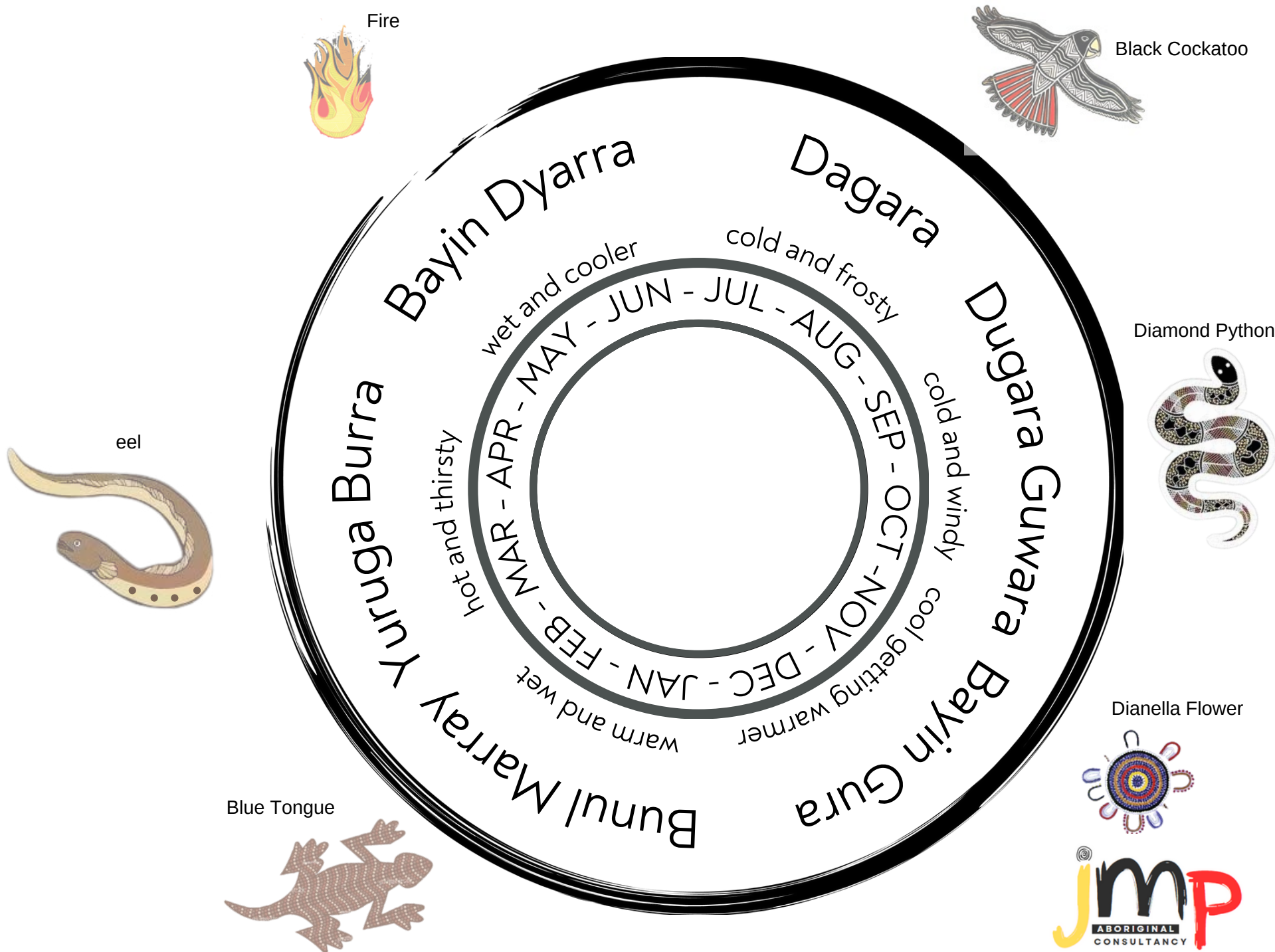
Now

Increase In Multi-
Residential Density

02.07Connecting with Country

Connecting with Country Framework

Through a close collaboration with JMP Aboriginal Consultancy, and Ground Ink Landscape architects, the proposed design outcome integrates a tightly woven Connecting With Country strategy that is embeded through both the landscape and the architecture that sits within and on country.



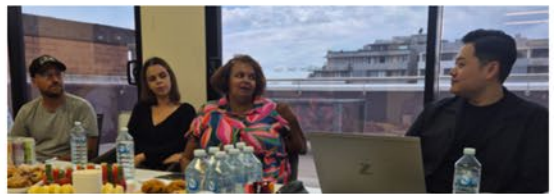
02.07Connecting with Country



Walk on Country
Took place on the 14th of February 2025 For both Pockley + Larkin to create a cultural narrative with Elder Aunty Jean Moran, Paige Moran and Adam Byrne from Bush to Bowl



Design Input Session
Was conducted after the Walk on Country back at Ground Ink Studio which allowed the Elders and Design Team to collaborate and blend Modern Design with the influence of Indigenous Traditional input.



"Places of Reflection and Connection"
Aunty Jean Moran

"Bring the Creek up to the development to gain the sense of Country"
Aunty Jean Moran

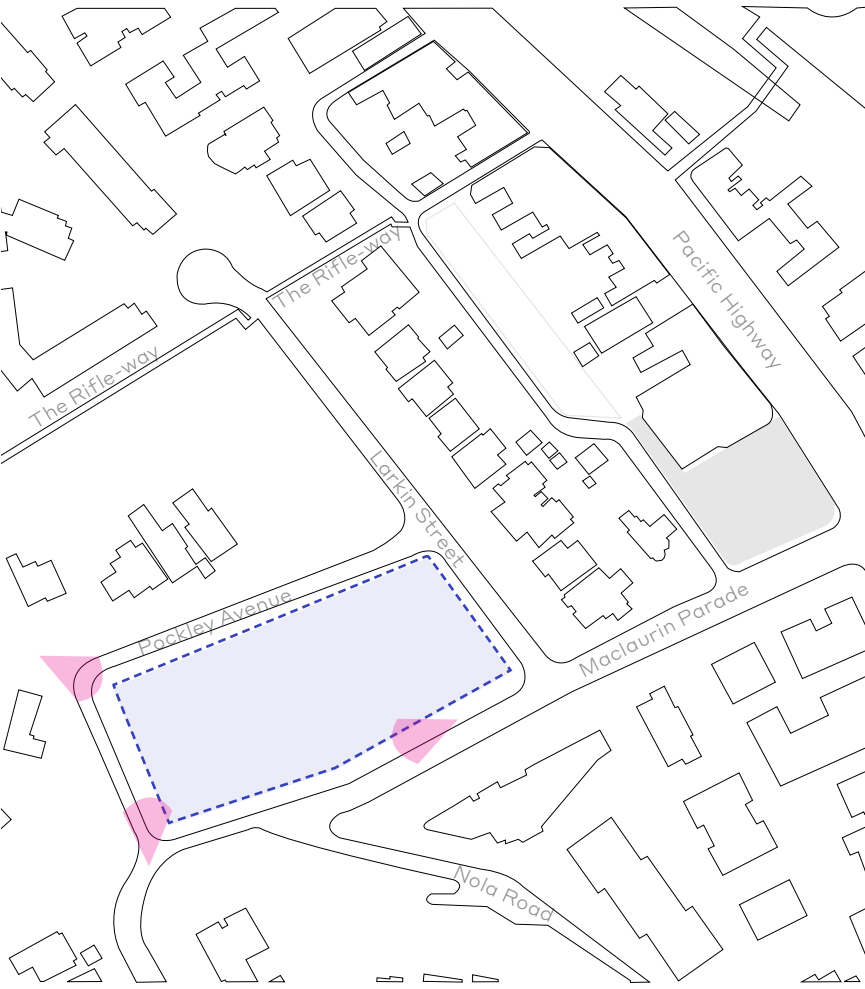


"Native indemick species into the landscaping will bring birds and animals back to observation for a sense of greater connection"
Adam Byrne (Bush to Bowl)



"Layering Culture through the levels of Pockley to bring all elements of Country"
Paiae Moran

02.08 Site Photos
Existing Conditions



Key Plan



View from the corner bend of
Pockley Ave



View from the corner of Pockley
Ave and MacLaurin Pde



View down MacLaurin Pde
looking South West

02.09 Place and Character



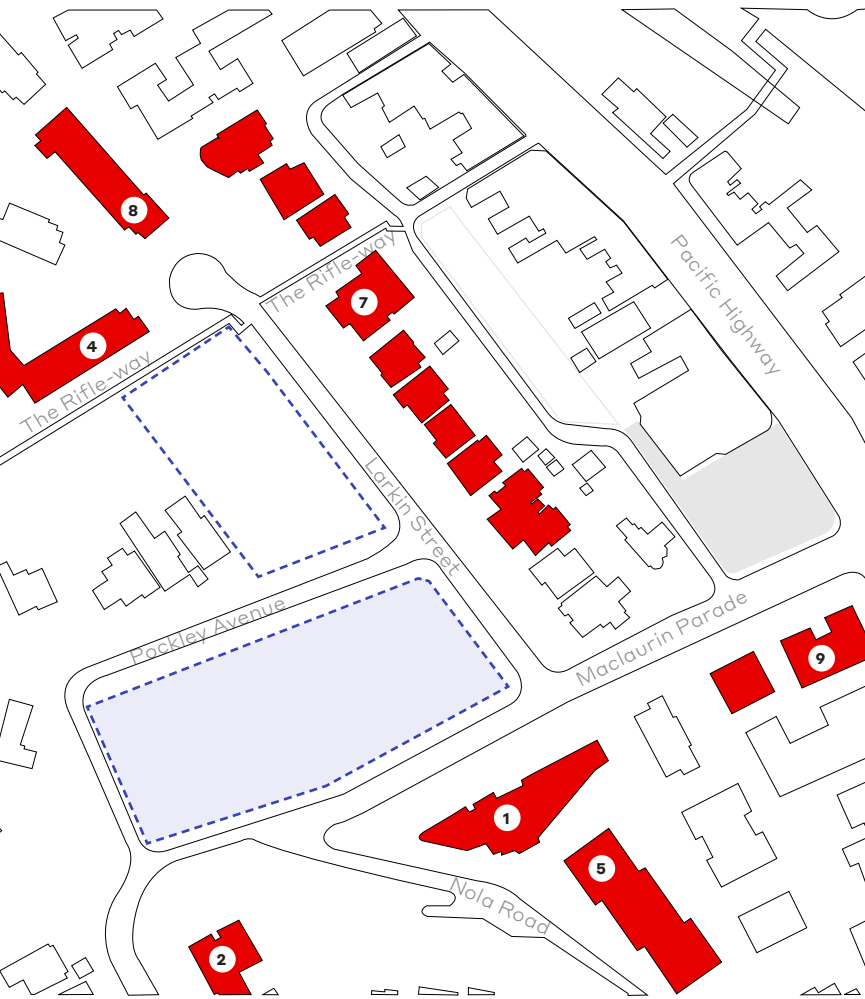
01 Rosewood Residence, 4-10 MacLaurin Pde



02 Kings Apartments, 9-15 Kings Avenue



03 Roseville Pavilions, 6-12 Nola Road



Key Plan



04 19-21 Larkin St



05 3-5 Nola Road



06 21 Larkin St



07 6 Larkin St



08 10 Larkin St



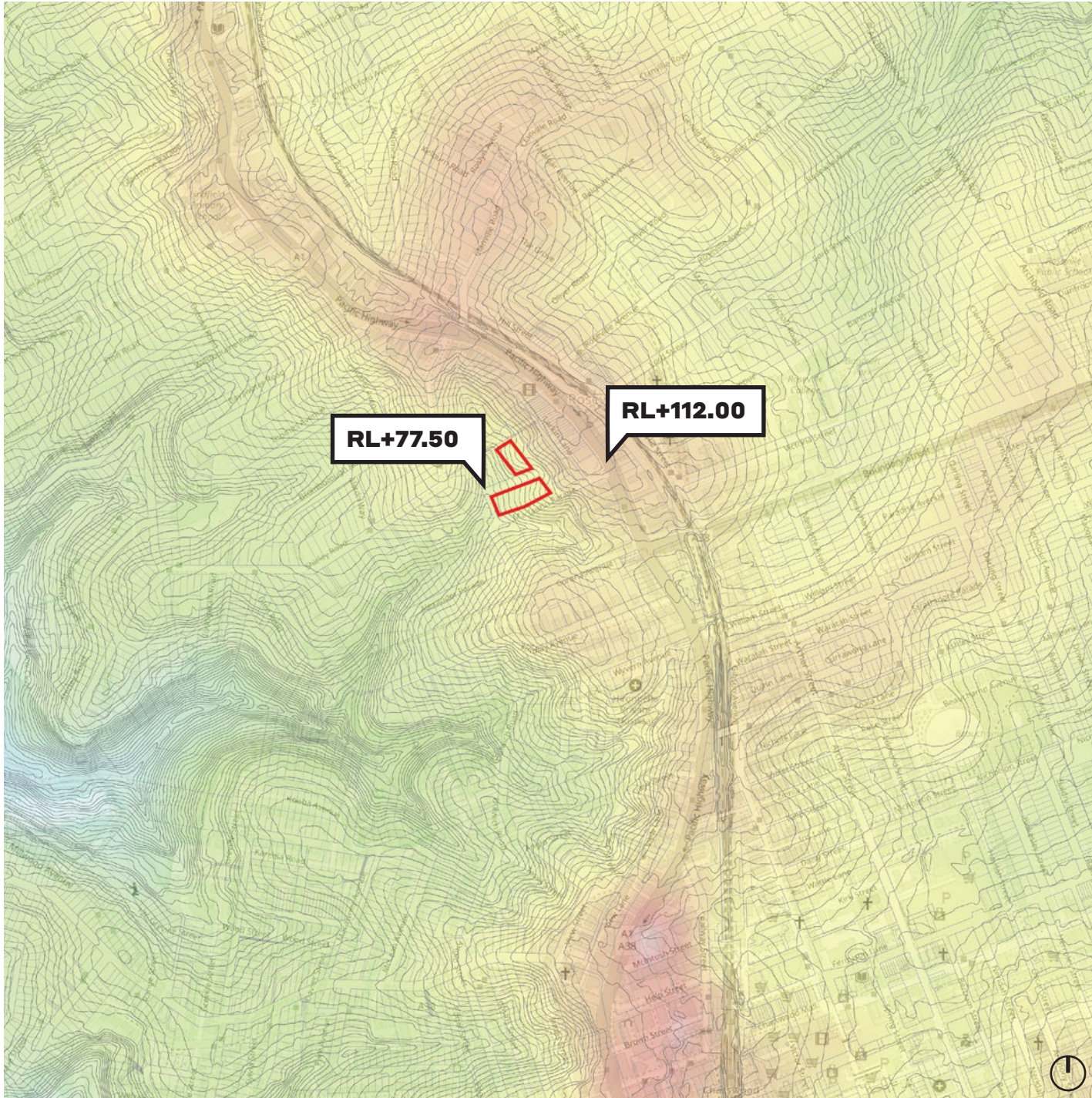
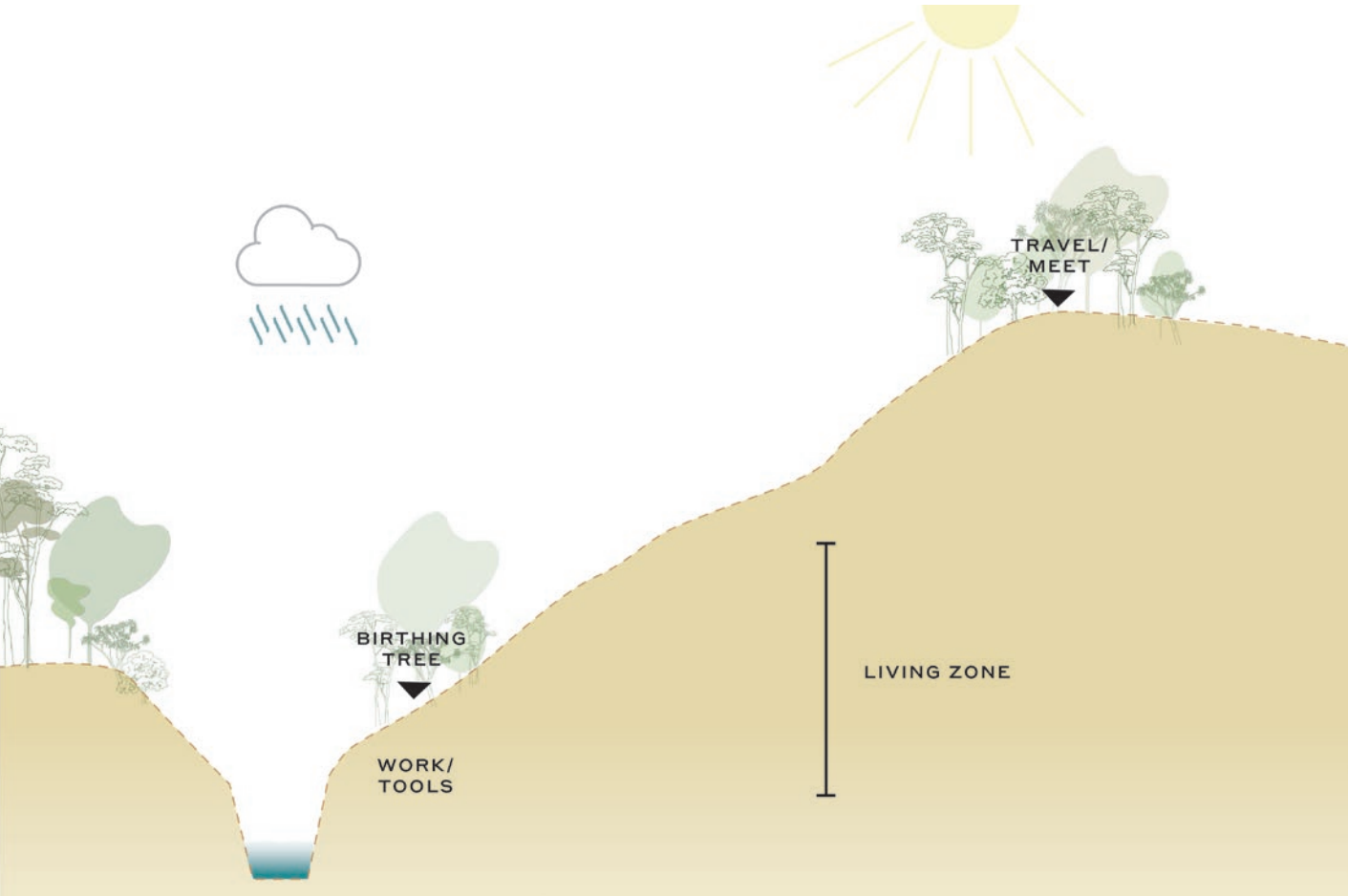
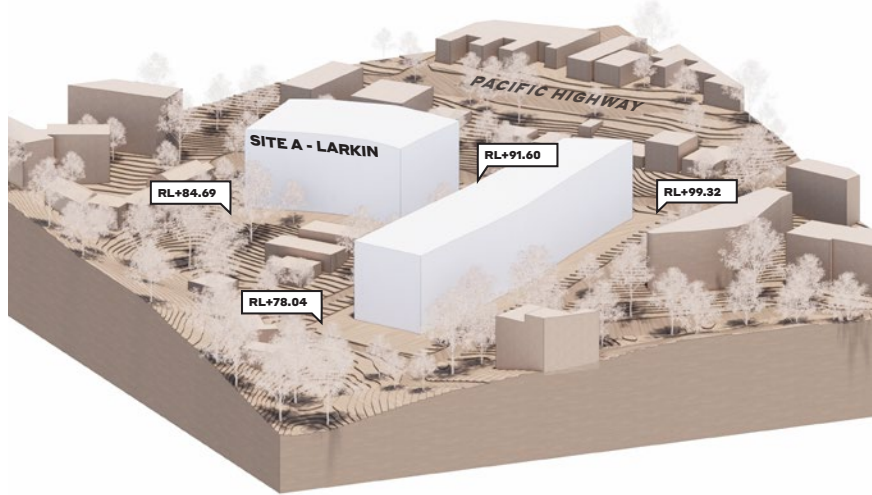
09 4 MacLaurin Parade

02.10 Topography and Landscape

Topography

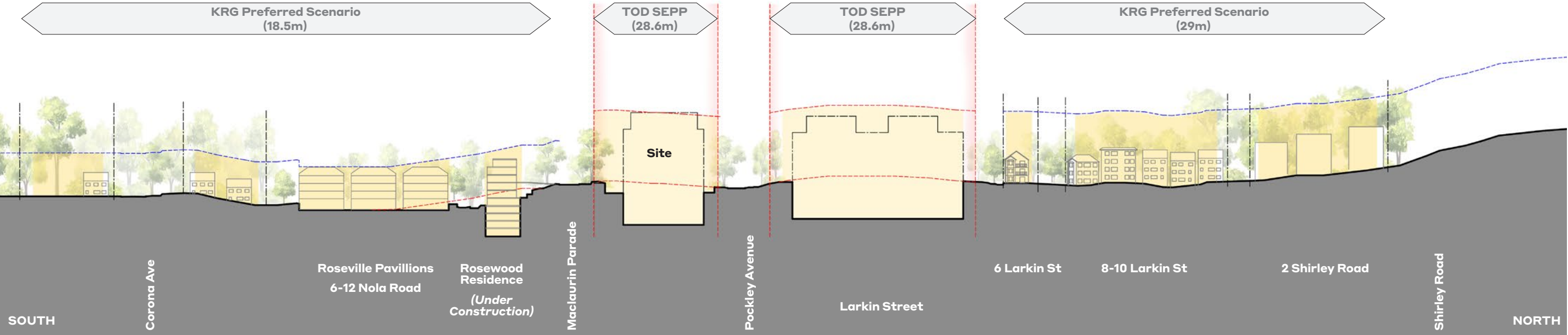
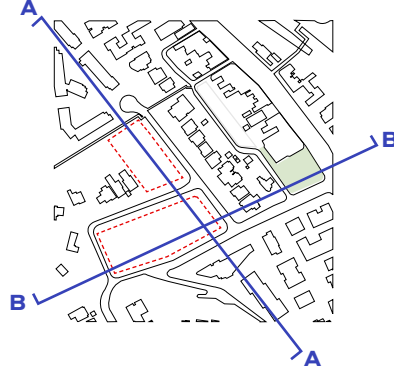
The two sites are located along a midpoint between the high point of Pacific Highway / Ku-ring-gai Ridge, and the low point towards Blue Gum Reserve.

This level change from Pacific Highway to the low point of the site is approximately 34.5m.

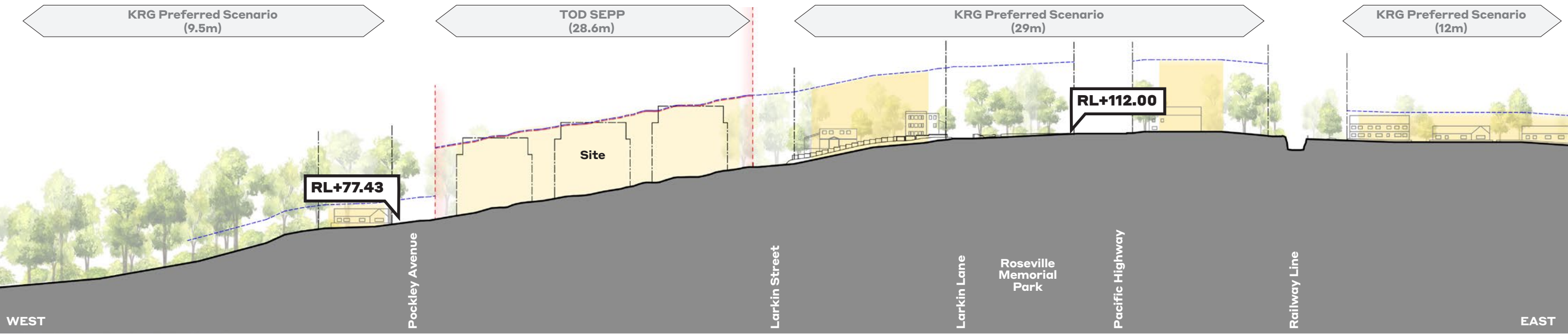


02.10 Topography and Landscape

Long Sections Through Broader Context



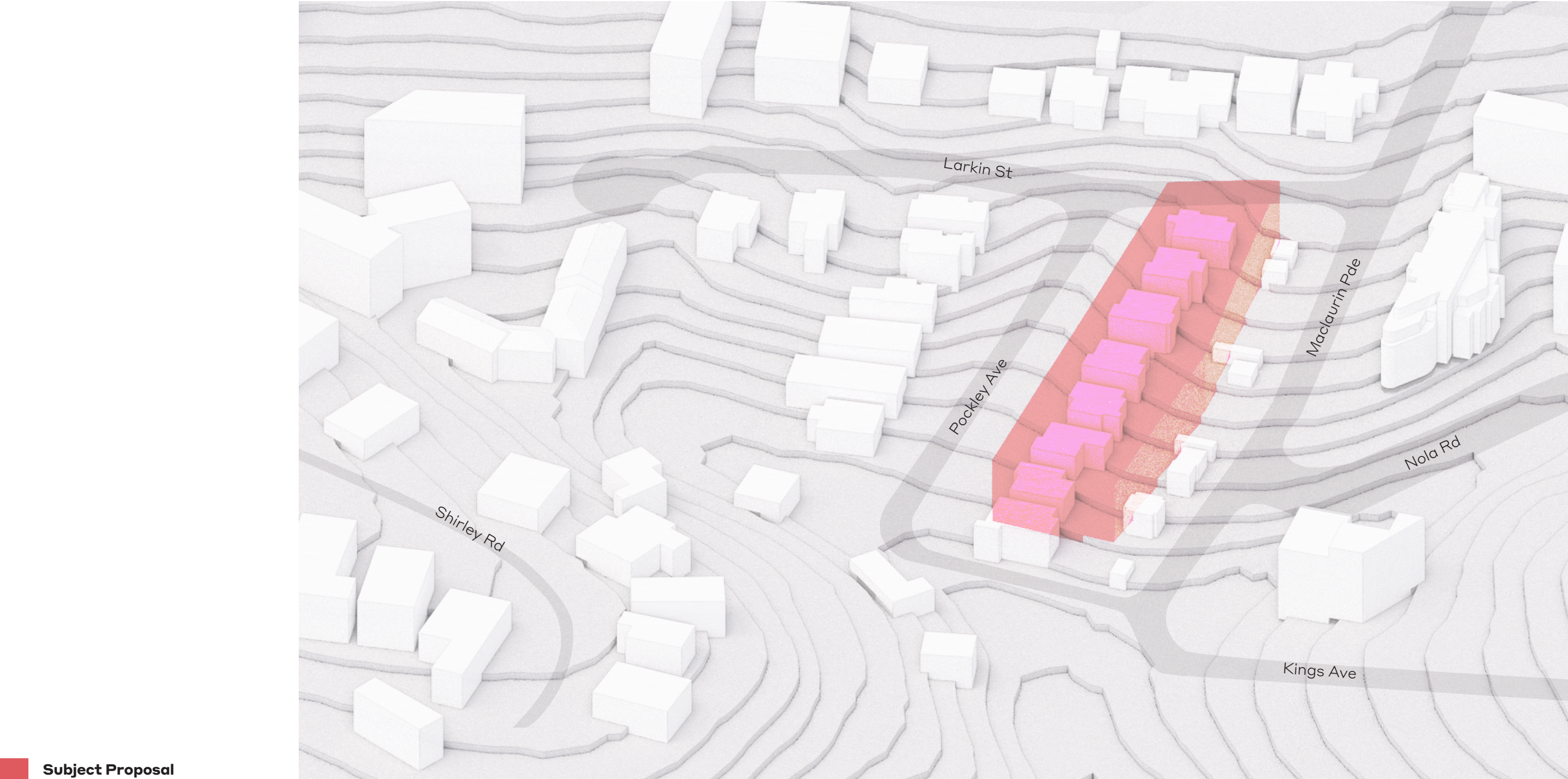
Section A: South-North Through Larkin St



Section B: West-East Through MacLaurin Parade

02.11 Context Height Analysis

Existing Context Massing

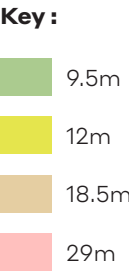


 Subject Proposal

02.11 Context Height Analysis

Ku Ring Gai Preferred Scenario Future Massing

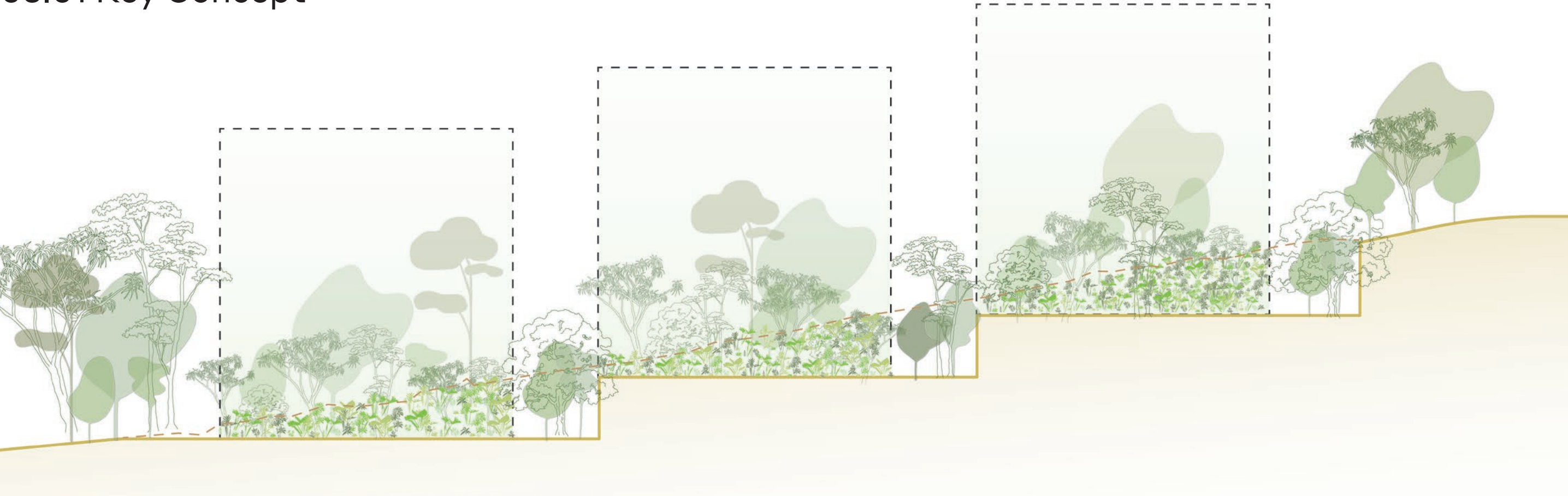
- 1 Subject Proposal
- 2 SSD-77822461
- 3 7-11 Pockley Ave (KRG eDA0189/25)
- 4 6-10 Maclaurin Pde (Under Construction)
- 5 17-21 Shirley St (SSD-81943462)



Design Framework

03.01	Key Concept
03.02	Building Mass

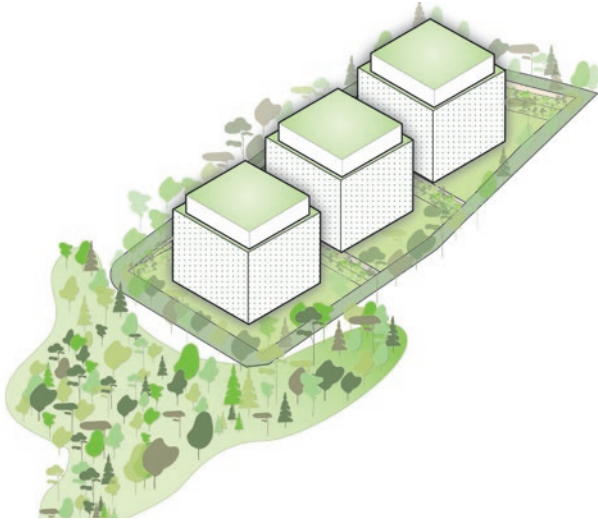
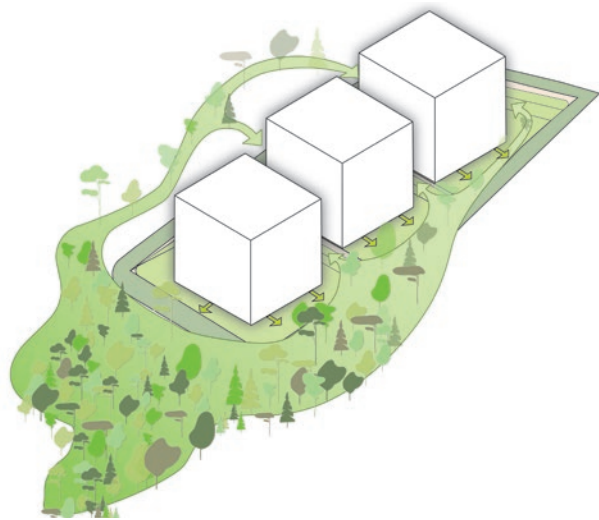
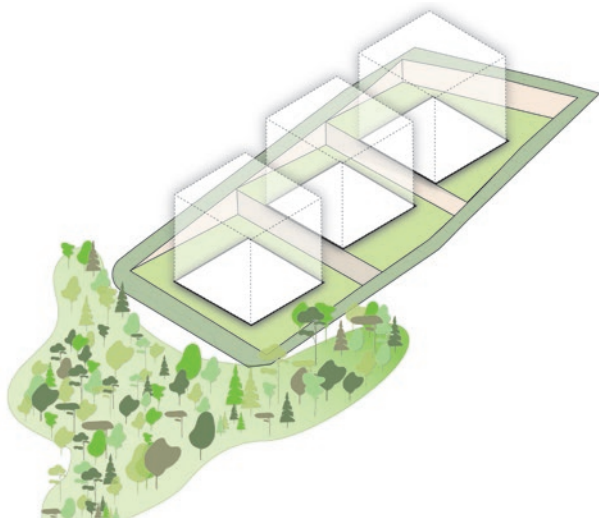
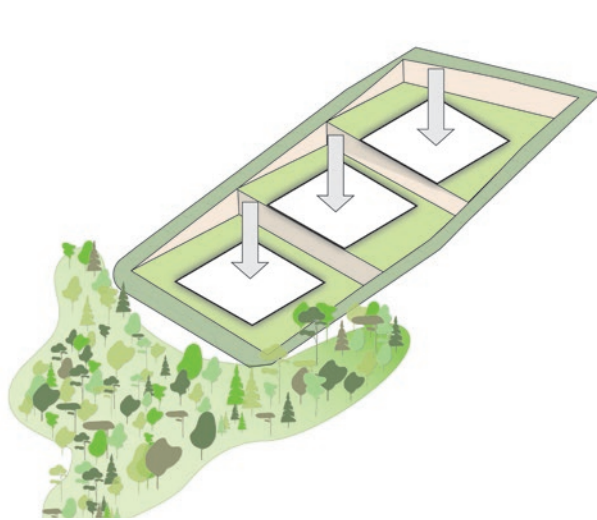
03.01 Key Concept



Grounded Within The Landscape



03.02 Building Mass



01 - Topographical Response

The site slopes 21m (or 7 storeys) from the South-East corner to the North-West. The diagram above shows the proposed Ground Floor levels and their relationship to natural ground at the perimeter

02 - 3 Pavillions

Having divided the site evenly into 3 individual platforms, setback volumes are placed within the landscape along the sloped topography

03 - Extension of Biodiversity

The proximity of the site to the Biodiversity zone to the lower portion on the South allows for the opportunity to extend the natural landscape up and throughout the site proposal, with trees and planting weaving in between the pavilions and along the ground condition

04 - Roof Relief & Outlook

The uppermost levels are set back to reduce the sense of bulk from the street, and to keep within the height control plane. Setting back on the upper levels also allows for the opportunity for outdoor outlook towards the natural landscape of the nearby biodiversity zone

The Proposal

04.01	Proposal
04.02	Ground Plane
04.03	Residential Amenity
04.04	Private Open Spaces
04.05	Sunken Courtyard Apartments
04.06	Building



04.01 Proposal - Program Overview

Site Area: **6,539.9sqm**

Max Height: **34.95m**

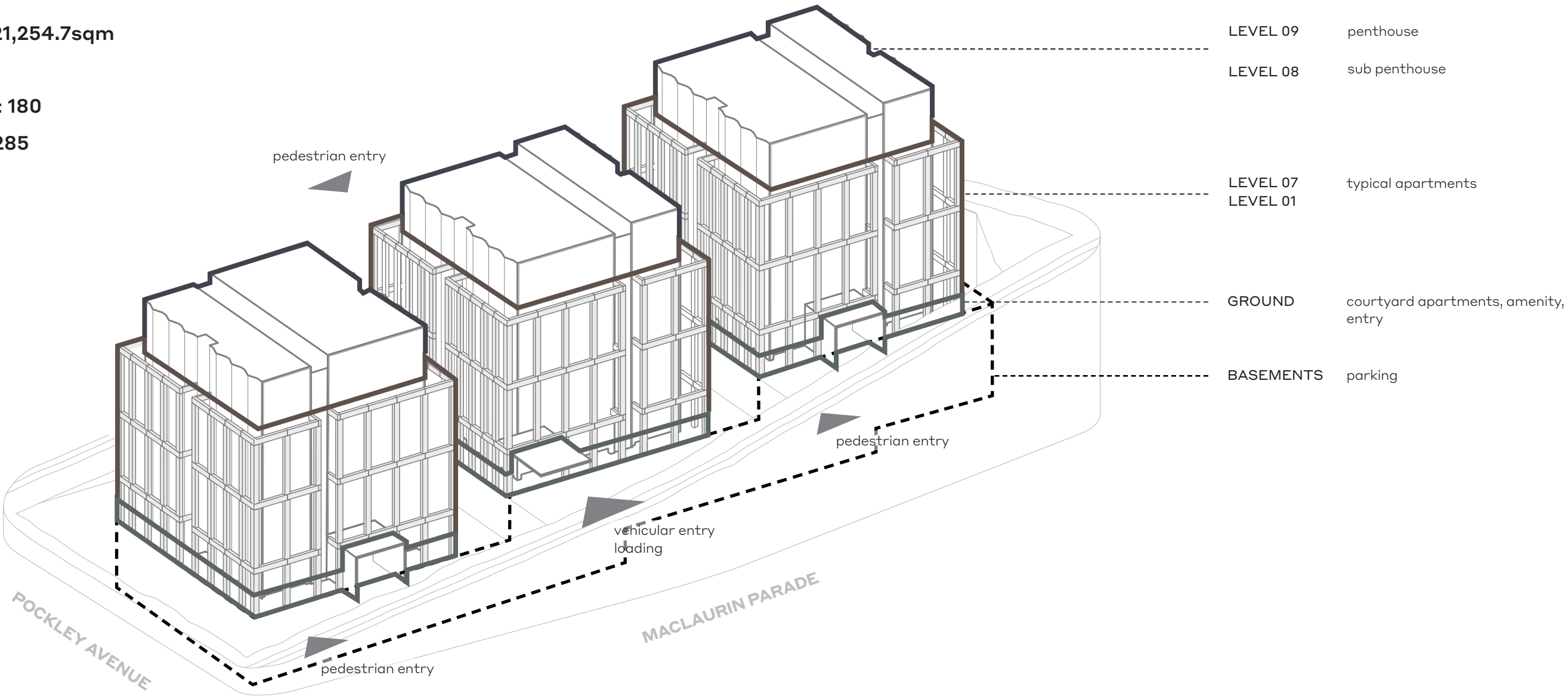
Max RL: **125.7m**

Proposed GFA: **21,254.7sqm**

FSR: **3.25:1**

No. Apartments: **180**

No. Carspaces: **285**



04.02 Ground Plane
Concept



Pavilions within a Landscape



Native Gardens with Meandering Walkways

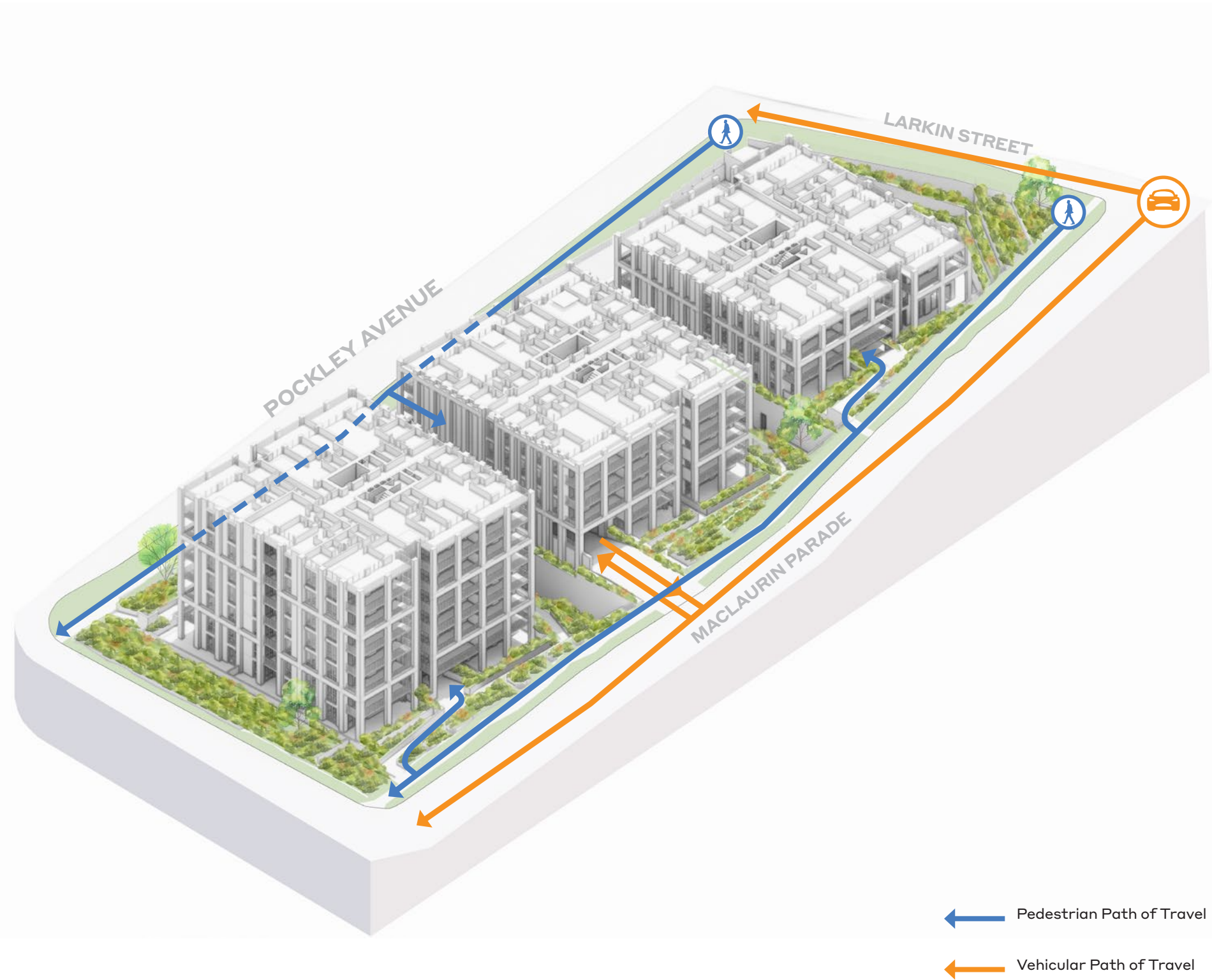


Blue Gum High Forest Ecosystem



Spaces for Gathering

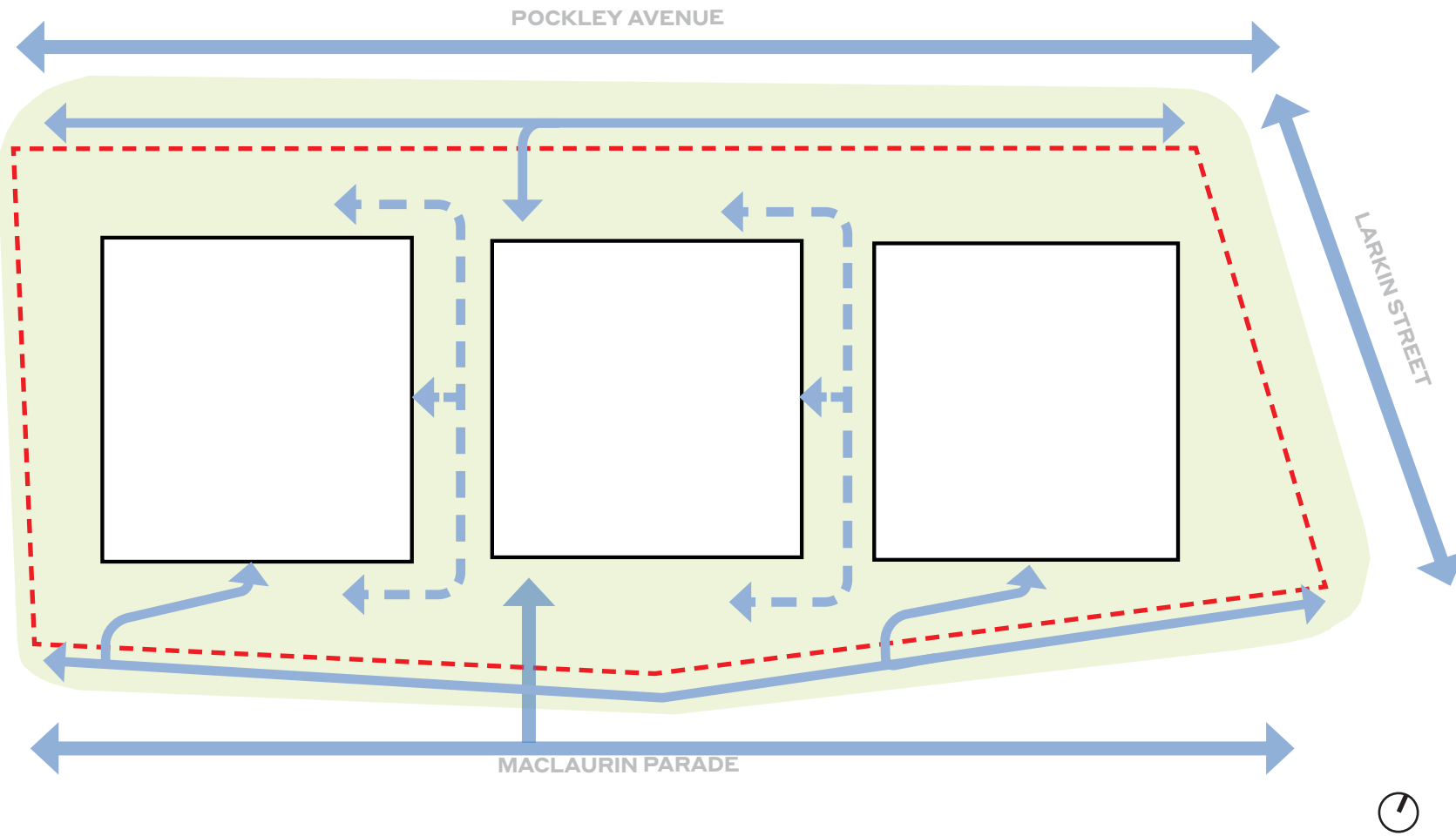
04.02 Ground Plane
Ground Plane Interface



04.02 Ground Plane Access & Circulation

A Breathable Space

The division of the site into three blocks creates the opportunity for an open, connected ground plane. This allows for the possibility of wandering through the site, and a diversity of ground plane uses including the native garden tracks, the blue gum creek walk, and meeting and reflection spaces.



Communal Open Space



Entry Sequence



Connective Path

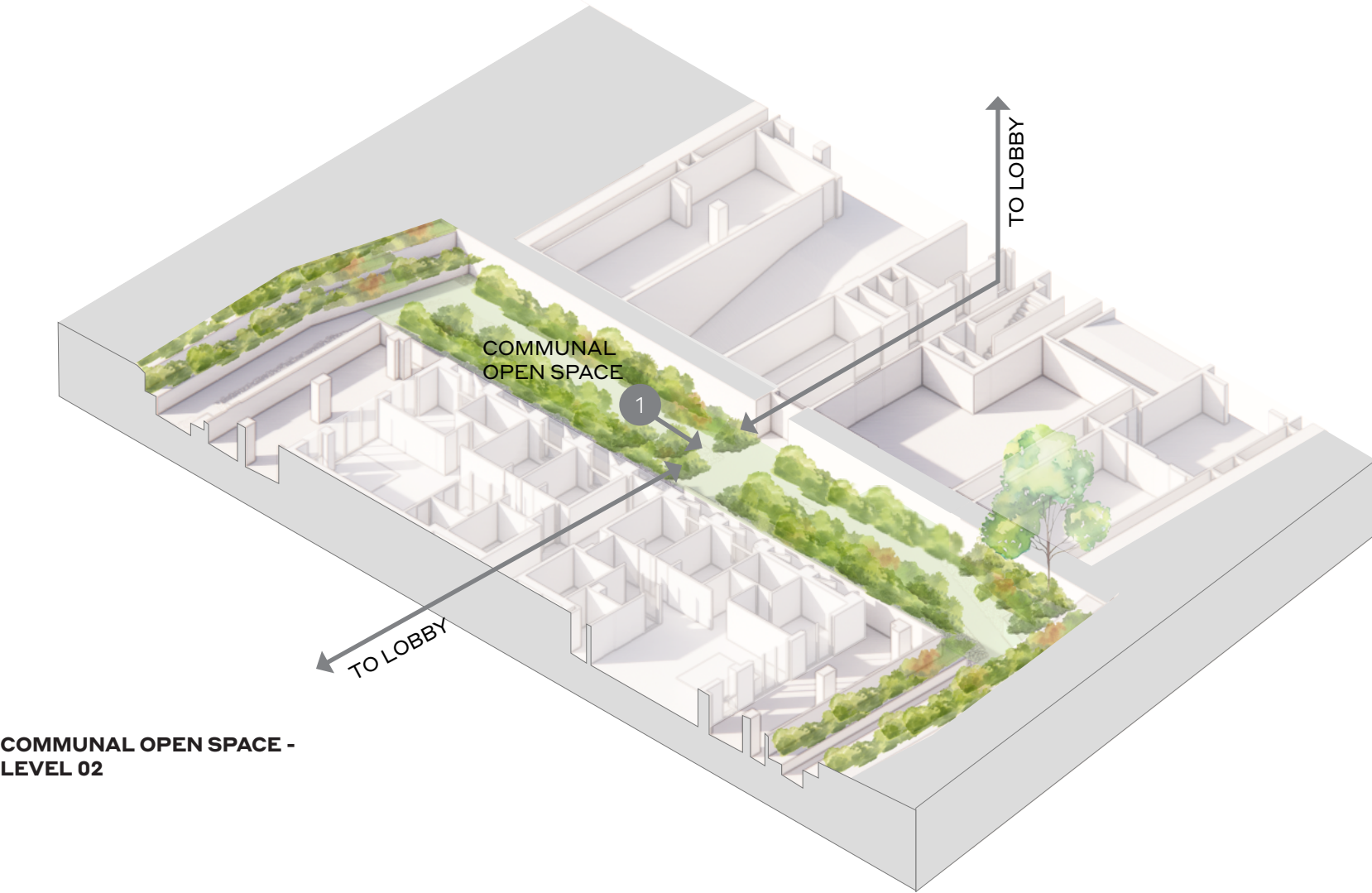
04.02 Ground Plane Communal Open Spaces & Entries



04.03 Residential Amenity Outdoor Connectivity

Connected Outdoor Spaces

The two communal open spaces between the pavilions have been designed to maximise community engagement with the spaces. Each space can be accessed from a variety of entry points connecting to the lobbies of both adjacent pavilions, with meandering paths linking to Maclaurin Parade and Pockley Avenue.



COMMUNAL OPEN SPACE -
LEVEL 02



1

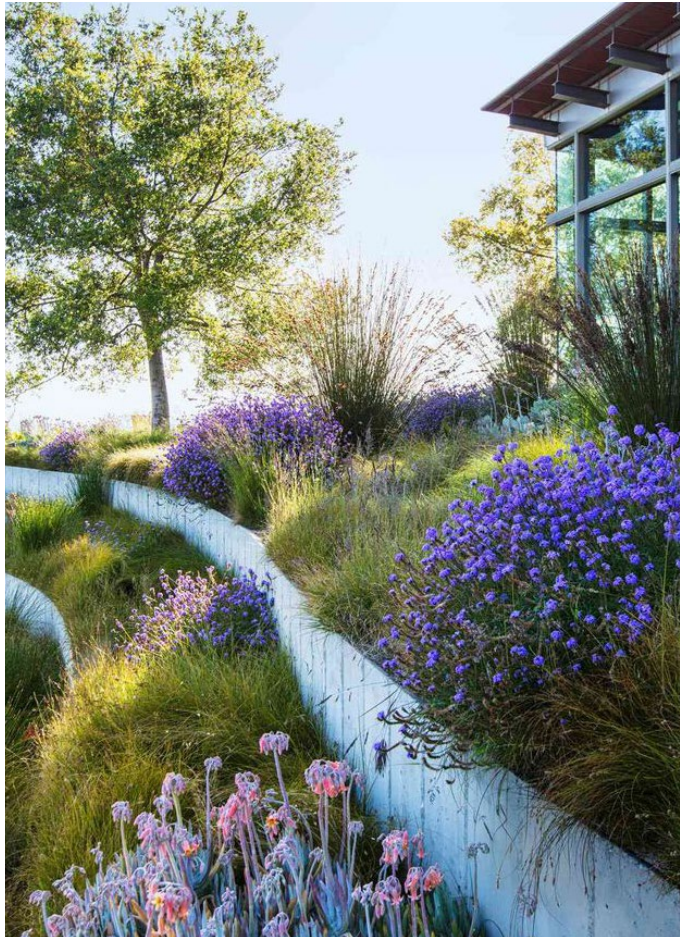


04.04 Private Open Spaces

Concept



Living Spaces looking into Geological Landscape



Tiered Planting, Maximising Green Outlook



Materials and Landscape Palettes Sensitive to Local Context



Planting of endemic Blue Gum High Forest

04.04 Private Open Spaces

Outlook

Designing Landscape for Green Outlook

The design of the terraced, cascading landscape has been carefully considered to improve outlooks for ground floor apartments. Where possible, the steps of the terraced planting have been reduced to 1000mm high, with the landscape gently mounded to increase the proportion of greenery that is visible.

On all site boundaries, fencing has been set back behind planting to reduce visibility from the street and create an inclusive, friendly public domain.

Taller planting has been placed along private courtyard walls to increase visual privacy for residents of ground floor apartments.

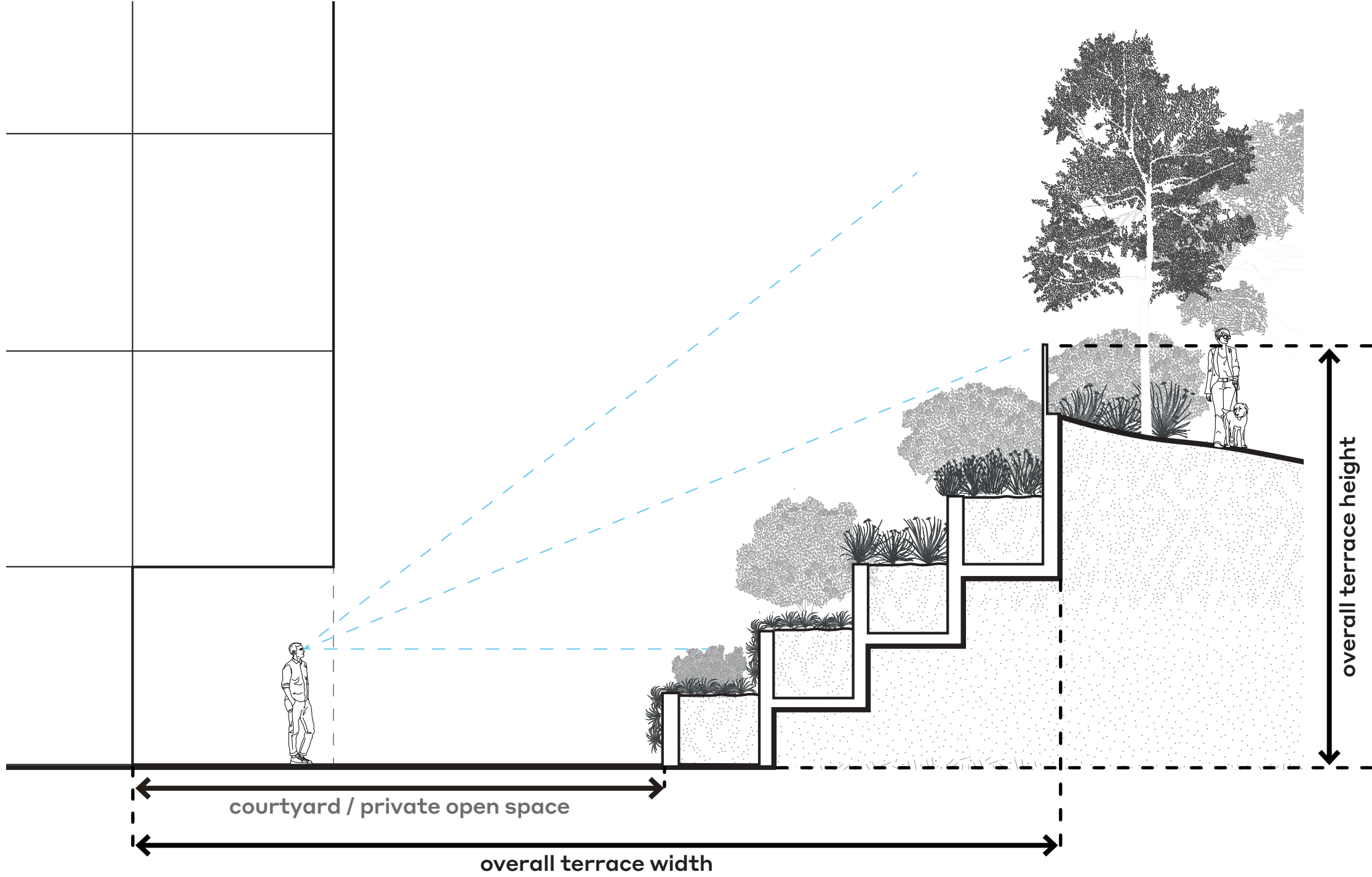


04.05 Sunken Courtyard Residences

Key Concept

Designing Sunken Courtyard Residences With Views To The Sky And Landscaped Terracing

The proposed perimeter landscaping of the proposal, especially along the North and South (Pockley Ave & Maclaurin Pde), are carefully and thoughtfull designed with the sunken courtyard residences in mind. These landscaped terraces are meticulously designed so that the overall setback width of the terraced landscape is always remains greater than the overall height (see diagram above). This ensures that the top of the terracing is always further away than it is high. This design maximises the amount of visible open sky from the courtyard residence, as well as creating a deep, landscaped buffer that extends horizontally.



04.05 Sunken Courtyard Residences

Key Concept



04.05 Sunken Courtyard Residences Precedent / Reference Case Studies



Sunken Courtyard Apartments Recently Built - Nine by MIRVAC



Sunken Courtyard Apartments Under Construction - Babylon Rouse Hill by Denvell Group

04.05 Sunken Courtyard Residences Design Studies & Evaluation

Designing Landscape for Green Outlook

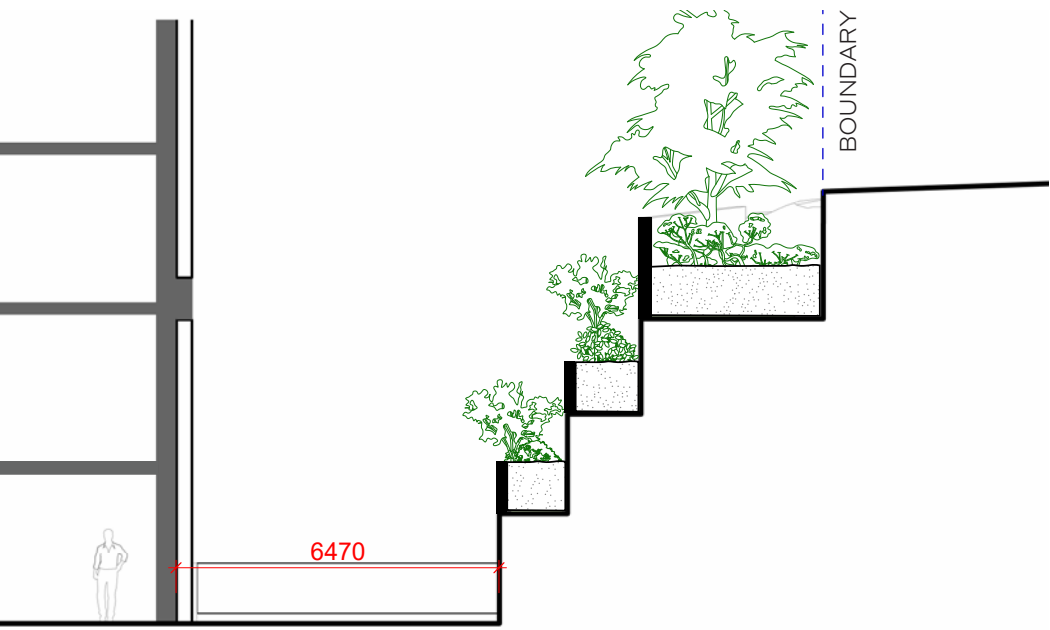
The design of the terraced, cascading landscape has been carefully considered to improve outlooks for ground floor apartments. Where possible, the steps of the terraced planting have been reduced to 1000mm high, with the landscape gently mounded to increase the proportion of greenery that is visible.

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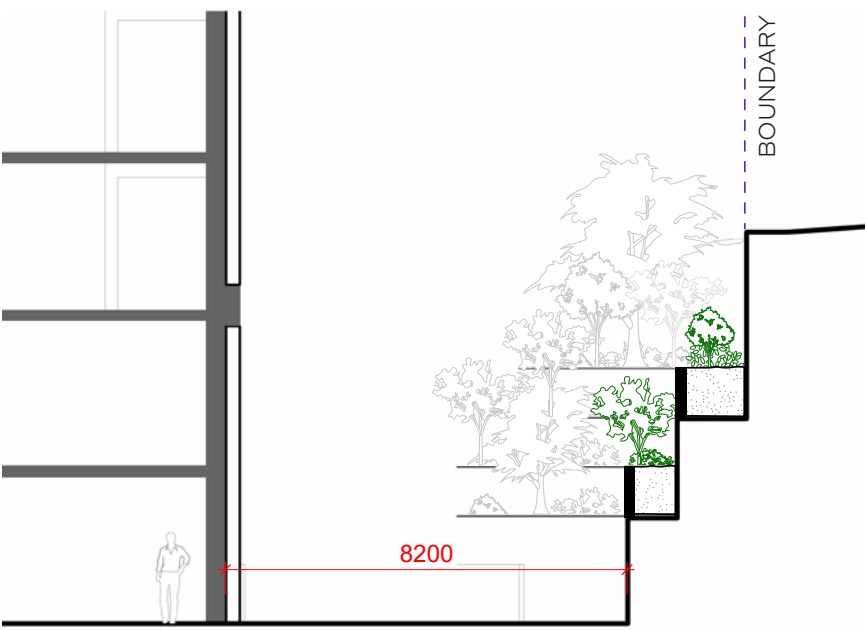
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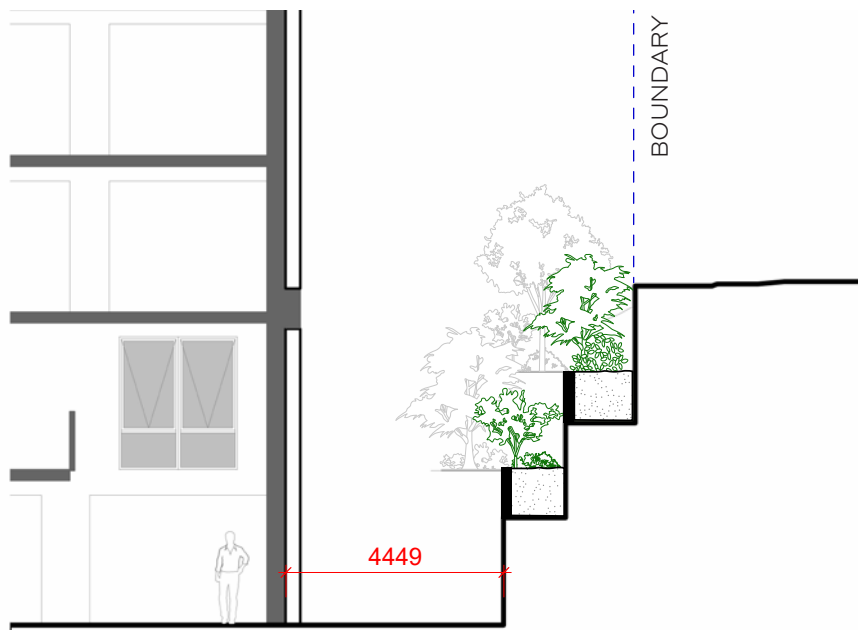
04.05 Sunken Courtyard Residences
Pavilion A



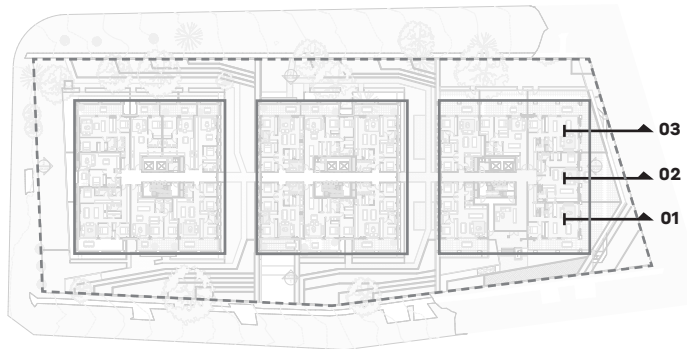
SECTION 01



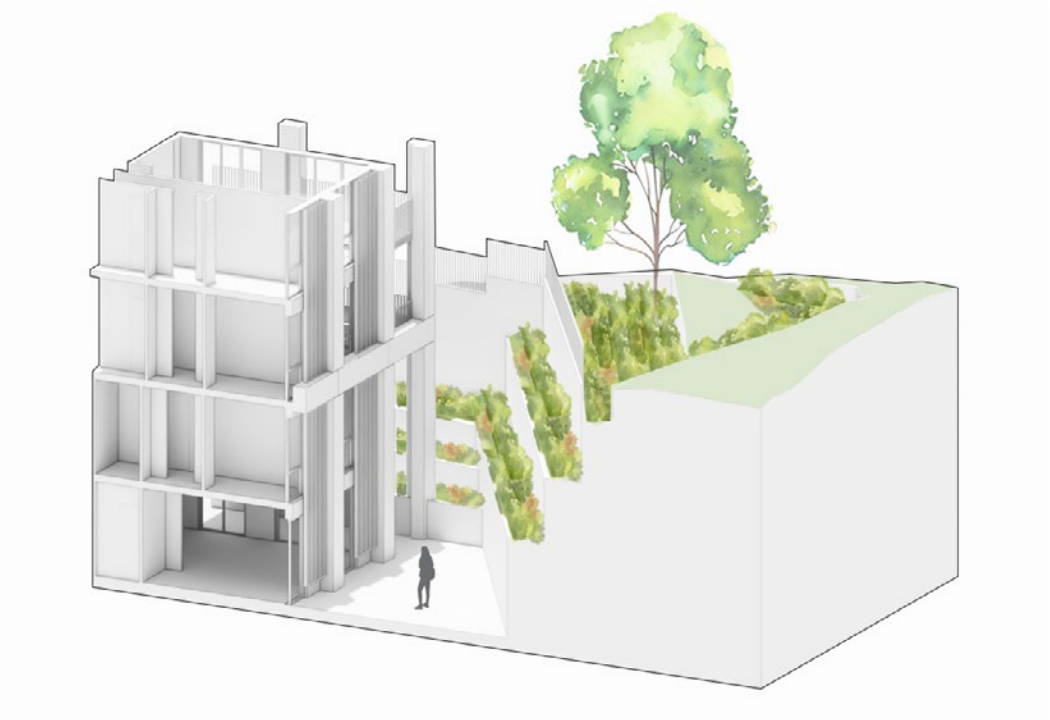
SECTION 02



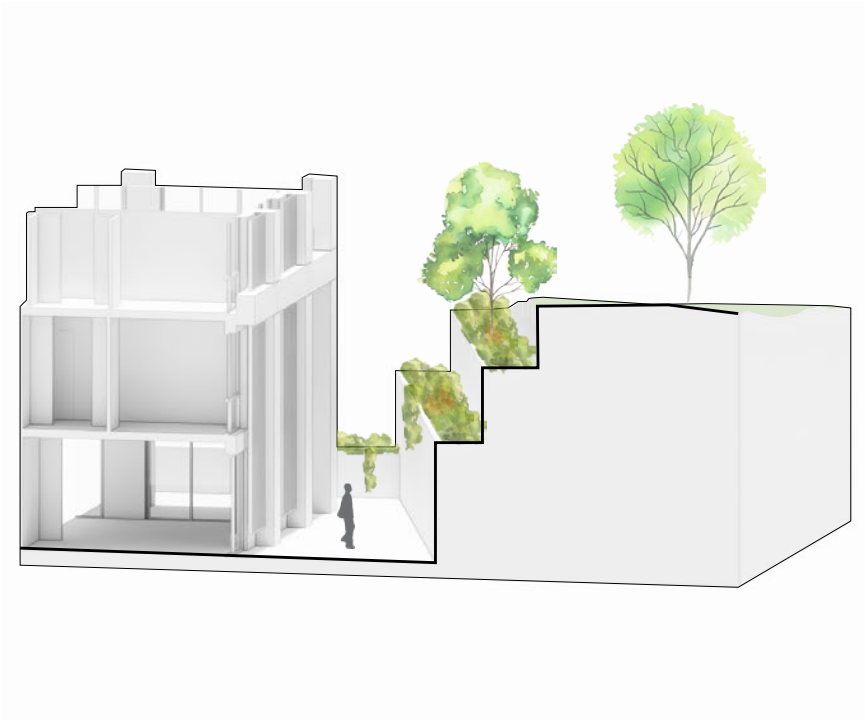
SECTION 03



04.05 Sunken Courtyard Residences
Pavilion A



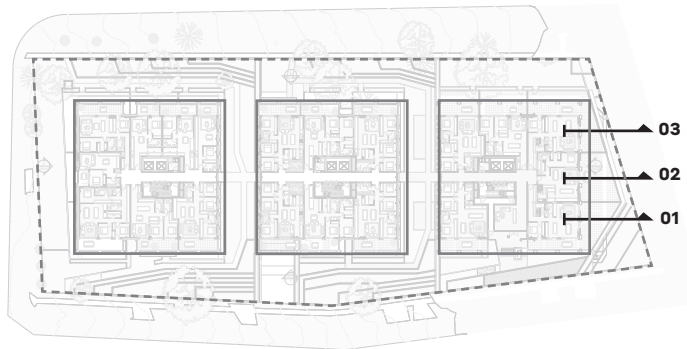
SECTION 01



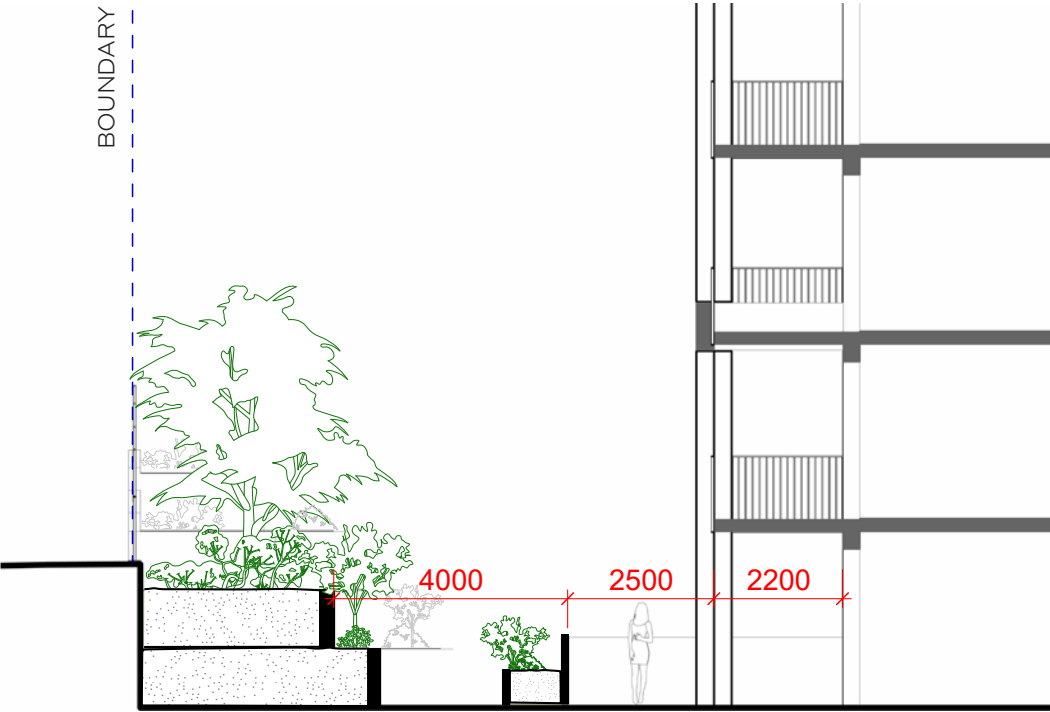
SECTION 02



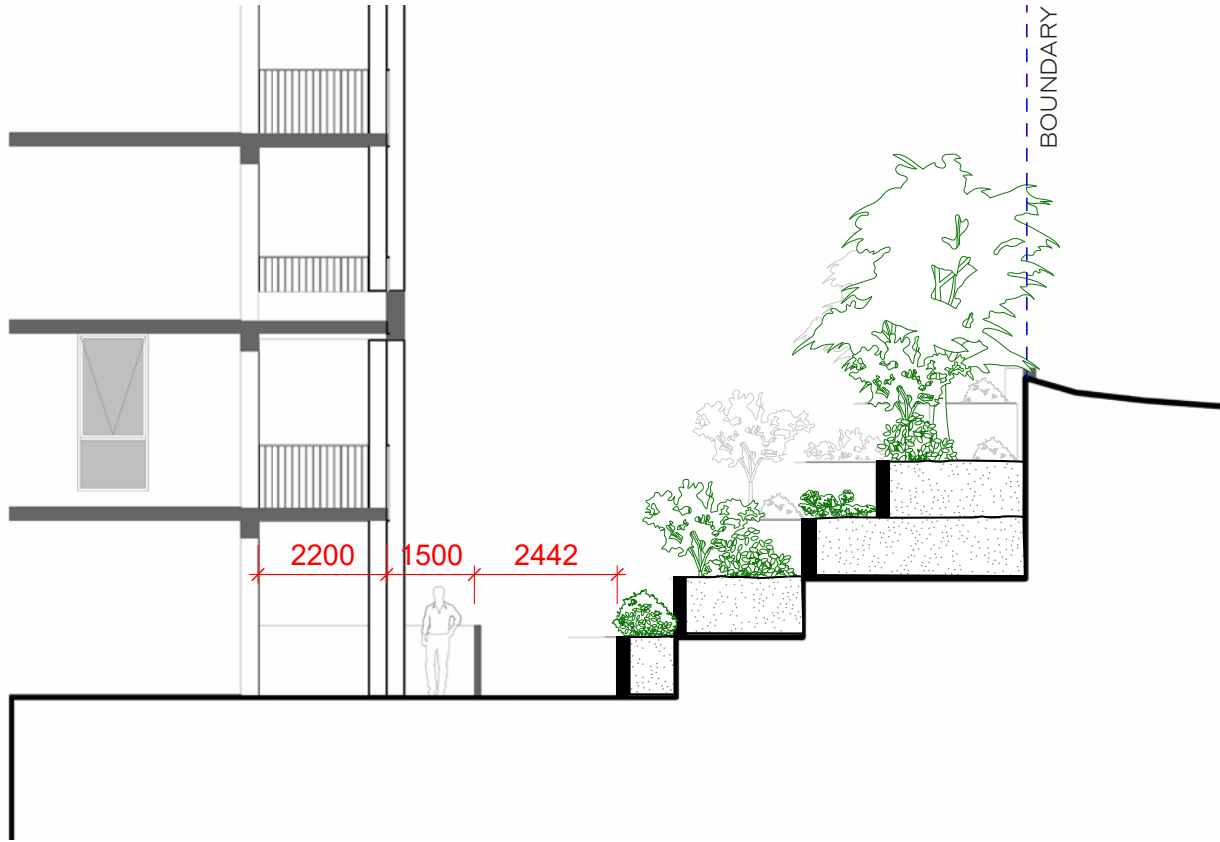
SECTION 03



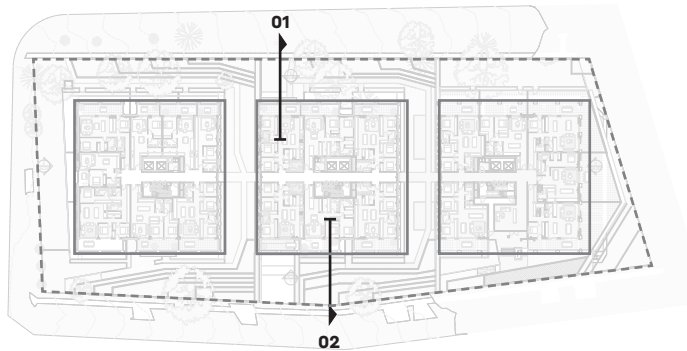
04.05 Sunken Courtyard Residences
Pavilion B



SECTION 01



SECTION 02



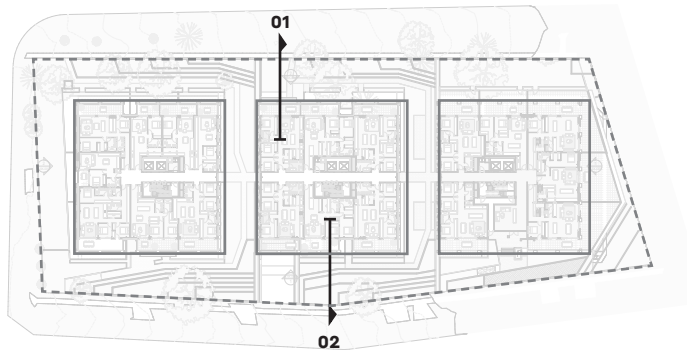
04.05 Sunken Courtyard Residences
Pavilion B



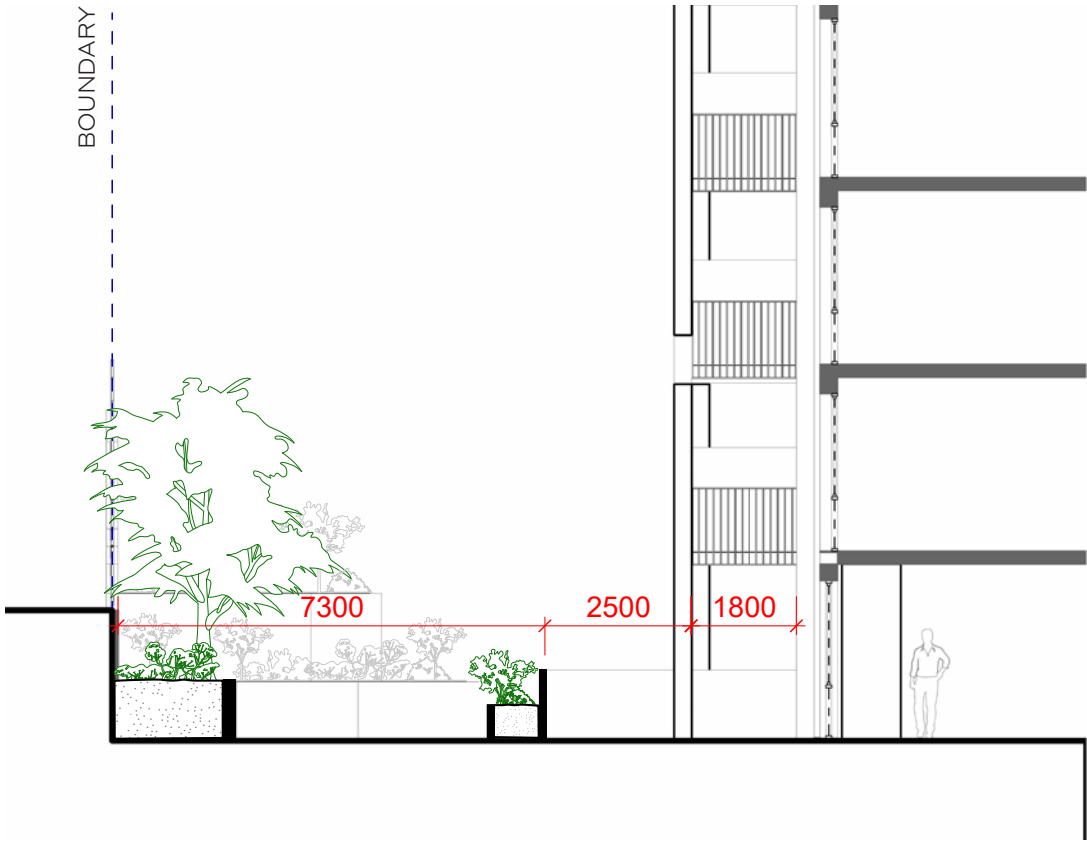
SECTION 01



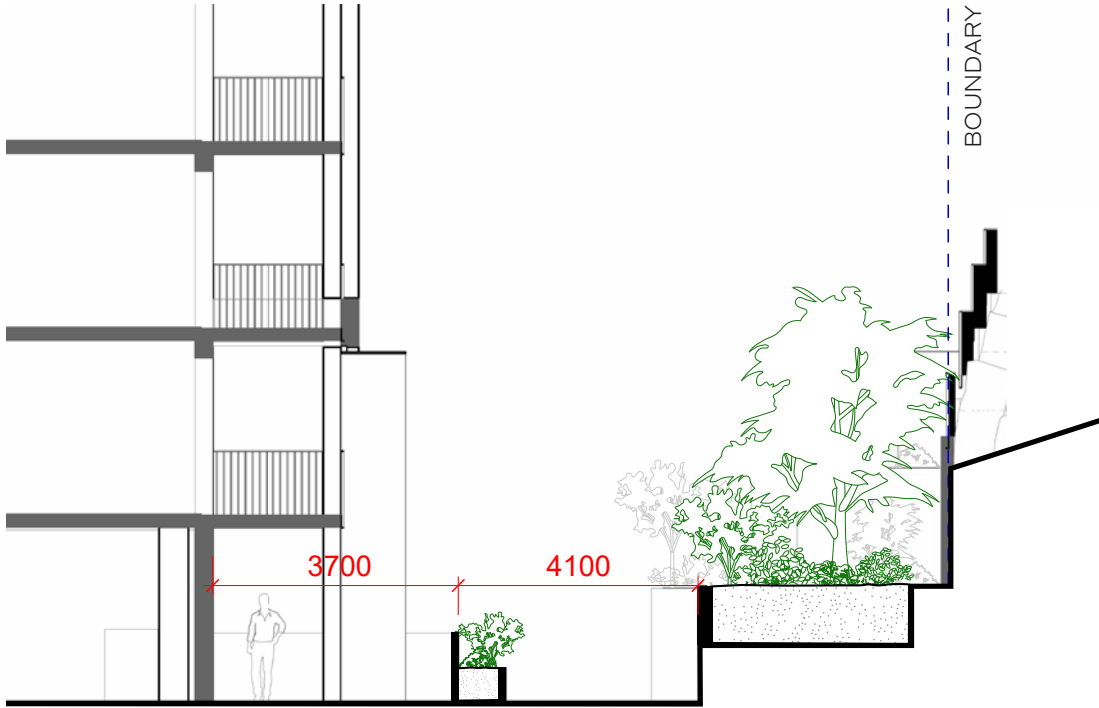
SECTION 02



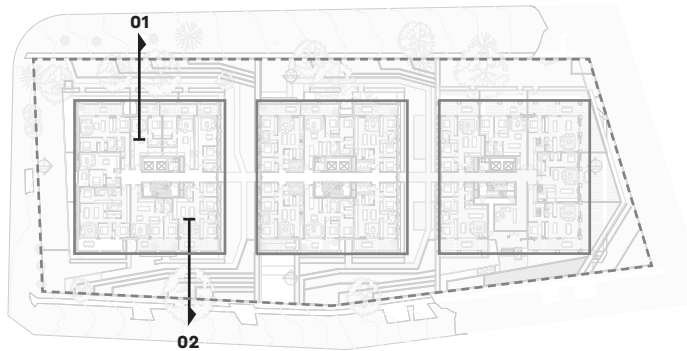
04.05 Sunken Courtyard Residences
Pavilion C



SECTION 01



SECTION 02



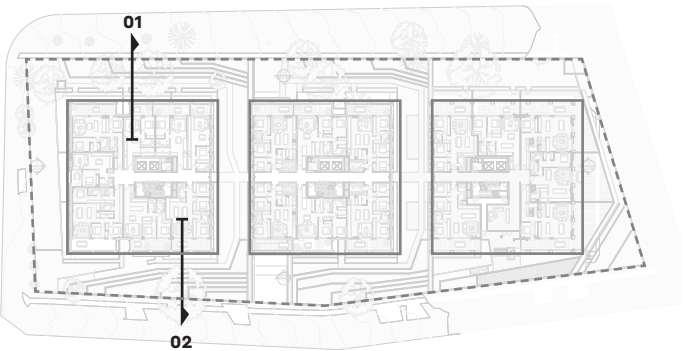
04.05 Sunken Courtyard Residences
Pavilion C



SECTION 01

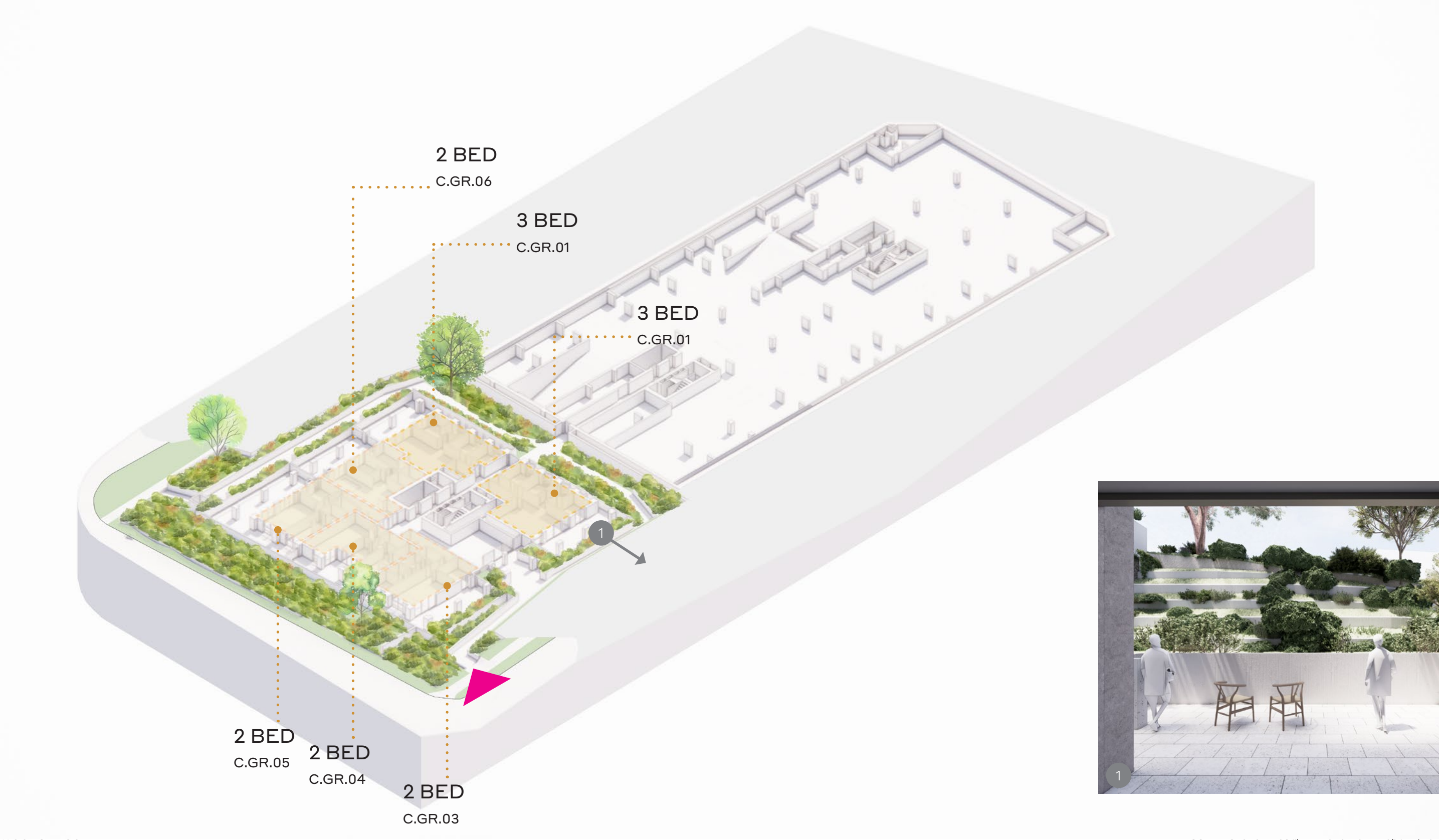


SECTION 02

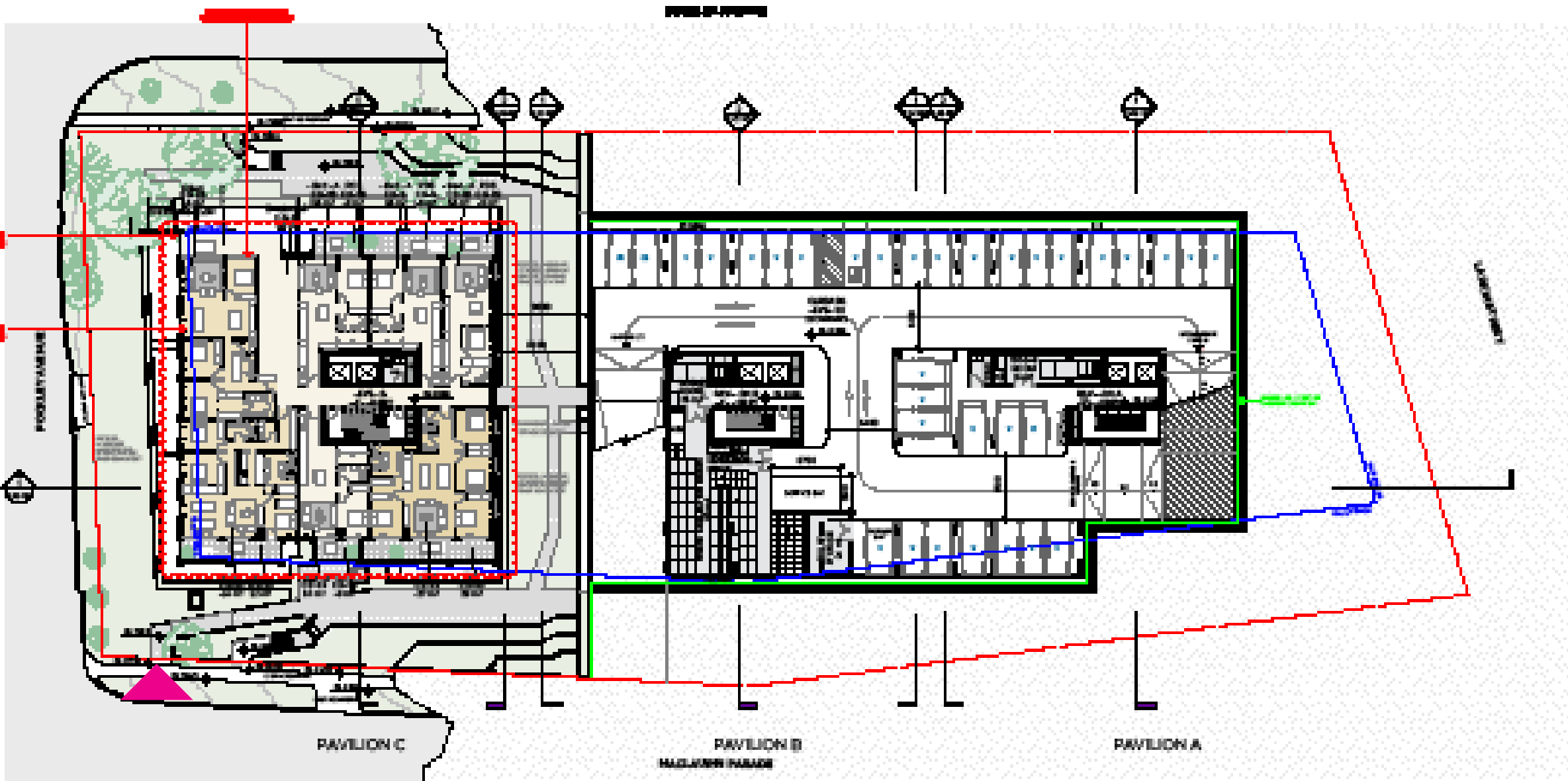


04.06 Building
Basement 04 Floor Plan - Pavilion C Entry On Maclaurin Pde

04.06 Building
Basement 04 Floor Plan

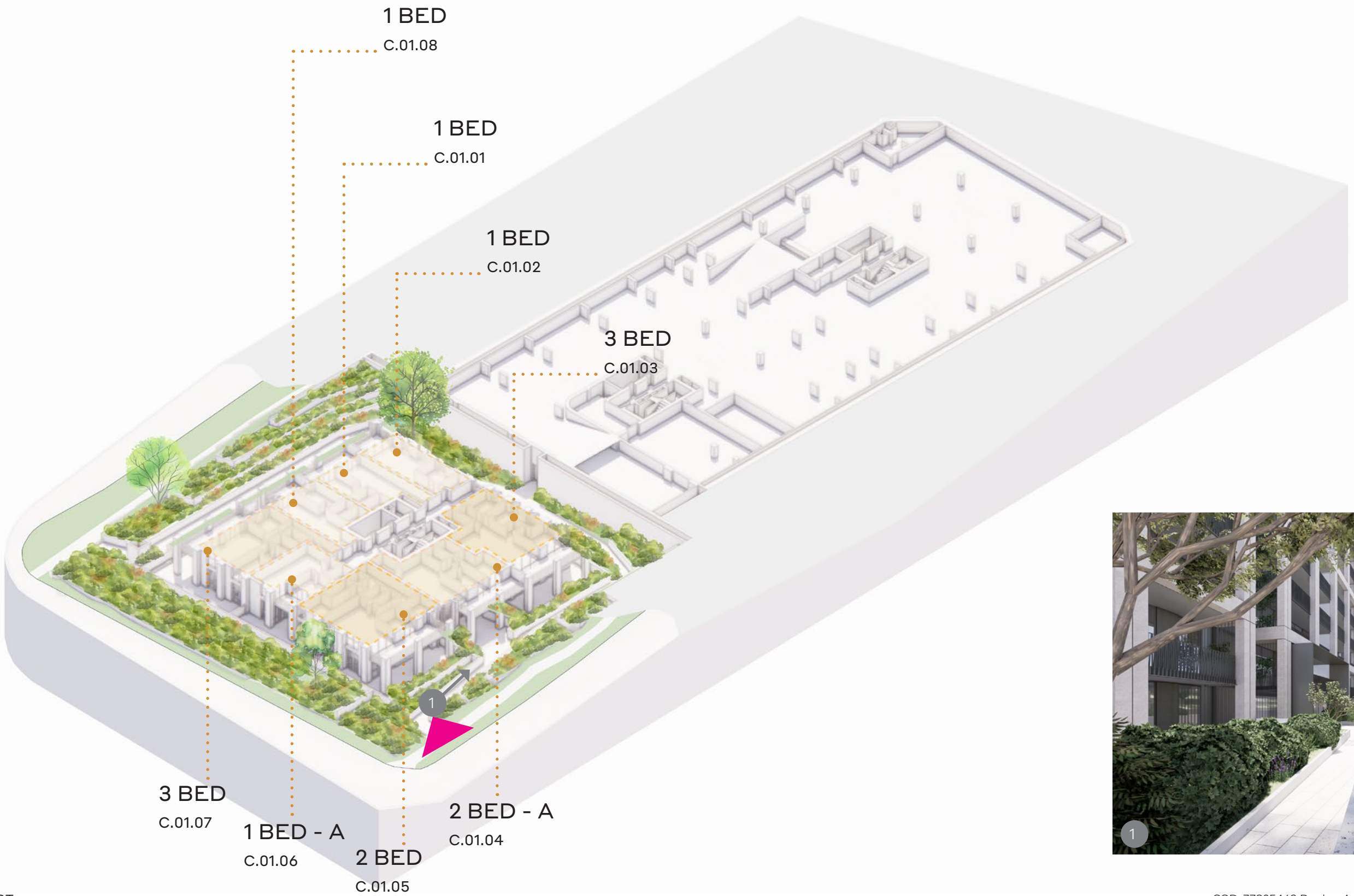


04.06 Building
Basement 03 Floor Plan

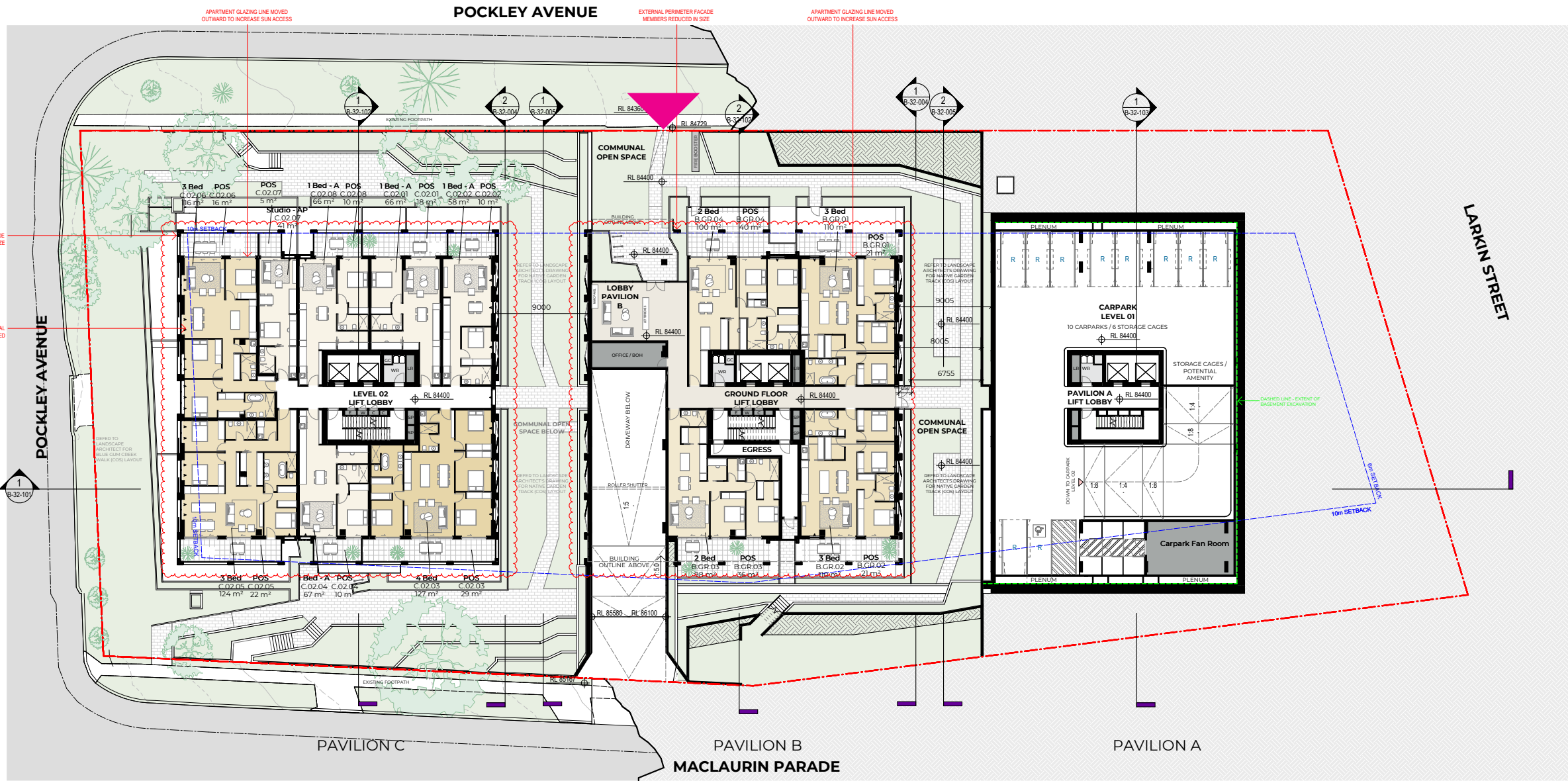


1:400@A3

04.06 Building
Basement 03 Floor Plan

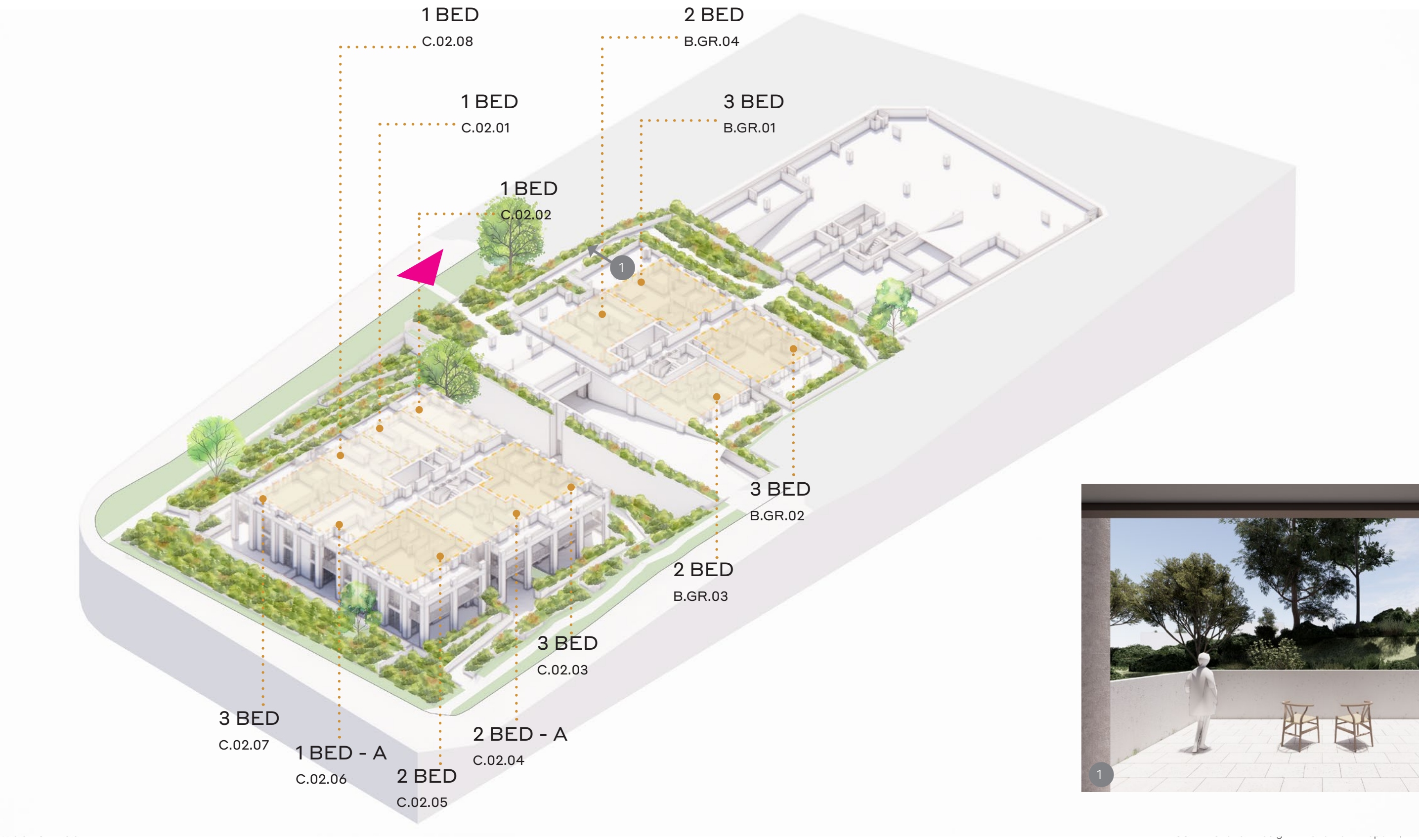


04.06 Building
Basement 02 Floor Plan - Pavilion B Entry On Pockley Avenue



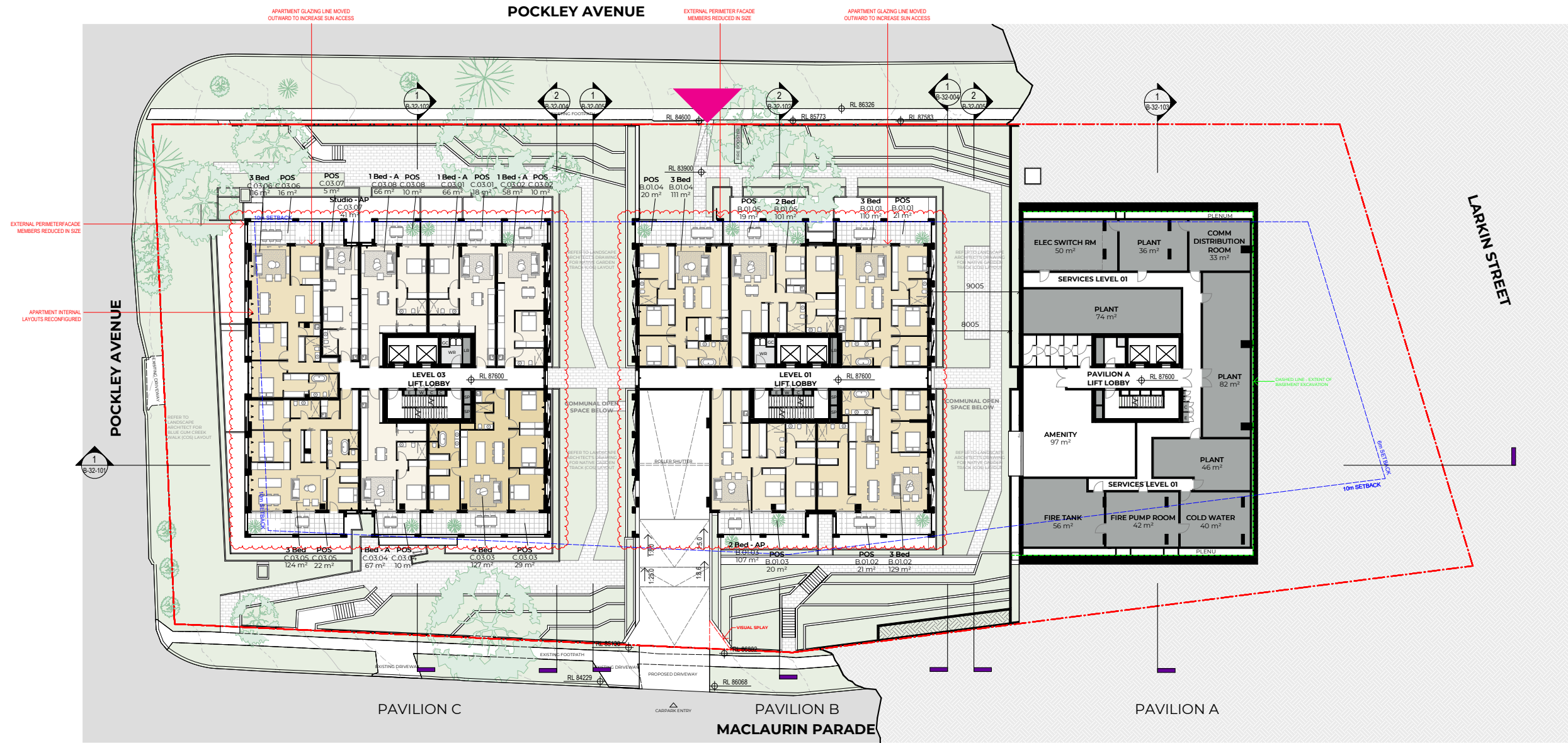
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04.06 Building
Basement 02 Floor Plan



1

04.06 Building
Basement 01 Floor Plan - Vehicle Entry On Maclaurin Parade



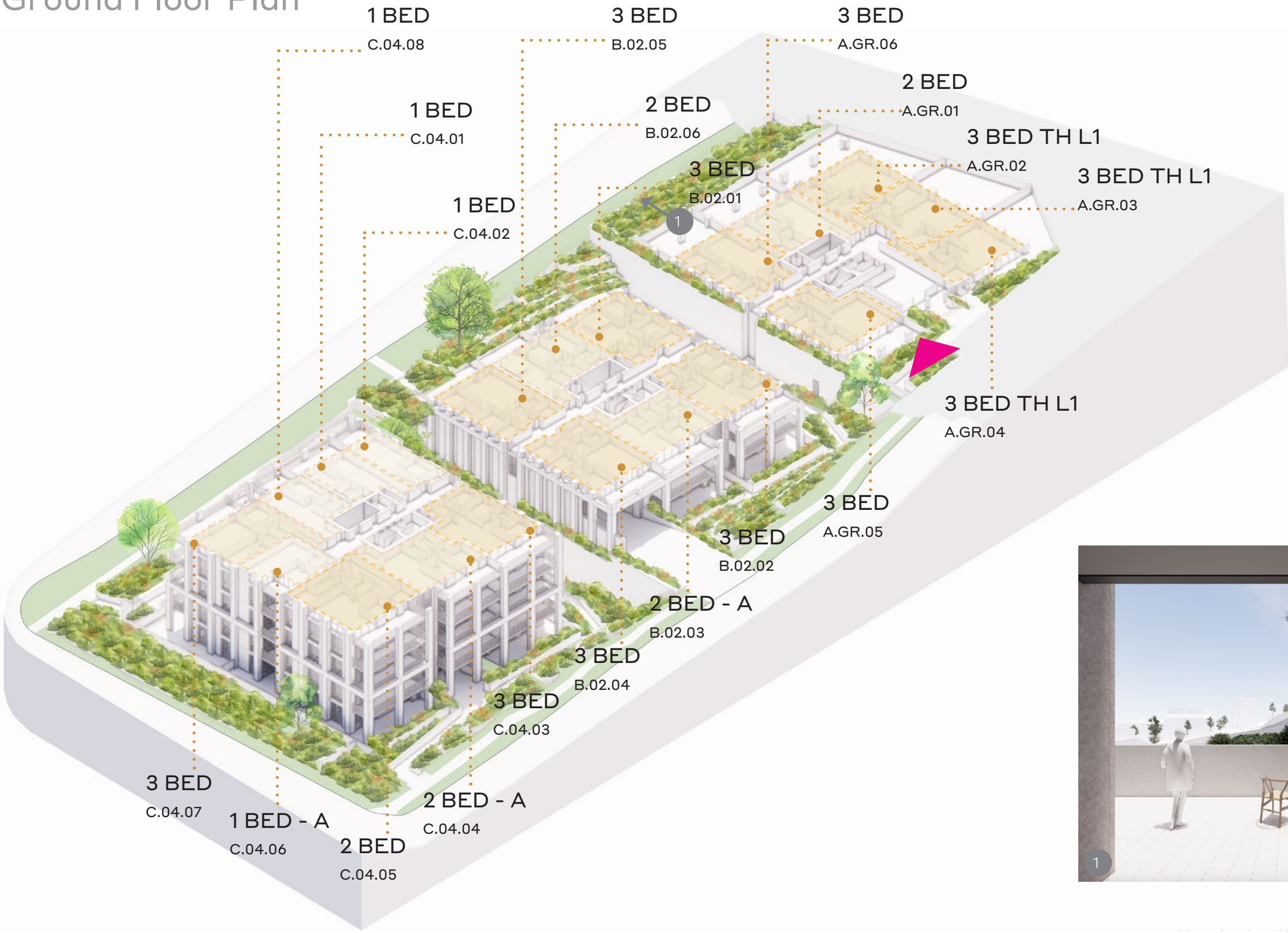
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04.06 Building
Basement 01 Floor Plan



04.06 Building

Ground Floor Plan

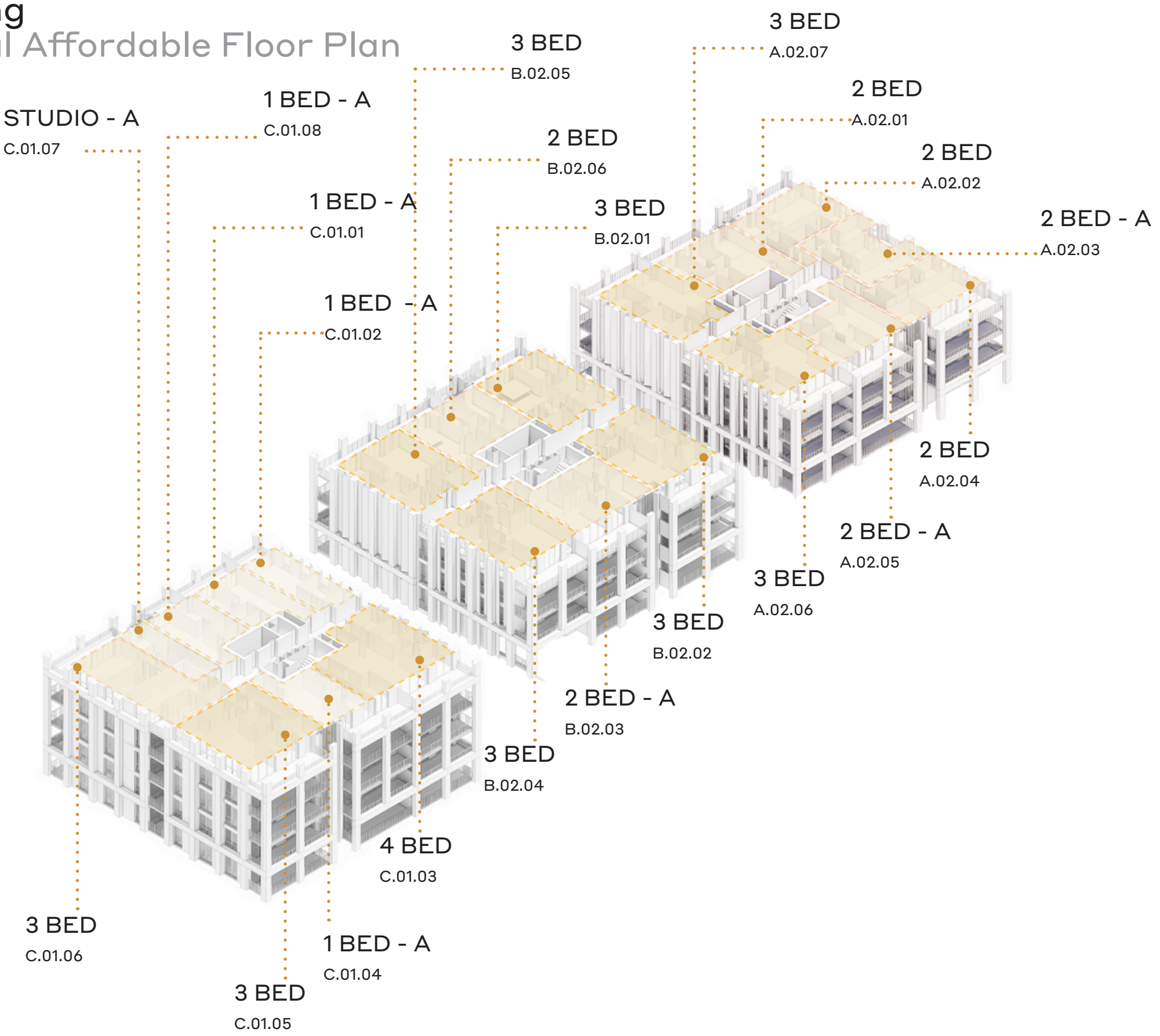


04.06 Building
Typical Affordable Housing Floor Plan

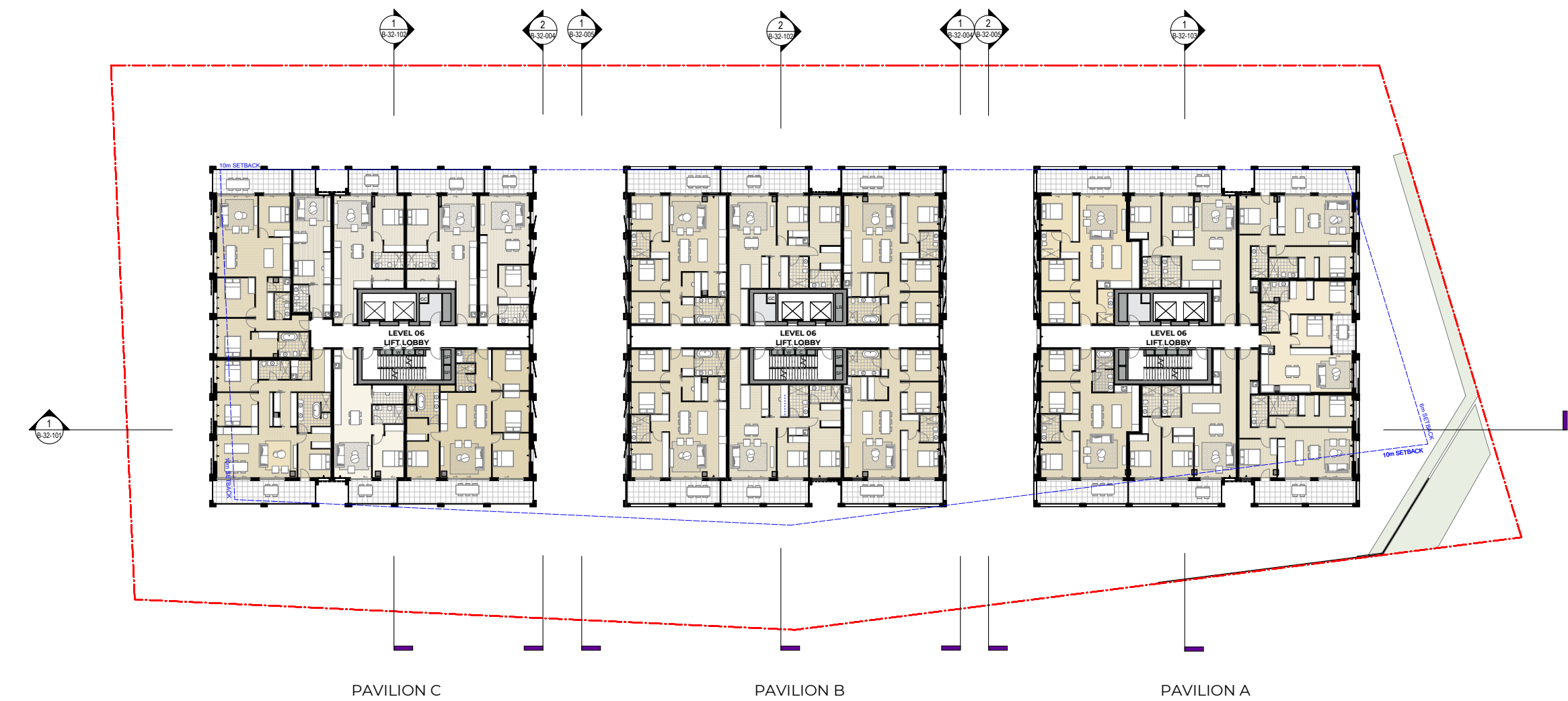


1:400@A3

04.06 Building
Typical Affordable Floor Plan

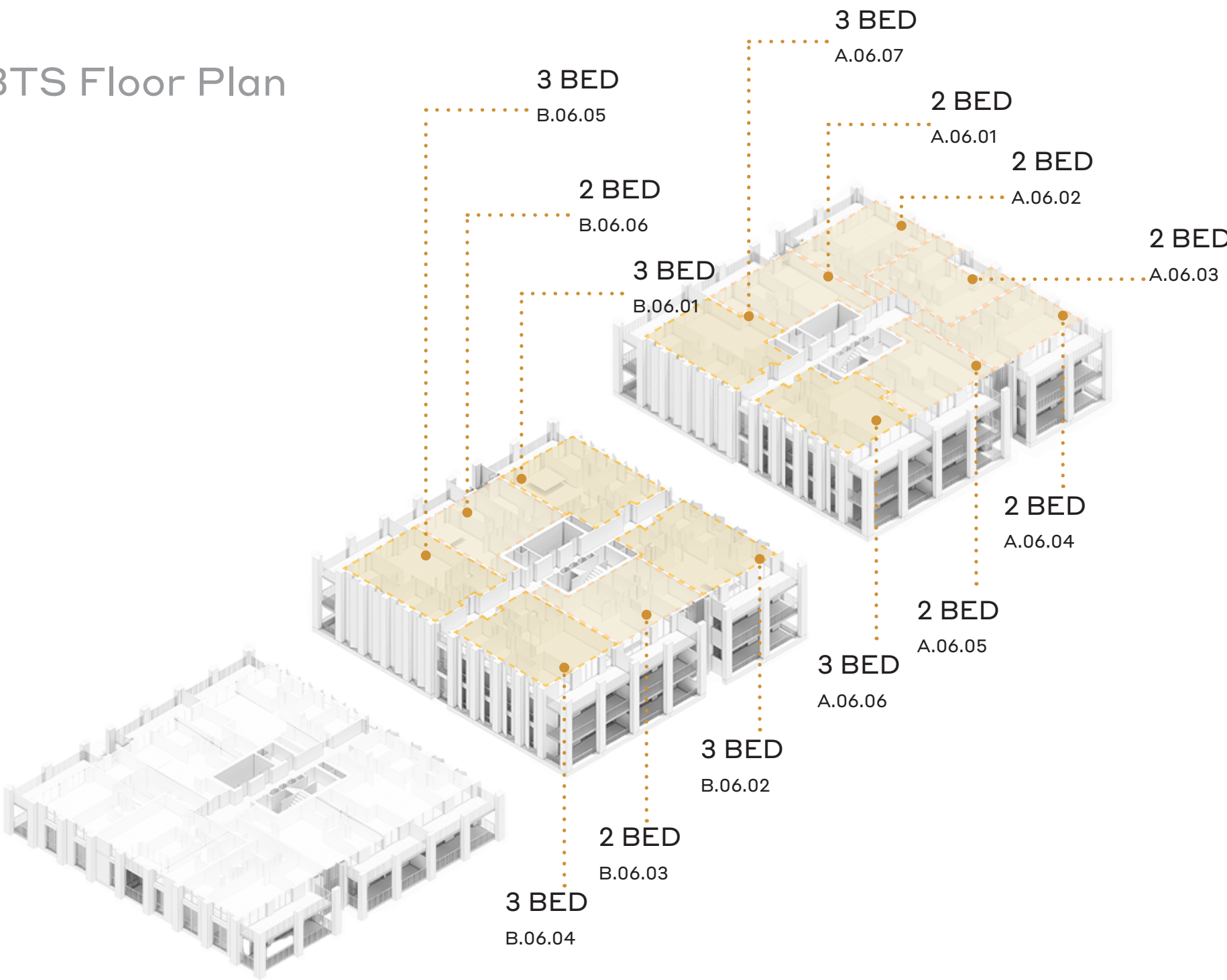


04.06 Building
Typical Market Housing Floor Plan



1:400@A3

04.06 Building
Typical BTS Floor Plan

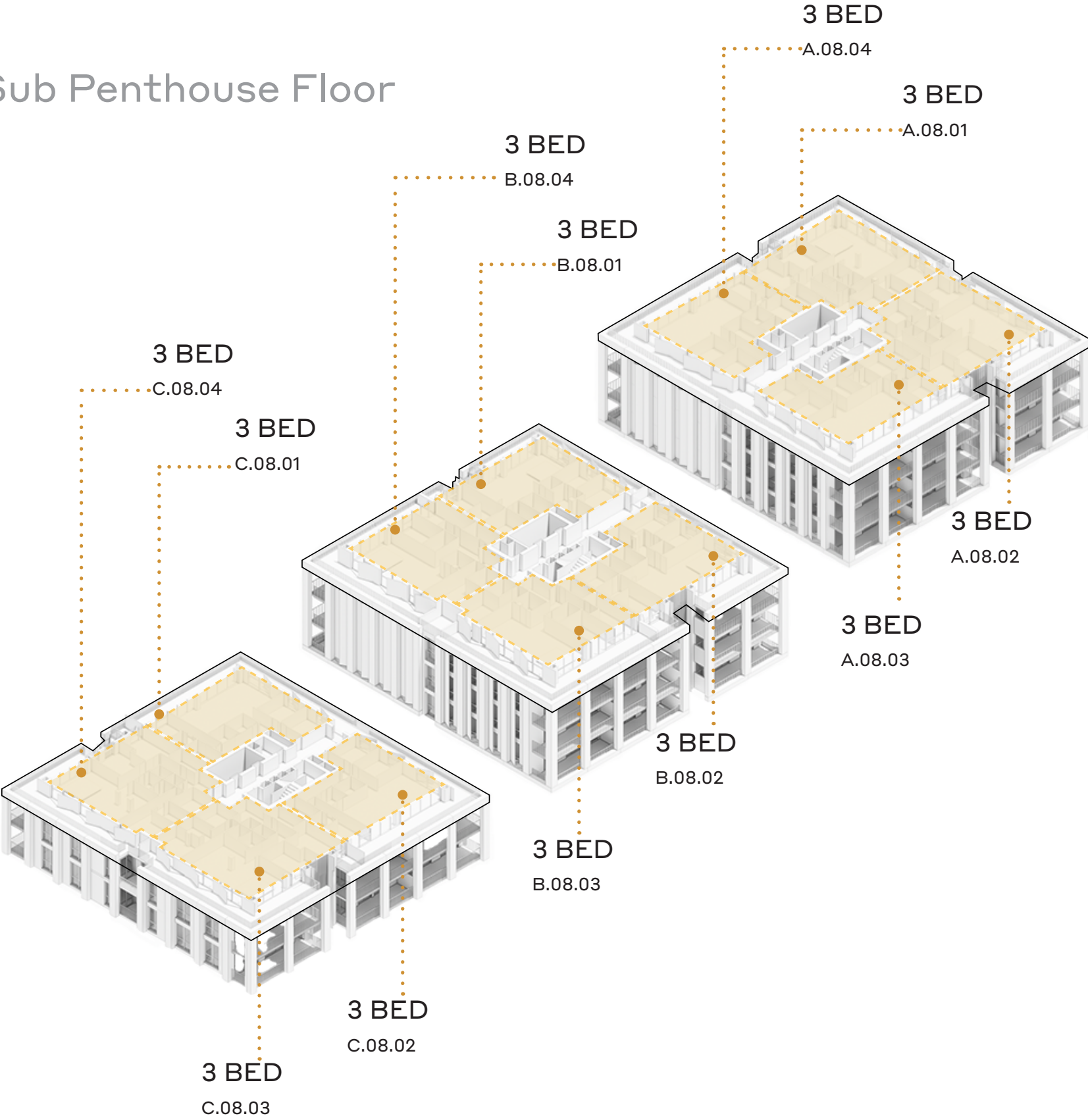


04.06 Building
Typical Sub Penthouse Floor Plan



1:400@A3

04.06 Building
Typical Sub Penthouse Floor

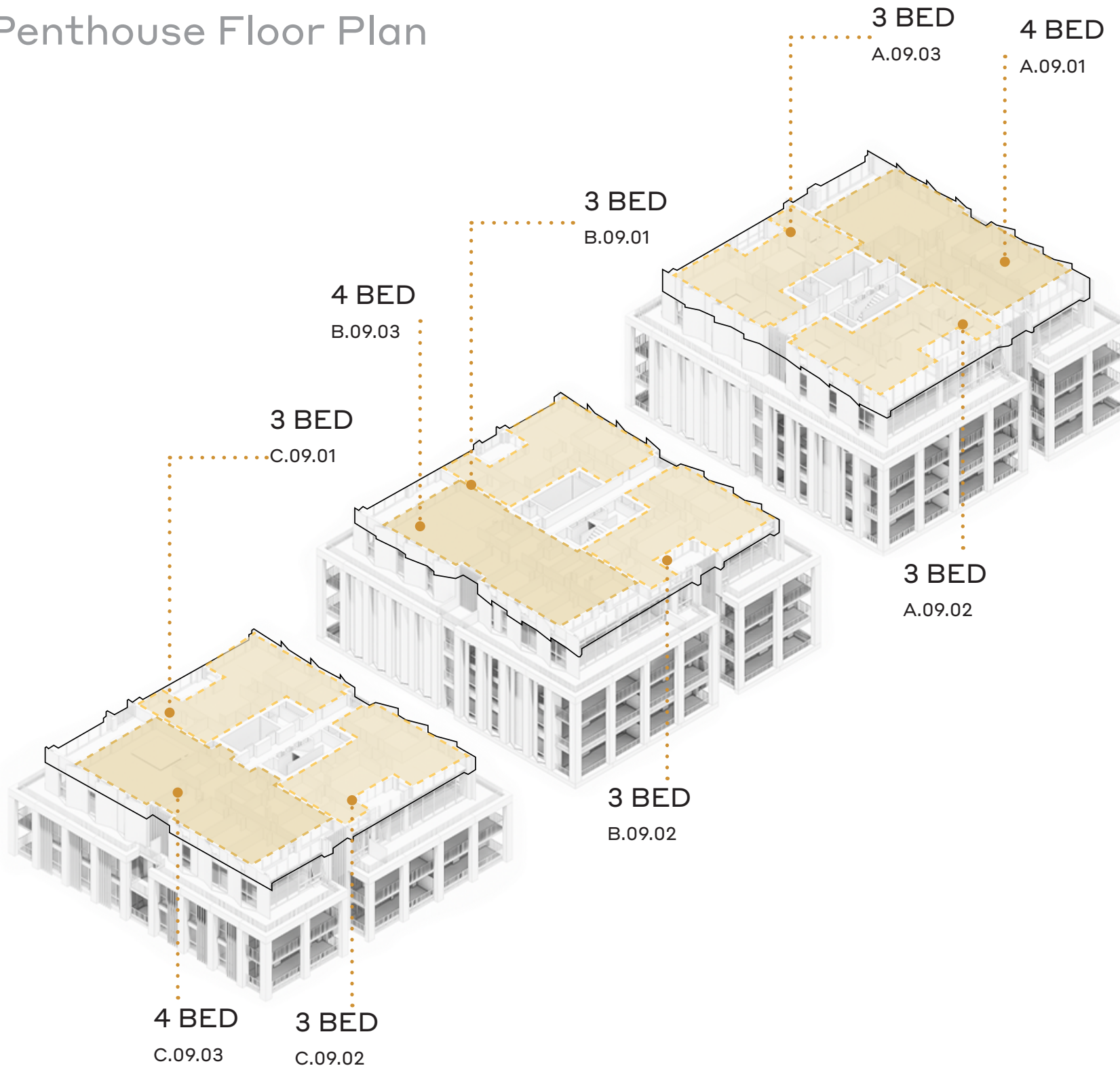


04.06 Building
Typical Penthouse Floor Plan

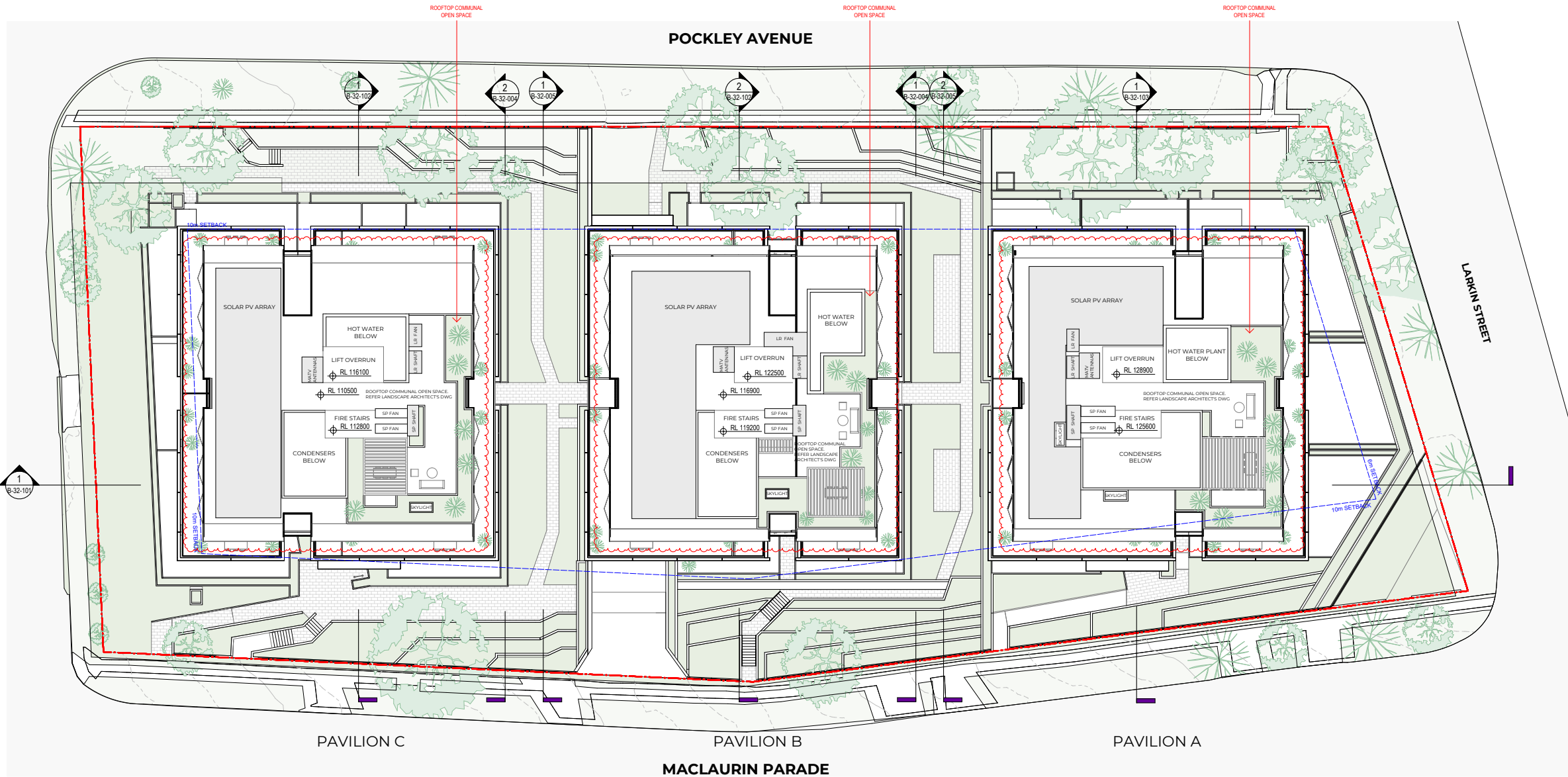


1:400@A3

04.06 Building
Typical Penthouse Floor Plan



04.06 Building
Roof Plan



1:400@A3

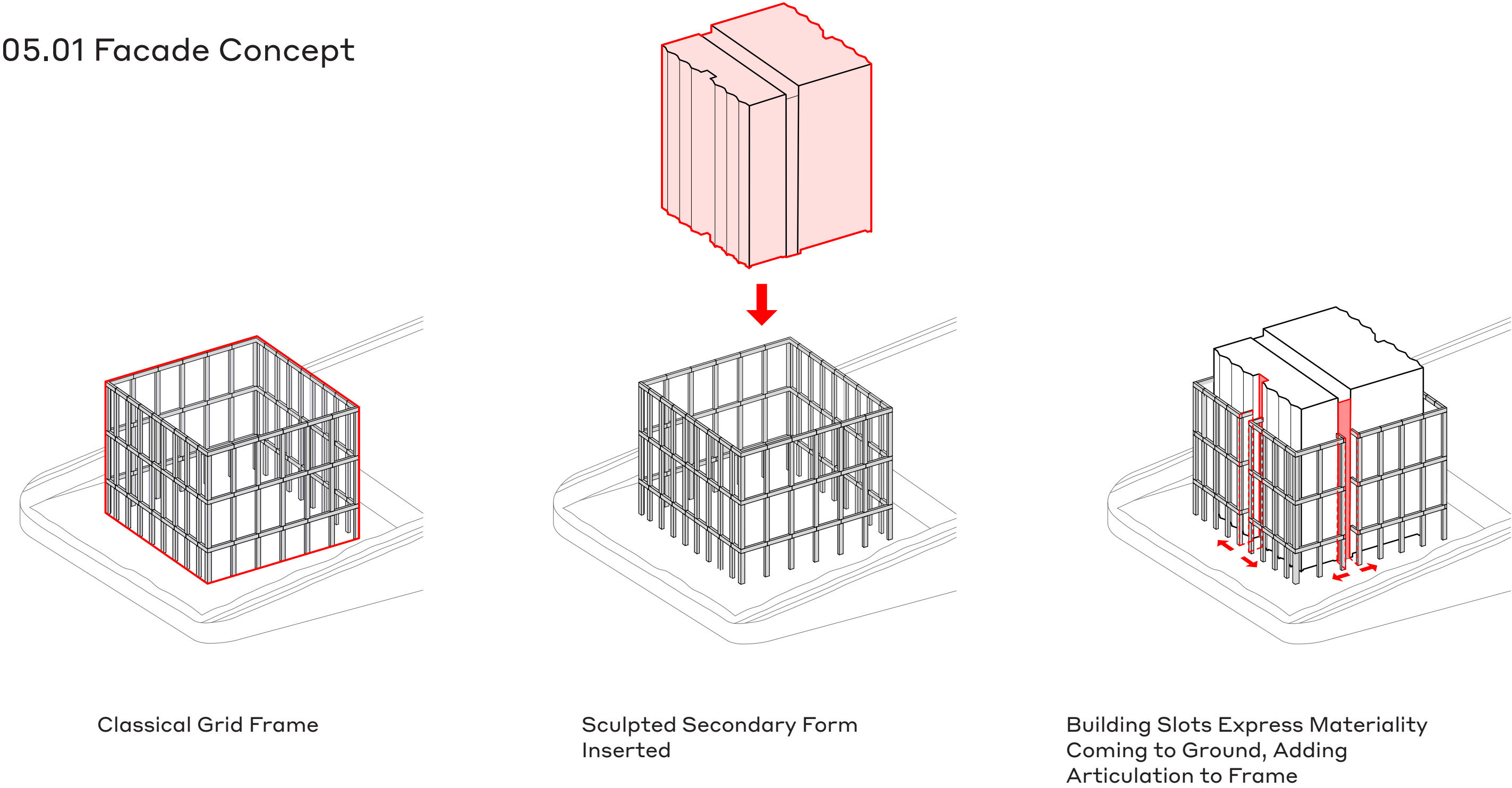
04.06 Building
Roof Plan



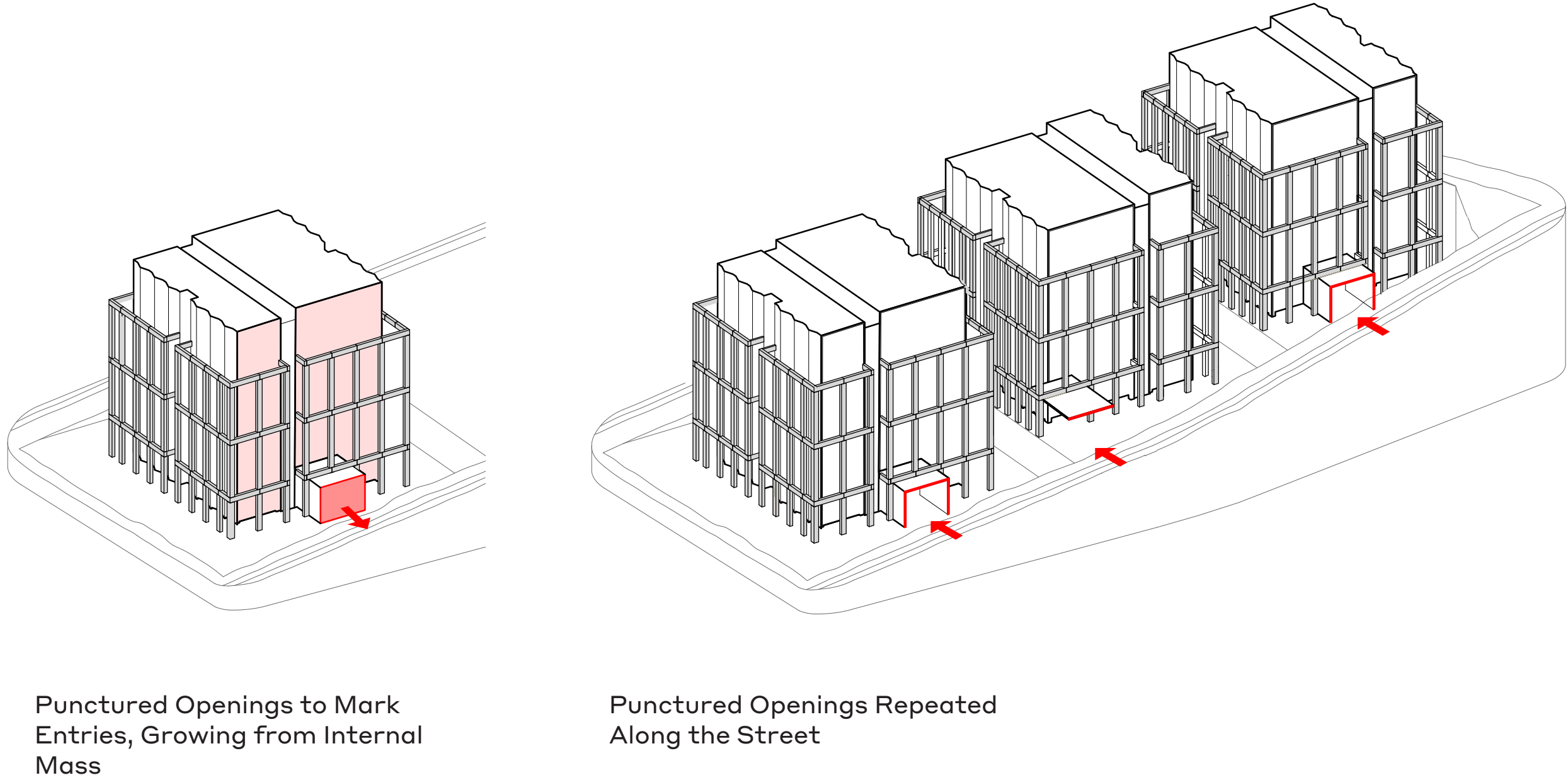
Facade and Materiality

05.01	Facade Concept
05.02	Materiality
05.03	Facade Detail
05.04	Connecting With Country
05.05	Sustainability
05.06	Building Elevations
05.07	Facade Amendment

05.01 Facade Concept



05.01 Facade Concept



05.01 Facade Concept

Classic and Timeless with a Contemporary Twist



Classical Proportions and Materiality



Sleek Penthouse

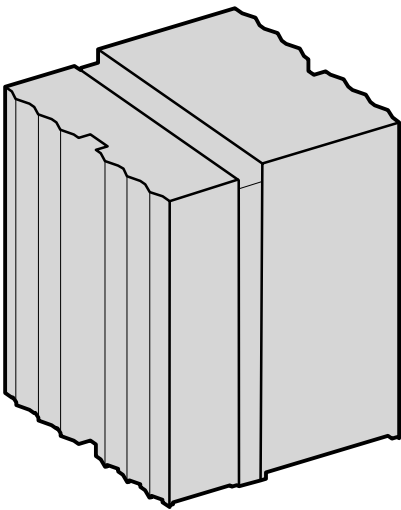


Intricate Detailing



A Confident Form Nestled Within Landscape

05.02 Materiality



Metal Insert



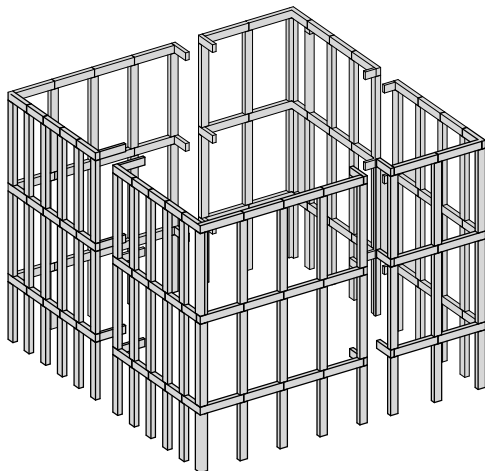
Expressed Frame



Fine Screens



Portal Entries



Grid Frame



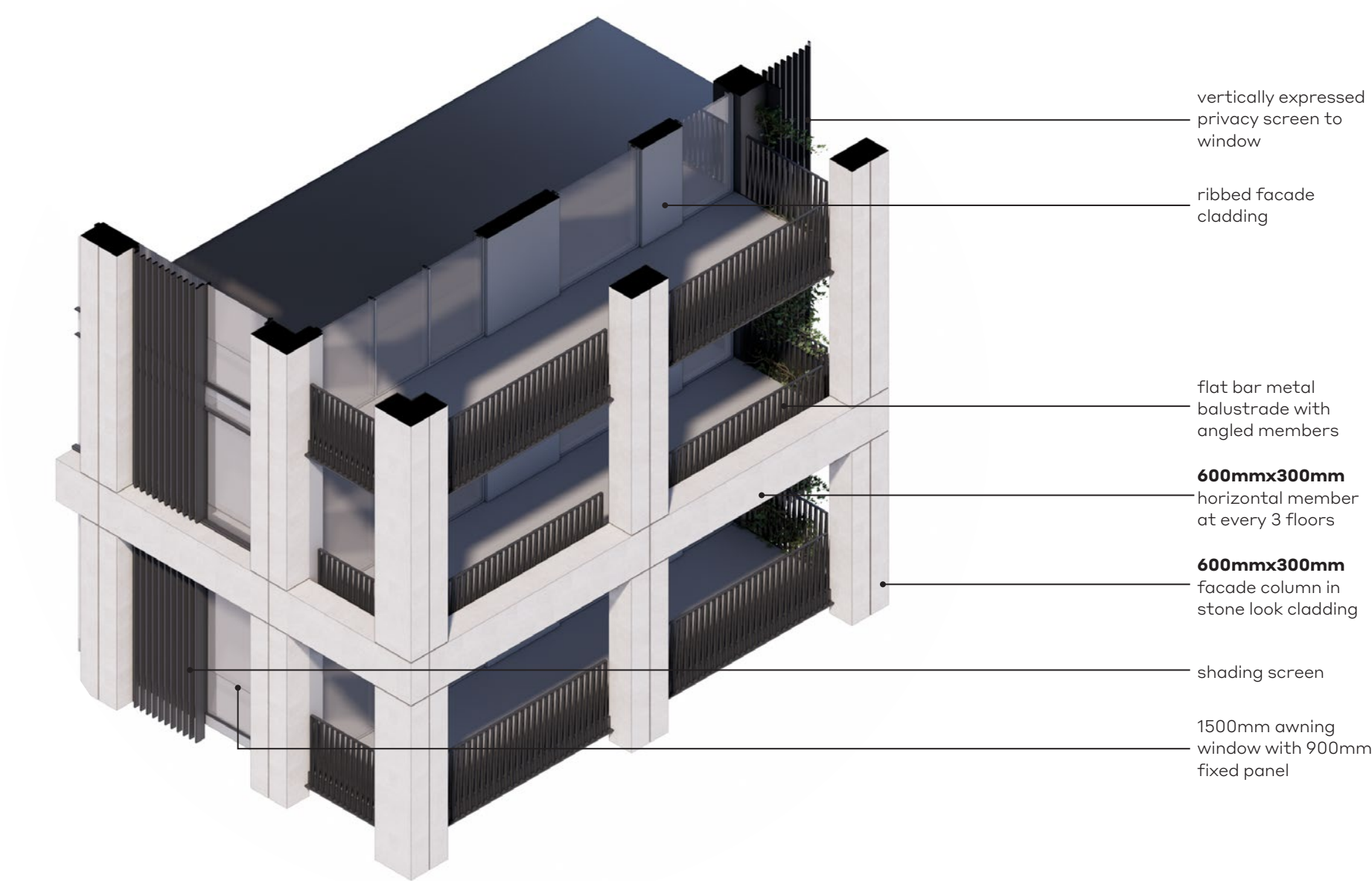
Stone-look panels



Considered joints



05.03 Facade Detail
Axonometric Views



3D Axonometric Digram

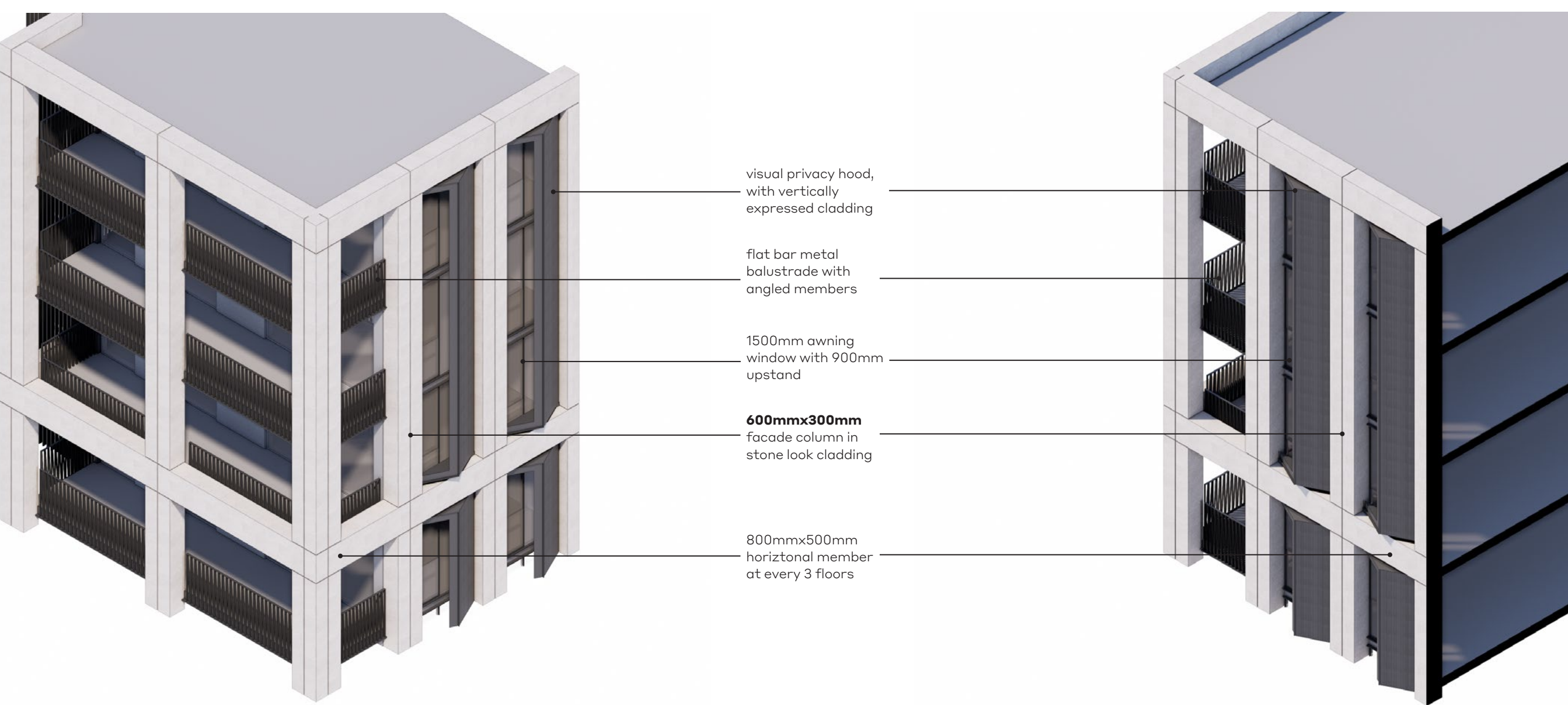


shading screens



Angled flat bar balustrade

05.03 Facade Detail
Axonometric Views



05.03 Facade Detail
Street Elevations - Street Facing Facade / Main Entry

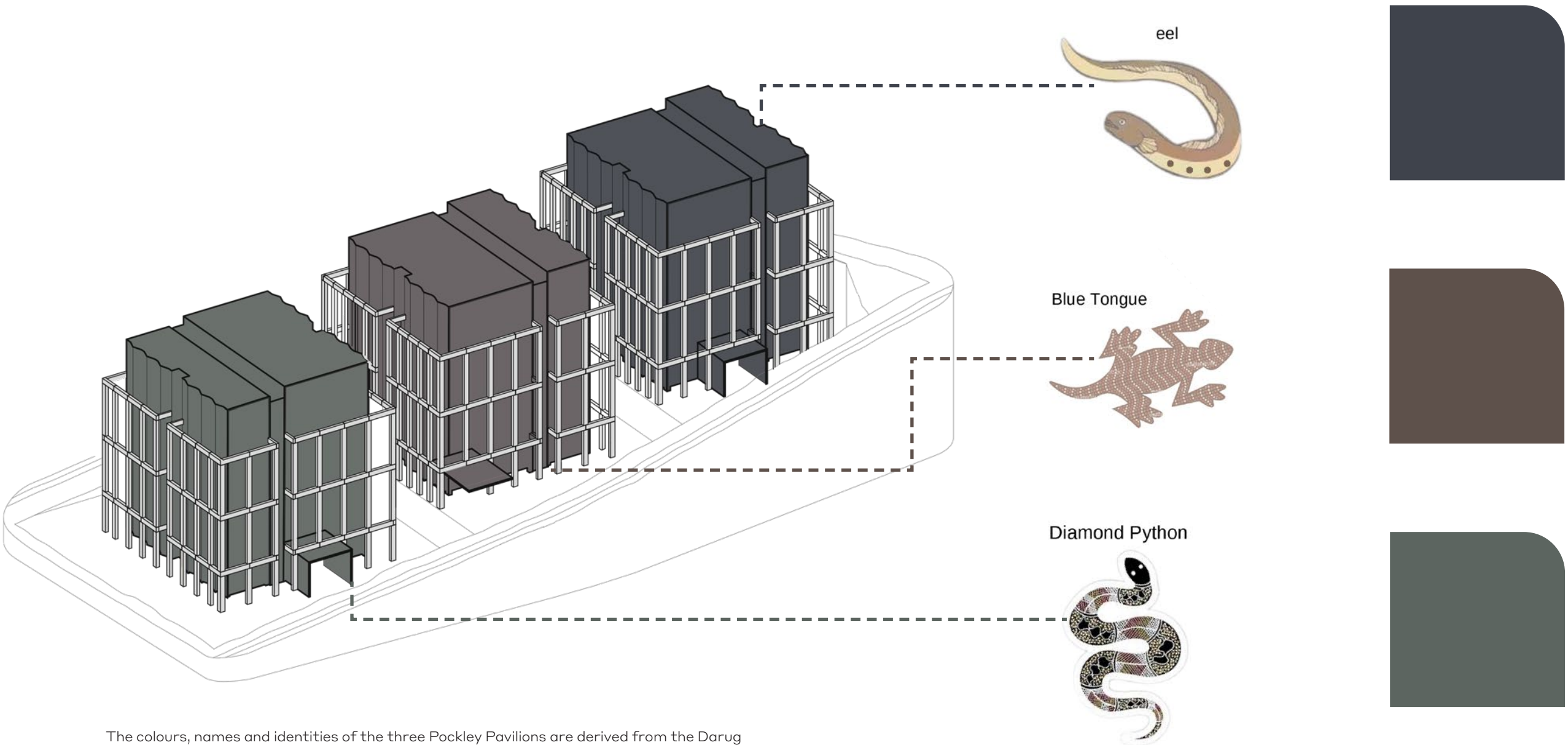


05.03 Facade Detail



05.04 Facade - Connecting with Country

Exploring Country Themes to Create Identity



The colours, names and identities of the three Pockley Pavilions are derived from the Darug understanding of the seasonal calendar. The three native, locally endemic animals each associated with one of the pavilions has a specific relationship with one of the Darug seasons; the eel to the *Yauruga Burra* (hot and thirsty), the blue tongue to *Bunul Marray* (warm and wet) and the diamond python to *Dugara Guwara* (cold and windy).

05.05 Sustainability



Sustainable Materials Strategy

Materials selection considering embodied carbon, health, environmental and social responsibility, durability, life cycle.

Design for Disassembly (DfD)

Consider elements to be DfD in envelope and interiors, according to expected life cycle.

Materials Reuse

Excavation materials, sandstone to be reused in Gabion Walls



Access to daylight

Maximised daylight access to amenities, communal spaces

Occupant Comfort and Air Quality

Maximise visual, thermal and acoustic comfort as well as Indoor Air Quality in the units through evidence-based design and materials selection

Biophilic Design

Communal areas to include green spaces, natural daylight, natural patterns and materials to incorporate a sense of place and history.



Connectivity

Close connection to Sydney's green grid, access to nature

Transit Oriented Development

Developed within close proximity to Roseville transport hub, encouraging use of public transport networks



Biodiversity

Maximise opportunities for vegetation at ground plane, siting the development within the landscape. Landscaping sensitive to local Blue Gum High Forest context, creating habitats for local species.



Energy Generation

On site PV array located on building roofs

Towards Net Zero

All electric, 100% energy from renewables, 100% fossil fuel free

Building Management Systems

Smart controls inbuilt within the BMS for HVAC and lighting, and monitor energy and water usage.

Natural Ventilation

Corridors, lobbies and carparks naturally ventilated where possible

Electric Vehicle Charging

Electric charging for personal automobiles



Facade Optimisation

Facade isolation has been reduced through a combination of depth and shape or façade's articulation design, as well as additional shading elements to east and west primarily.

East - Vertical facade elements, including stone blades and shading screens, reduce heat gain to facade.

North - Deep balconies across the whole of the Northern facade, blocking summer sun while allowing winter sun to hit the fenestration.

West - Vertical facade elements, including stone blades and shading screens, reduce heat gain to facade.

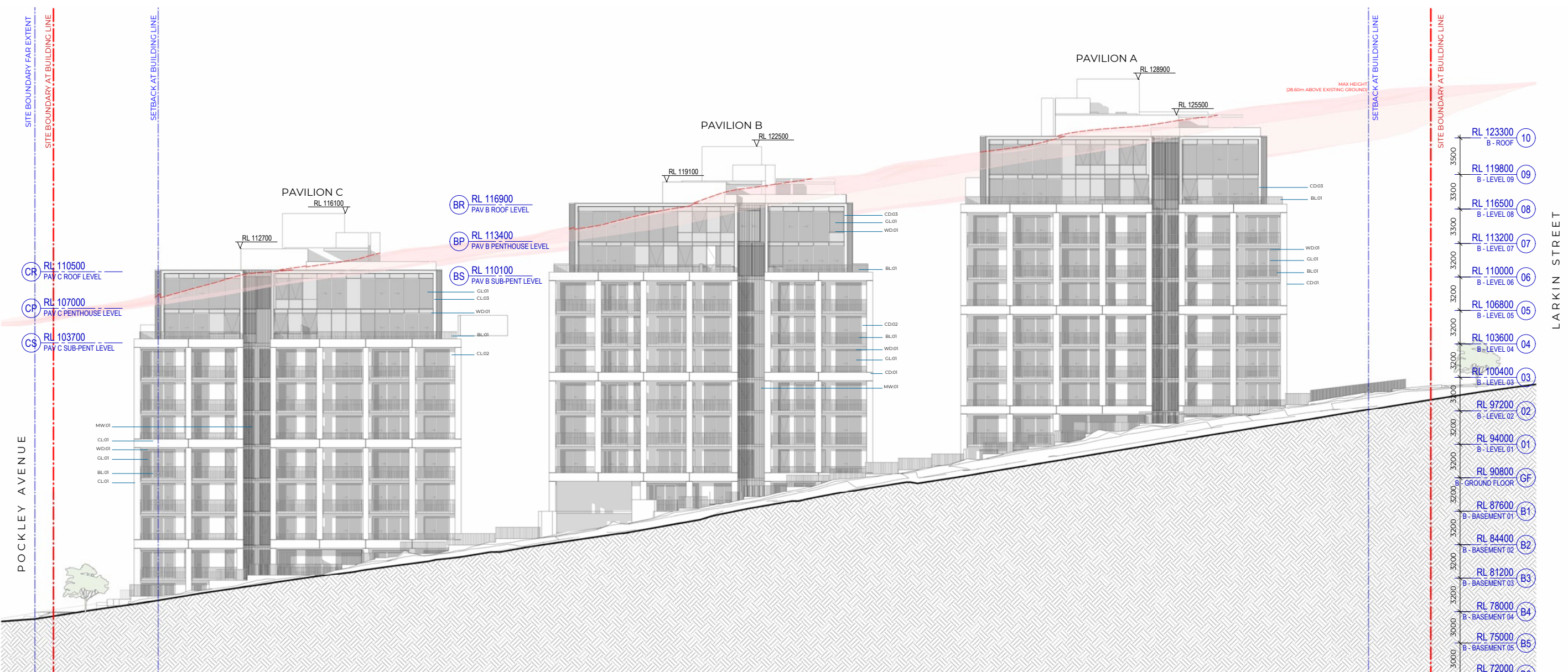


Water Management

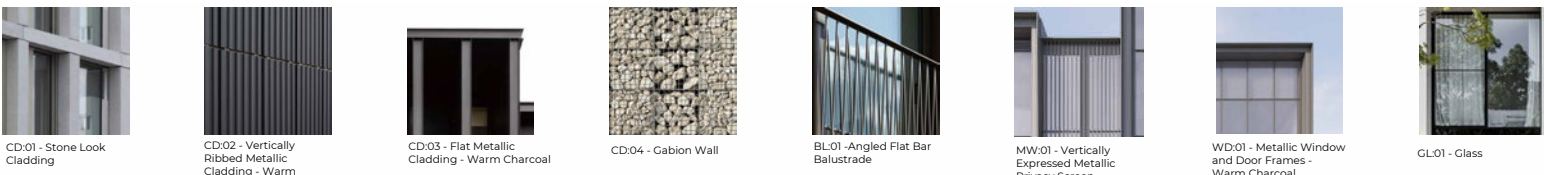
Reduce water consumption in process water and water fixtures. Rainwater collection and reuse

05.06 Building Elevations

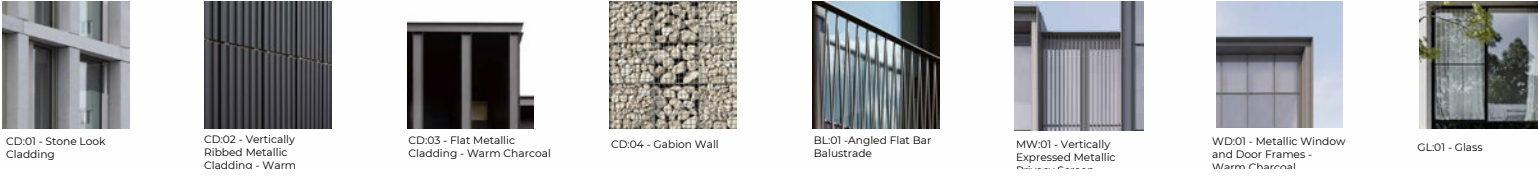
South Elevation



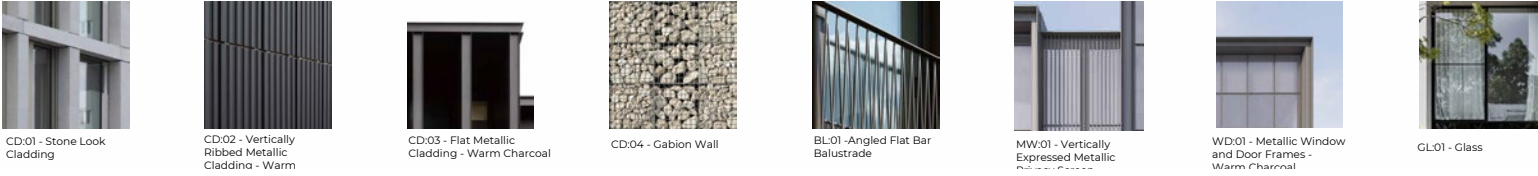
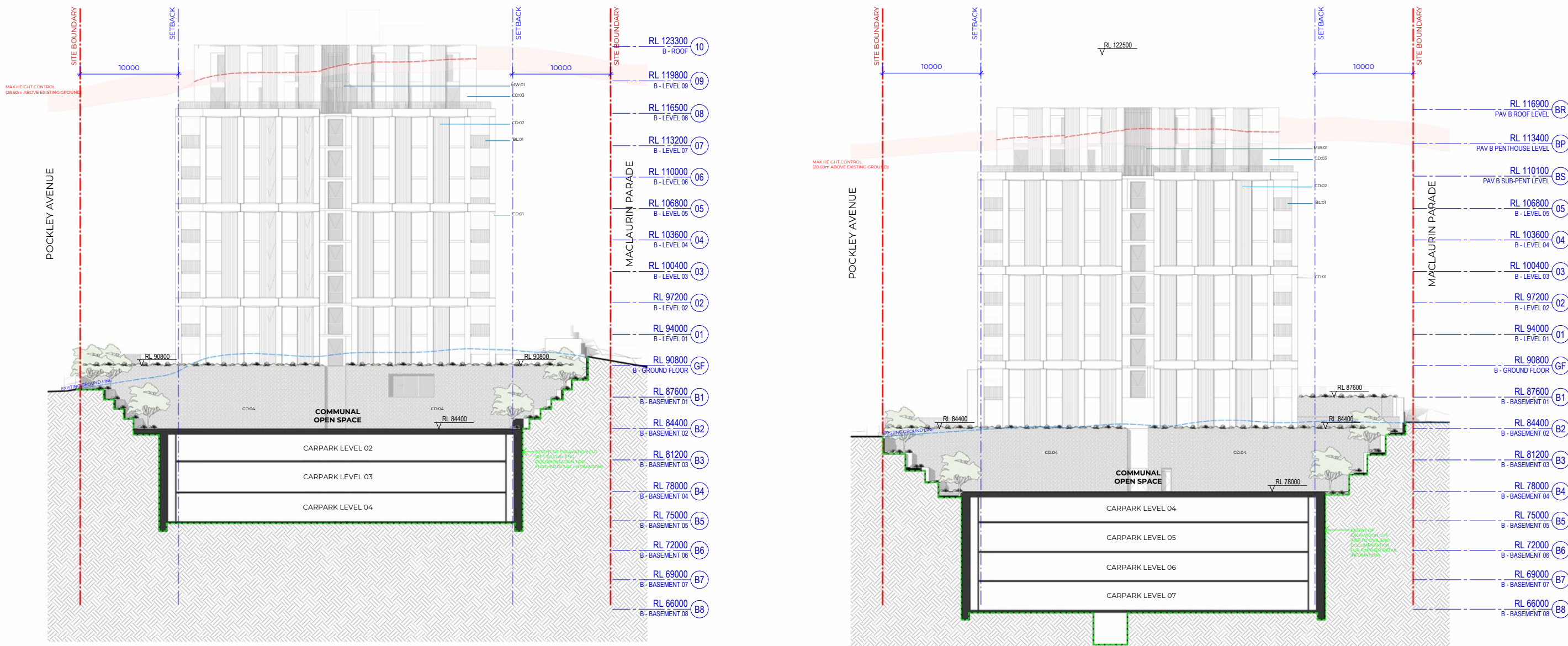
South Elevation



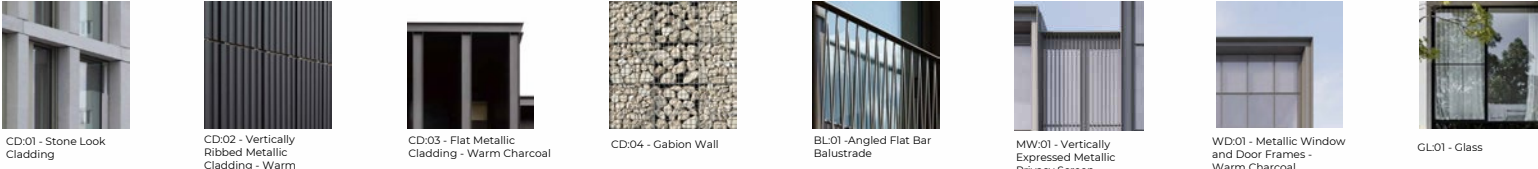
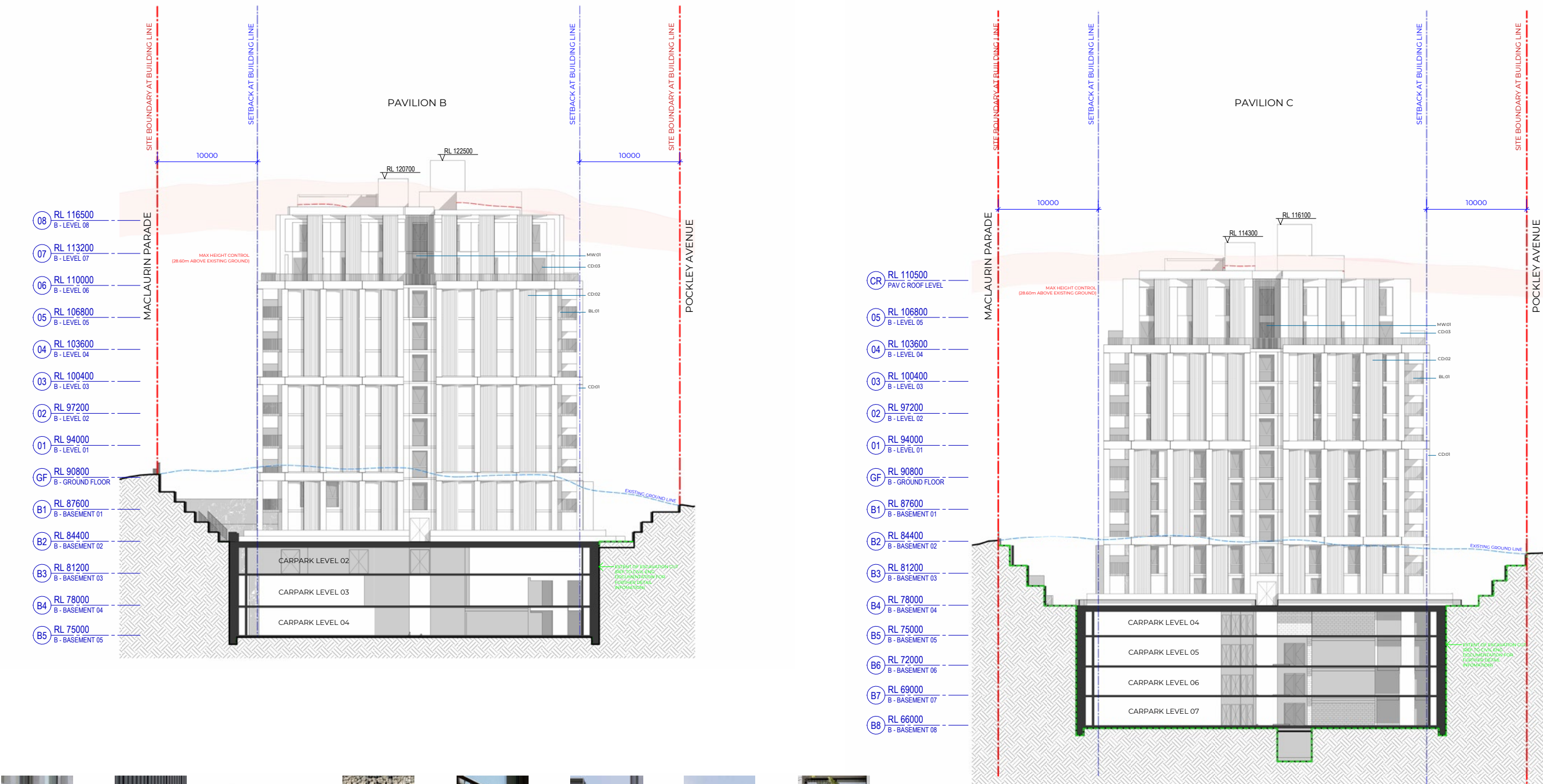
05.06 Building Elevations
East & West Elevation



05.06 Building Elevations
Pavilion A & B West Elevations



05.06 Building Elevations
East & West Elevation

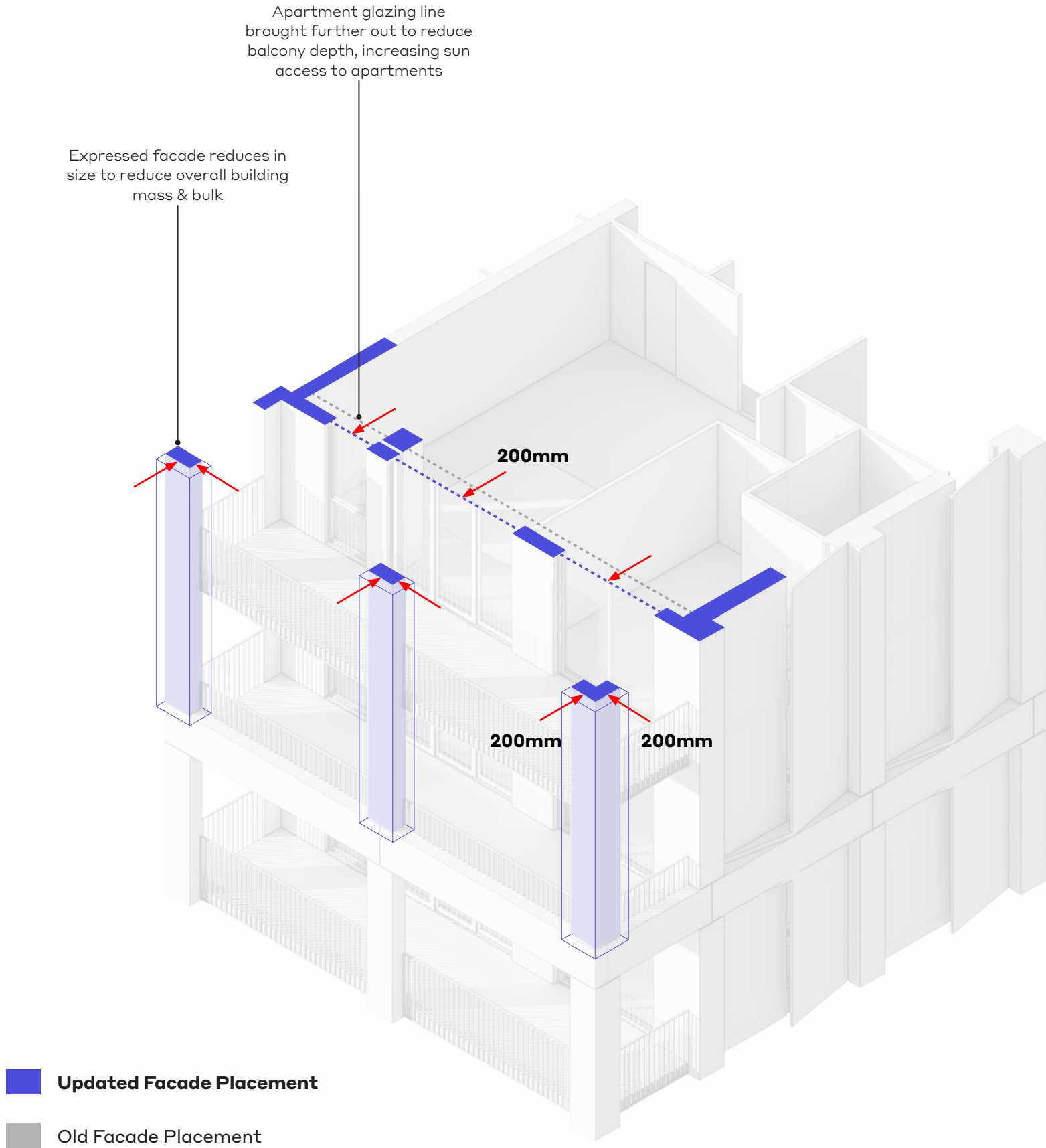


05.07 Facade Amendment
Facade Line Adjustments

Facade Modifications

The facade members have been reduced by 200mm, bringing the external facade line in by 200mm. This adjustments reduces the overall building mass & bulk

At the same time, the internal glazing line has been pushed outward to maximise sun access to adjacent internal spaces.



Compliance

06.01	Building Height
06.02	Neighbouring Development
06.03	Sun Eye Views
06.04	Solar Access
06.05	Daylight Access
06.06	Cross Ventilation
06.07	Solar Access and Cross Ventilation Summary
06.08	Shadow Diagrams
06.09	Livable Housing Units
06.10	GFA Diagrams
06.11	Principal COS Solar Access

06.01 Building Height

Rooftop COS Height Breach Elements

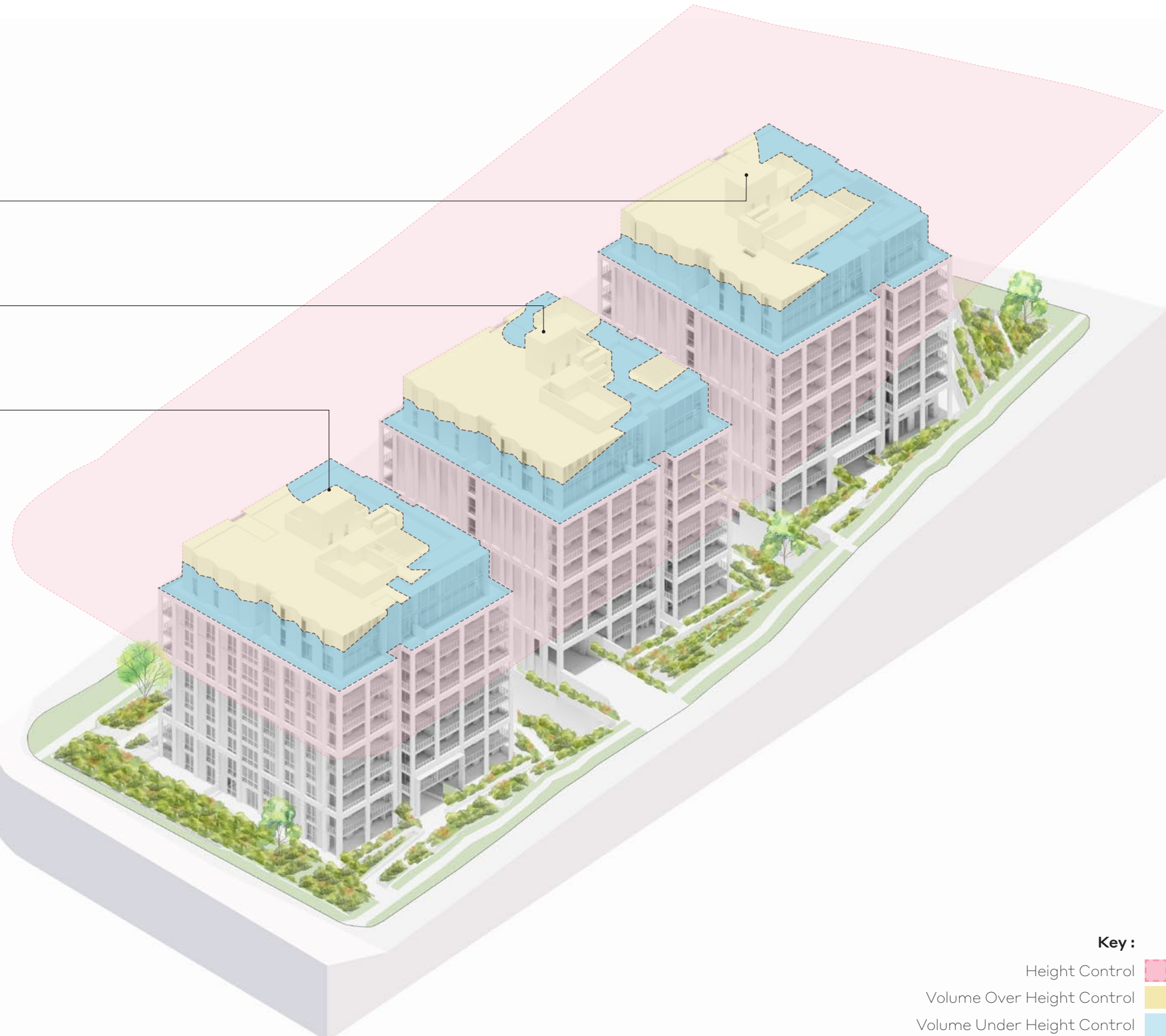
Breach Breakdown

	Height (max)	Distance (max)	Volume (total)
Pavillion A			
Over Height Control	34.95m	+6.35m	883m³
Pavillion B			
Over Height Control	34.86m	+6.26m	943m³
Pavillion C			
Over Height Control	34.70m	+6.10m	923m³
Total Over Height Control			2,749m³
Total Under Height Control			5,195m³

Height Control

With the inclusion of Communal Open Space on the rooftops of each pavilion, additional plant & services have had to be included on the roof levels that breach the height control. Among these are:

- Lift Overrun
- Egress Stair Core
- Pergola Shading Structure For COS Areas
- Plant & Services



06.01 Building Height

Rooftop COS Impact on Height Control

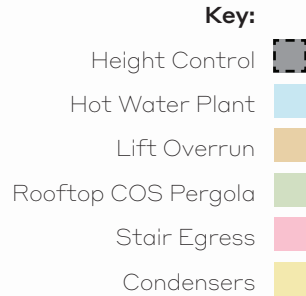
Breach Breakdown

	Volume over height control
Pavillion A	
Hot Water Plant	81m³
Lift Overrun	112m³
Rooftop COS Pergola	7m³
Stair Egress	80m³
Condensers	108m³
Habitable Floors and Roof Slabs	496m³
Pavillion B	883m³
Hot Water Plant	73m³
Lift Overrun	108m³
Stair Egress	63m³
Rooftop COS Pergola	14m³
Condensers	103m³
Habitable Floors and Roof Slabs	582m³
Pavillion C	943m³
Lift Overrun	111m³
Hot Water Plant	73m³
Stair Egress	63m³
Rooftop COS Pergola	35m³
Condensers	96m³
Habitable Floors and Roof Slabs	546m³
Total	923m³

Height Control Breach

With the inclusion of Communal Open Space on the rooftops of each pavilion, additional plant & services have had to be included on the roof levels that breach the height control. Among these are:

- Lift Overrun
- Egress Stair Core
- Pergola Shading Structure For COS Areas
- Plant & Services



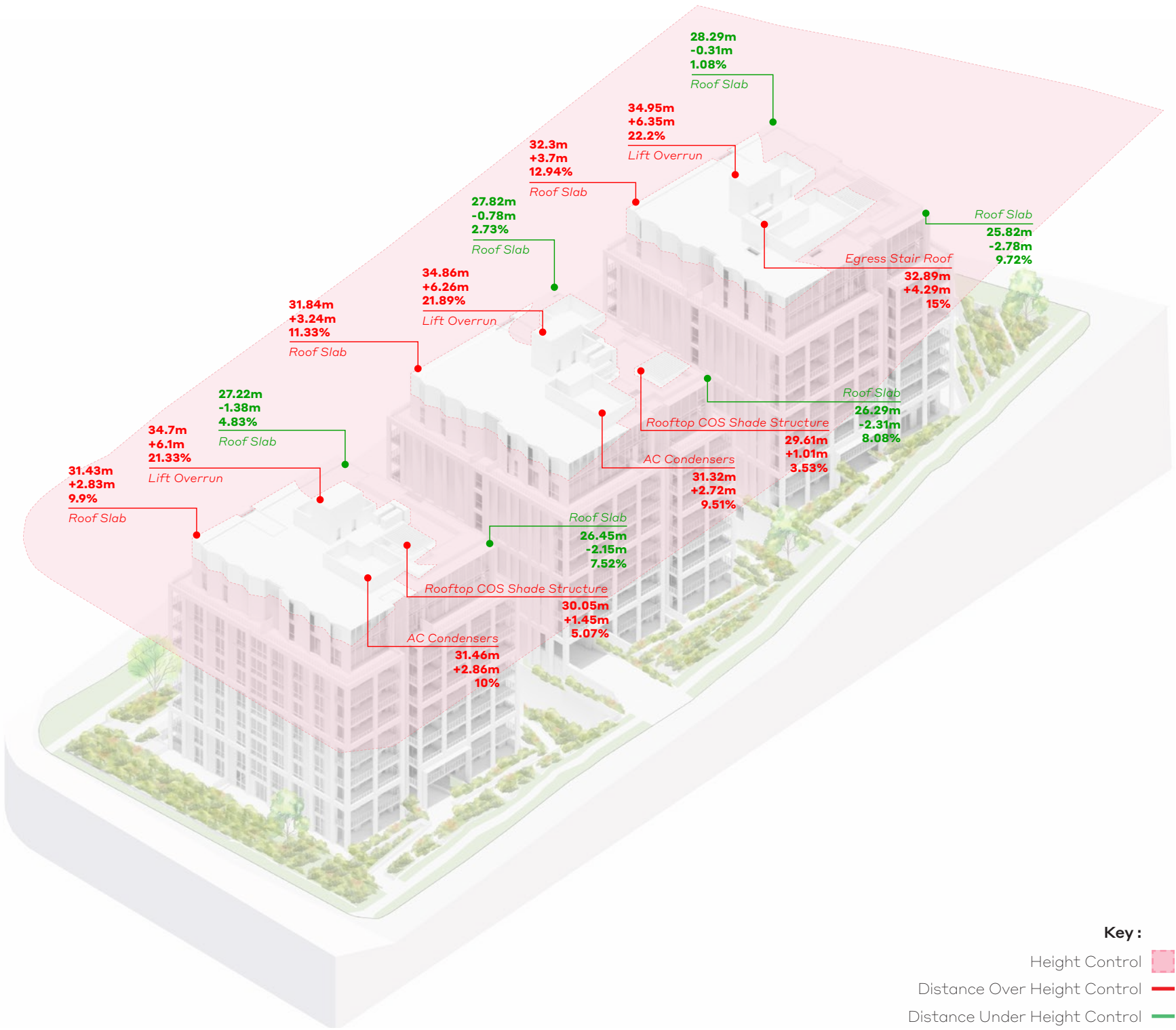
06.01 Building Height Height Control

Height Control

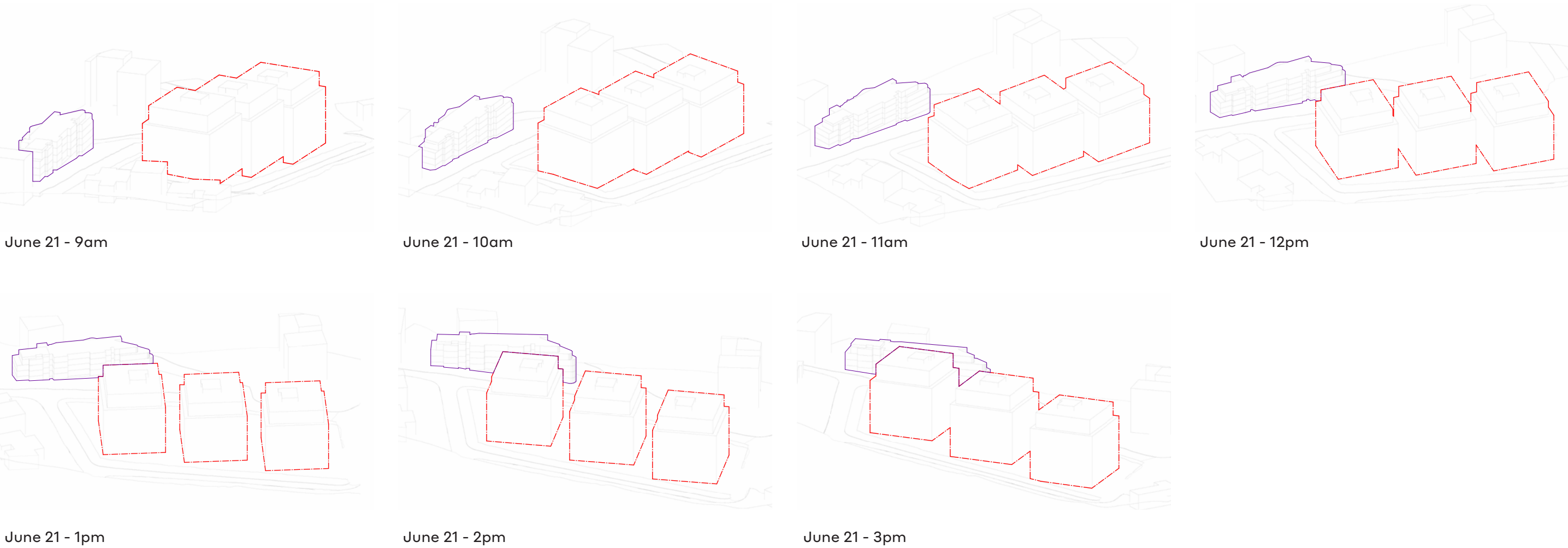
Due to the complex nature of the site topography, the proposed pavilions step with the site slope in an effort minimise any significant height complications. Additionally, all effort has been made to locate any roof elements such as lift overruns and all required plant equipment for the pavilions towards the East where the height control has more relief.

All architectural roof features that previously provided visual and acoustic protection that breached the height control have been removed

While there are minor breaches of the height control, these breaches contribute significantly to the architectural outcome, and as demonstrated in overshadowing diagrams and in View Impact Analysis, are significantly less harmful than if a larger "compliant" built form were to be on site



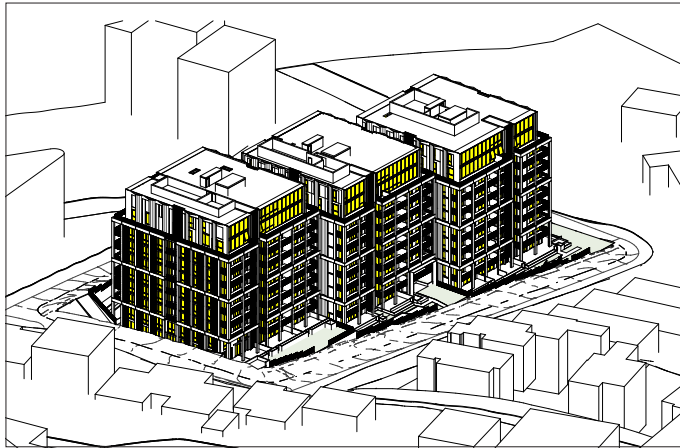
06.02 Neighbouring Development 4-10 Maclaurin Parade (Rosewood)



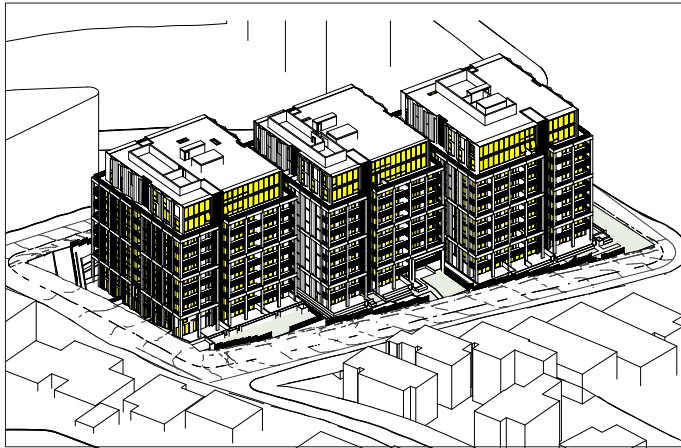
06.03 Sun Eye Views Existing Context



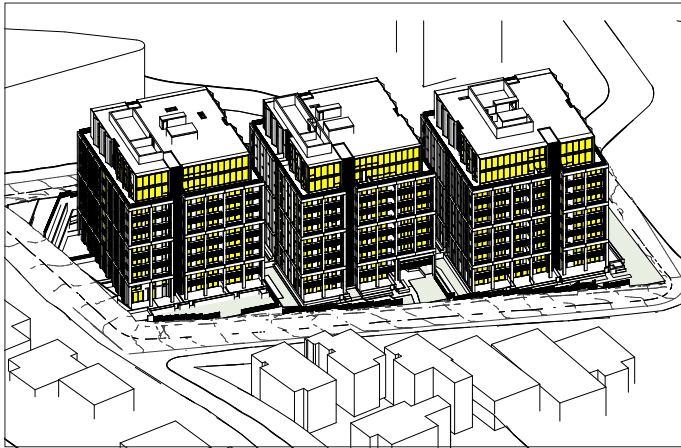
June 21 - 9am



June 21 - 10am



June 21 - 11am



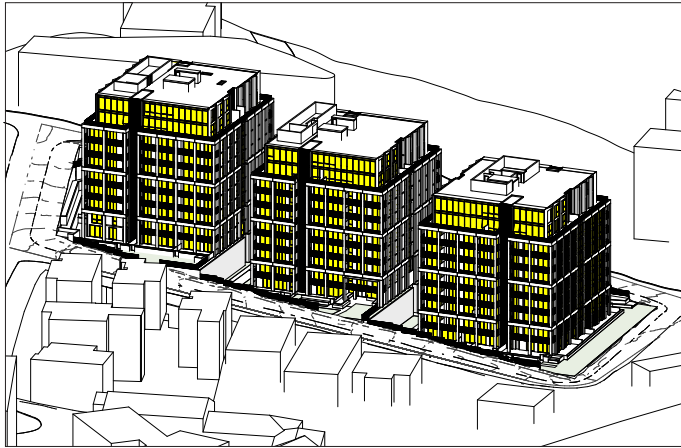
June 21 - 12pm



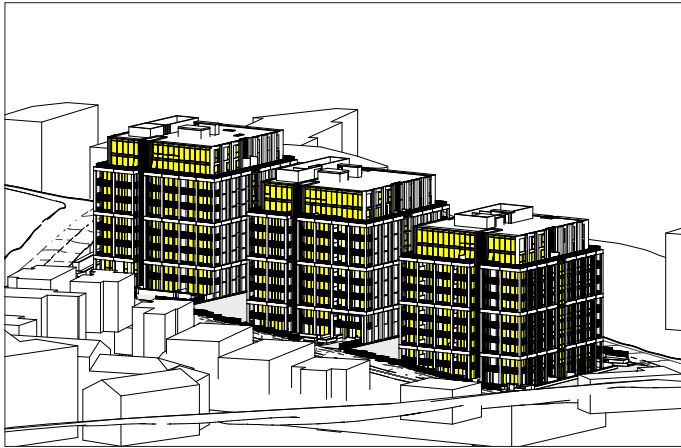
June 21 - 1pm



June 21 - 2pm



June 21 - 3pm



June 21 - 4pm

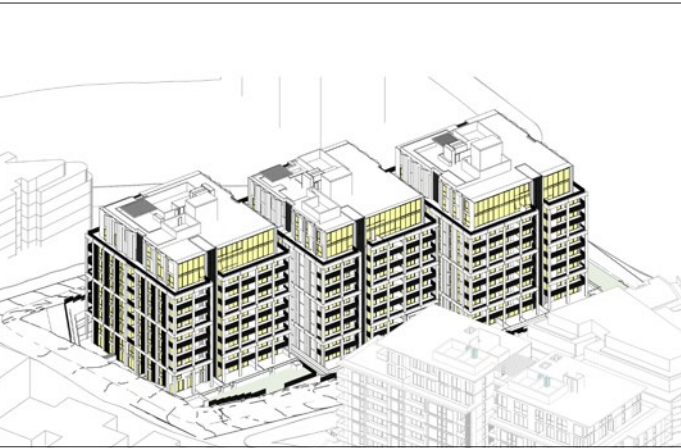
06.03 Sun Eye Views Future Context



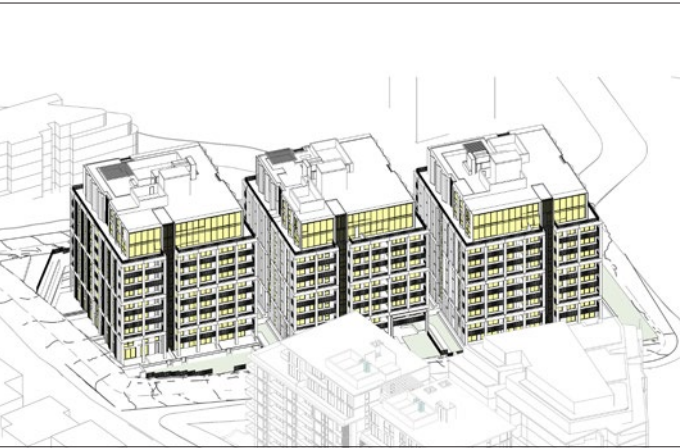
June 21 - 9am



June 21 - 10am



June 21 - 11am



June 21 - 12pm



June 21 - 1pm



June 21 - 2pm



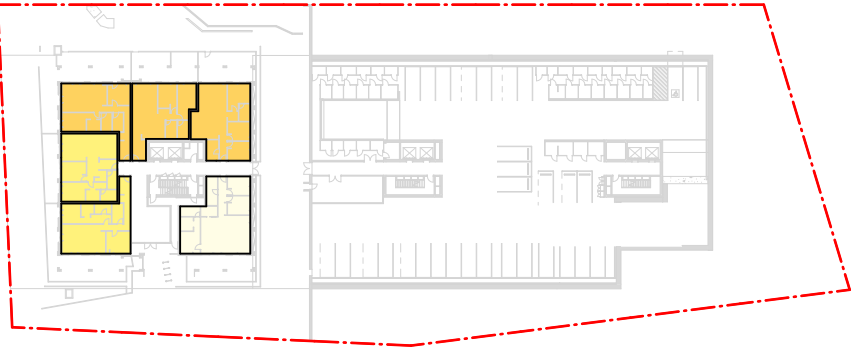
June 21 - 3pm



June 21 - 4pm

06.04 Solar Access

- Receives at least 2 hours sun between 9am-3pm on June 21.
- Receives at least 2 hours sun between 9am-4:30 pm on June 21.
- Receives sunlight.
- No direct sunlight. Receives increased daylight access due to dual aspect.



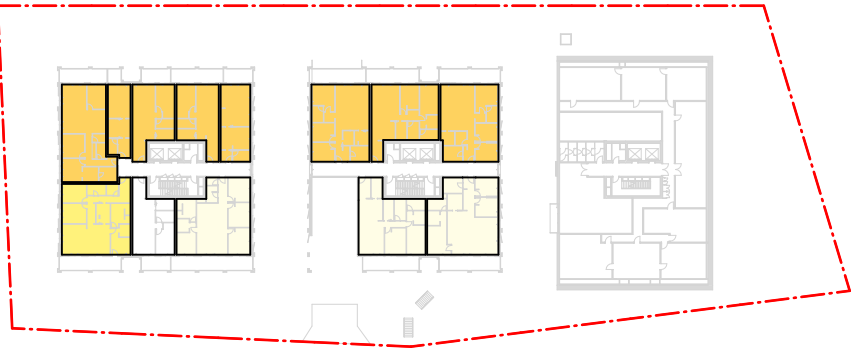
Basement 04



Basement 03



Basement 02



Basement 01



Ground Floor



Level 01



Level 02



Level 03



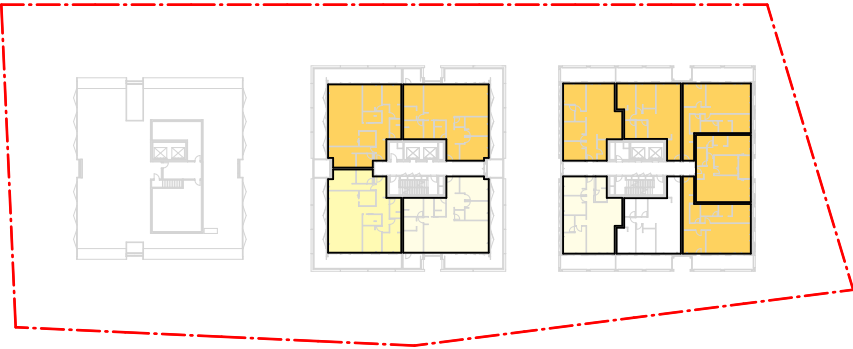
Level 04

06.04 Solar Access

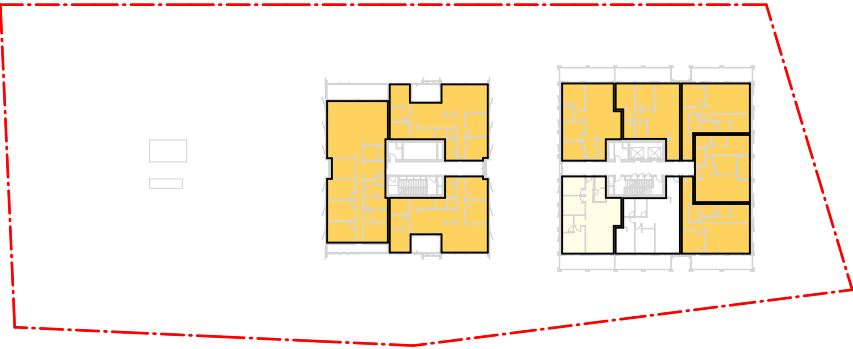
- Receives at least 2 hours sun between 9am-3pm on June 21.
- Receives at least 2 hours sun between 9am-4:30 pm on June 21.
- Receives sunlight.
- No direct sunlight. Receives increased daylight access due to dual aspect.



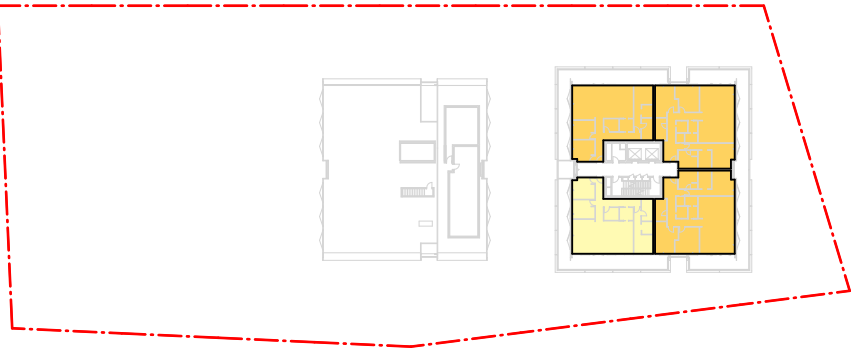
Level 05



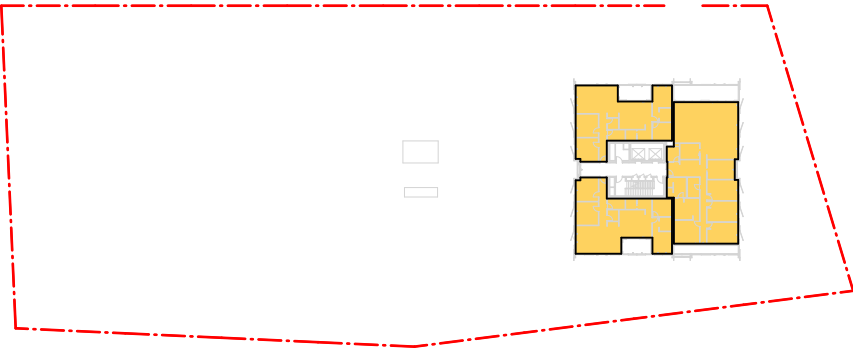
Level 06



Level 07



Level 08



Level 09

	ADG 4A-1 Solar Access (9am-3pm 21 June)			ADG 4A-1 (Supplementary) Solar Access (Any Time 21 June)		
	2hrs	Total Apt		2hrs	Total Apt	
Roof						
Level 9	3	3	100%	3	3	100%
Level 8	3	4	75%	4	4	100%
Level 7	8	10	80%	8	10	80%
Level 6	7	11	64%	8	11	73%
Level 5	11	16	69%	11	16	69%
Level 4	10	17	59%	11	17	65%
Level 3	13	21	62%	14	21	67%
Level 2	13	21	62%	14	21	67%
Level 1	10	18	56%	11	18	61%
Ground Floor	13	20	65%	14	20	70%
Level B01	8	13	62%	9	13	69%
Level B02	7	12	58%	8	12	67%
Level B03	5	8	63%	6	8	75%
Level B04	3	6	50%	5	6	83%
Level B05						
Level B06						
Level B07						
	114	180		126	180	
Total			63%			70%

06.04 Solar Access

ADG Objective 4A-1

- Design Criteria 1 refers to living rooms and private open spaces of at least 70% of apartments to receive a minimum of 2 hours direct sunlight between 9am - 3pm at mid-winter (21 June)
- However, relevant to the last design guidance it is important to note that this specific proposed site at 2-16 Pockley Avenue, Roseville is heavily constrained
- The following detailed analysis of the impact of site orientation on direct sun access, aims to remediate the constraints and emphasise other high value characteristics of the design proposal such as maximising dual orientation apartments, and enabling good daylight access during the prescribed hours of 9am - 3pm at mid-winter (21 June)

Objective 4A-1 To optimise the number of apartments receiving sunlight to habitable rooms, primary windows and private open space	
Design criteria	
1.	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
2.	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
3.	A maximum of 15% of apartments in a building receive no direct sunlight between 9 am and 3 pm at mid winter
Design guidance	
The design maximises north aspect and the number of single aspect south facing apartments is minimised	
Single aspect, single storey apartments should have a northerly or easterly aspect	
Living areas are best located to the north and service areas to the south and west of apartments	
To optimise the direct sunlight to habitable rooms and balconies a number of the following design features are used:	
• dual aspect apartments • shallow apartment layouts • two storey and mezzanine level apartments • bay windows	
To maximise the benefit to residents of direct sunlight within living rooms and private open spaces, a minimum of 1m ² of direct sunlight, measured at 1m above floor level, is achieved for at least 15 minutes	
Achieving the design criteria may not be possible on some sites. This includes:	
• where greater residential amenity can be achieved along a busy road or rail line by orientating the living rooms away from the noise source • on south facing sloping sites • where significant views are oriented away from the desired aspect for direct sunlight	
Design drawings need to demonstrate how site constraints and orientation preclude meeting the design criteria and how the development meets the objective	



Apartment Design Guide

Tools for improving the design of residential apartment development



06.04 Solar Access

Project Overview

- Site is a South facing sloping site
- Significant views to the city and biodiversity zone are oriented South, away from the desired aspect for direct sunlight
- 63% of all units can receive 2 hours of direct sun on 21 June between 9am-3pm
- 70% of all units can receive 2 hours of direct sun on 21 June at any time during the day
- Due to site constraints, the building massing was divided a reasonably maximum amount of times to maximise number of dual aspect apartments
- 59% dual aspect apartments (106 of 180)

To optimise the direct sunlight to habitable rooms and balconies a number of the following design features are used:	
• dual aspect apartments	
Achieving the design criteria may not be possible on some sites. This includes:	
• where greater residential amenity can be achieved along a busy road or rail line by orientating the living rooms away from the noise source • on south facing sloping sites • where significant views are oriented away from the desired aspect for direct sunlight	
Design drawings need to demonstrate how site constraints and orientation preclude meeting the design criteria and how the development meets the objective	

*Extract From ADG Design Guidance For Objective 4A-1



06.05 Daylight Access

Access To Daylight - GBCA Green Star Pathway

- In addition to direct sunlight under the ADG which ensures that apartments have access to sunlight, GBCA's Green Star Pathway for Apartment Buildings outlines "daylight" levels for apartments that support visual comfort for residents
- This is particularly beneficial for high levels of direct sun that can cause glare and visual discomfort to occupants, especially those who face North and will have to manually intervene to reduce the glare and harsh bright light entering their apartments
- Typical minimum daylight levels to be achieved in habitable rooms (living and bedroom) is **160 Lux**
- Kitchen areas are not included
- The recommended measurement to calculate "daylight" is Daylight Autonomy - the total percentage of the tested floor area that achieves the minimum level (160 Lux) during nominated hours (in this case 9am - 3pm on 21 June)
- The following page outlines a 'typical' baseline floor plate (a 'shoebox') to analyse daylighting conditions of a typical apartment floor plate. The central pavilion was chosen as an appropriate base case analysis. More studies can be undertaken

Daylight levels

80% of apartment units meet 160Lux for 60% of the combined living and bedroom areas with each room achieving daylight for 20% of its area

The remaining 20% of apartment units must meet 160 lux for at least 40% of living and bedroom areas, with each room achieving daylight for 20% of its area

Kitchens are not included in the calculations.

Daylight must be calculated using Daylight Autonomy.

High levels of daylight

High levels of daylight are deemed to have at least 160 lux due to daylight during 80% of the nominated hours.

Nominated hours

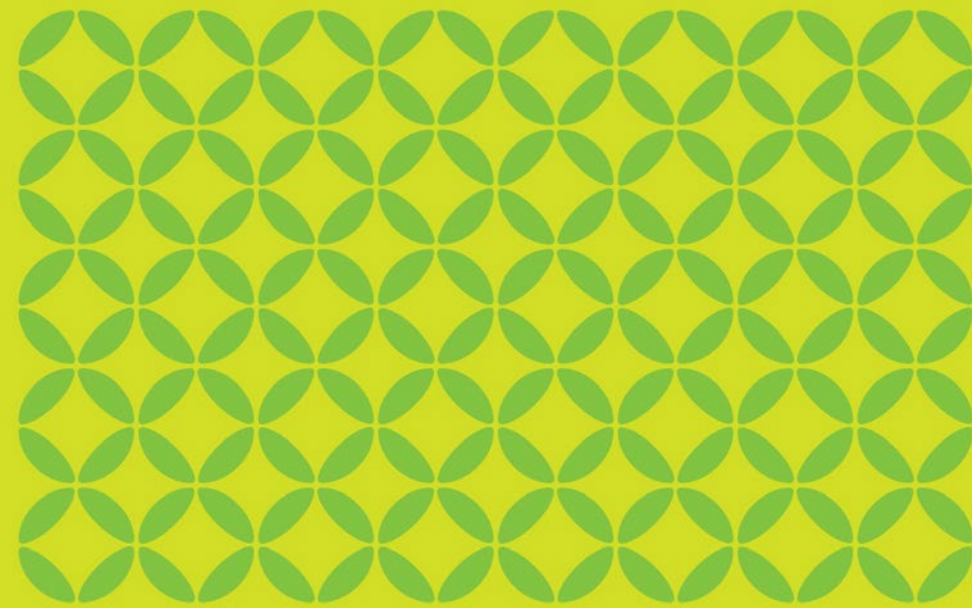
Nominated hours shall be defined by the project team. The project team shall provide a summary of space types, uses, and nominated hours. Projects that are operational outside of daylight hours only need to demonstrate compliance for operational daylight hours.

Excerpt from GBCA Green Star Buildings - Apartments Pathway v1 revision A 24 February 2025



Green Star Buildings – Apartments Pathway

Green Star Buildings v1 revision A

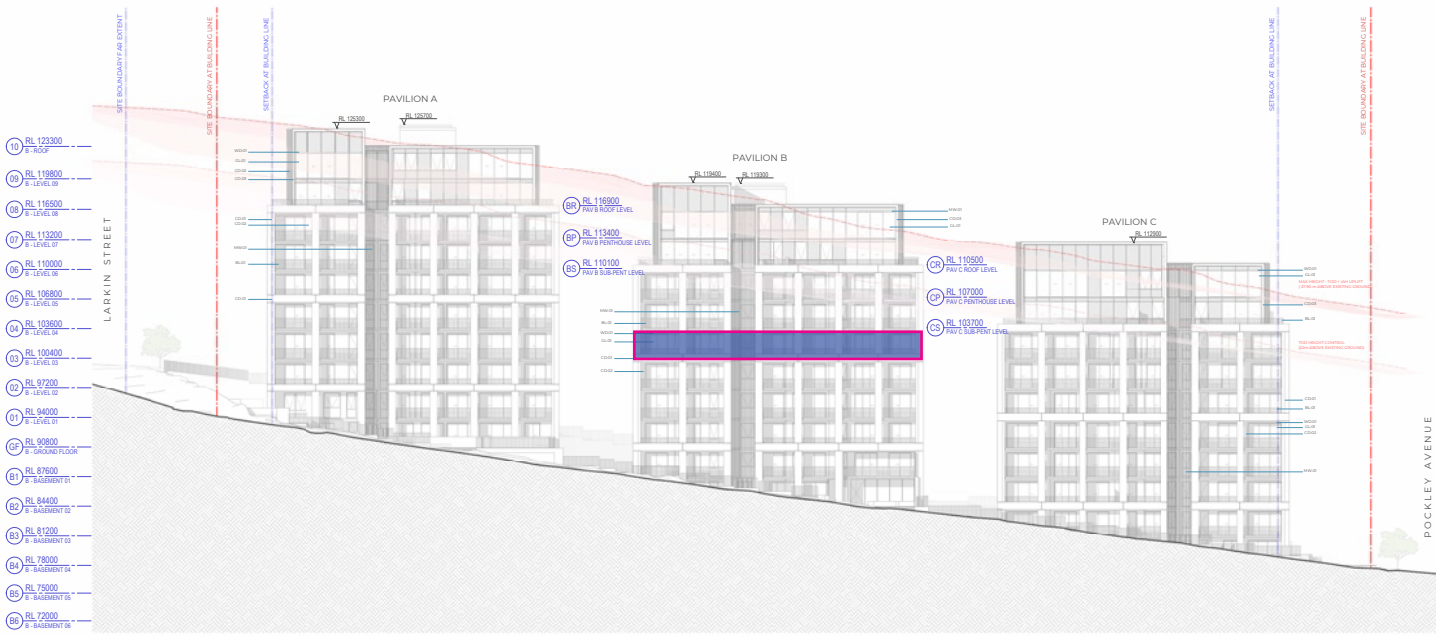


Version 1 Revision A
24 February 2025

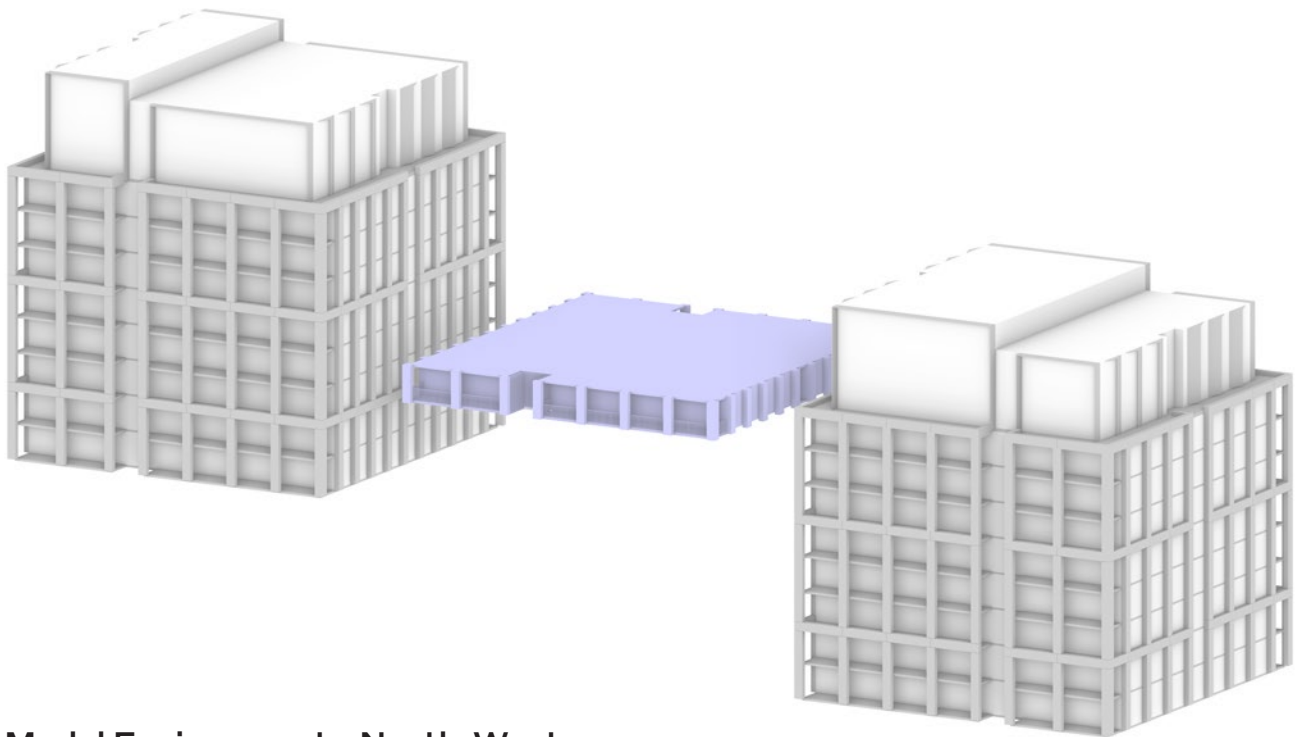


06.05 Daylight Access

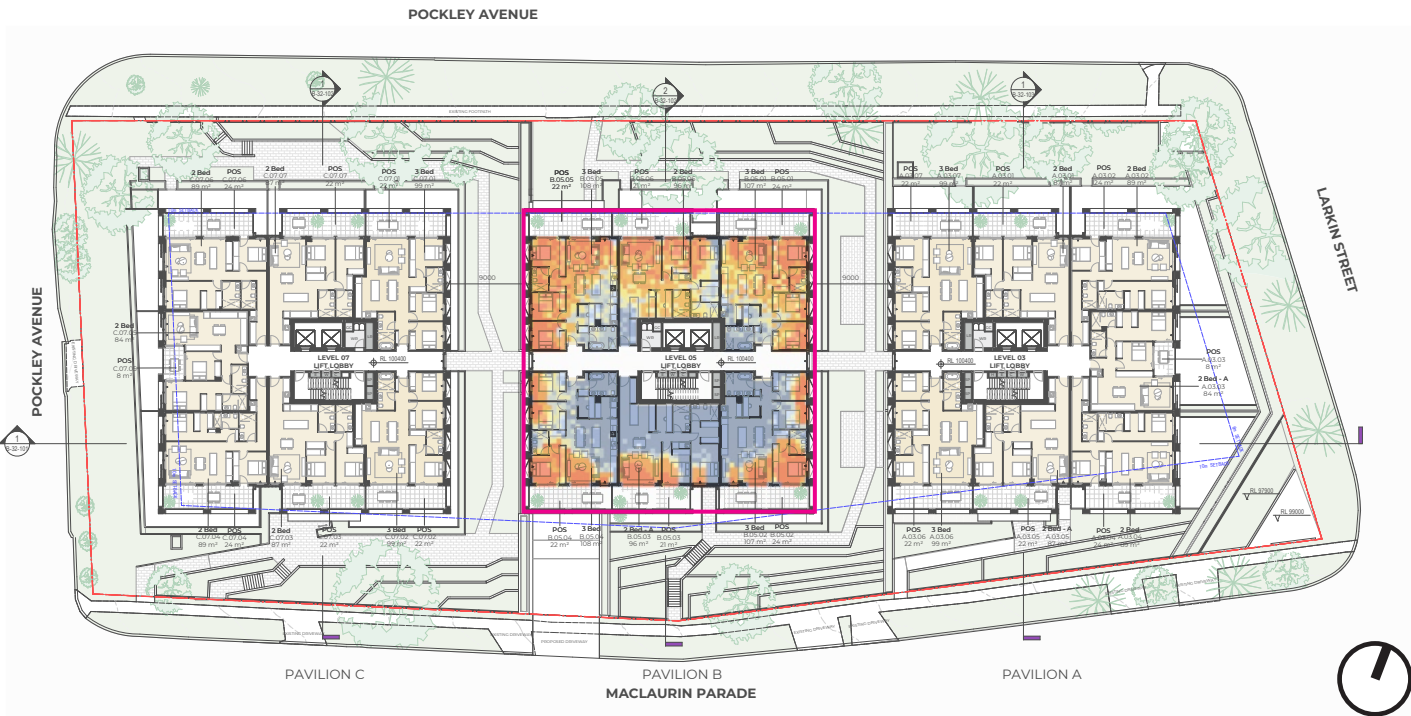
Selected 3D Analysis Environment - Level 03 (Pavilion B Level 05)



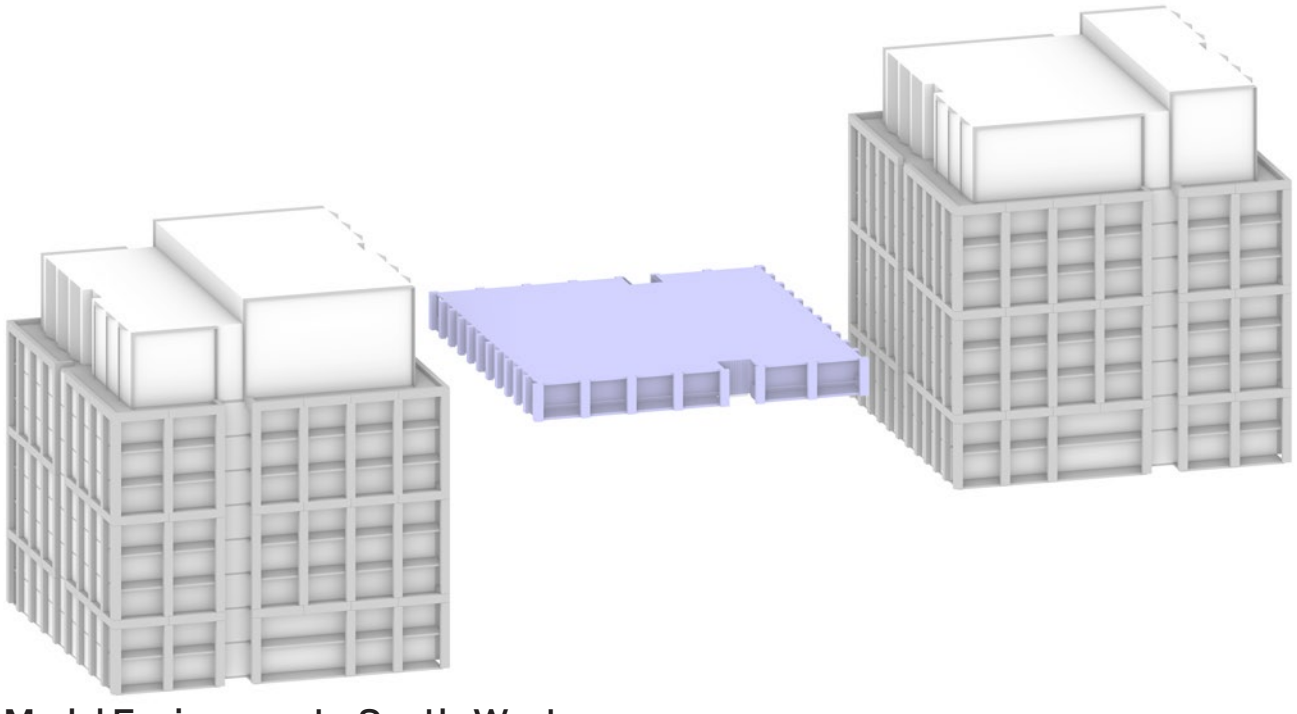
North Elevation



3D Model Environment - North-West



Selected Floor Level Plan (Level 03)

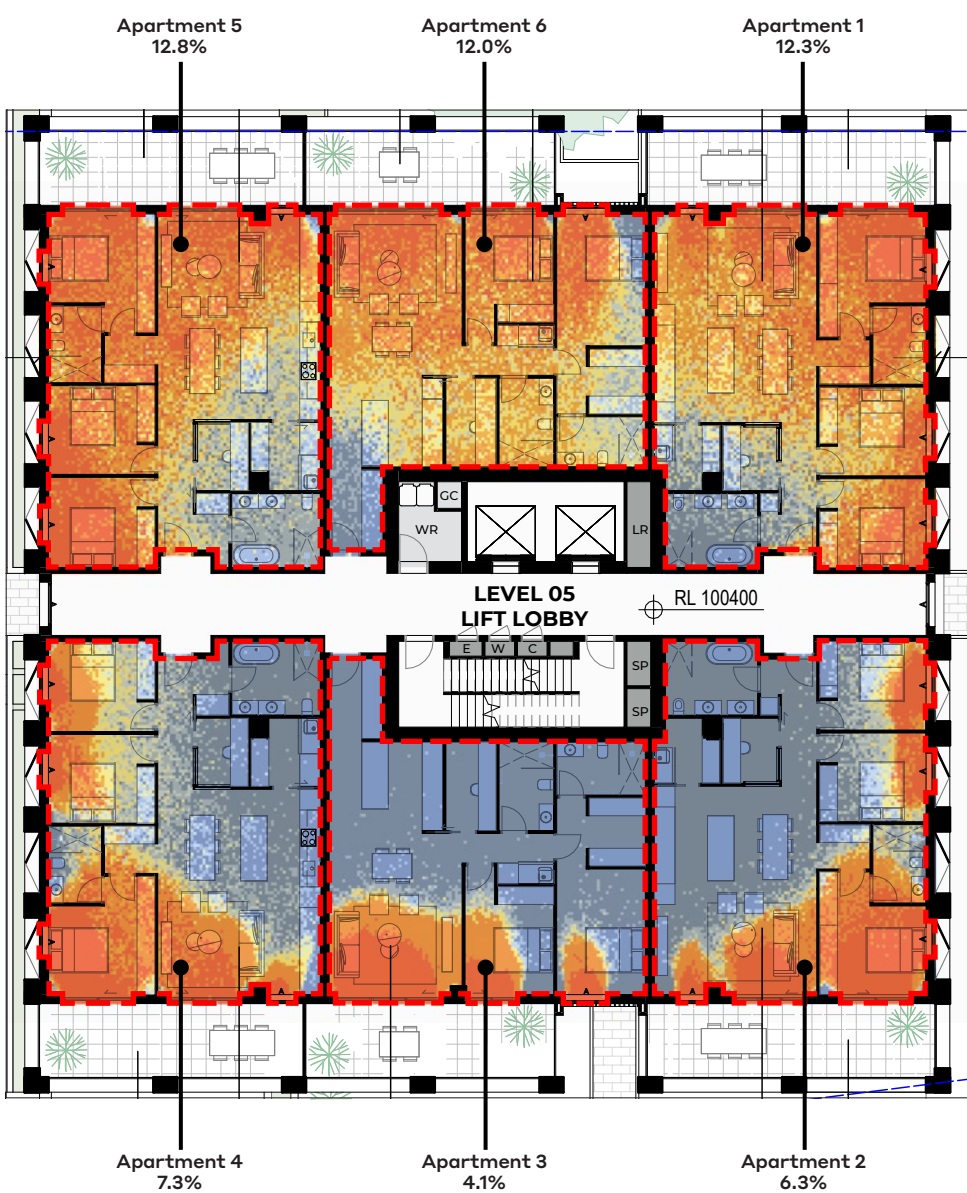


3D Model Environment - South-West

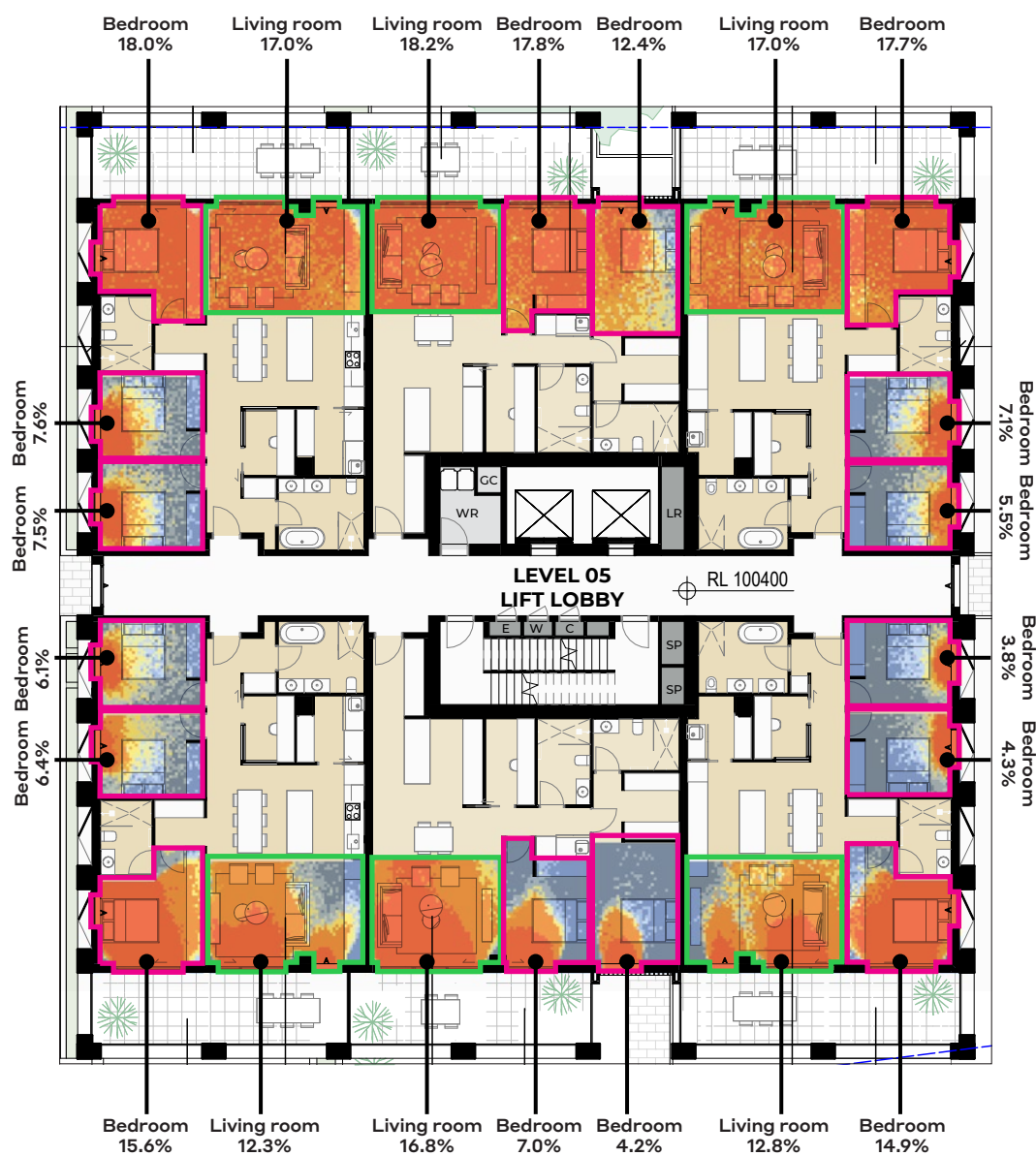
06.05 Daylight Access

Defining Spaces To Assess Daylight Autonomy

- Daylight illuminance is measured using Lux, which is a calculation of the amount of light that falls onto a particular surface - in this case, the floor. This illuminance helps to define the 'brightness' of a space
- The diagrams to the right outline the amount of time, in percentage, that each respective apartment or room, achieves the minimum 160 Lux between 9am - 3pm on 21 June
- When calculating Daylight availability, Greenstar requirements define spaces to assess are living and bedroom areas, excluding kitchens
- As the overall apartment includes areas that are not necessary for this analysis, such as toilets, kitchens, pantries, etc., a more detailed analysis per bedroom and living rooms is undertaken
- Typical living room depth is measured at 4m from the facade line



Daylight Autonomy (min. 160 Lux)
Average duration in % achieved per apartment
Between 9am-3pm @ 21 June



Daylight Autonomy (min. 160 Lux)
Average duration in % achieved per room
Between 9am-3pm @ 21 June

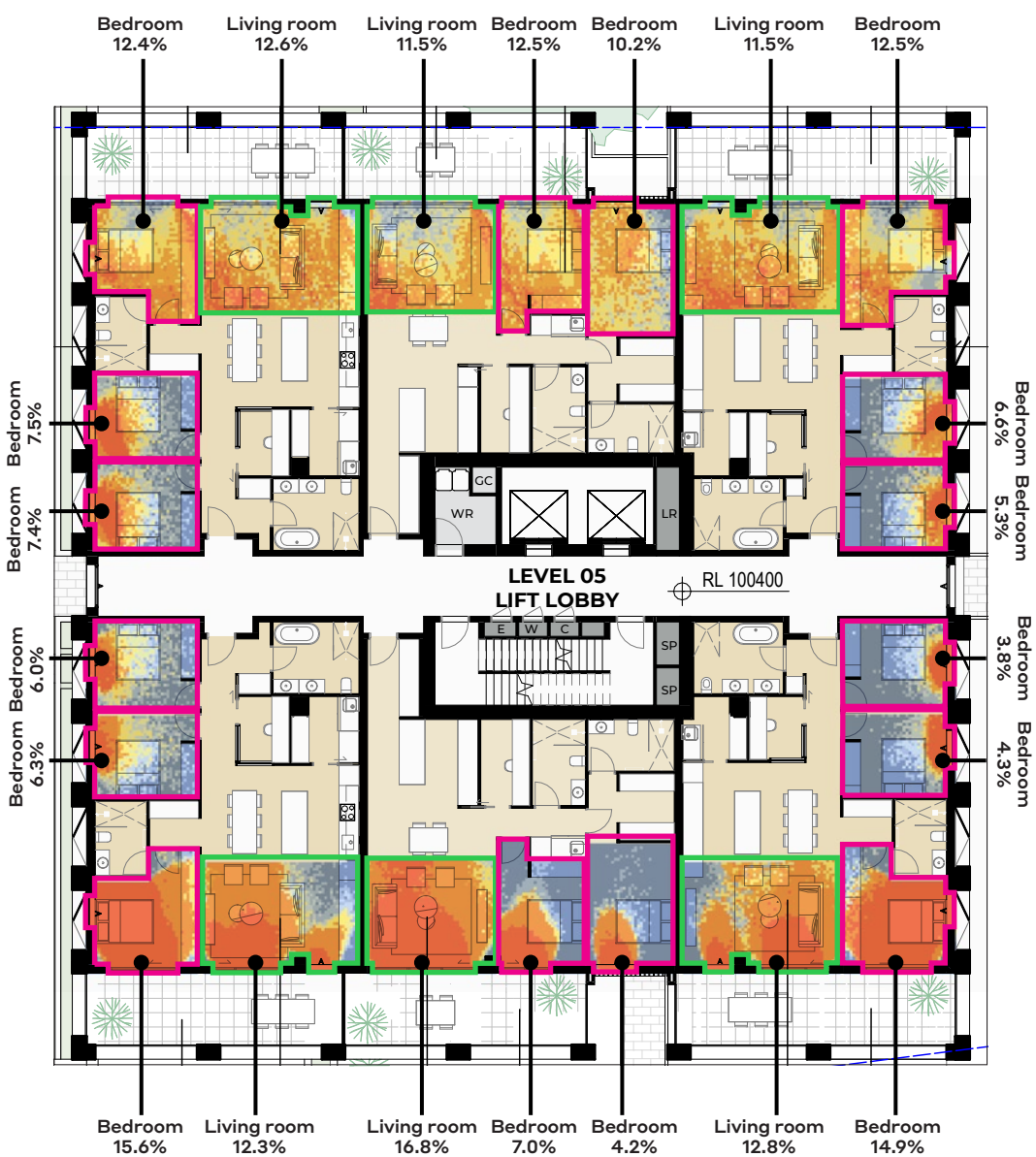
Bedroom
Livingroom



06.05 Daylight Access

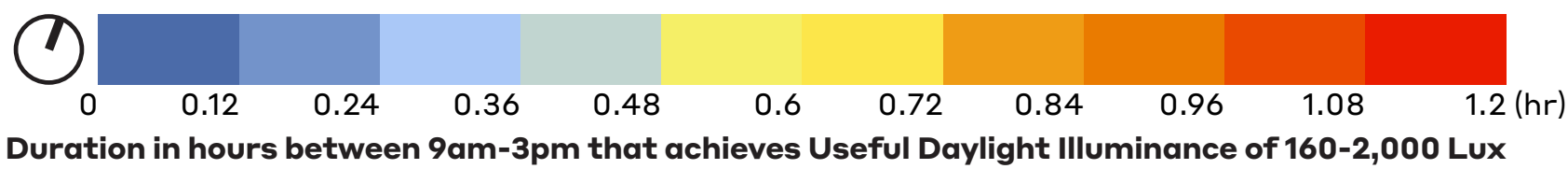
Useful Daylight Illuminance (160 - 2,000 Lux)

- While Daylight Autonomy calculates any illuminance level above the minimum 160 Lux, this method is not a comprehensive measure as it does not limit a "maximum" illuminance which would determine *when a space is too bright for comfort*
- Generally accepted upper limit for illuminance to enable a space to be visually comfortable is typically a *maximum of 2,000 Lux*
- This range of a lower and upper limit is referred to as *Useful Daylight Illuminance (UDI)*
- In this case, the UDI range is determined to be between *160 - 2,000 Lux*
- When defining these constraints and looking at the UDI of each room individually, it is clear that the **South facing apartments have equal to, or greater than, visually comfortable daylight levels as opposed to North facing apartments**



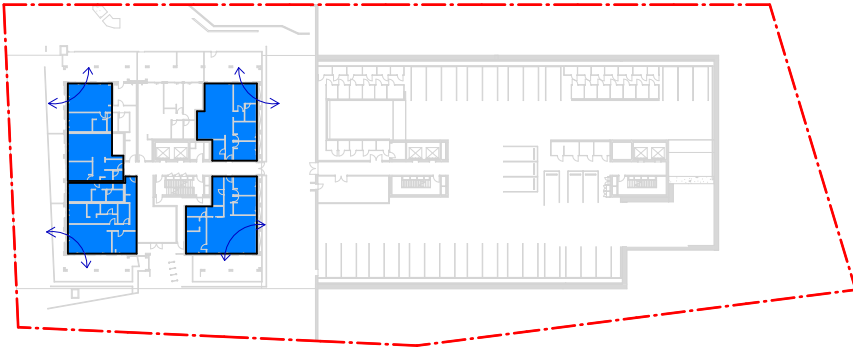
Usefull Daylight Illuminance (160 - 2,000 Lux)
Average duration in % achieved per room
Between 9am-3pm @ 21 June

Bedroom
Livingroom

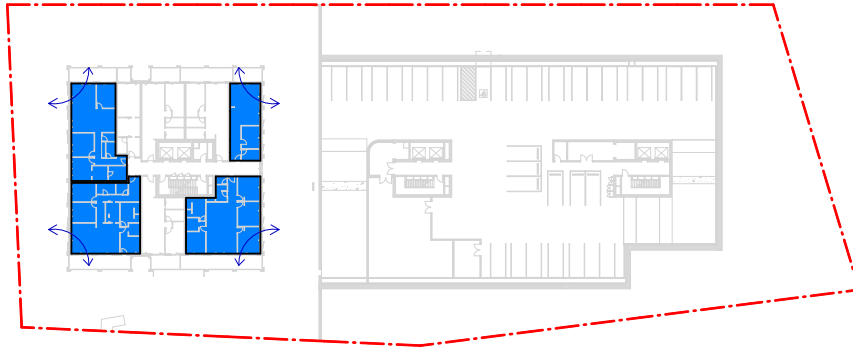


06.06Cross Ventilation

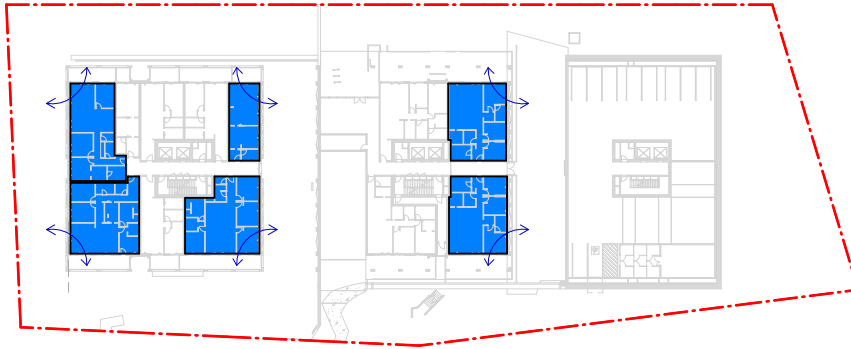
● Achieves cross ventilation.



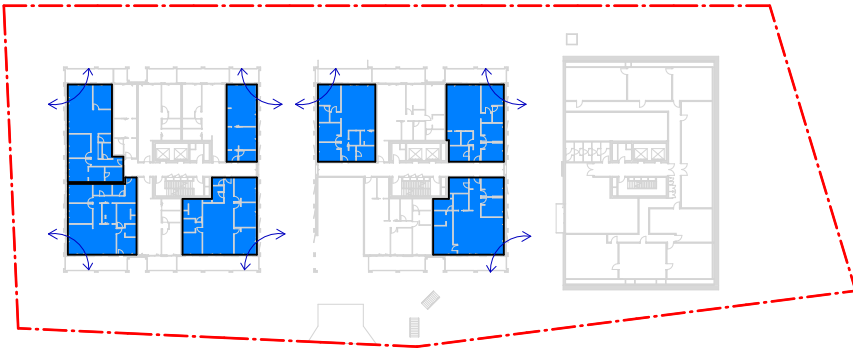
Basement 04



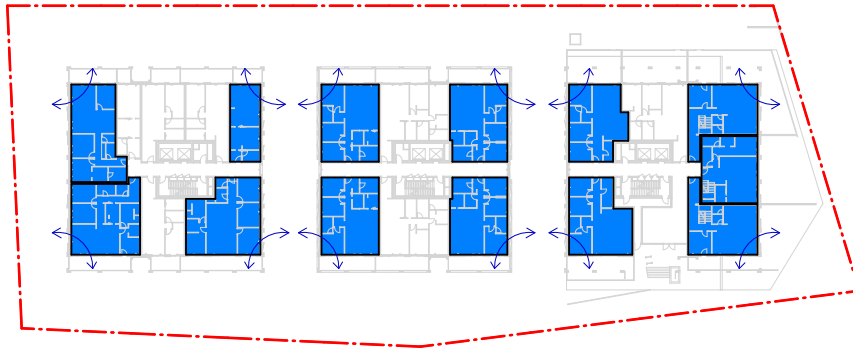
Basement 03



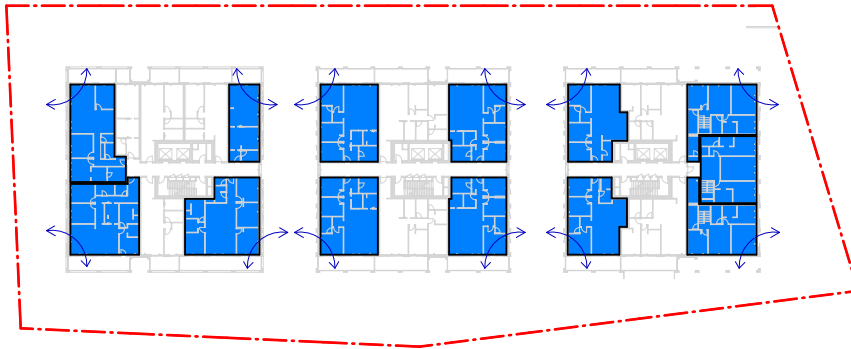
Basement 02



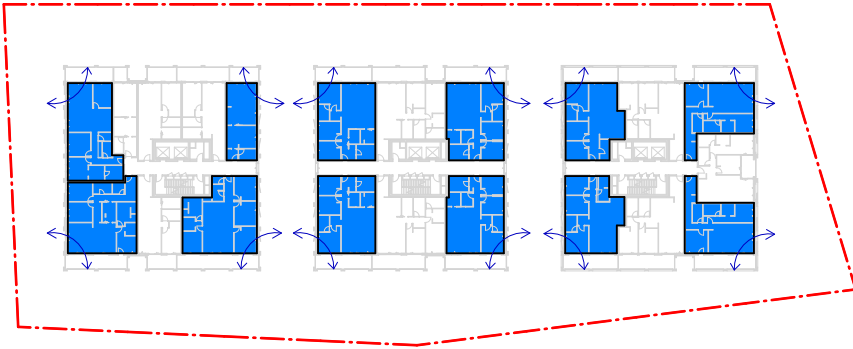
Basement 01



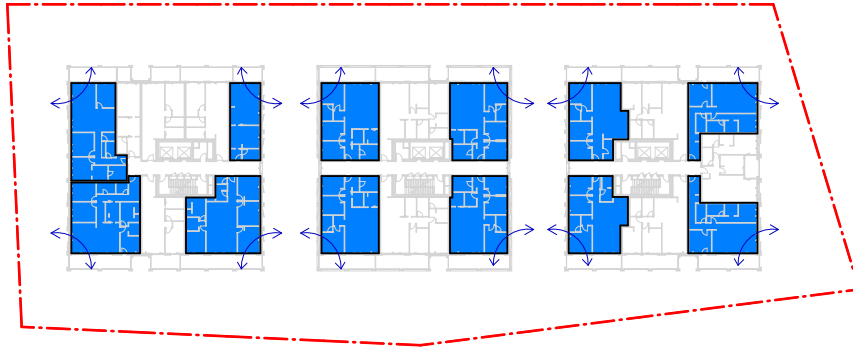
Ground Floor



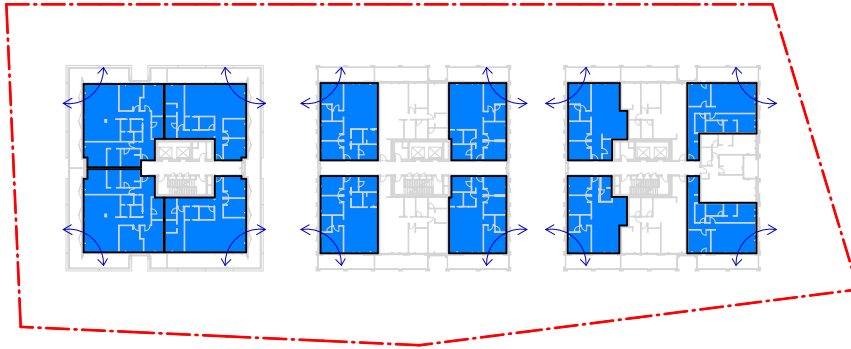
Level 01



Level 02

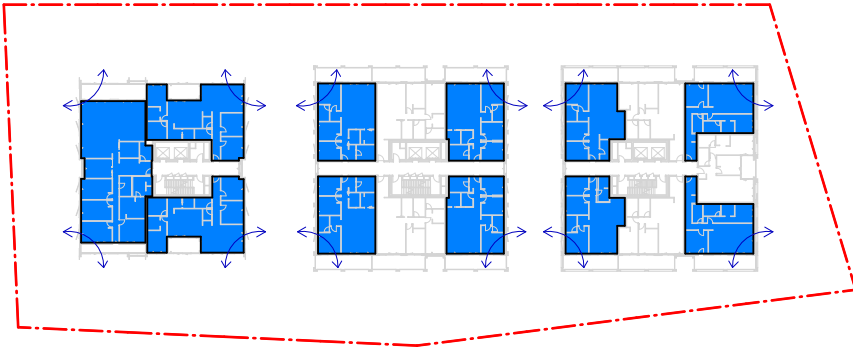


Level 03

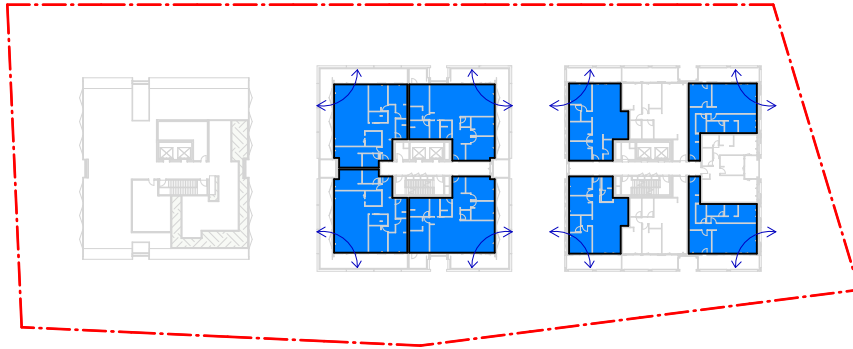


Level 04

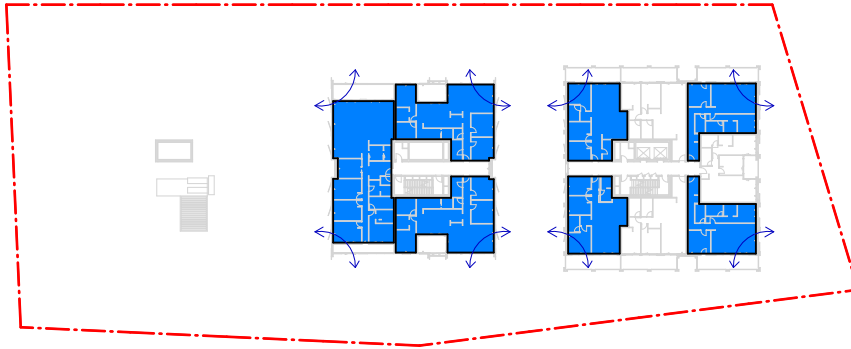
06.06Cross Ventilation



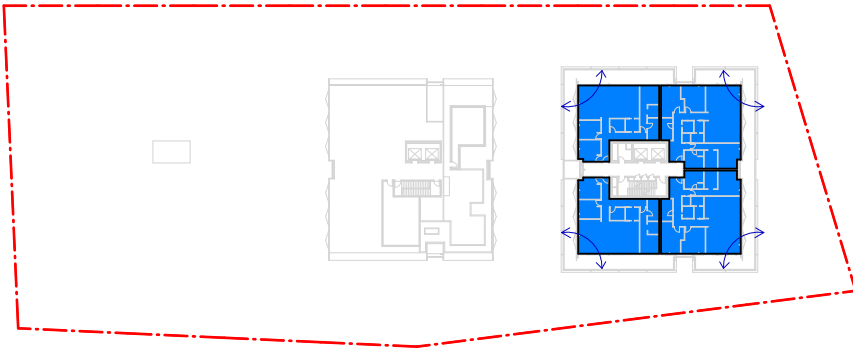
Level 05



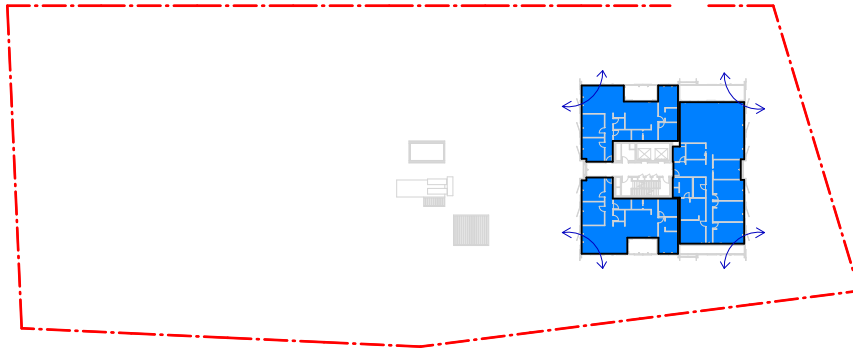
Level 06



Level 07



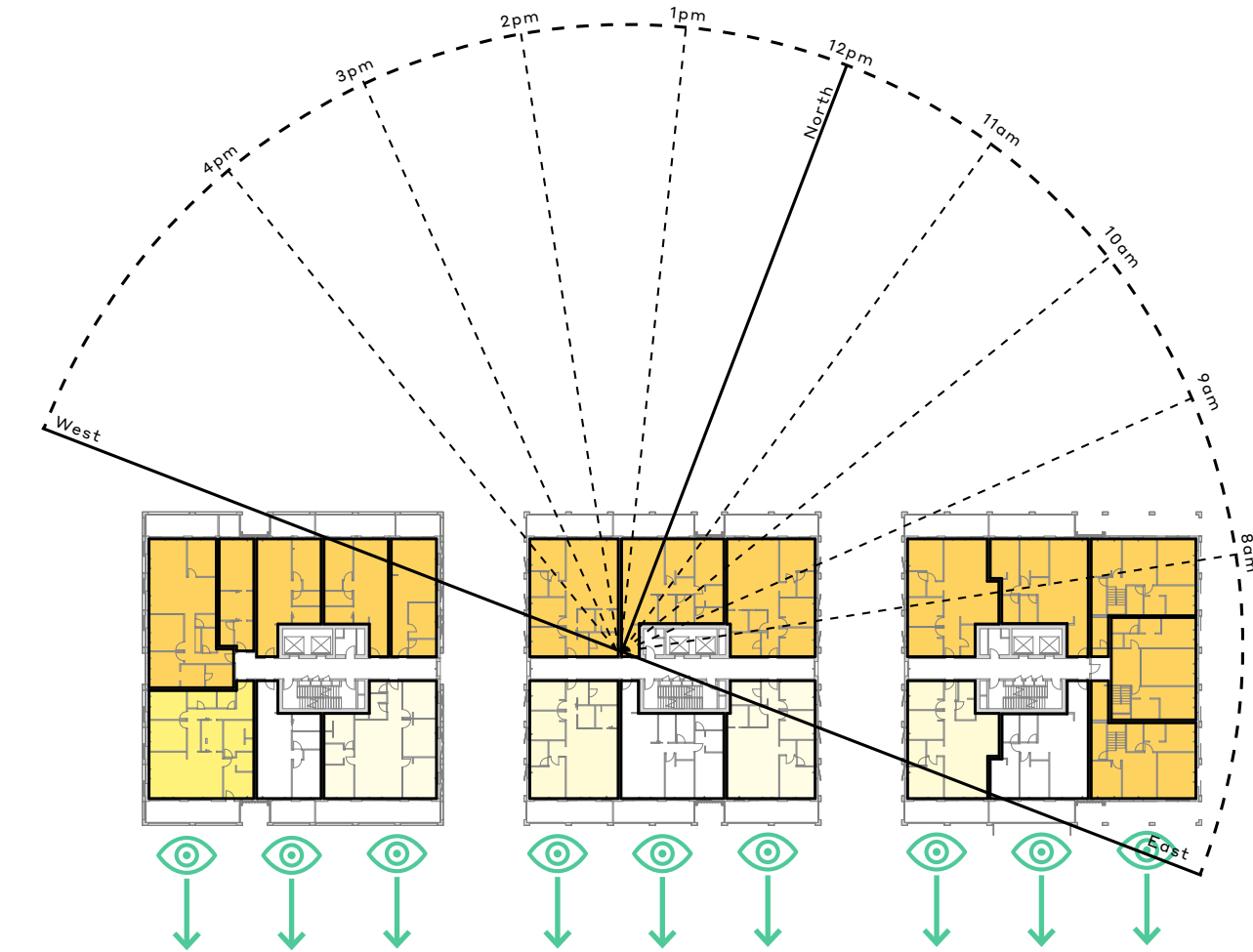
Level 08



Level 09

	CROSS VENT (MIN 60%)		
	Cross Vent	Total	
Roof			
Level 9	3	3	100%
Level 8	4	4	100%
Level 7	7	10	70%
Level 6	8	11	73%
Level 5	11	16	69%
Level 4	12	17	71%
Level 3	12	21	57%
Level 2	12	21	57%
Level 1	10	18	56%
Ground Floor	13	20	65%
Level B01	7	13	54%
Level B02	6	12	50%
Level B03	4	8	50%
Level B04	4	6	67%
Level B05			
Level B06			
Level B07			
	113	180	9
Total			63%

06.07 Solar Access & Cross Ventilation Summary

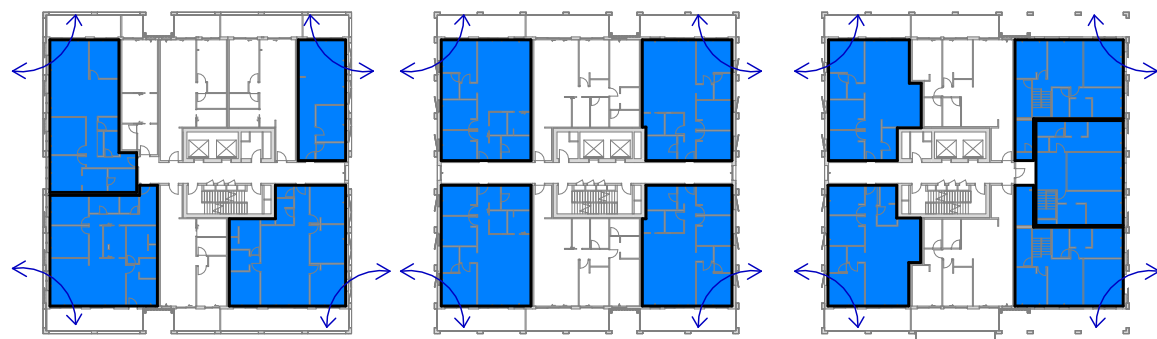


Solar Compliance

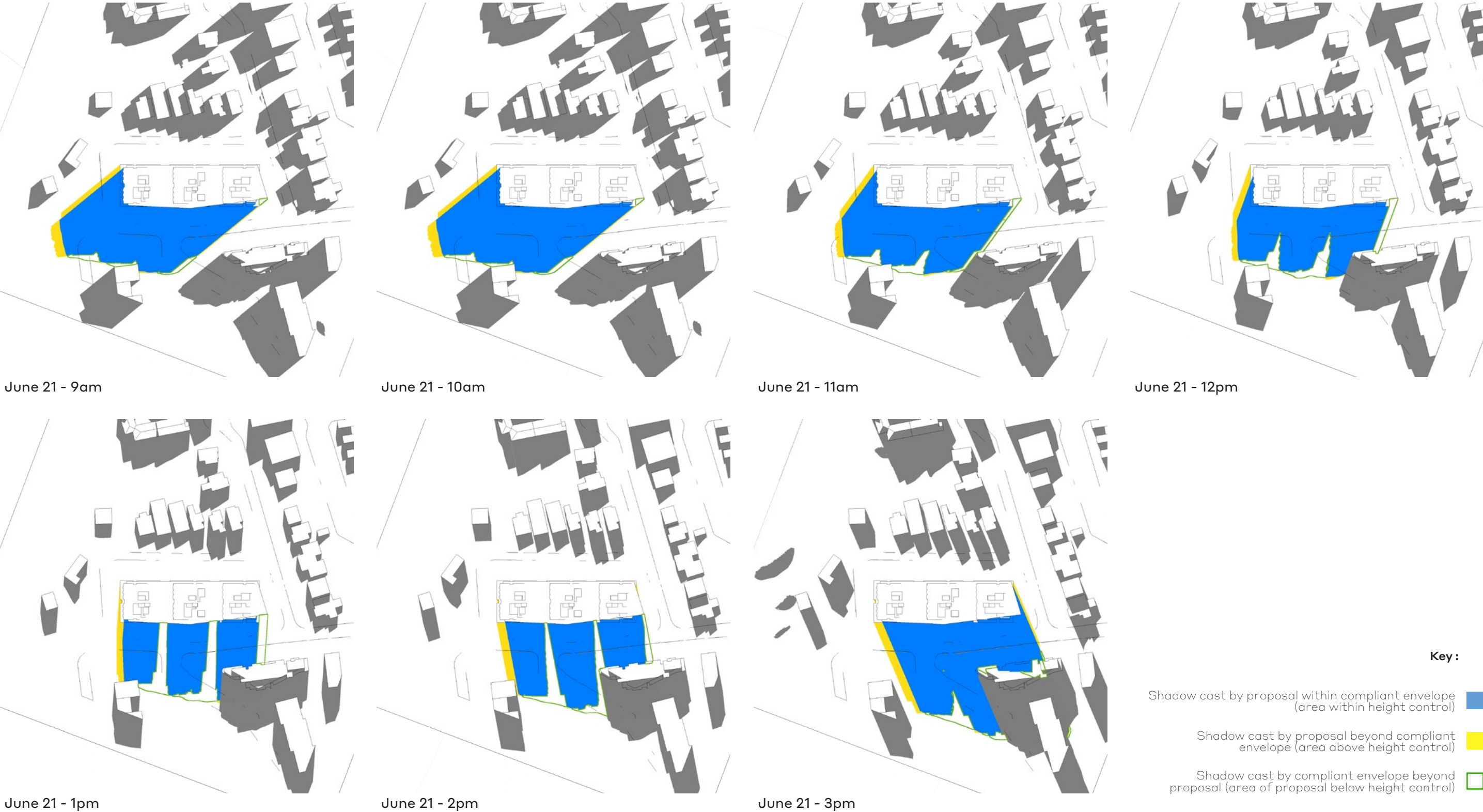
- 63% of apartments meet this criteria, of these 68% of apartments provide dual frontages.
 - If the criteria is extended to be between 9am – 4:30pm the solar increases to 69%.
 - Due to the axis of the site and its depth it is challenging to achieve the 70%. As prime City skyline views are towards the south the proposal balances capitalising on the views and solar.
 - Both AFH and BTS have been given proportionally shared split between north and south oriented apartments. An increase of 1 bed apartments face north to maximise solar compliance.
- Receives at least 2 hours sun between 9am-3pm on June 21.
 - Receives at least 2 hours sun between 9am-4:30 pm on June
 - Receives sunlight.
 - No direct sunlight. Receives increased daylight access due to

Natural Ventilation Compliance

- 63% cross vent
 - The proposal's massing and planning maximise dual fronted apartments, increasing the cross ventilation.
- Achieves cross ventilation.



06.08 Shadow Diagrams
Comparing Proposed Shadow Vs Compliant Envelope

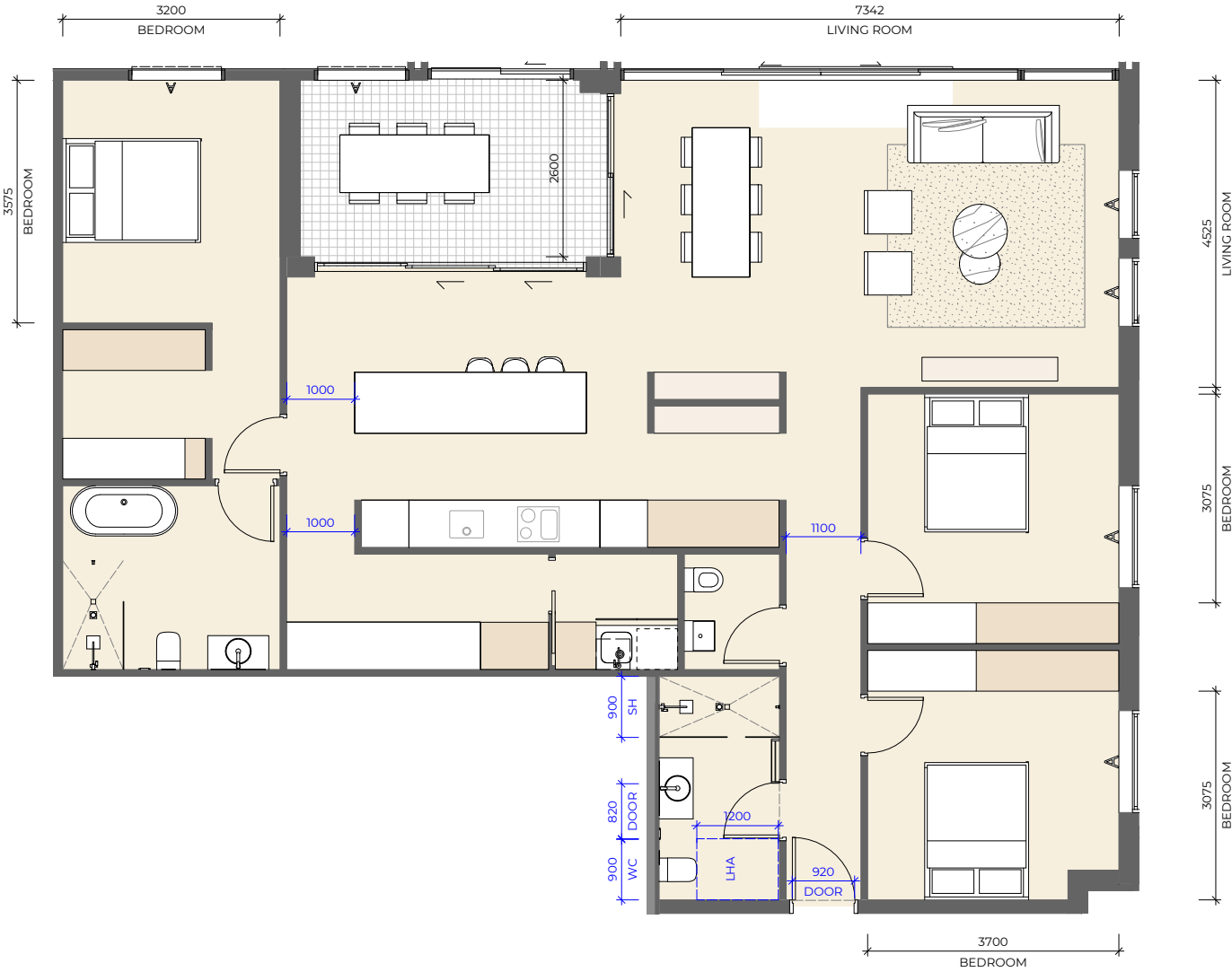


06.09 Livable Housing Universal Design

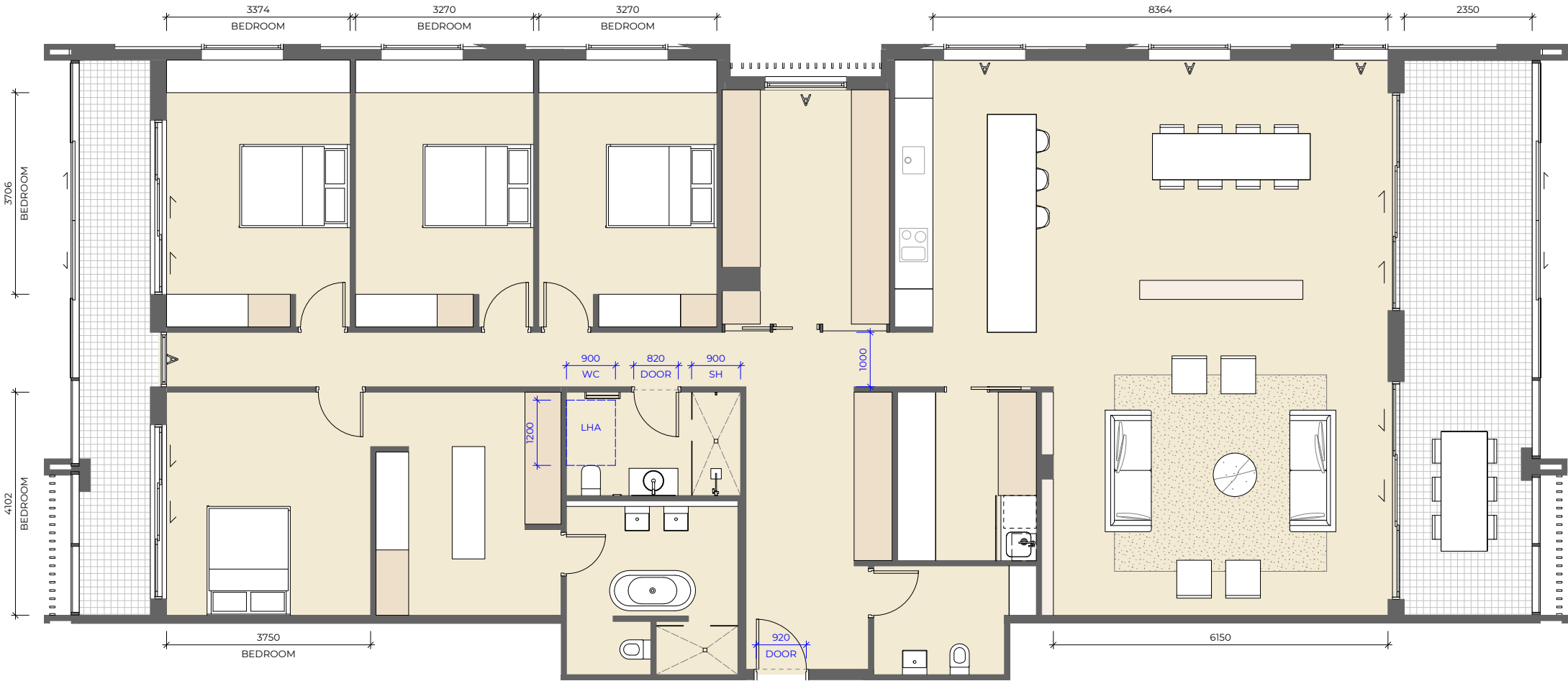
3 Bed



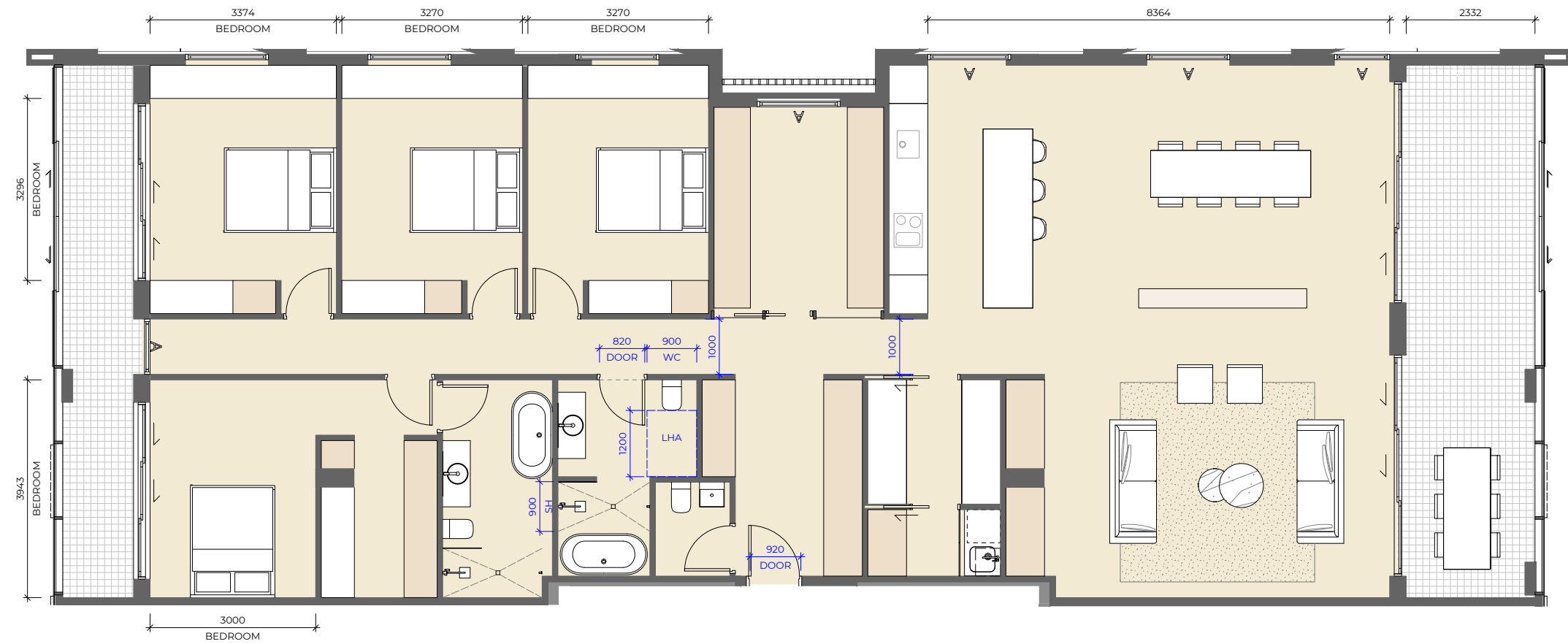
06.09 Livable Housing Universal Design
3 Bed



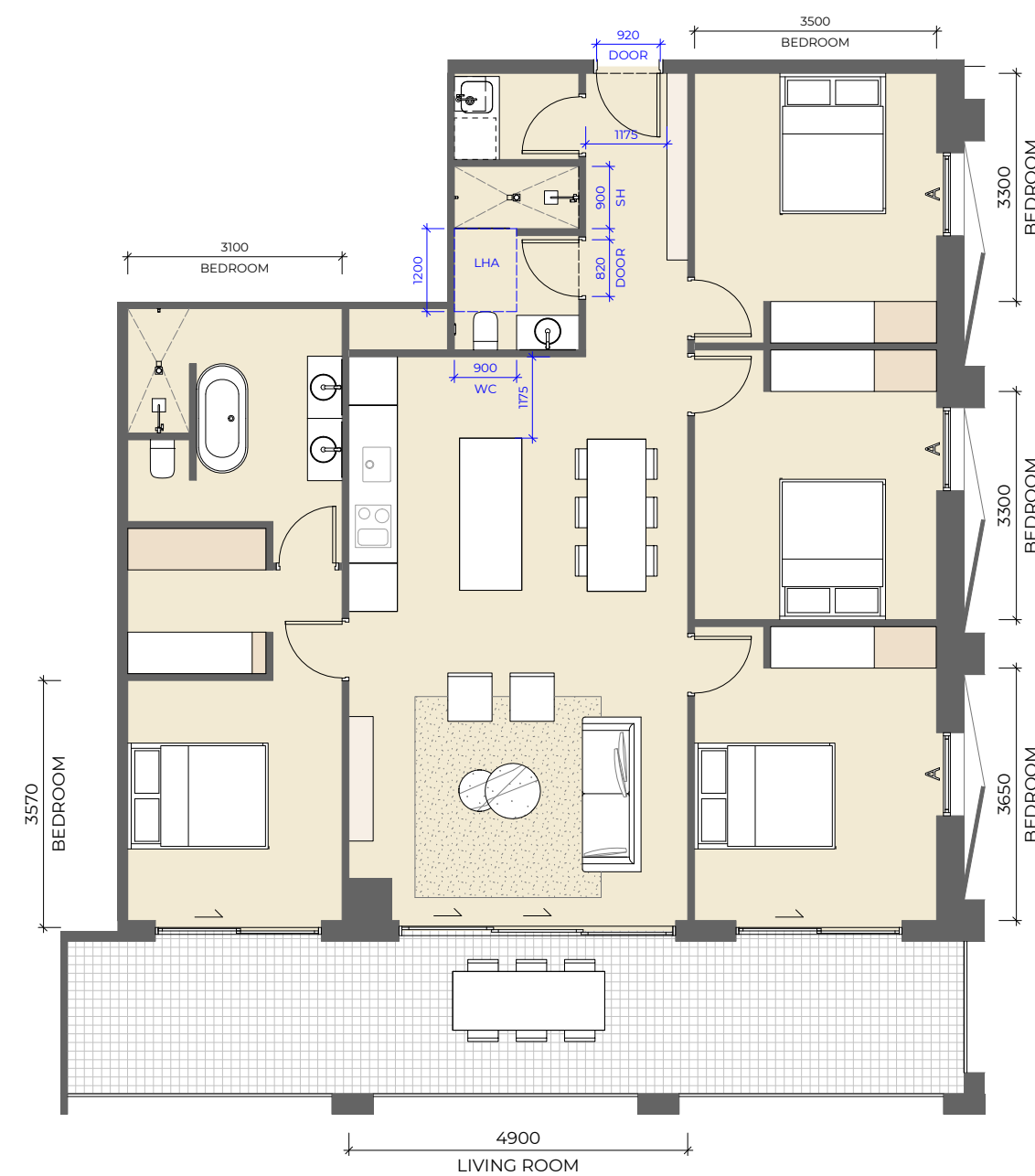
06.09 Livable Housing Universal Design
4 Bed



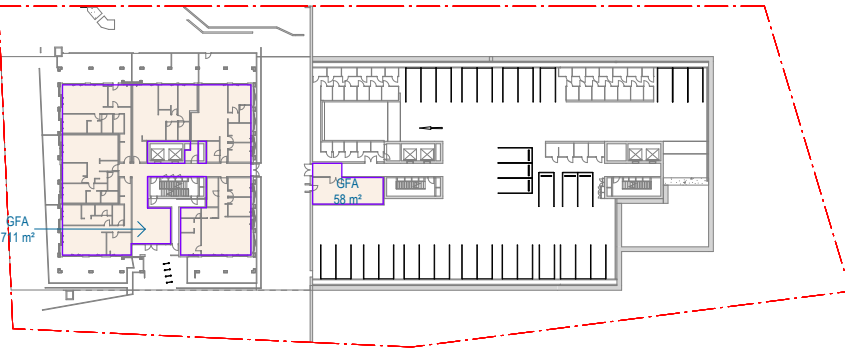
06.09 Livable Housing Universal Design
4 Bed



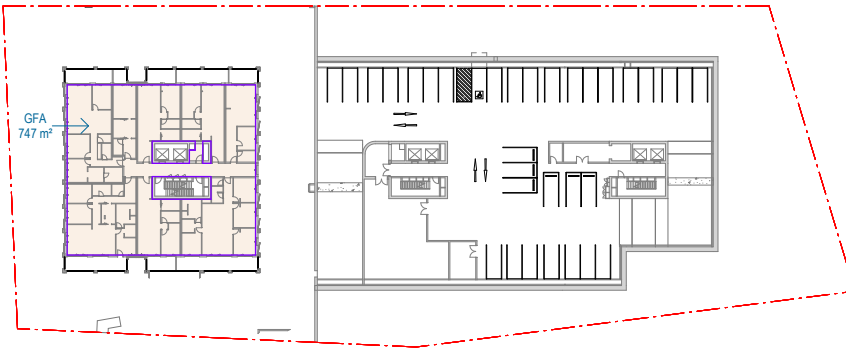
06.09 Livable Housing Universal Design
4 Bed



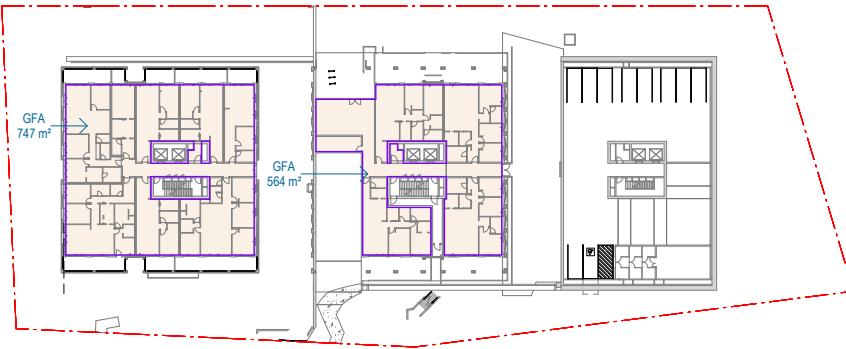
06.10 GFA Diagrams
Overall Proposed GFA



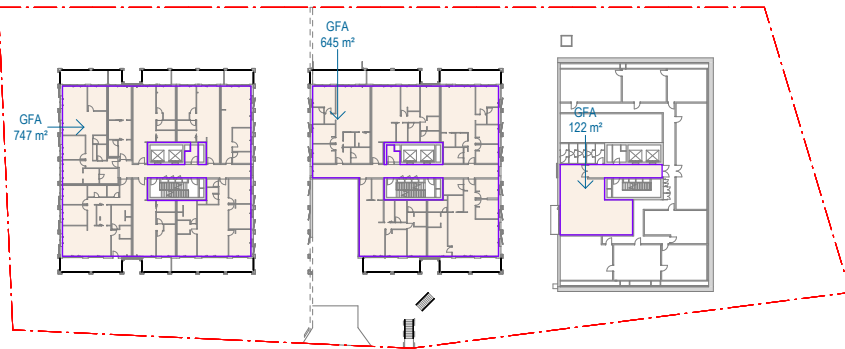
Basement 04



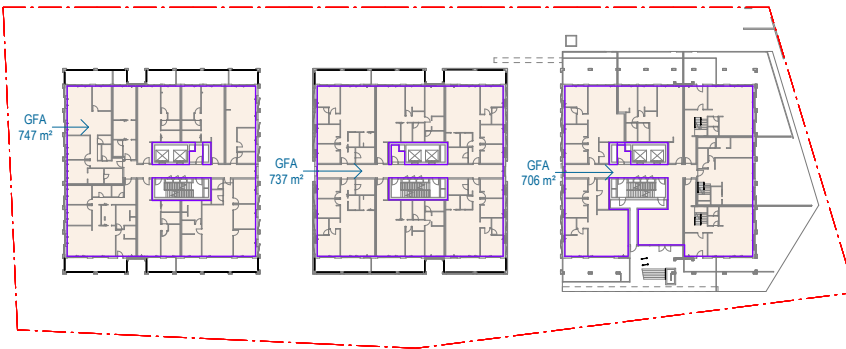
Basement 03



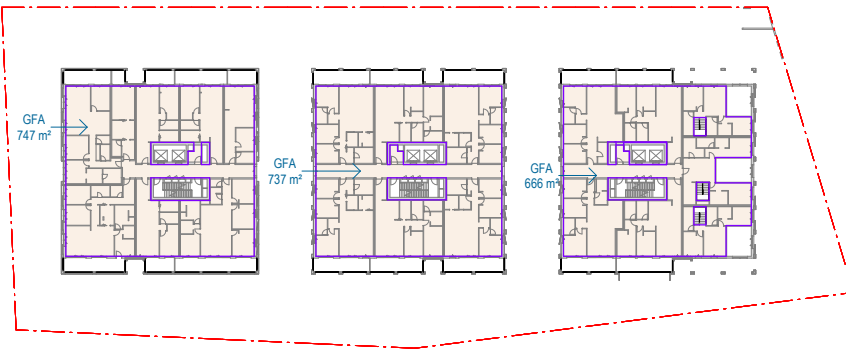
Basement 02



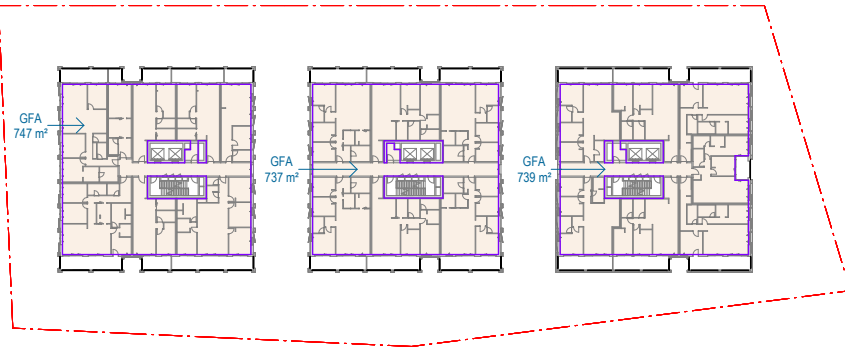
Basement 01



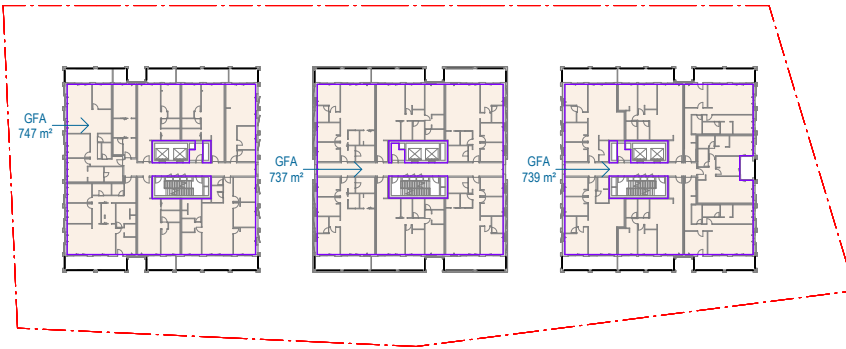
Ground Floor



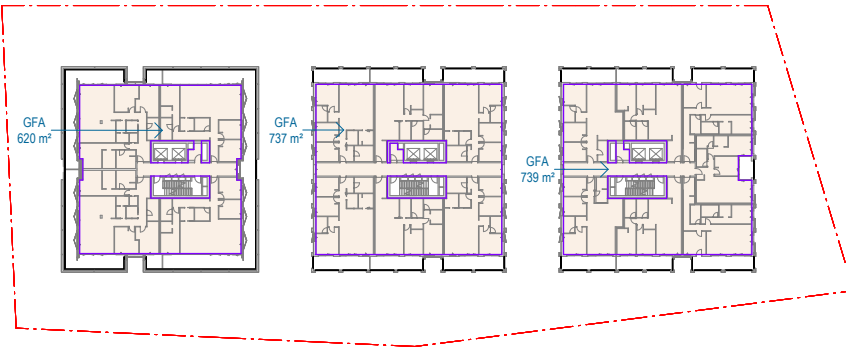
Level 01



Level 02

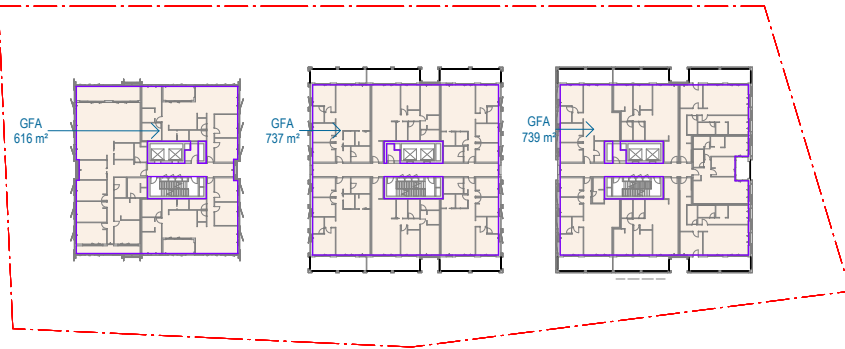


Level 03

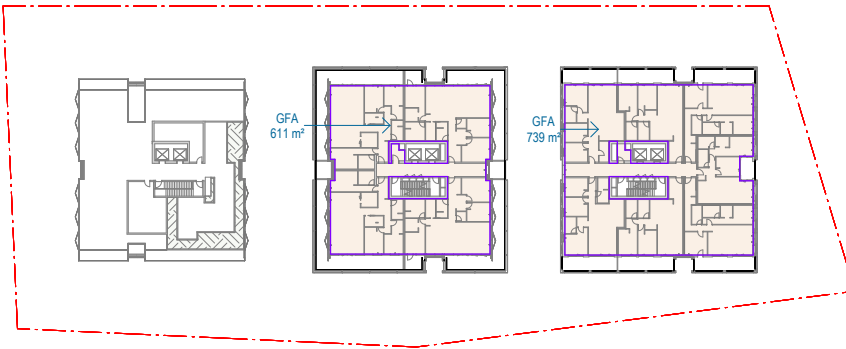


Level 04

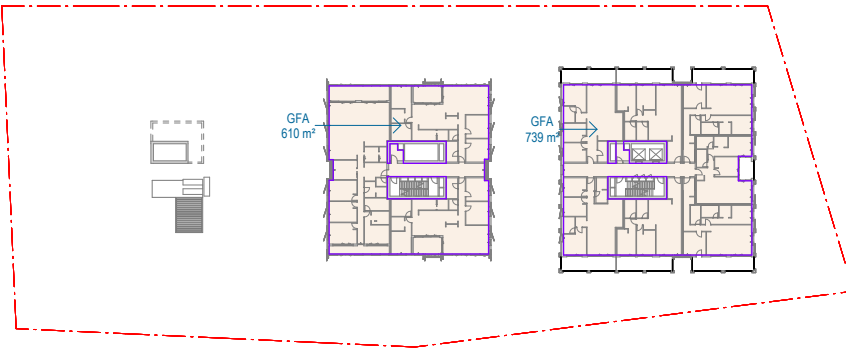
06.10 GFA Diagrams
Overall Proposed GFA



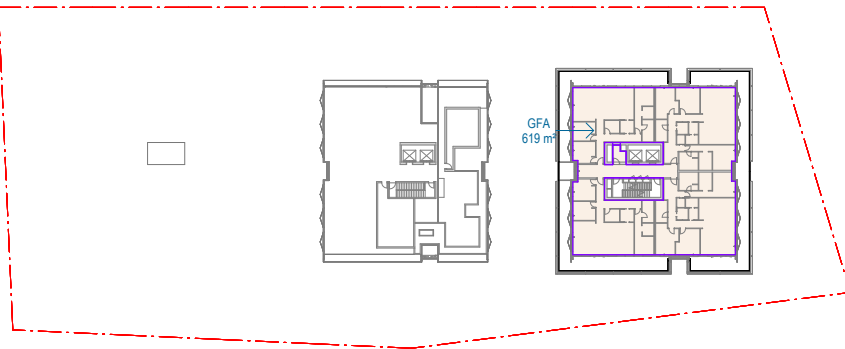
Level 05



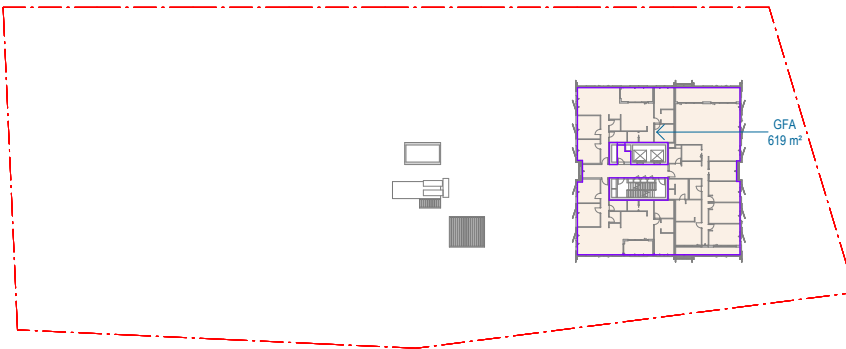
Level 06



Level 07

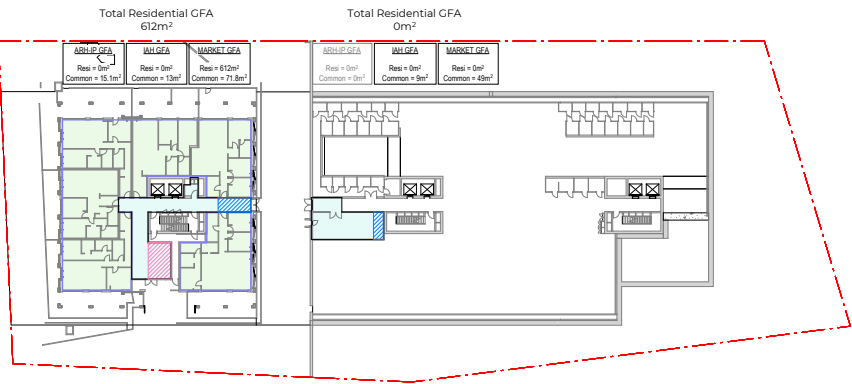


Level 08

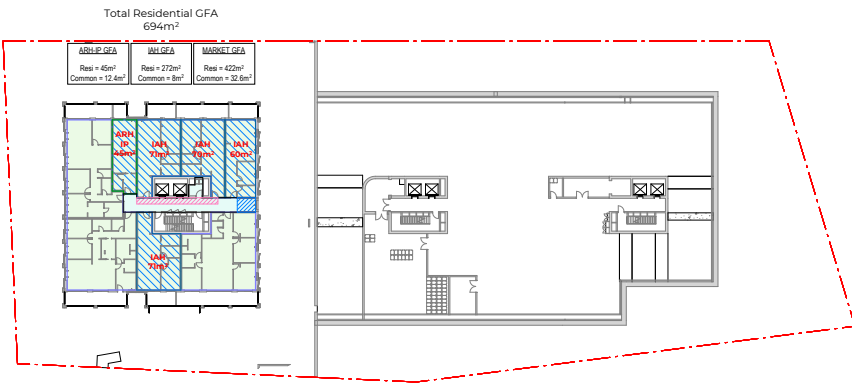


Level 09

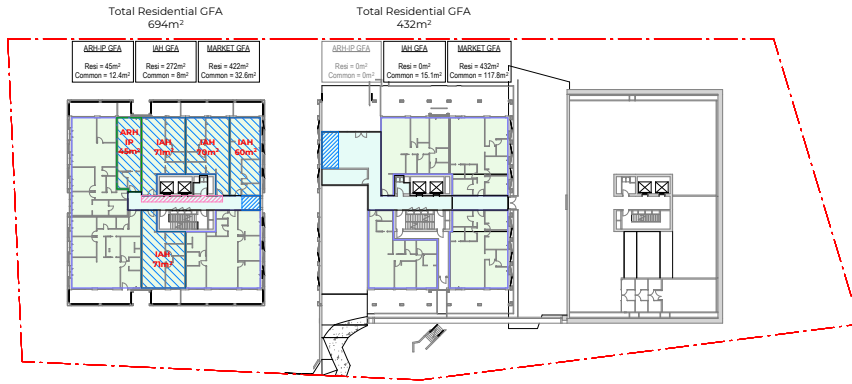
06.10 GFA Diagrams Residential GFA Component



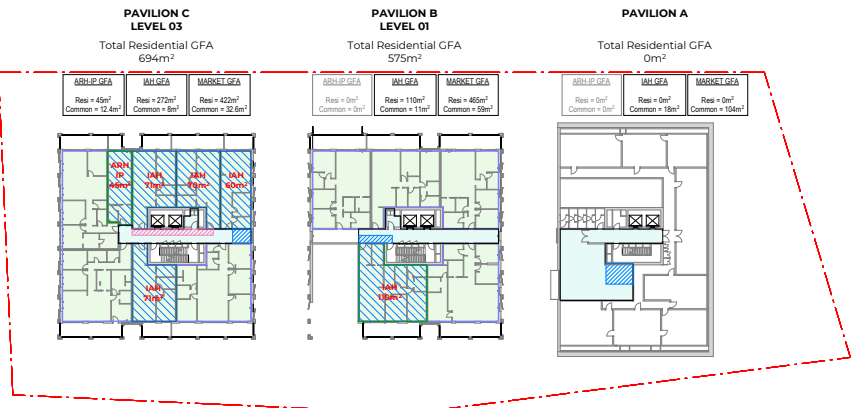
Basement 04



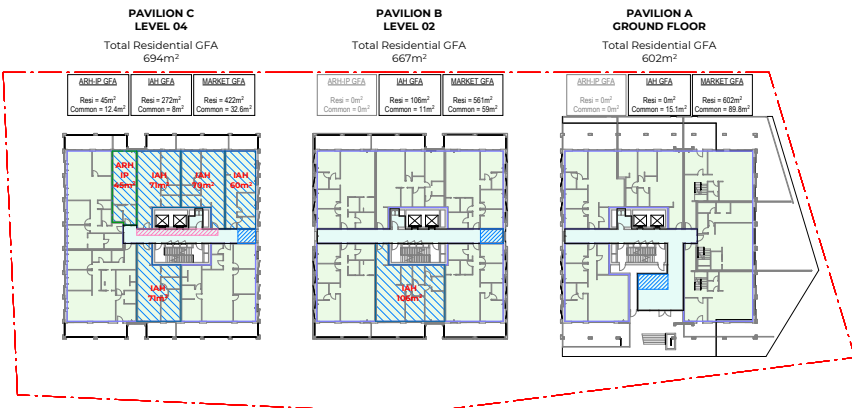
Basement 03



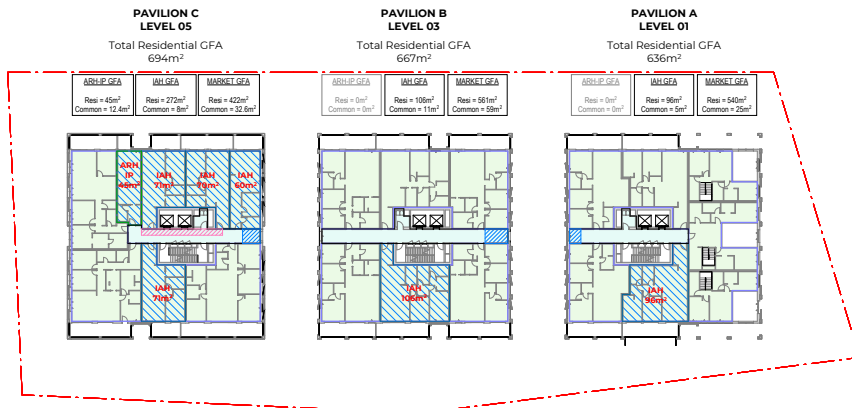
Basement 02



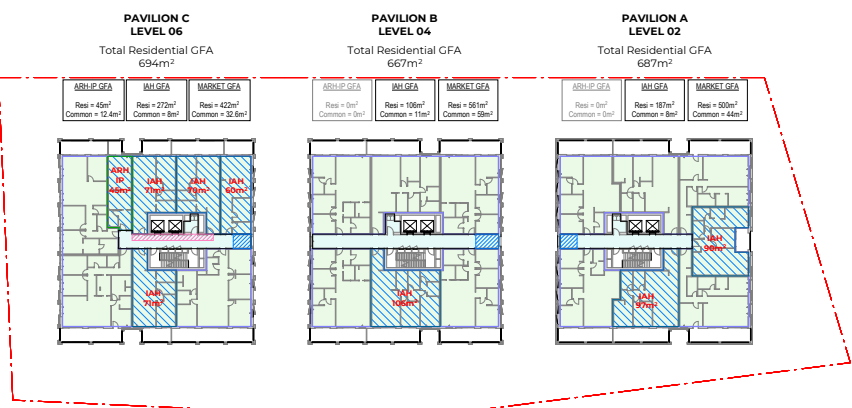
Basement 01



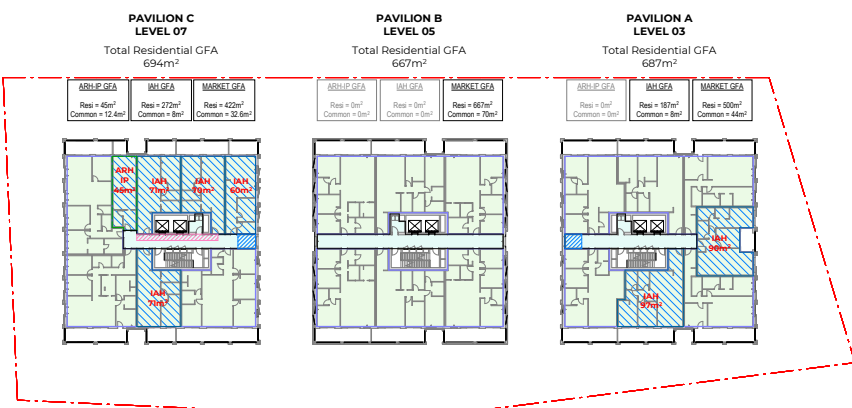
Ground Floor



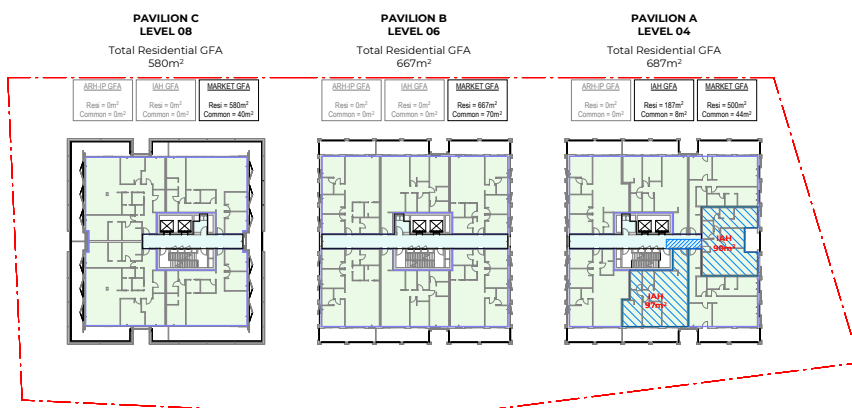
Level 01



Level 02

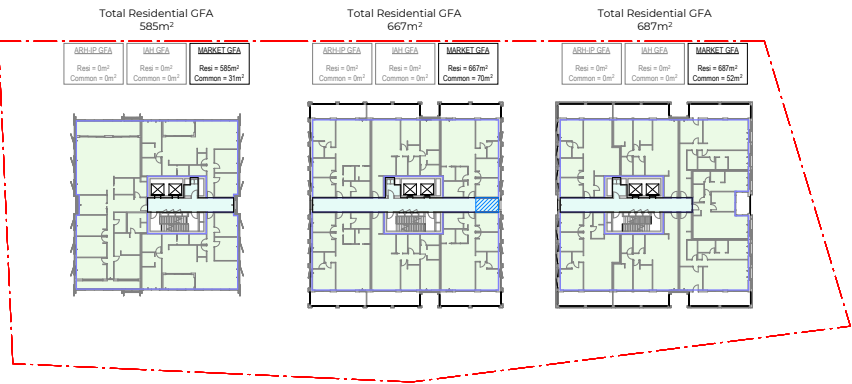


Level 03

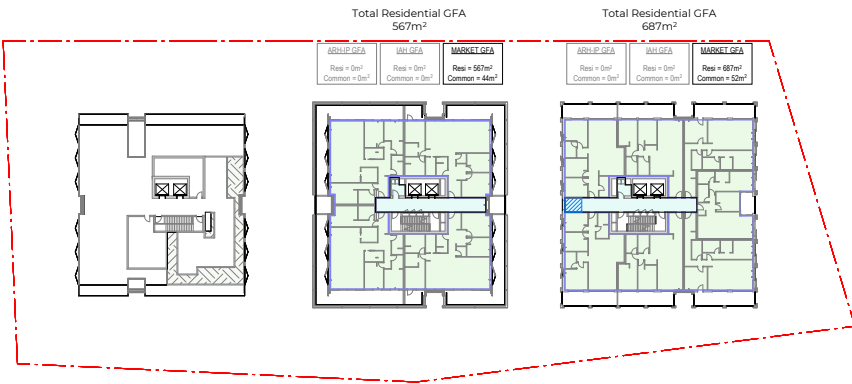


Level 04

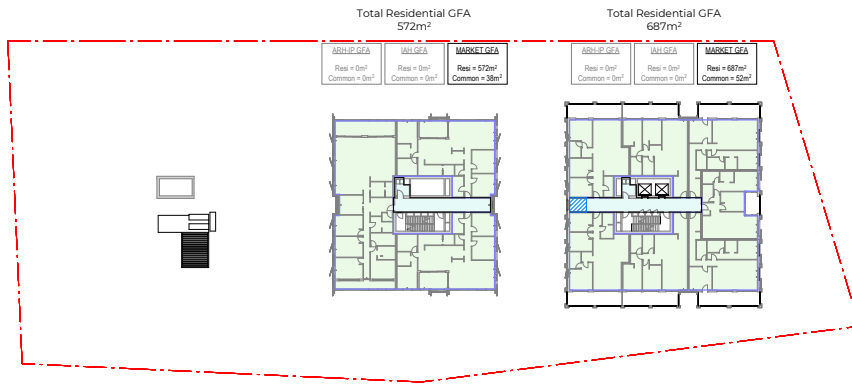
06.10 GFA Diagrams Residential GFA Component



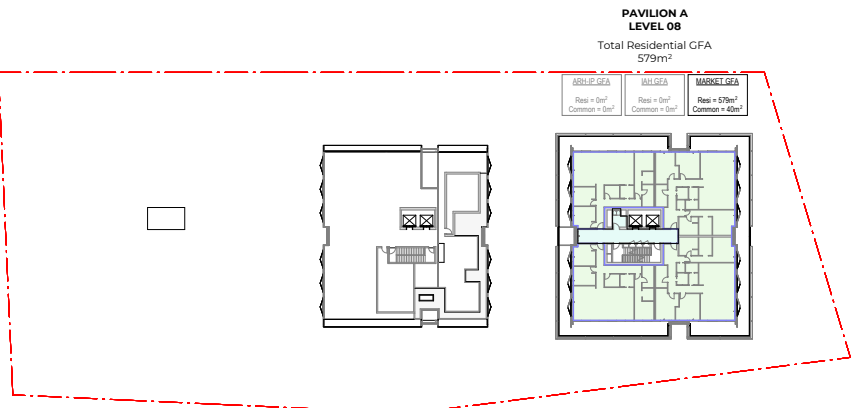
Level 05



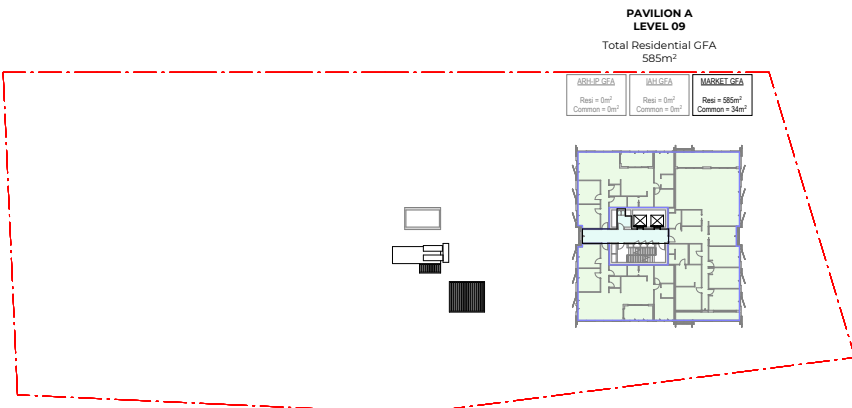
Level 06



Level 07



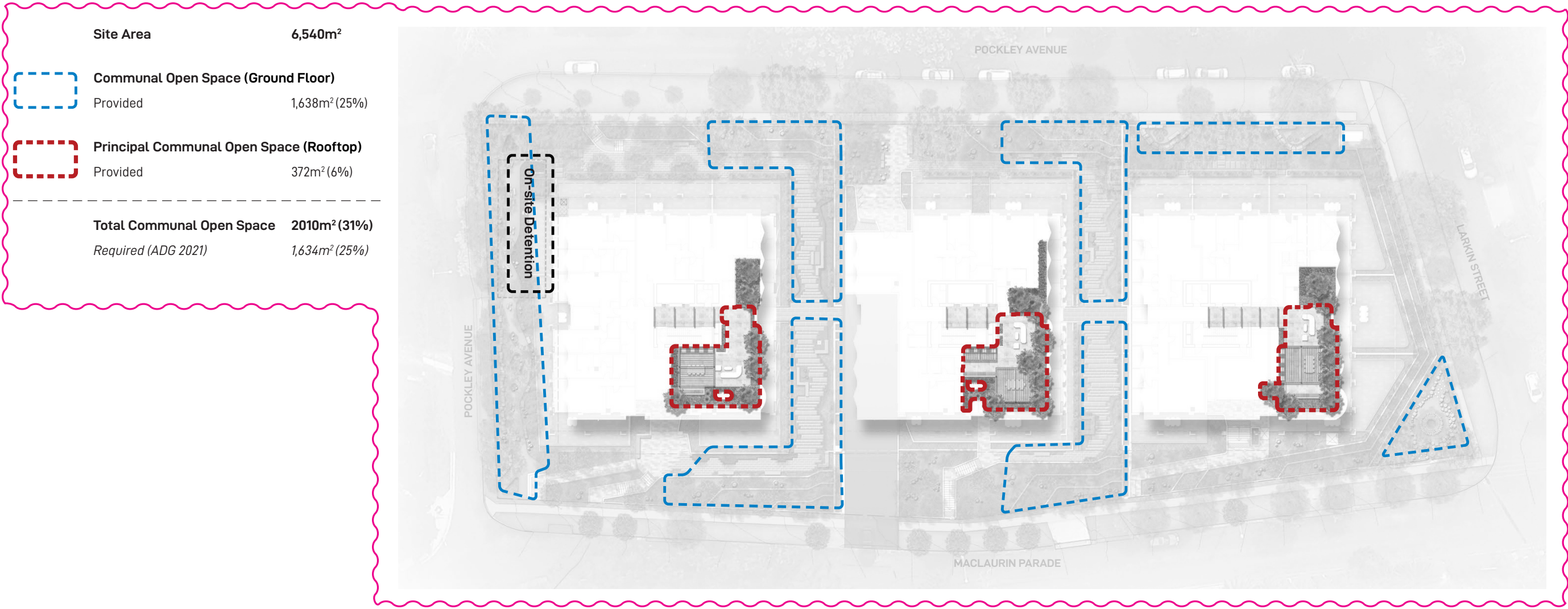
Level 08



Level 09

06.11 Principal COS Solar Access

Area Receiving 2hr Direct Sunlight Between 9am - 3pm On 21 June



Principal Communal Open Space - Rooftops

As all Principal COS for each pavilion is now located on the rooftops of each building, 100% of all Principal COS areas achieve a minimum of 2 hours direct sunlight between 9am & 3pm on 21 June

Schedules

07.01	Area Schedule
07.02	Apartment Design Guide Compliance Schedule

RESIDENTIAL GFA	Percent	Total (m ²)	No. Units
TOH Affordable GFA - in perpetuity	2%	425.1	7
JAH GFA - min 15 years	15%	3,188.3	39
Total Affordable Housing GFA	17%	3,613.3	46
Total Market GFA	83%	17,641.4	134
Total Proposed GFA	100%	21,254.7	180
Total Proposed FSR		3.25	

RESIDENTIAL GFA	Percent	Total (m ²)	No. Units
TOH Affordable GFA - in perpetuity	2%	425.1	7
JAH GFA - min 15 years	15%	3,188.3	39
Total Affordable Housing GFA	17%	3,613.3	46
Total Market GFA	83%	17,641.4	134
Total Proposed GFA	100%	21,254.7	180
Total Proposed FSR		3.25	

[illegible]

07.02 Apartment Design Guide Compliance Schedule
Summary Of Key Criteria Compliance

BASEMENT 01	UNIT NO.	UNIT TYPE	4A-1 Solar Compliant Access (9am-3pm 21 June)	4A-1 Solar: Alternative Access (At Any Time 21 June)	4A-2 Solar:	4B Natural Ventilation	4D-1 Apartment sizes	4D-2 Maximum habitable room depth	4D-3 Living room sizes & dimensions	4E-1 Balcony / Private Open Space min size & dimensions	4G-1 Storage min volume
	B.01.01	3 Bed	Yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	B.01.02	3 Bed	No (No Sun)	N/A	No	Yes	Yes	Yes	Yes	Yes	Yes
	B.01.03	2 Bed - AP	No (No Sun)	N/A	No	No	Yes	No	Yes	Yes	Yes
	B.01.04	3 Bed	Yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	B.01.05	2 Bed	Yes	N/A	Yes	No	Yes	No	Yes	Yes	Yes
	C.03.01	1 Bed - A	Yes	N/A	Yes	No	Yes	Yes	Yes	Yes	Yes
	C.03.02	1 Bed - A	Yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	C.03.03	4 Bed	No (No Sun)	N/A	No	Yes	Yes	Yes	Yes	Yes	No
	C.03.04	1 Bed - A	No (No Sun)	N/A	No	No	Yes	No	Yes	Yes	Yes
	C.03.05	3 Bed	No (1hr)	2hr (14:00 onward)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	C.03.06	3 Bed	Yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	C.03.07	1 Bed - AP	Yes	N/A	Yes	No	Yes	Yes	Yes	Yes	Yes
	C.03.08	1 Bed - A	Yes	N/A	Yes	No	Yes	Yes	Yes	Yes	Yes
TOTAL	13										

GROUND FLOOR	UNIT NO.	UNIT TYPE	4A-1 Solar Compliant Access (9am-3pm 21 June)	4A-1 Solar: Alternative Access (At Any Time 21 June)	4A-2 Solar:	4B Natural Ventilation	4D-1 Apartment sizes	4D-2 Maximum habitable room depth	4D-3 Living room sizes & dimensions	4E-1 Balcony / Private Open Space min size & dimensions	4G-1 Storage min volume
	A.GR.01	2 Bed Courtyard	Yes	N/A	Yes	No	Yes	No	Yes	Yes	Yes
	A.GR.02	3 Bed TH L1 Townhouse Duplex	Yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	A.GR.03	3 Bed TH L1 Townhouse Duplex	Yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	A.GR.04	3 Bed TH L1 Townhouse Duplex	Yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	A.GR.05	3 Bed Courtyard	No (No Sun)	N/A	No	Yes	Yes	Yes	Yes	Yes	No
	A.GR.06	3 Bed Courtyard	Yes	N/A	Yes	Yes	Yes	No	Yes	Yes	No
	B.02.01	3 Bed	Yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	B.02.02	3 Bed	No (No Sun)	N/A	No	Yes	Yes	Yes	Yes	Yes	Yes
	B.02.03	2 Bed - A	No (No Sun)	N/A	No	No	Yes	No	Yes	Yes	Yes
	B.02.04	3 Bed	No (No Sun)	N/A	No	Yes	Yes	Yes	Yes	Yes	Yes
	B.02.05	3 Bed	Yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	B.02.06	2 Bed	Yes	N/A	Yes	No	Yes	No	Yes	Yes	Yes
	C.04.01	1 Bed - A	Yes	N/A	Yes	No	Yes	Yes	Yes	Yes	Yes
	C.04.02	1 Bed - A	Yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	C.04.03	4 Bed	No (No Sun)	N/A	No	Yes	Yes	Yes	Yes	Yes	No
	C.04.04	1 Bed - A	No (No Sun)	N/A	No	No	Yes	No	Yes	Yes	Yes
	C.04.05	3 Bed	No (1hr)	2hr (14:00 onward)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	C.04.06	3 Bed	Yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	C.04.07	1 Bed - AP	Yes	N/A	Yes	No	Yes	Yes	Yes	Yes	Yes
	C.04.08	1 Bed - A	Yes	N/A	Yes	No	Yes	Yes	Yes	Yes	Yes
TOTAL	20										

07.02 Apartment Design Guide Compliance Schedule
Summary Of Key Criteria Compliance

LEVEL 01	UNIT NO.	UNIT TYPE	4A-1 Solar Compliant Access (9am-3pm 21 June)	4A-1 Solar: Alternative Access (At Any Time 21 June)	4A-2 Solar:	4B Natural Ventilation	4D-1 Apartment sizes	4D-2 Maximum habitable room depth	4D-3 Living room sizes & dimensions	4E-1 Balcony / Private Open Space min size & dimensions	4G-1 Storage min volume
	A.01.01	2 Bed	Yes	N/A	Yes	No	Yes	No	Yes	Yes	Yes
	A.01.02	2 Bed - A	No (No Sun)	N/A	No	No	Yes	No	Yes	Yes	Yes
	A.01.03	3 Bed	No (No Sun)	N/A	No	Yes	Yes	Yes	Yes	Yes	No
	A.01.04	3 Bed	Yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes	No
	3 Bed TH L2 Townhouse Duplex	Yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	3 Bed TH L2 Townhouse Duplex	No	N/A	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	3 Bed TH L2 Townhouse Duplex	Yes	N/A	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
	B.03.01	3 Bed	Yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	B.03.02	3 Bed	No (No Sun)	N/A	No	Yes	Yes	Yes	Yes	Yes	Yes
	B.03.03	2 Bed - A	No (No Sun)	N/A	No	No	Yes	No	Yes	Yes	Yes
	B.03.04	3 Bed	No (No Sun)	N/A	No	Yes	Yes	Yes	Yes	Yes	Yes
	B.03.05	3 Bed	Yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	B.03.06	2 Bed	Yes	N/A	Yes	No	Yes	No	Yes	Yes	Yes
	C.05.01	1 Bed - A	Yes	N/A	Yes	No	Yes	Yes	Yes	Yes	Yes
	C.05.02	1 Bed - A	Yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	C.05.03	4 Bed	No (No Sun)	N/A	No	Yes	Yes	Yes	Yes	Yes	No
	C.05.04	1 Bed - A	No (No Sun)	N/A	No	No	Yes	No	Yes	Yes	Yes
	C.05.05	3 Bed	No (1hr)	2hr (14:00 onward)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	C.05.06	3 Bed	Yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	C.05.07	1 Bed - AP	Yes	N/A	Yes	No	Yes	Yes	Yes	Yes	Yes
	C.05.08	1 Bed - A	Yes	N/A	Yes	No	Yes	Yes	Yes	Yes	Yes
TOTAL	18										

LEVEL 02	UNIT NO.	UNIT TYPE	4A-1 Solar Compliant Access (9am-3pm 21 June)	4A-1 Solar: Alternative Access (At Any Time 21 June)	4A-2 Solar:	4B Natural Ventilation	4D-1 Apartment sizes	4D-2 Maximum habitable room depth	4D-3 Living room sizes & dimensions	4E-1 Balcony / Private Open Space min size & dimensions	4G-1 Storage min volume
	A.02.01	2 Bed	Yes	N/A	Yes	No	Yes	No	Yes	Yes	Yes
	A.02.02	2 Bed	Yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	A.02.03	2 Bed - A	Yes	N/A	Yes	No	Yes	Yes	No	No	Yes
	A.02.04	2 Bed	Yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	A.02.05	2 Bed - A	No (No Sun)	N/A	No	No	Yes	No	Yes	Yes	Yes
	A.02.06	3 Bed	No (No Sun)	N/A	No	Yes	Yes	Yes	Yes	Yes	No
	A.02.07	3 Bed	Yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes	No
	B.04.01	3 Bed	Yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	B.04.02	3 Bed	No	N/A	No	Yes	Yes	Yes	Yes	Yes	Yes
	B.04.03	2 Bed - A	No (No Sun)	N/A	No	No	Yes	No	Yes	Yes	Yes
	B.04.04	3 Bed	No (No Sun)	N/A	No	Yes	Yes	Yes	Yes	Yes	Yes
	B.04.05	3 Bed	Yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	B.04.06	2 Bed	Yes	N/A	Yes	No	Yes	No	Yes	Yes	Yes
	C.06.01	1 Bed - A	Yes	N/A	Yes	No	Yes	Yes	Yes	Yes	No
	C.06.02	1 Bed - A	Yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes	No
	C.06.03	4 Bed	No (No Sun)	N/A	No	Yes	Yes	No	Yes	Yes	Yes
	C.06.04	1 Bed - A	No (No Sun)	N/A	Yes	No	Yes	Yes	Yes	Yes	Yes
	C.06.05	3 Bed	No (1hr)	2hr (14:00 onward)	Yes	Yes	Yes	No	No	No	Yes
	C.06.06	3 Bed	Yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	C.06.07	1 Bed - AP	Yes	N/A	Yes	No	Yes	No	Yes	Yes	Yes
	C.06.08	1 Bed - A	Yes	N/A	Yes	No	Yes	Yes	Yes	Yes	Yes
TOTAL	21										

07.02 Apartment Design Guide Compliance Schedule
Summary Of Key Criteria Compliance

LEVEL 03	UNIT NO.	UNIT TYPE	4A-1 Solar Compliant Access (9am-3pm 21 June)	4A-1 Solar: Alternative Access (At Any Time 21 June)	4A-2 Solar:	4B Natural Ventilation	4D-1 Apartment sizes	4D-2 Maximum habitable room depth	4D-3 Living room sizes & dimensions	4E-1 Balcony / Private Open Space min size & dimensions	4G-1 Storage min volume
	A.03.01	2 Bed	Yes	N/A	Yes	No	Yes	No	Yes	Yes	Yes
	A.03.02	2 Bed	Yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	A.03.03	2 Bed - A	Yes	N/A	Yes	No	Yes	No	No	No	Yes
	A.03.04	2 Bed	Yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	A.03.05	2 Bed - A	No (No Sun)	N/A	No	No	Yes	No	Yes	Yes	Yes
	A.03.06	3 Bed	No (No Sun)	N/A	Yes	Yes	Yes	Yes	Yes	Yes	No
	A.03.07	3 Bed	Yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes	No
	B.05.01	3 Bed	Yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	B.05.02	3 Bed	No (No Sun)	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	B.05.03	2 Bed	No (No Sun)	N/A	No	No	Yes	No	Yes	Yes	Yes
	B.05.04	3 Bed	No (No Sun)	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	B.05.05	3 Bed	Yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	B.05.06	2 Bed	Yes	N/A	Yes	No	Yes	No	Yes	Yes	Yes
	C.07.01	1 Bed - A	Yes	N/A	Yes	No	Yes	Yes	Yes	Yes	No
	C.07.02	1 Bed - A	Yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes	No
	C.07.03	4 Bed	No (No Sun)	N/A	No	Yes	Yes	No	Yes	Yes	Yes
	C.07.04	1 Bed - A	No (No Sun)	N/A	Yes	No	Yes	Yes	Yes	Yes	Yes
	C.07.05	3 Bed	No (1hr)	2hr (14:00 onward)	Yes	Yes	Yes	No	Yes	No	Yes
	C.07.06	3 Bed	Yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	C.07.07	1 Bed - AP	Yes	N/A	Yes	No	Yes	No	Yes	Yes	Yes
	C.07.08	1 Bed - A	Yes	N/A	Yes	No	Yes	Yes	Yes	Yes	Yes
TOTAL		21									

LEVEL 04	UNIT NO.	UNIT TYPE	4A-1 Solar Compliant Access (9am-3pm 21 June)	4A-1 Solar: Alternative Access (At Any Time 21 June)	4A-2 Solar:	4B Natural Ventilation	4D-1 Apartment sizes	4D-2 Maximum habitable room depth	4D-3 Living room sizes & dimensions	4E-1 Balcony / Private Open Space min size & dimensions	4G-1 Storage min volume
	A.04.01	2 Bed	Yes	N/A	Yes	No	Yes	No	Yes	Yes	Yes
	A.04.02	2 Bed	Yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	A.04.03	2 Bed - A	Yes	N/A	Yes	No	Yes	No	No	No	Yes
	A.04.04	2 Bed	Yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	A.04.05	2 Bed - A	No (No Sun)	N/A	No	No	Yes	No	Yes	Yes	Yes
	A.04.06	3 Bed	No (No Sun)	N/A	No	Yes	Yes	Yes	Yes	Yes	No
	A.04.07	3 Bed	Yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes	No
	B.06.01	3 Bed	Yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	B.06.02	3 Bed	No (No Sun)	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	B.06.03	2 Bed	No (No Sun)	N/A	No	No	Yes	No	Yes	Yes	Yes
	B.06.04	3 Bed	No (No Sun)	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	B.06.05	3 Bed	Yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	B.06.06	2 Bed	Yes	N/A	Yes	No	Yes	No	Yes	Yes	Yes
	C.08.01	3 Bed	Yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	C.08.02	3 Bed	No (No Sun)	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	C.08.03	3 Bed	No (1hr)	2hr (14:00 onward)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	C.08.04	3 Bed	Yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes
TOTAL		17									

07.02 Apartment Design Guide Compliance Schedule
Summary Of Key Criteria Compliance

LEVEL 05	UNIT NO.	UNIT TYPE	4A-1 Solar Compliant Access (9am-3pm 21 June)	4A-1 Solar: Alternative Access (At Any Time 21 June)	4A-2 Solar:	4B Natural Ventilation	4D-1 Apartment sizes	4D-2 Maximum habitable room depth	4D-3 Living room sizes & dimensions	4E-1 Balcony / Private Open Space min size & dimensions	4G-1 Storage min volume
	A.05.01	2 Bed	Yes	N/A	Yes	No	Yes	No	Yes	Yes	Yes
	A.05.02	2 Bed	Yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	A.05.03	2 Bed	Yes	N/A	Yes	No	Yes	No	No	No	Yes
	A.05.04	2 Bed	Yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	A.05.05	2 Bed	No (No Sun)	N/A	No	No	Yes	No	Yes	Yes	Yes
	A.05.06	3 Bed	No (No Sun)	N/A	No	Yes	Yes	Yes	Yes	Yes	No
	A.05.07	3 Bed	Yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes	No
	B.07.01	3 Bed	Yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	B.07.02	3 Bed	No (No Sun)	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	B.07.03	2 Bed	No (No Sun)	N/A	No	No	Yes	No	Yes	Yes	Yes
	B.07.04	3 Bed	No (No Sun)	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	B.07.05	3 Bed	Yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	B.07.06	2 Bed	Yes	N/A	Yes	No	Yes	No	Yes	Yes	Yes
	C.09.01	3 Bed	Yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	C.09.02	3 Bed	Yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	C.09.03	4 Bed	Yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes

TOTAL 16

LEVEL 06	UNIT NO.	UNIT TYPE	4A-1 Solar Compliant Access (9am-3pm 21 June)	4A-1 Solar: Alternative Access (At Any Time 21 June)	4A-2 Solar:	4B Natural Ventilation	4D-1 Apartment sizes	4D-2 Maximum habitable room depth	4D-3 Living room sizes & dimensions	4E-1 Balcony / Private Open Space min size & dimensions	4G-1 Storage min volume
	A.06.01	2 Bed	Yes	N/A	Yes	No	Yes	No	Yes	Yes	Yes
	A.06.02	2 Bed	Yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	A.06.03	2 Bed	Yes	N/A	Yes	No	Yes	No	No	No	Yes
	A.06.04	2 Bed	Yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	A.06.05	2 Bed	No (No Sun)	N/A	No	No	Yes	No	Yes	Yes	Yes
	A.06.06	3 Bed	No (No Sun)	N/A	Yes	Yes	Yes	Yes	Yes	Yes	No
	A.06.07	3 Bed	Yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes	No
	B.08.01	3 Bed	Yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	B.08.02	3 Bed	No (No Sun)	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	B.08.03	3 Bed	No (5min)	2hr (14:55 onward)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	B.08.04	3 Bed	Yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes

TOTAL 11

07.02 Apartment Design Guide Compliance Schedule

Summary Of Key Criteria Compliance

LEVEL 07	UNIT NO.	UNIT TYPE	4A-1 Solar Compliant Access (9am-3pm 21 June)	4A-1 Solar: Alternative Access (At Any Time 21 June)	4A-2 Solar:	4B Natural Ventilation	4D-1 Apartment sizes	4D-2 Maximum habitable room depth	4D-3 Living room sizes & dimensions	4E-1 Balcony / Private Open Space min size & dimensions	4G-1 Storage min volume
	A.07.01	2 Bed	Yes	N/A	Yes	No	Yes	No	Yes	Yes	Yes
	A.07.02	2 Bed	Yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	A.07.03	2 Bed	Yes	N/A	Yes	No	Yes	No	No	No	Yes
	A.07.04	2 Bed	Yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	A.07.05	2 Bed	No (No Sun)	N/A	No	No	Yes	No	Yes	Yes	Yes
	A.07.06	3 Bed	No (No Sun)	N/A	Yes	Yes	Yes	Yes	Yes	Yes	No
	A.07.07	3 Bed	Yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes	No
	B.09.01	3 Bed	Yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	B.09.02	3 Bed	Yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	B.09.03	4 Bed	Yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes
TOTAL	10										

LEVEL 08	UNIT NO.	UNIT TYPE	4A-1 Solar Compliant Access (9am-3pm 21 June)	4A-1 Solar: Alternative Access (At Any Time 21 June)	4A-2 Solar:	4B Natural Ventilation	4D-1 Apartment sizes	4D-2 Maximum habitable room depth	4D-3 Living room sizes & dimensions	4E-1 Balcony / Private Open Space min size & dimensions	4G-1 Storage min volume
	A.08.01	3 BED	Yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	A.08.02	3 BED	Yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	A.08.03	3 BED	No (5min)	2hr (14:55 onward)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	A.08.04	3 BED	Yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes
TOTAL	4										

LEVEL 09	UNIT NO.	UNIT TYPE	4A-1 Solar Compliant Access (9am-3pm 21 June)	4A-1 Solar: Alternative Access (At Any Time 21 June)	4A-2 Solar:	4B Natural Ventilation	4D-1 Apartment sizes	4D-2 Maximum habitable room depth	4D-3 Living room sizes & dimensions	4E-1 Balcony / Private Open Space min size & dimensions	4G-1 Storage min volume
	A.09.01	4 BED	Yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	A.09.02	3 BED	Yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	A.09.03	3 BED	Yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes
TOTAL	3										

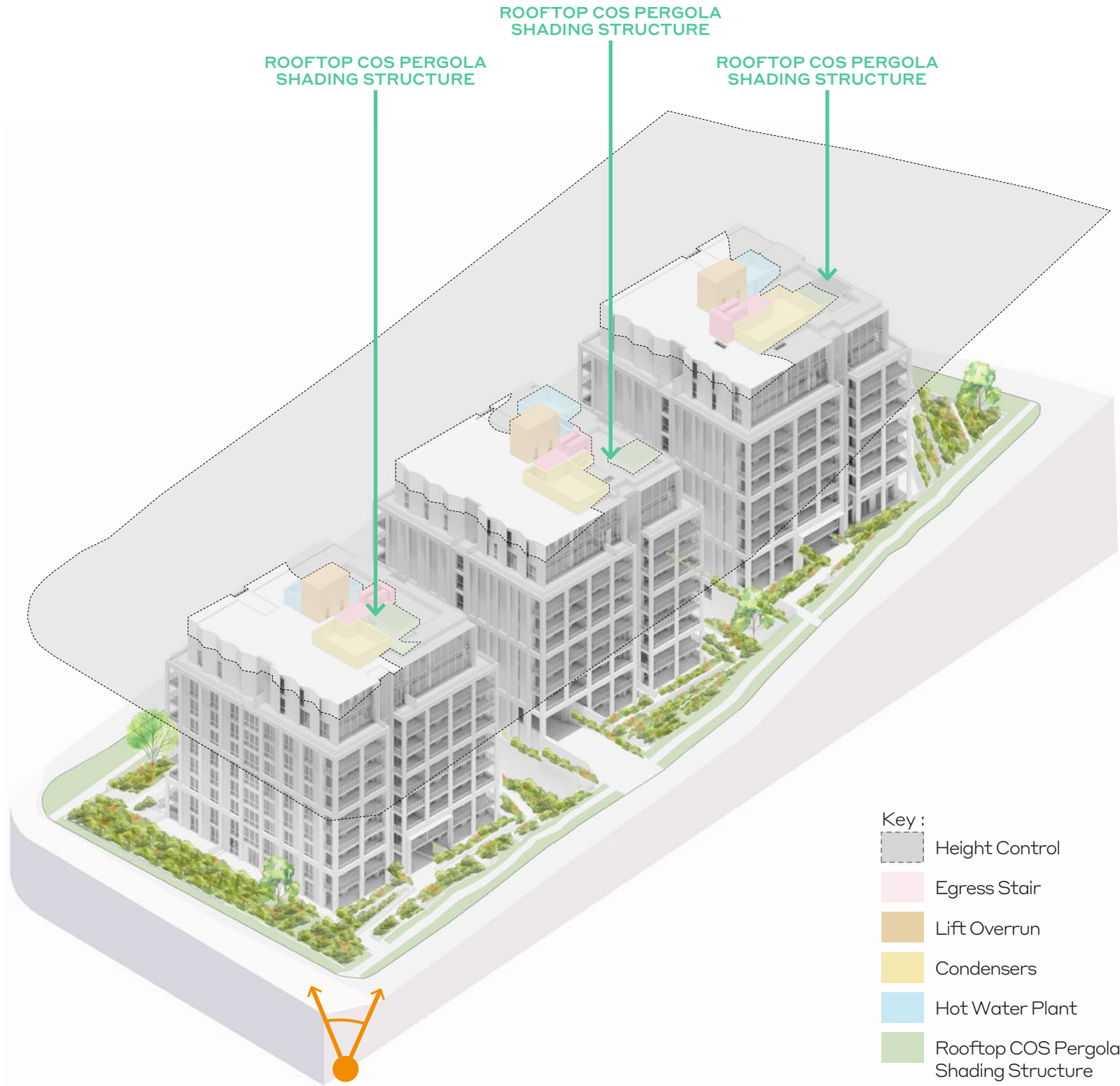
TOTALS	UNITS
	180

View Study

0801	View Analysis
08.02	View Impact Assessment

08.01 View Analysis

Low Point Of Site 01 - South-West Corner Looking Up Maclaurin Pde At West & South Facade



08.01 View Analysis

Low Point Of Site 01 - South-West Corner Looking Up Maclaurin Pde At West & South Facade



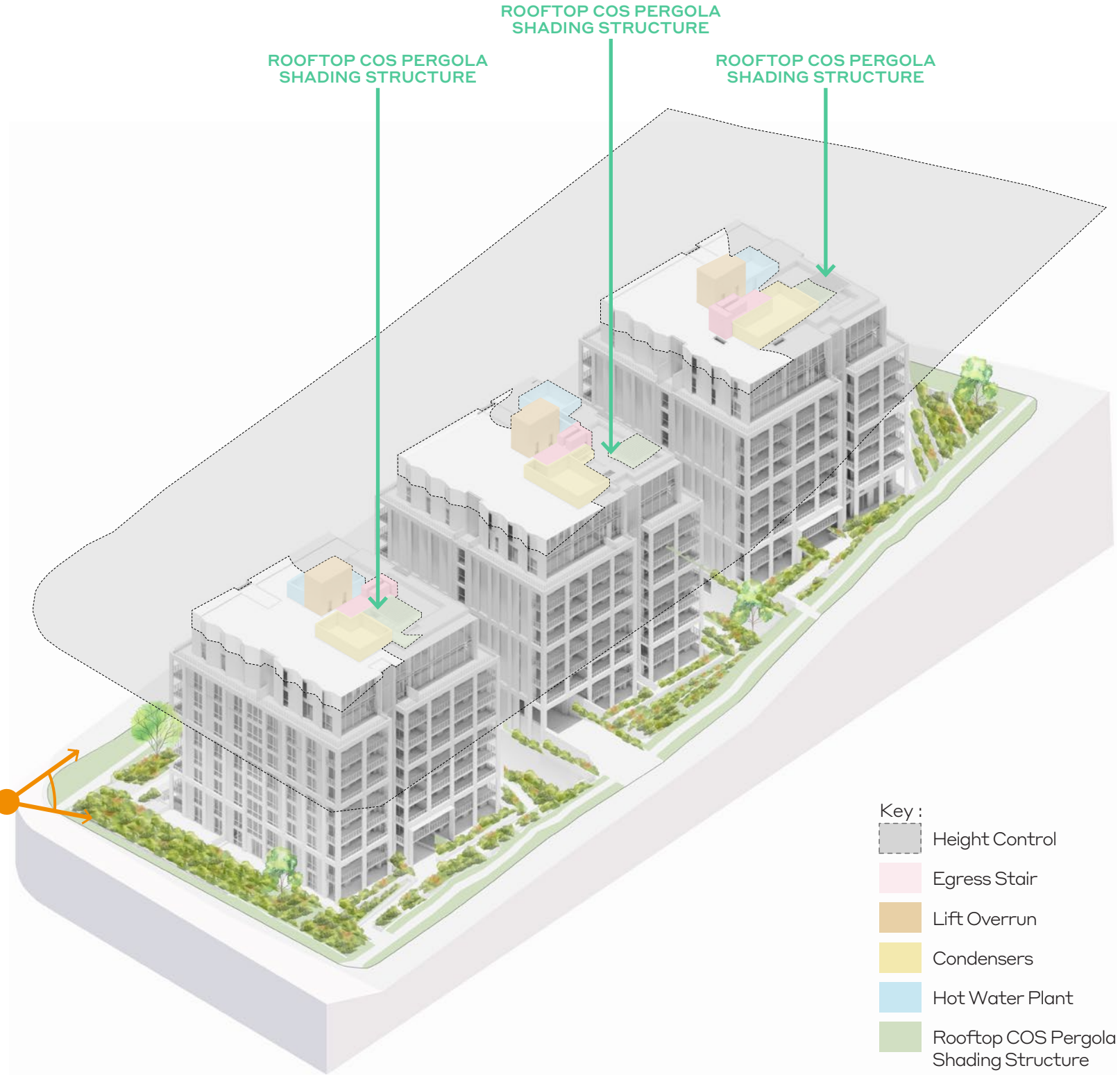
Original Exhibited Scheme



Current Scheme

08.01 View Analysis

Low Point Of Site 02 - North-West Corner Looking Up Pockley Avenue At West & North Facade



08.01 View Analysis

Low Point Of Site 02 - North-West Corner Looking Up Pockley Avenue At West & North Facade



Original Exhibited Scheme



Current Scheme

08.01 View Analysis



08.01 View Analysis



08.02 View Impact Assessment
Viewpoint Overview Map



08.02 View Impact Assessment
Viewpoint 01 - 21 Shirley Road, Roseville



Key :
Height Control Limit

08.02 View Impact Assessment

Viewpoint 02 - 5-7 Larkin Street (North), Roseville



Height control limit
Proposed buildings

Key :
Volume Over Max Height Control
Volume Under Max Height Control
Proposed Building

View Impact Assessment Prepared By Virtual Ideas - 15 April 2025

08.02 View Impact Assessment

Viewpoint 03 - 4 MacLaurin Parade, Roseville



Key :
Height Control Limit
Proposed Building

View Impact Assessment Prepared By Virtual Ideas - 15 April 2025

08.02 View Impact Assessment
Viewpoint 04 - 2 Alexander Parade, Roseville



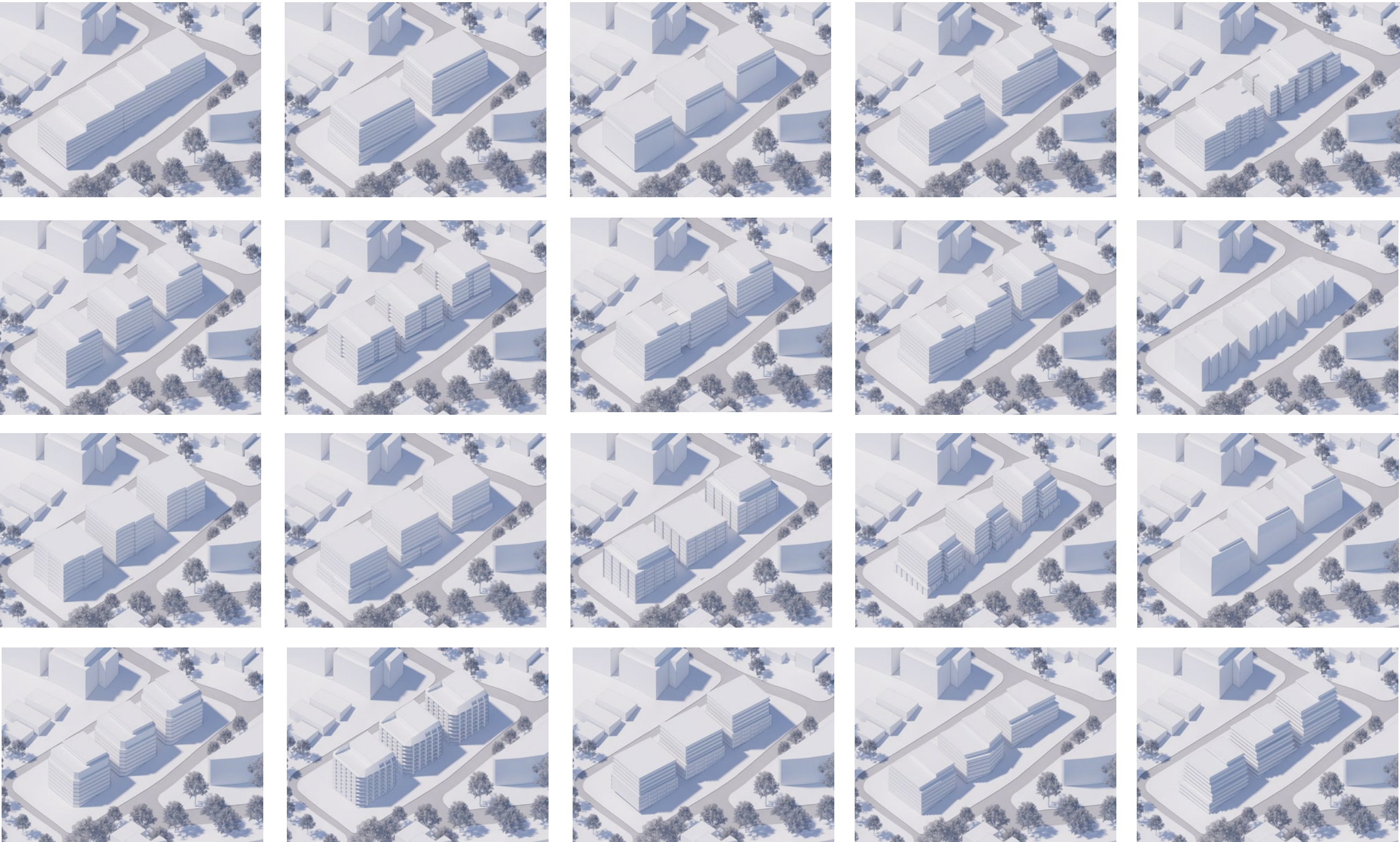
View Impact Assessment Prepared By Virtual Ideas - 15 April 2025

Key :
Height Control Limit
Proposed Building

Appendix

09.01	SDRP Massing Studies
09.02	Building Separation
09.03	SDRP Comments

09.01 SDRP Massing Studies Selected Shortlist



09.02 Building Separation Precedent Review & Analysis

➡ Primary frontage
➡ Secondary frontage

Diagram illustrating building separation and frontage analysis. The diagram shows a floor plan of a building complex with various setbacks and frontages. Blue arrows indicate the primary frontage, and green arrows indicate the secondary frontage. The diagram also shows setbacks of 1.8m, 3m, 3.3m, 5m, 9m, 14m, and 15m.

Horizon Apartments, Newcastle - Hill Thalys (2024)

Building separation: 5m to 14m

Primary frontage facing out, secondary frontages are mitigated through screening.

Lume, Newcastle - SuB (2020)

Building separation: 5.5m to 7m

Primary frontage facing out, secondary frontages are mitigated through angled bay windows.

09.03 SDRP Comments Response Table

SDRP COMMENT		RESPONSE
Connecting With Country		
01	Continue to engage with local Aboriginal knowledge-holders and ensure that the response to Country is guided by them.	W-B continue to work closely with JMP Aboriginal Consultancy and Ground Ink Landscape Architects to ensure a closely integrated Connecting With Country strategy is achieved
04	Ensure that the landscape and architectural design respond to the site's topography and natural systems.	Architecture and landscape design is deeply embedded into the site's topography and ecosystems. Entry experiences, communal spaces, and courtyard apartments are all sited within a densely landscaped environment.
06	Explore opportunities for Country themes to inform subtle differences in each of the three pavilions to assist with building identification and wayfinding.	Facade materiality has been designed to reflect connecting with country themes to inform identities for each of the three pavilions. This continues to be a work in progress collaboration with JMP Aboriginal Consultancy
Site Strategy and Landscape		
08	Ensure the proposed boundary setbacks can accommodate adequate deep soil to support mature tree growth and a generous landscape buffer around the perimeter of the site.	Minimum deep soil requirement of 7% of site has been achieved and proposed beyond 10% as a minimum target. Refer to landscape architect report for further information
10	Design the landscaped edges of the site so that they belong to the broader community, and the site does not appear as a gated community.	Stepping of landscape into site creates a sense of the continuation of the street landscaping into the site. Refer to landscape architect report for further information
11	Provide detail on the proposed fencing strategy/boundary condition and illustrate how fall prevention will be mitigated where retaining walls are required.	Fences concealed behind planting to minimise visual imposition. Refer to landscape architect report for further information
12	Ensure that any fencing and/or vehicle barriers are integrated in the landscape design and softened by planting.	Fences concealed behind planting to minimise visual imposition. Refer to landscape architect report for further information
14	Incorporate intimate courtyard spaces near the main building entries, which could add a functional element for residents.	Entries to each pavilion has been designed to provide a "stoop" out the front of the lobby. These spaces on ground are within a planted and landscaped courtyard area. Refer to landscape architect report for further information
15	Provide stairs from the footpath to give residents and visitors the option of a more direct route and provide legibility of the main entry.	Both stairs and ramps provided to entry to Pavilion C. Entry to Pavilion B from Pockley Avenue has a direct entry to the lobby, while the topography of Pavilion A makes both a stair and a ramp entry unfeasible.
17	Continue to develop the preferred option and ensure that the carpark entry does not adversely affect the apartments adjacent to or above it.	Carpark entry has been relocated to the Southern boundary of the site on Maclaurin Parade. Design & integration of entry awning mitigates acoustic and visual privacy concerns to apartments directly above the ramp. Generous landscape buffer created to protect apartments adjacent and from below
18(d)	Connect the links to the footpath along Pockley Street to the north and Maclaurin Parade to the south.	Connections provided between all three pavilions.
21	Ensure that the quality of the carpark façade is not eroded during future phases of the project as technical components are incorporated, such as mechanical ventilation and exhaust. Provide more information on the carpark façade as the design develops.	Using existing rock on site was an early consideration and discussed with SDRP. However with further developed site investigation the site conditions have revealed this to be difficult to achieve. Maintaining the intent of a natural wall, the carpark façade is proposed as a gabion wall, utilising sandstone rubble from site excavation where possible.

09.03 SDRP Comments Response Table

SDRP COMMENT		RESPONSE
22	Provide a visual and physical connection along the east-west axis	East-West connectivity between pavilions improved by the creation of additional connections to communal open spaces through to lift lobbies. Topography of the steeply sloping site makes the creation of additional visual and physical connections between pavilions along the East-West axis unfeasible and impractical, with at least 2 storeys worth of staircases required to connect between pavilions.
23	Extend the communal corridors of the central pavilion to the façades in both directions to provide natural light and outlook to the lift lobbies and a visual connection to the eastern and western pavilions.	Corridors of central pavilion extended to the facades.
24	Continue to develop the east-west connections and illustrate the experience for residents walking from the lift lobby of one building, through the central garden, to the lobby of the adjacent building.	East-West connectivity between pavilions improved by the creation of additional connections to communal open spaces through to lift lobbies.
26	Explore the opportunity for internal communal space for residents within the carpark of the eastern and central buildings to support the goal of social sustainability.	Amenity space introduced in the carpark space of the eastern and central pavilion, and located adjacent to the outdoor communal open spaces between the pavilions, enabling and enhancing the usability and activity of these spaces.
26(a)	Locate this space on the pavilion's western façade and adjacent to the east-west link to enable a connection to the central garden and improve the experience of walking to and from the lift lobby at the carpark level	Spaces located within the carpark facades, adjacent to the North-South link between each of the pavilions.
26(b)	Ensure this space does not infringe upon the privacy of the apartments opposite.	Landscape buffer provided. Refer to landscape architect report for further information
26(c)	Design any openings in the carpark façade as deep slots to reinforce the solidity of the sandstone wall.	Openings in carpark façade read as deep metal framed reveals within the gabion wall.
27	Illustrate how each façade responds to sun, wind, views, privacy, outlook, streetscape character, etc.	East - Vertical facade elements, including stone blades and shading screens, reduce heat gain to facade. North - Deep balconies across the whole of the Northern facade, blocking summer sun while allowing winter sun to hit the fenestration. West - Vertical facade elements, including stone blades and shading screens, reduce heat gain to facade.
28	Break down the mass of the built form by introducing a finer grain of articulation in the facades to better reflect the residential character of the local area.	Additional massing articulation added to each of the three pavilions in the form of slots in all four sides of each pavilions, reducing the perceived scale of the buildings. Further height variation has been added to the massing of the penthouse levels, creating a varied roofline that steps with the falling topography of the street. A finer level of detail has been added, including: finer grain detailing to the grid expression, angled balustrade details, fine vertical metal privacy and shading screens, ribbed textures to metal panels.
30	Convert more of the subterranean units into 2-storey apartments to improve their amenity where issues regarding solar access, ventilation and outlook cannot be resolved by adjusting the building siting.	Ground floor courtyard apartments to the east of Pavilion A have been converted to 2-storey apartments which include double height spaces, two storey windows and living spaces across both ground and first storeys to improve amenity and daylighting.

09.03 SDRP Comments Response Table

SDRP COMMENT		RESPONSE
33	Undertake overshadowing studies to demonstrate that there are no adverse impacts on neighbouring residents as a result of the lift and stair cores extending above the height plane	Overshadowing studies have been undertaken, and diagrams provided to demonstrate that no adverse impacts to existing neighbouring residents or onto future developments
34	Provide an analysis of privacy and overlooking for apartments in the development and neighbouring residences. Illustrate strategies to mitigate overlooking.	Privacy hoods provided to all internally facing windows within the site.
35	Include options that test communal space on the rooftop of one, two, and all three of the pavilions.	Communal spaces on rooftops were investigated but deemed difficult to achieve with existing site and building constraints. In lieu of this internal communal spaces have been designed & integrated into the outdoor communal open spaces between the pavilions, enabling and enhancing the usability and activity of these spaces.
Sustainability and Climate Change		
37	Target a minimum of 70% solar access to apartments to provide better amenity to the residents	Apartment layouts have been designed to maximise Northern / Eastern sunlight access to allow as much solar access as possible. Due to the nature of the site and its orientation however, this has constrained the site significantly - every effort has been done to attempt to maximise solar access to as many apartments as possible.



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