

AREAS 1, 2 AND 4 ST LEONARDS SOUTH

4-8 MARSHALL, 1-5 CANBERRA, 2-8 HOLDSWORTH AVE, ST LEONARDS

rothelowman

Brisbane, Melbourne, Sydney, Gold Coast, Perth

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WE ACKNOWLEDGE THE GADIGAL PEOPLE OF THE EORA NATION AS THE TRADITIONAL CUSTODIANS OF THE COUNTRY ON WHICH WE STAND TODAY AND THE CAMMERAYGAL AS THE TRADITIONAL CUSTODIANS OF THE COUNTRY WHERE THIS PROJECT WILL RESIDE.

WE RECOGNISE THEIR CONTINUING CONNECTION TO THE LAND AND WATERS, AND THANK THEM FOR PROTECTING THIS COASTLINE AND ITS' ECOSYSTEMS SINCE TIME IMMEMORIAL. WE PAY OUR RESPECTS TO ELDERS PAST, PRESENT AND EMERGING AND EXTEND THAT RESPECT TO ALL FIRST NATIONS PEOPLE.

Our design begins with the experience of the individual dwelling, informed by nature and a generous eye for life.

Understanding that synergy here, brings harmony.

An experience of place, begins with an experience of home.

THE VISION

Sydney harbour and its foreshores have been shaped by water, and weather over several millennia. The sunken river valley that results, is characterized by smooth and eroded sandstone rock shelf's running from the waters edge to the ridge lines. Dense tree canopies of bluegum and native forest create a green backdrop to the deep blue of the harbour. These colours and textures epitomize the Sydney idyll.

Our concept builds on the extraordinary landscape character of St Leonards, to amplify these natural aspects, referencing and interpreting them into a contemporary residential development.

The concept results in high-quality living spaces both within and above the landscape. Cascading rock shelves, with planting for verdant ground cover to large trees sets the tone for the generous terrace style dwellings that address the landscape link.

These fluid stone shelves, meander through the podium levels to create a strong visual presence at the ground plane and tonally capture the landscape.

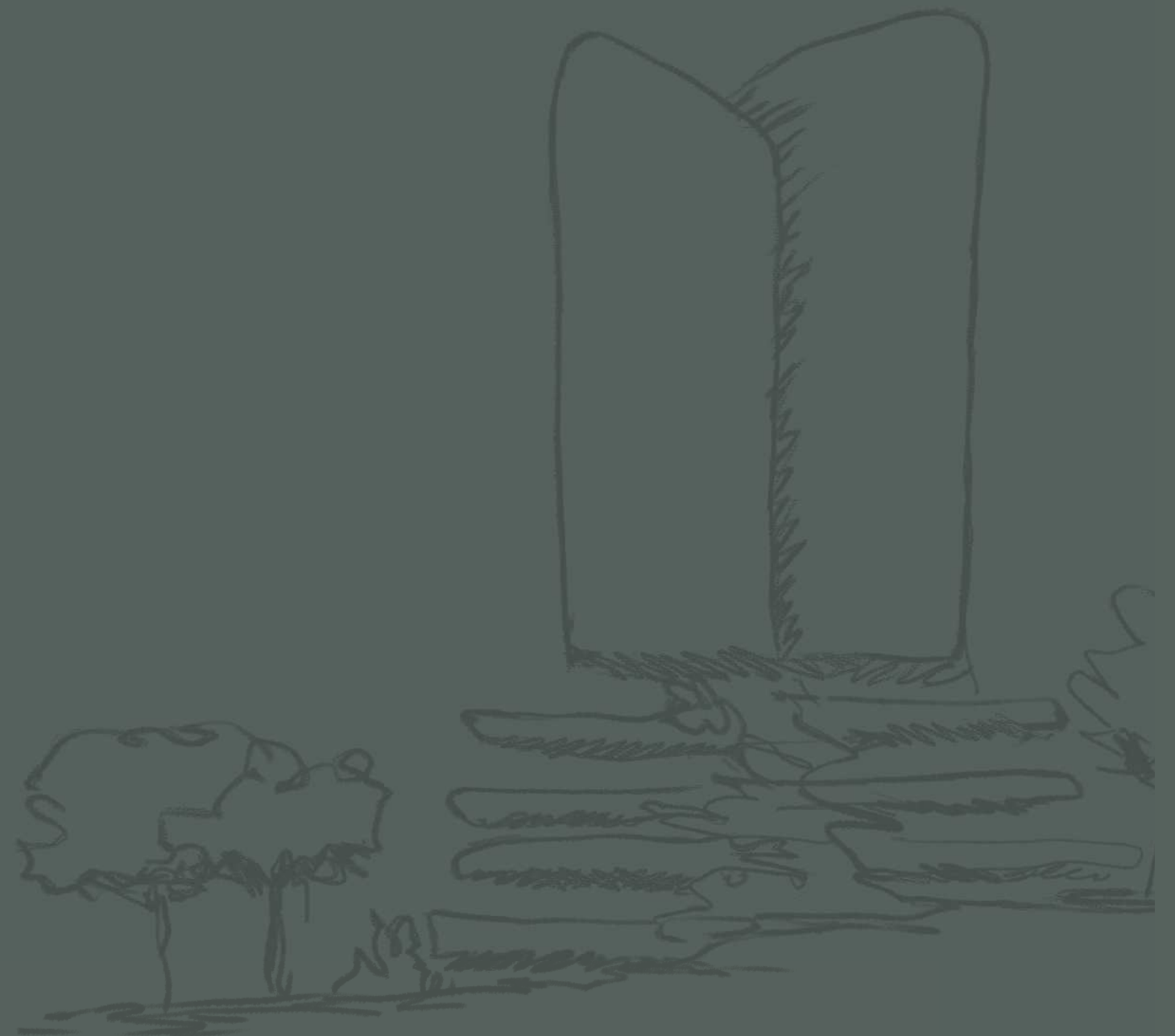
Living in the tree canopy creates a different type of view – a shaped and captured one – where vistas between the trees create an element of surprise in the everyday, revealing distant vistas of the harbour city, framed by the tree canopy.

Above the sandstone shelf, highly sculpted and polished tower forms float in the sky – each one expressing the unique aspect for the apartment contained within, pivoting and rearranging themselves to capture views, whilst visually separate this development from all its neighbours.

The tower façades are smooth, and elegant, with a more polished finish to help reflecting blue skies.

Just as the traditional owners of the Gamaragal land established their gathering places at the junction between the water and land, so too does the elevated communal terrace create a dynamic communal space between the towers and rock shelf's.

St Leonards South will establish a new type of urban community, where living in harmony with the landscape is celebrated.



1.0

AREAS 1, 2 AND 4 ST LEONARDS SOUTH

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EXECUTIVE SUMMARY

1.01

INTRODUCTION

Background

Rothelowman was commissioned in May 2022 to prepare a design and DA submission for the site located on 1-5 Canberra Avenue, 2-8 Holdsworth Avenue and 4-8 Marshall Avenue in the St Leonards South Precinct. The development found on a high point along a key green vein which runs from the ridgetop of St Leonards down to the harbour will be a prominent beacon for the St Leonards South Precinct. It is located conveniently less than 500 meters from the St Leonards town centre and within 5 minutes walking distance from mass transit stations including the new metro station. The DA application was approved on the 17th of April 2023. Five S4.55 modifications have since been lodged to modify the DA approved development and to date three of these have been approved. The remaining two modifications are under assessment by Council. Construction on the project commenced in early 2024.

Infill Affordable Housing

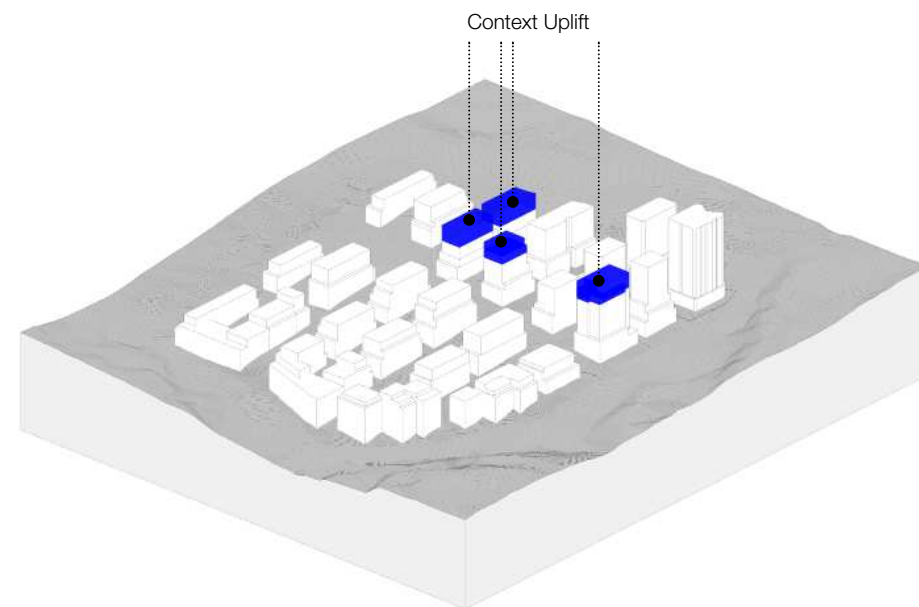
The proponent desires to respond to the infill affordable housing policy, which was implemented by the NSW Government at the end of 2023 to address the housing crisis, by providing critical additional affordable housing for the precinct.

The infill affordable housing is proposed to be achieved by adding additional floor levels to the three towers which form part of the approved development. These additional floor levels will be accommodated below the maximum 30% uplift height plane and within the allowable maximum FSR.

The uplifted proposal is consistent with the design intent of the approved DA development and distributes the infill affordable housing throughout the residential levels of the three towers. The increased height to the towers provides slender proportions which are sensitively designed to minimize impact to the surrounding context.

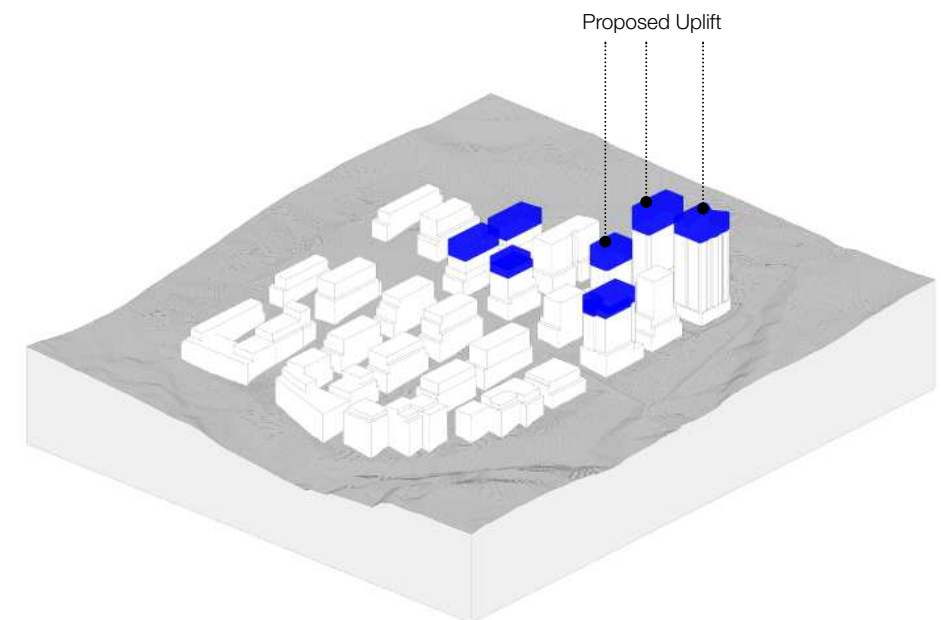
Approved:

DA79/2022 S4.55-2 Determined 5/10/23



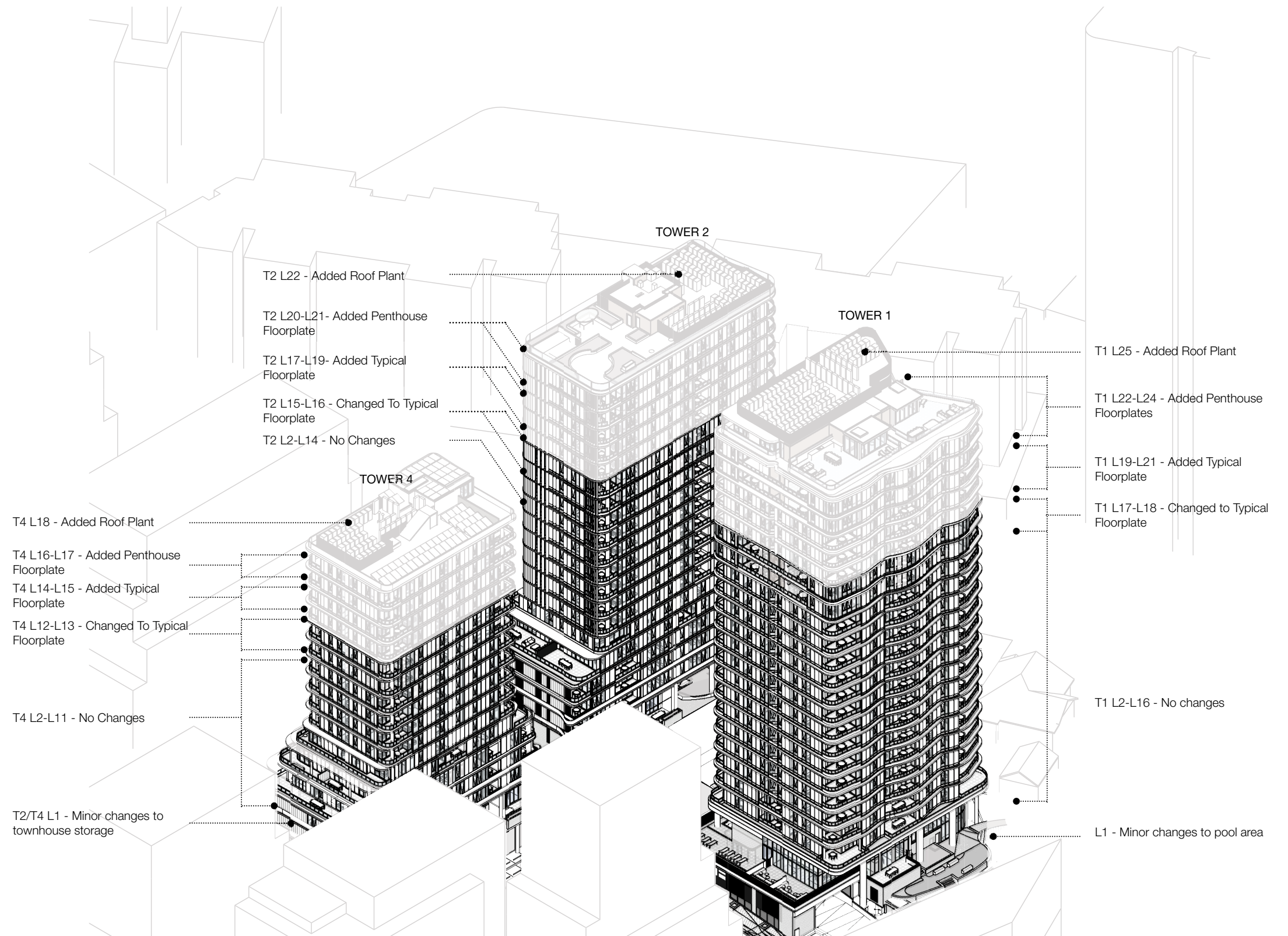
Proposed:

S4.55-6 Modification For In-Fill Affordable Housing Uplift



1.02 PROPOSAL

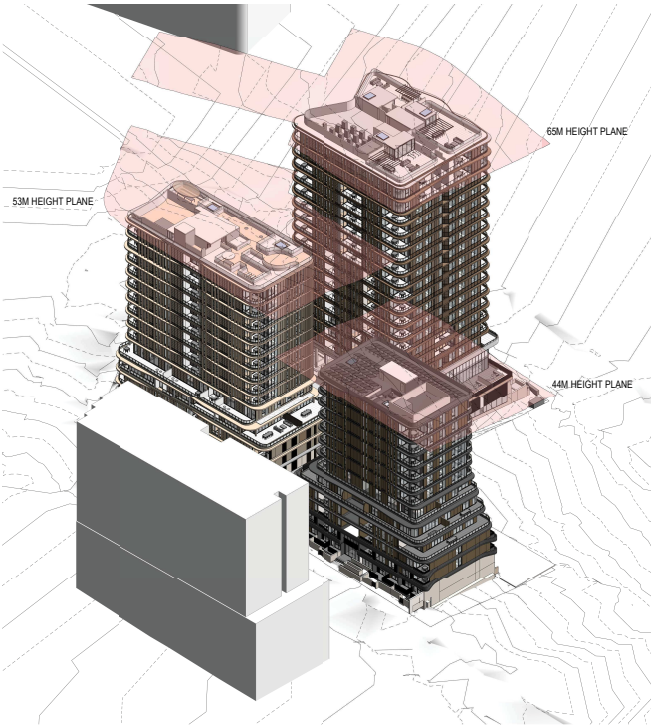
The uplift for the infill affordable housing is achieved by adding five additional floor levels to Tower One and Tower Two and four additional floor levels to Tower Four. The infill affordable housing is interwoven through the residential levels in all three towers to encourage an inclusive community and to provide a variety of unit types. The design of all three towers is consistent with the design intent of the approved DA development and the additional floor levels added to each of the towers are seamlessly integrated into the tower forms with consistent architectural façade treatment. Minor changes to the apartment layouts, tower cores, rooftops, floor level heights and basement have occurred to accommodate the increased services and structural requirements to support the additional housing. As per the approved development, the open landscaped green spine space running between the towers and the dedicated public park will provide much needed recreation areas for the community.



1.03 HEIGHT PLANE / DEVELOPMENT STATISTICS

The development including the proposed infill affordable housing will be accommodated entirely below the maximum 30% uplift height plane including the lift overruns and building services on the rooftops.

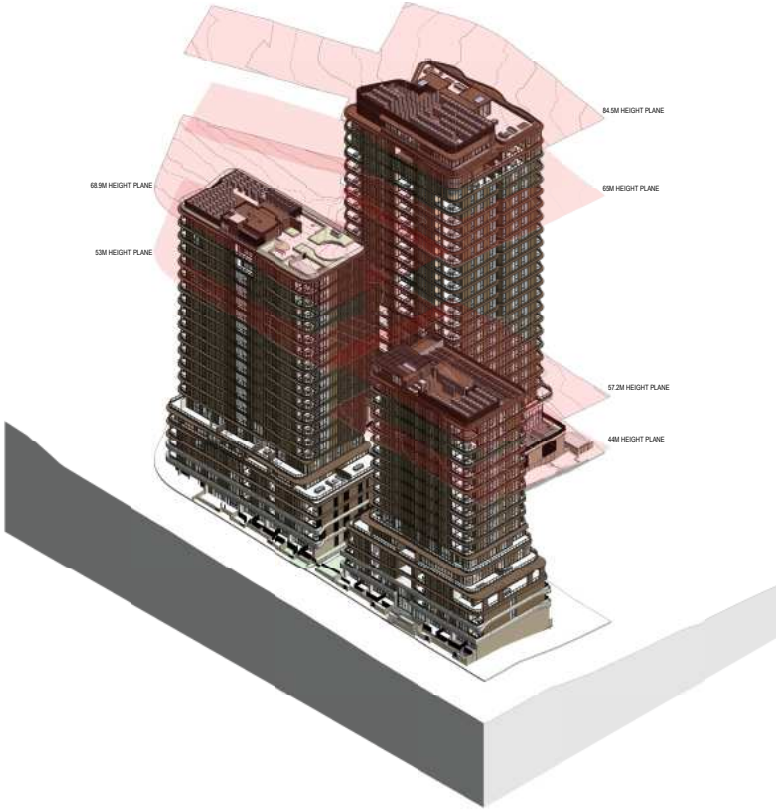
Approved:
DA79/2022 S4.55-2 Determined 5/10/23



PROPOSED GFA 24,703.5M²	TOTAL APTS 234	SOLAR 61%
FSR SITE 1 3.85:1 SITE 2+4 3.55:1	APT MIX 20/57/23	CROSS VENT 67.5%
STOREYS 19/15/12	PARKING 327	DEEP SOIL 24.5%
T1 MAX HEIGHT 65M	T2 MAX HEIGHT 53M	T4 MAX HEIGHT 44M

TOTAL MAX GFA 32114.6 M²
MAX FSR SITE 1 5.00:1 SITE 2+4 4.61:1
SEPP AH BONUS +30%

Proposed:
S4.55-6 Modification For In-Fill Affordable Housing Uplift



PROPOSED GFA 32114.6 M²	TOTAL APTS 311	SOLAR 60%
FSR SITE 1 5.00:1 SITE 2+4 4.61:1	APT MIX 18/60.5/21.5	CROSS VENT 68.5%
STOREYS 24/22/18	PARKING 405	DEEP SOIL 24.4%
T1 MAX HEIGHT 84.5M	T2 MAX HEIGHT 68.9M	T4 MAX HEIGHT 57.2M

2.0

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CONTEXT ANALYSIS/ CONTEXT &
NEIGHBOURHOOD CHARACTER

2.01 REGIONAL

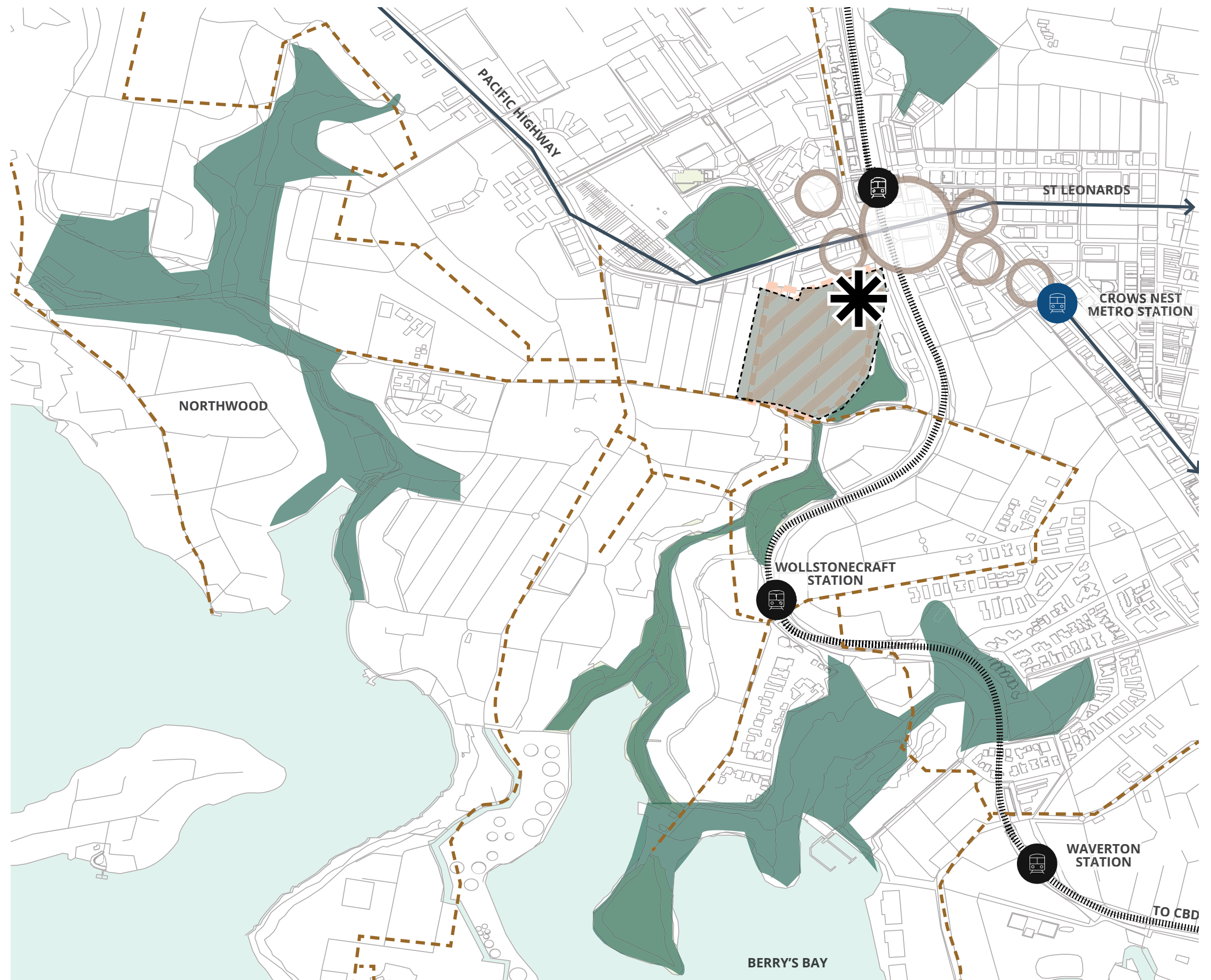
Located in the heart of the Eastern economic corridor and identified as a strategic urban centre by NSW and greater Sydney planning departments, the inner North Shore suburb of St Leonards is undergoing a period of rapid growth and development.

With the town centre undergoing urban renewal and the new Crows Nest Metro station being developed in close proximity to the project site, the site has recently been rezoned from low density residential to higher density as part of St Leonards South precinct.

With the St Leonards Crows Nest 2036 plan identifying a total of over 6,680 new homes to be built in the area, the landscape areas - both private and public - will need to be multifunctional and flexible in order to accommodate the growing community's needs.

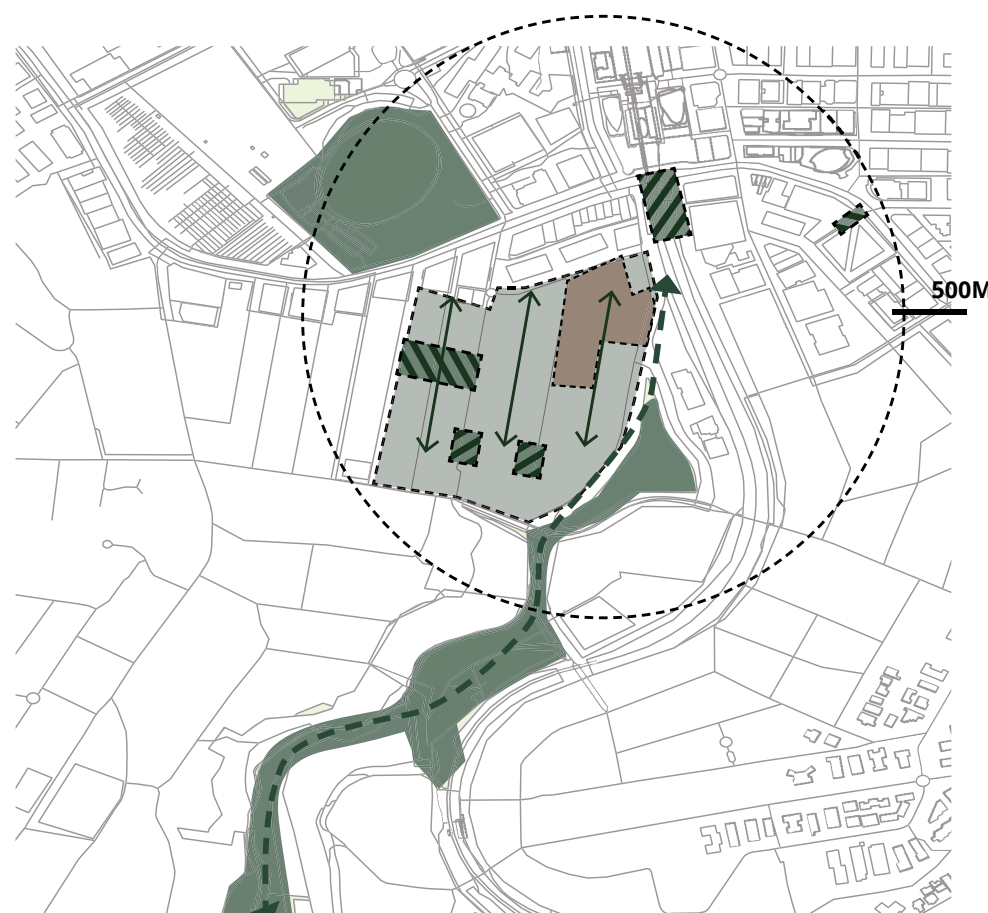
Legend

-  St Leonards South Precinct
-  Site
-  Stations
-  CBD Core
-  Key Development Sites
-  Bicycle Connection



2.02

NETWORKS

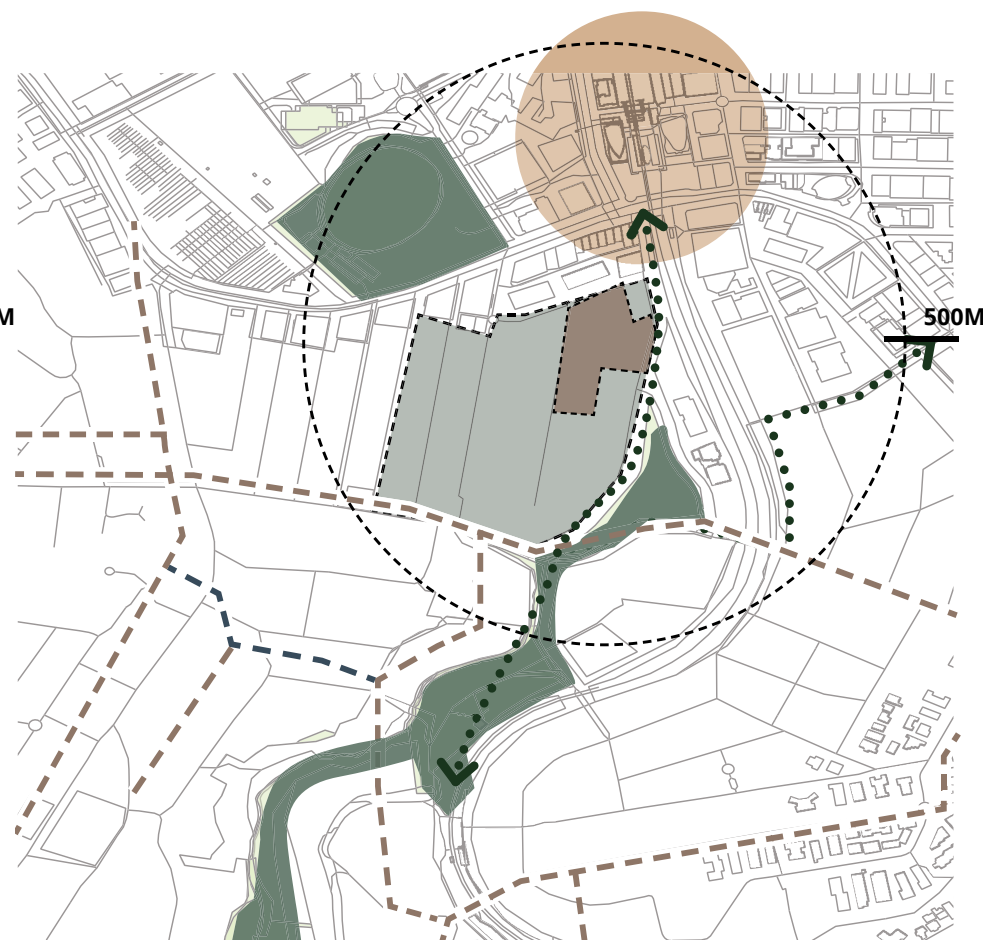


GREEN OPEN SPACE

Green open space analysis reveals that the site is found along a key green vein from the ridgetop at St Leonards down to the harbour.

Legend

	Project site
	Green open space
	Proposed green space
	Proposed green corridors
	Green vein

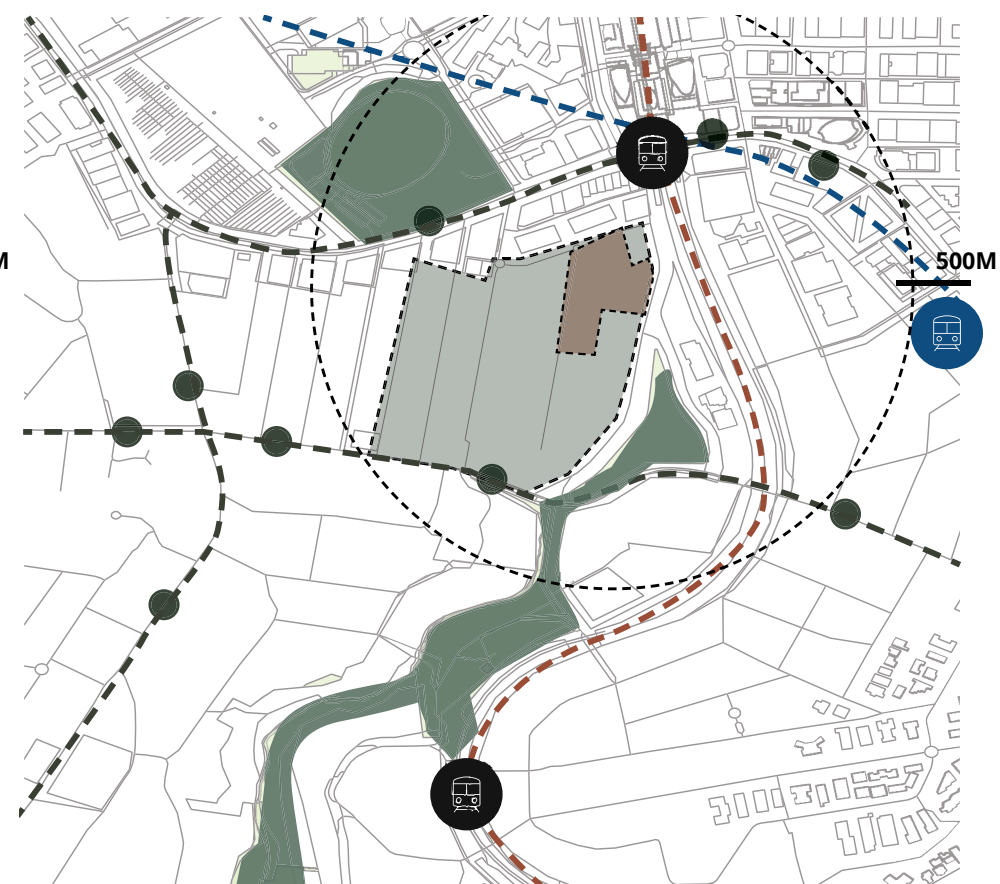


KEY PLACES AND PEDESTRIAN MOVEMENT

Movement and key places reveals that the site is located less than 500 metres from the town centre, providing convenient access to shops and employment.

Legend

	Project site
	St Leonards South Precinct
	Town centre
	Circulation routes
	Bicycle routes



PUBLIC TRANSPORT

The project site is conveniently located within 5 minutes walk from mass transit stations including rail and the proposed metro station.

Legend

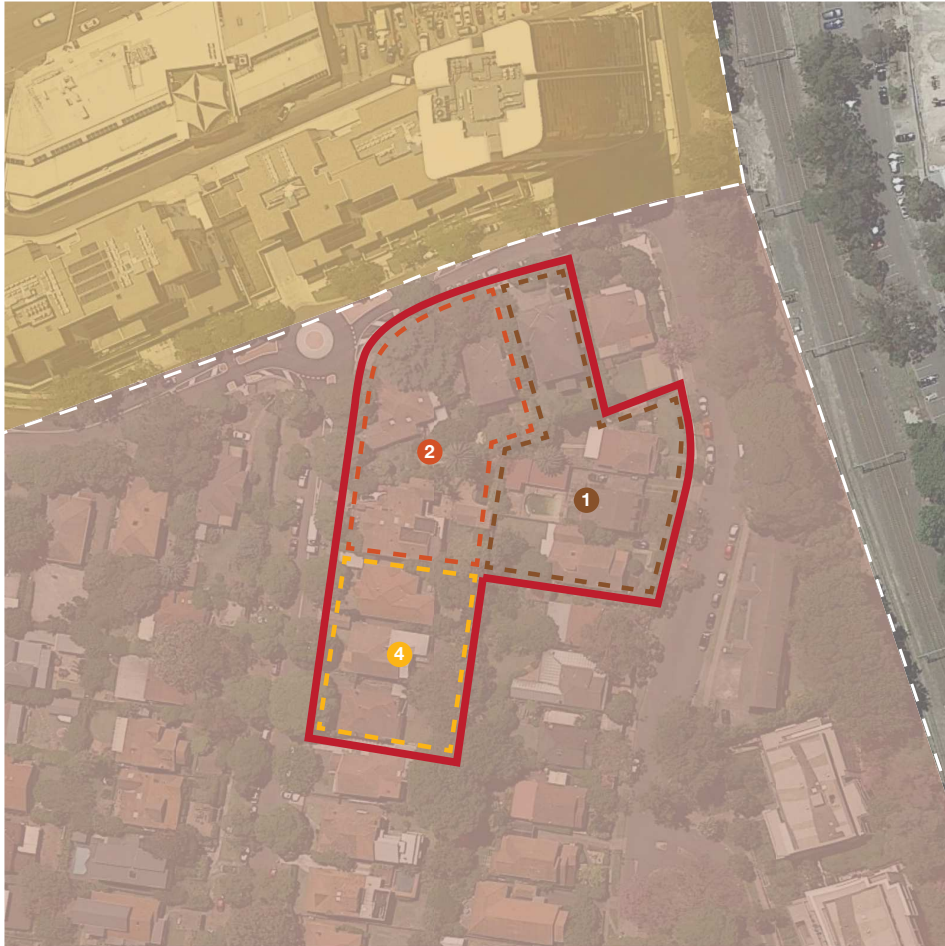
	Rail and stops
	Metro and stops
	Bus network and stops



2.03

PLANNING OVERLAY




The subject sites are identified within the St Leonards South Master plan to be consolidated into specific Areas, each with their own determined building envelopes and controls.

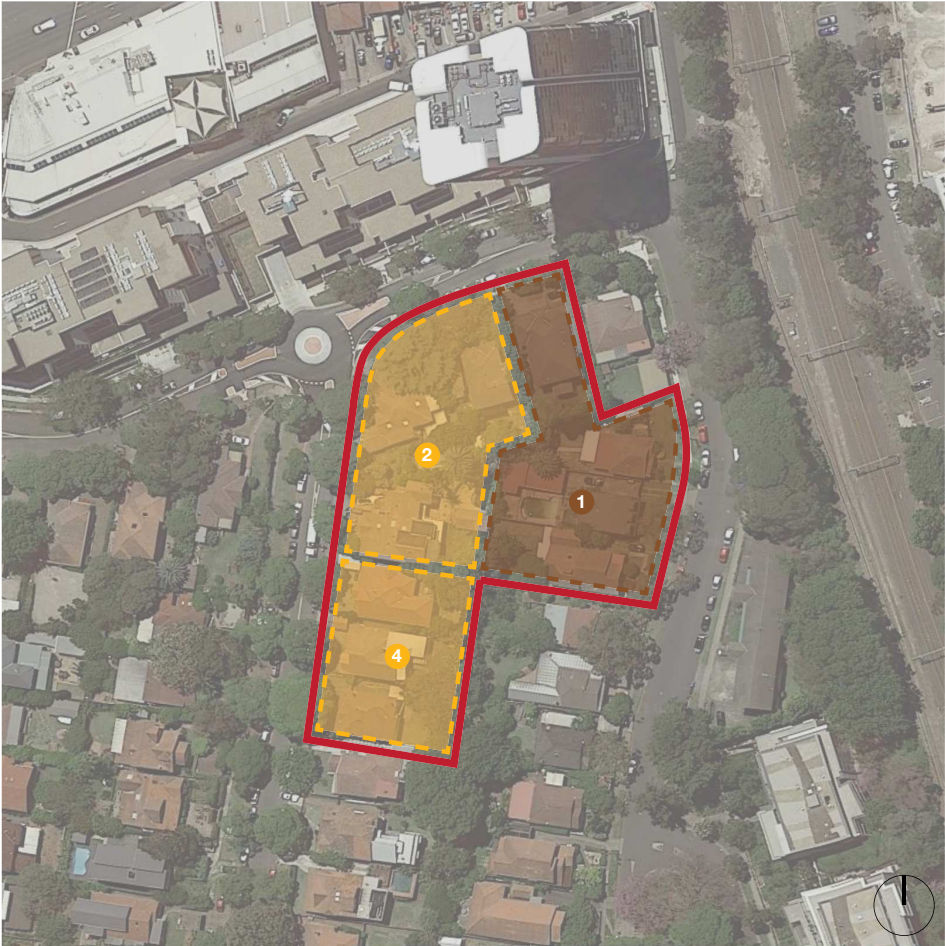
2 Marshall Avenue forms part of Area 1, but this site is unable to be consolidated as part of the development.



Zoning	
	High Density Residential Zone
	Mixed Use Zone



Heights	
	84.5m 24 Storey
	68.9m 22 Storey
	57.2m 18 Storey



Floor Space Ratio	
	5.00 : 1
	4.61 : 1

2.04

MASTER PLAN PRINCIPLES

The St Leonards South DCP and landscape master plan sets out the intended redevelopment pattern for the area, inclusive of locations of public open space, through site links and indicative built form.

The subject site incorporates areas 1, 2 and 4.



Landscape and Landforms

	Subject Site
	Road Reserve / Public Domain Tree
	Private Property Tree
	Topography
	Fall
	St Leonards South Landscape Masterplan



Connectivity and Community

	Area 1 (24 storeys)
	Area 2 (22 storeys)
	Area 4 (18 storeys)
	Pedestrian Link
	Green Spine
	Future Plaza / Station Connection



Urban Movement

	Secure Entry Point
	Community Amenity
	Stairs / Ramps
	Public Park
	Green spine
	Possible Canberra Ave Closure

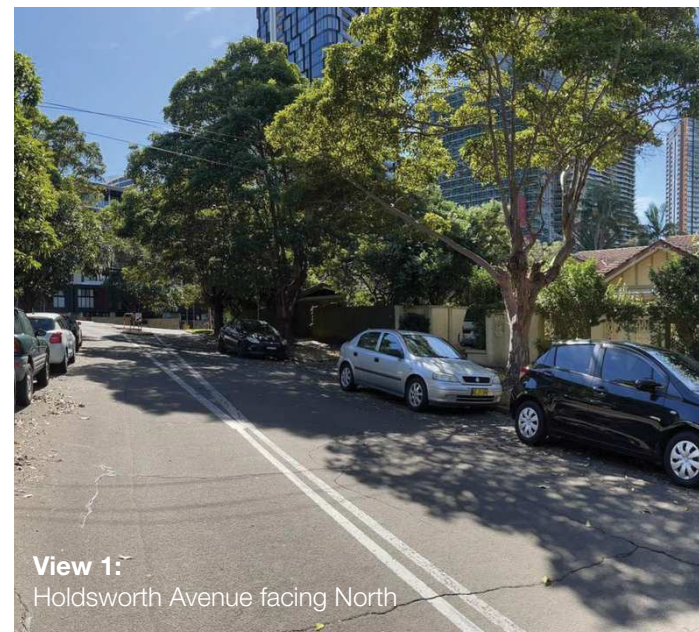
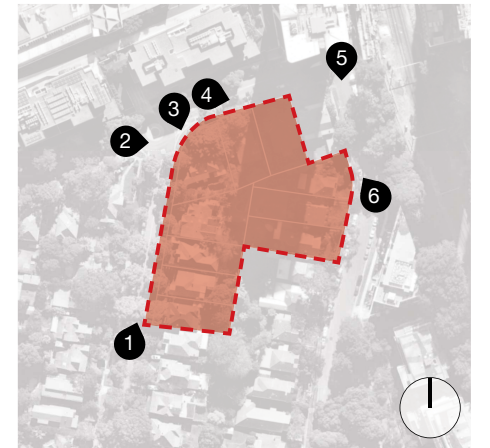
2.05 STREET VIEWS

As an area undergoing transition, the existing character of the area is of one and two storey dwelling houses, with relatively shallow front yard setbacks. The land form slopes steeply from North to South, with a relatively dense tree canopy to each street frontage.

To the north the recently completed Embassy apartments form a more urban interface, as that the site transitions from the St Leonards CBD core.

The St Leonards south precinct extends to the south of the site which is ultimately anticipated to redevelop from low to high density residential in line with the council's masterplan for the area.

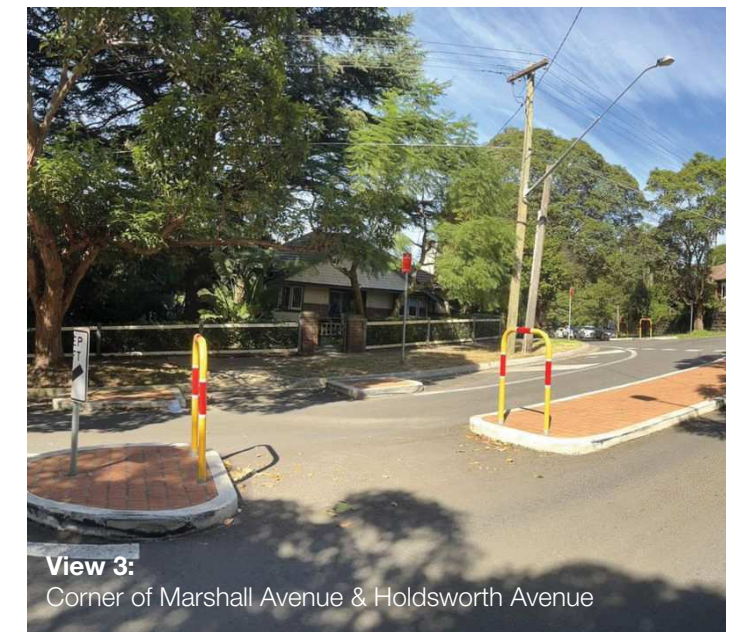
To the south of the site are further low density residential housing, with similar zoning to the subject site and anticipated to redevelop in line with the St Leonards Landscape Masterplan.



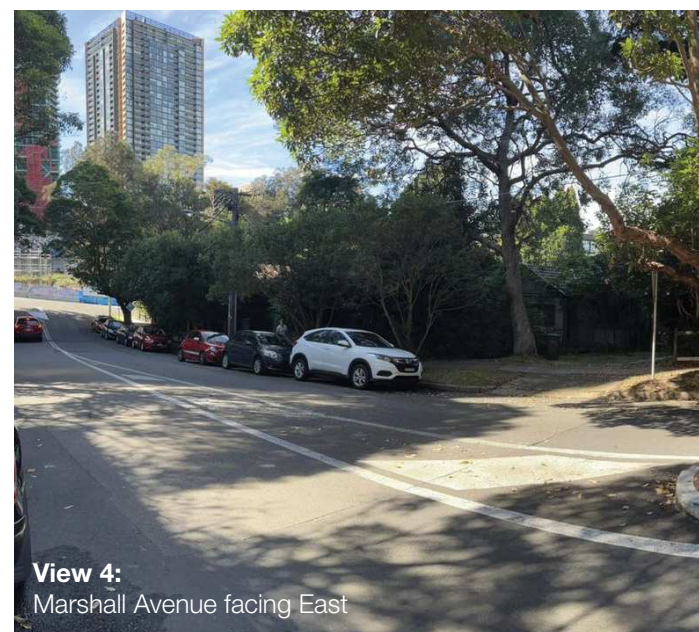
View 1:
Holdsworth Avenue facing North



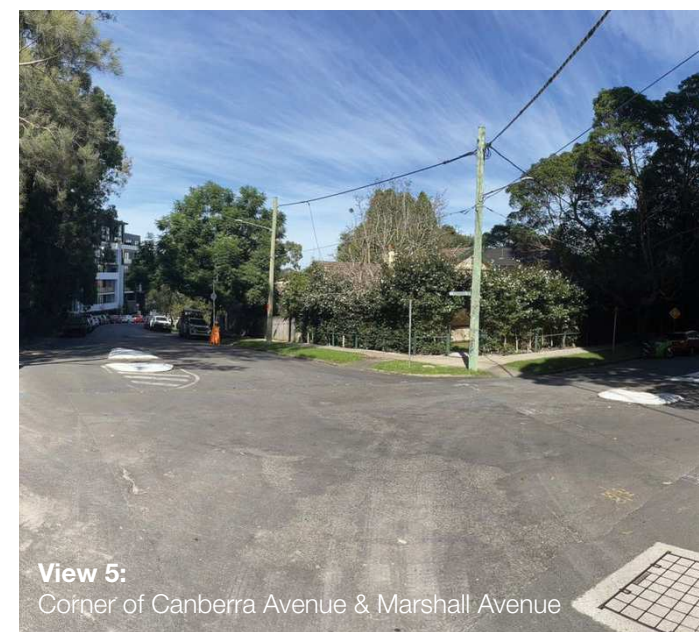
View 2:
Marshall Avenue facing East



View 3:
Corner of Marshall Avenue & Holdsworth Avenue



View 4:
Marshall Avenue facing East



View 5:
Corner of Canberra Avenue & Marshall Avenue



View 6:
Canberra Avenue facing North

2.06

SITE COMPOSITION

The subject sites are identified within the St Leonards South Masterplan to be consolidated into areas 1, 2 and 4, each with determined building envelopes and controls.

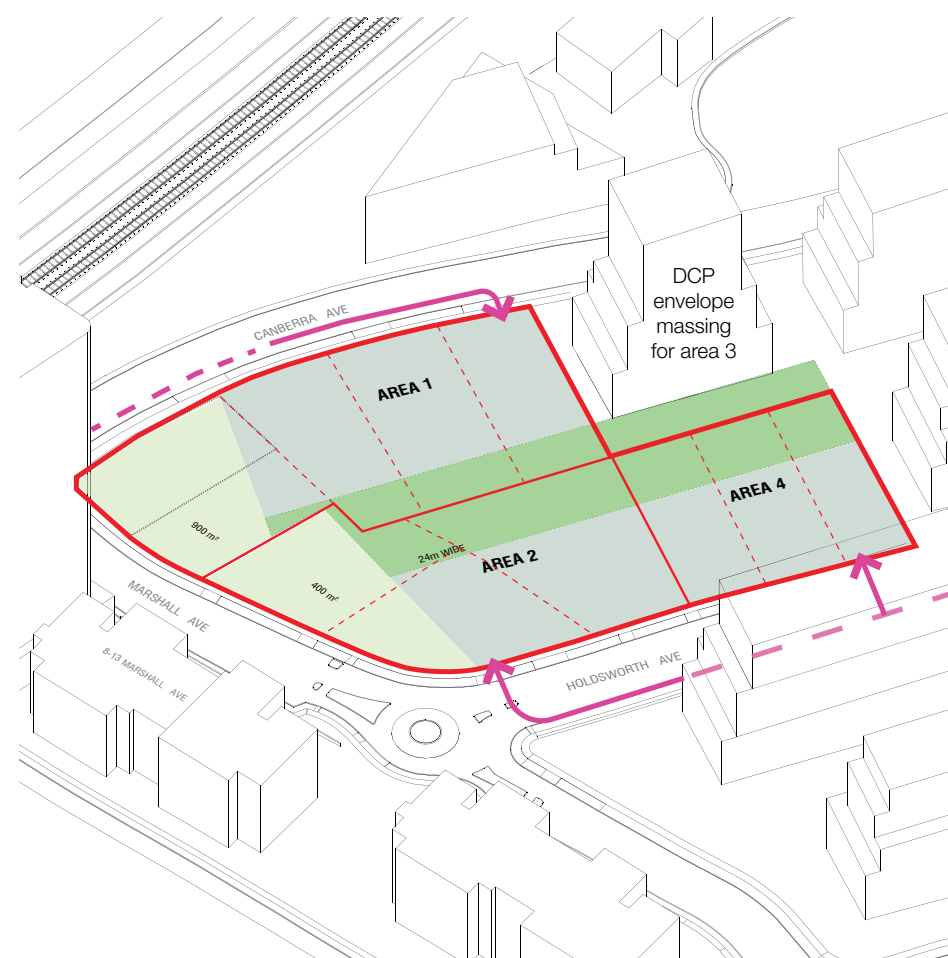
2 Marshall Avenue forms part of Area 1, but this site is unable to be consolidated as part of the development.

The Masterplan nominates 3 key conditions, with two public open spaces to be dedicated at the northern end of the precinct, and a 24m wide green spine connecting the three areas, and the remaining area available for building footprints.

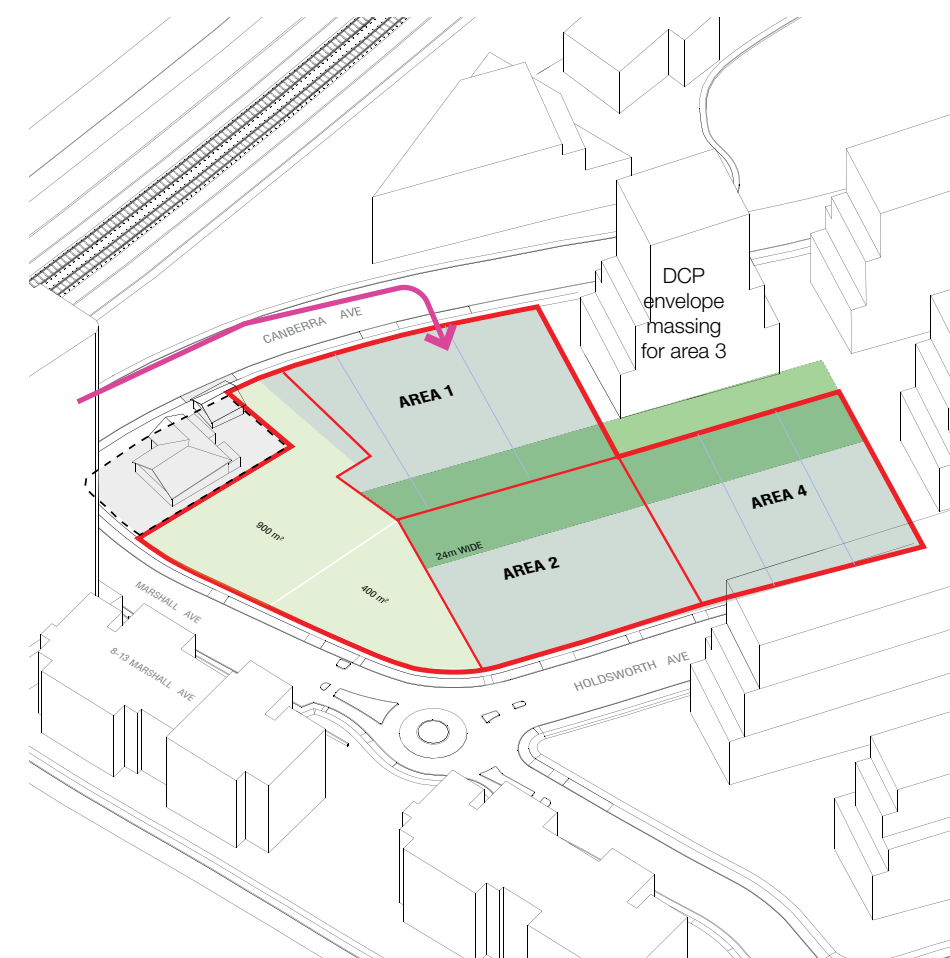
The 3 sites consolidation enables the removal of vehicular crossovers on Holdsworth avenue, enhancing its dense tree lined character.

Legend

	Subject Site
	Site Divisions
	Public Open Space
	Green Spine
➔	Vehicular Access



DCP & LMP
Original masterplan



Site Proposal
Reconfiguration whilst maintaining core elements

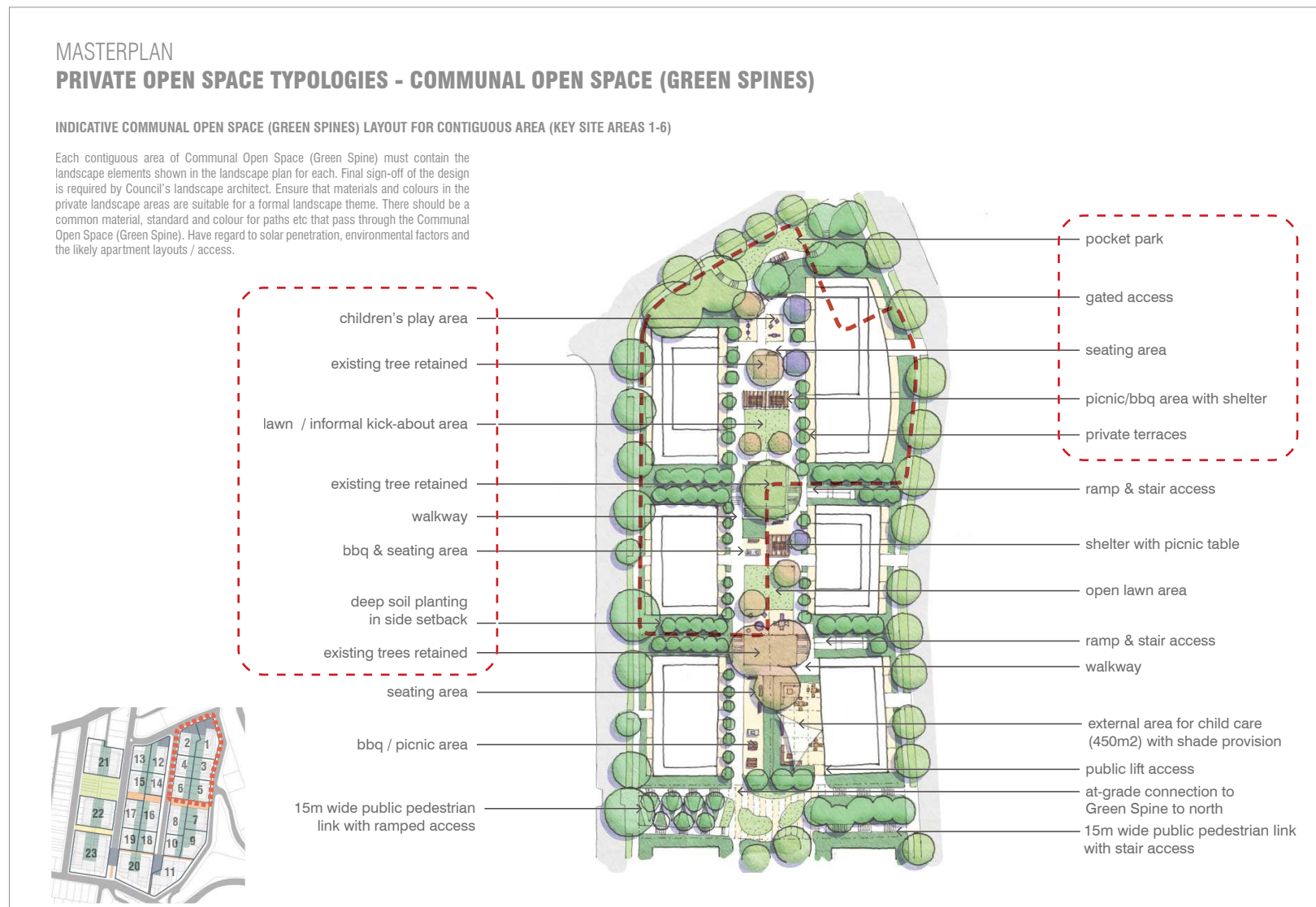
2.07 LANDSCAPE MASTERPLAN

Finalised in August 2020, the St Leonards South masterplan produced by Oculus provides a great scope of work for a new, green high density precinct.

Guiding design principles and requirements:

- Topography + accessibility
- Connectivity - maximising via through site links
- Street enhancement
- Open space network - via network of private communal green spines, public parks, links and pocket parks
- Street trees - canopy coverage and character
- Public/private separation and CPTED
- Setbacks and deep soil
- Sustainability - material and planting selection, WSUD, active transport and energy considerations
- Public art integration in each development

The subject site lies across several key areas, with each of the individual components identified as part of the masterplan being included within the proposal.



Acanthus mollis



Anemone x hybrida



Arthropodium cirratum



Aspidistra elatior



Asplenium australasicum



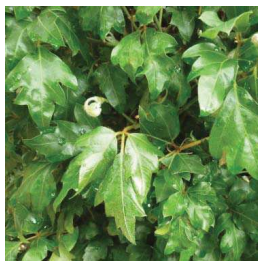
Calathea zebrinus



Ctenanthe 'Silver-Maroon'



Clivia miniata



Cissus antarctica



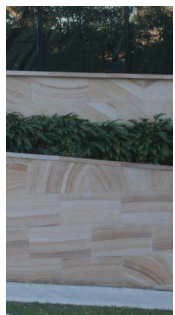
Dichondra argentea Silver Falls



Hydrangea quercifolia



Phormium cookianum



3.0

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DESIGN STRATEGY BUILT FORM & SCALE

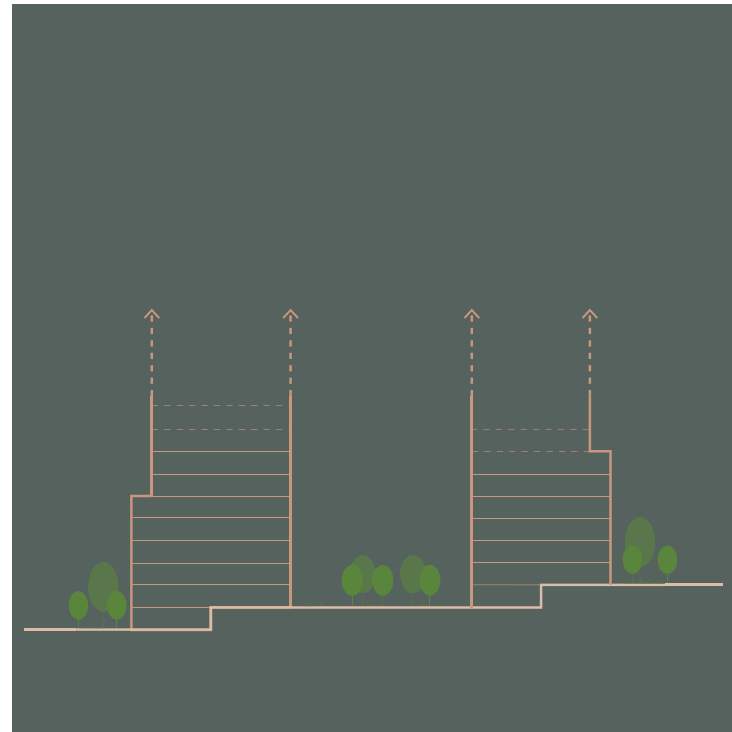
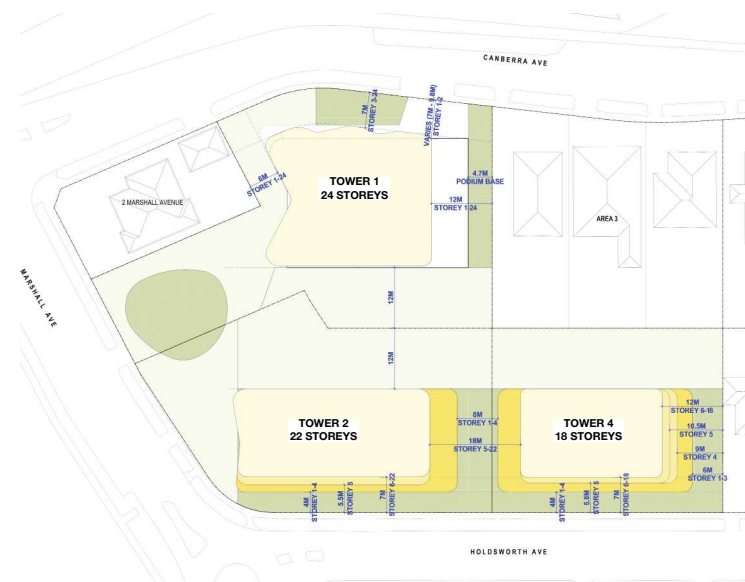
3.01 BUILT FORM STRATEGY

The current proposal is consistent with the approved DA/ S.455-2 Modification.

The DA/ S4.55-2 approved built form and heights were developed and iterated in response to feedback from council, Design excellence panel and the St Leonards South Masterplan.

The approved scheme proposed subtle variation to the DCP envelopes in order to maximise opportunities for solar access to apartments and open spaces. Sitting within the DCP envelope controls of the street wall controls with lower podium heights proposed on each tower to provide a more responsive residential character creating neighbourhood scale.

The current proposal raises the height of the towers by providing additional levels within the approved building footprint, maintaining the approved concept and formal strategy. The openness of the tower podium in response to the surrounding green spine and park is maintained. The additional height of the towers improves the overall proportion of the buildings.



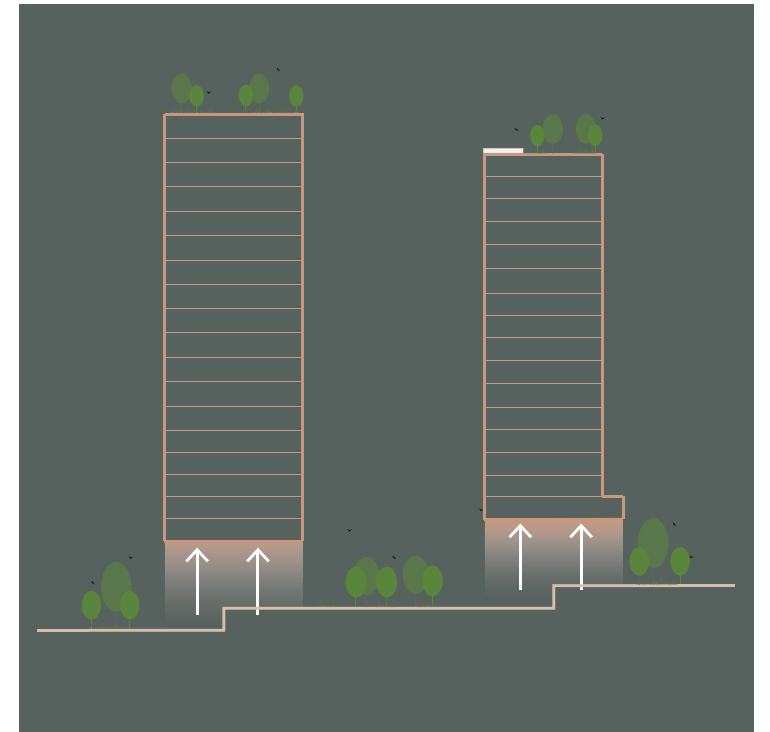
DCP Masterplan Vision

The masterplan establishes a hierarchy of linear landscaped spaces that follow the established subdivision pattern. The ridge line down to the water. Existing planting in the street and rear gardens is to be capitalised upon through the creation of a "Green Spine".



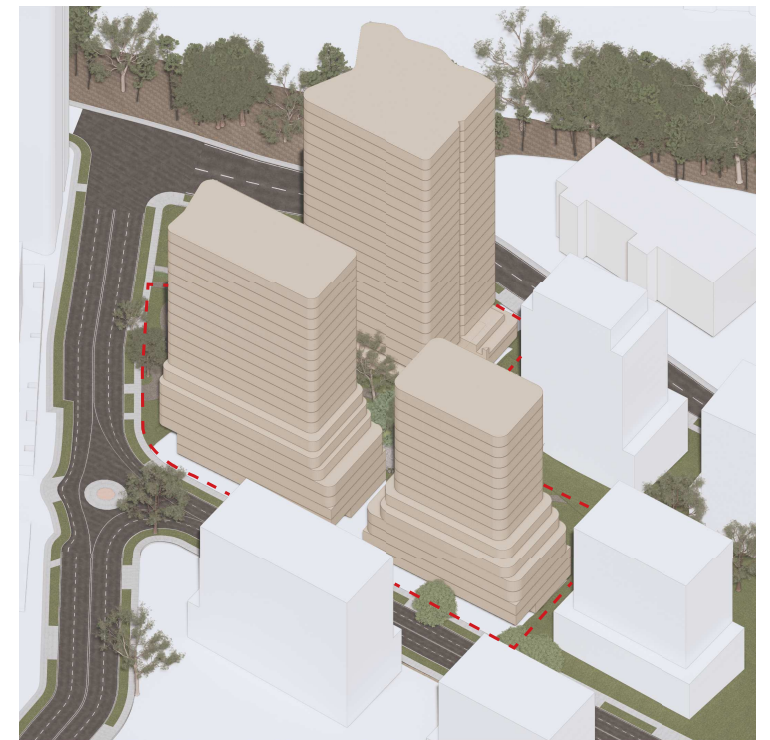
Overview 1

South-West Axonometric



Enhancing the communal

To visually connect the linear landscapes, the lower levels of the buildings are opened up to create lines of sight across the precinct. Elevated gardens are created on roof tops to seek vistas to the harbour beyond.



Overview 2

North-East Axonometric

3.02

INTERFACE WITH PUBLIC DOMAIN

The interface with the public domain is consistent with the approved DA/S4.55-2 Modification.

The design of the public and private entry areas, along with services have been tuned to the terrain, landscape and orientation to maximise passive surveillance and legibility of address from the public domain.

Double height lobbies address the street entry and green spine. Individual terrace style apartments are established with individual gates and access to activate the streetscape.

The location of the driveway and services to minimise visual impact is maintained. The location of the communal open space and gym above counters the lack of activation of the driveway, with enhanced passive surveillance to the street.

Public Open Space

The new public park provides a unique second address for both Tower 1 and Tower 2, along with a communal access to the green spine in the centre. Both lobbies to the towers are designed as thru spaces, enhancing visual connectivity and permeability through the site.

An integrated fence design is proposed that meanders through the landscape design, reducing its visual appearance and creating a more softly framed edge between public and private areas, whilst still establishing a definition to each.

An additional residents only access point to the communal landscape is created in the break between the two buildings, with a meandering pathway created to connect to the green spine below the street.



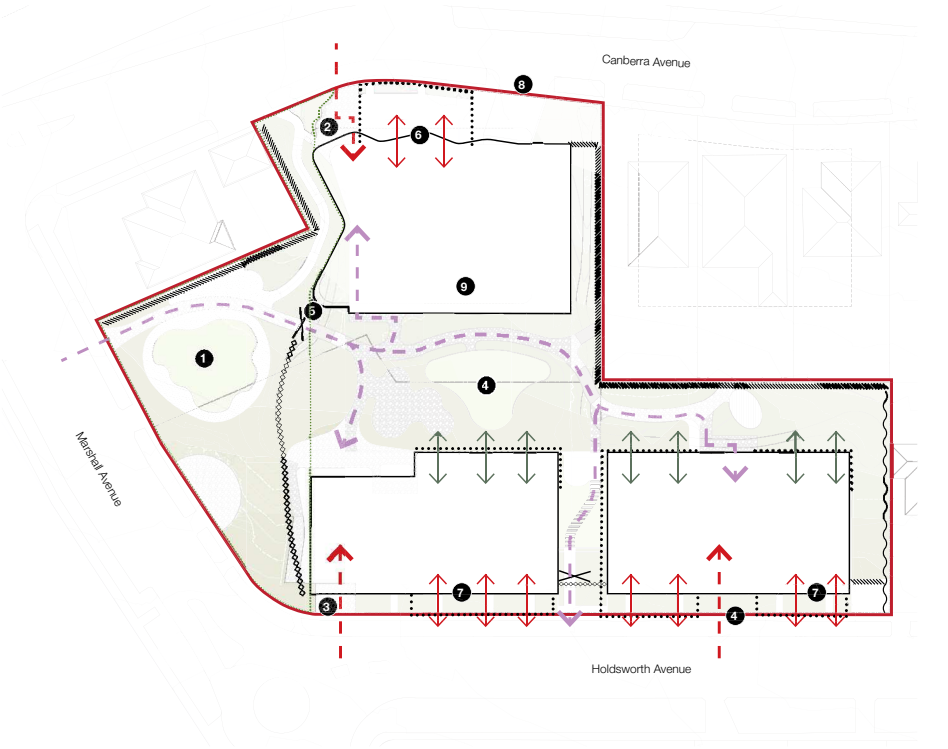
1. The Park






















2. Holdsworth Link



3. Tower 4



Legend			
	Subject Site		Fence to Green Spine
	Entry Point Circulation		Security Gate
	General Circulation Paths		Fence to Private Courtyards
	Public Park		Permanent boundary fence
	Townhouse Entry/Exit Points		Temporary boundary fence pending development of adjacent areas
	Townhouse Green Interface		
	Public Park Access		
	T1 Lobby Entry		
	T2 Lobby Entry		
	T4 Lobby Entry		
	Public Park Green Spine access		
	Townhouse Holdsworth Ave Interface		
	Townhouse Canberra Ave Interface		
	Basement Access		

3.03 COMMUNAL AREAS

The communal spaces are consistent with the approved DA/ S4.55-2 Modification.

As part of the proposal, a significant amount of communal space is provided, both internal and external.

Once the Public park is dedicated, the developable area of the subject site is 5427m². The ADG would suggest a minimum communal open space of 1357m².

Within the development a series of Communal open spaces are provided.

These are:

Outdoor

- Green Spine - 1728.8m²
- Ground Landscaping Areas - 590.5m²
- Tower 1 Pool Recreation area - 413.5m²
- Tower 2 Rooftop Communal space (including amenities & soft landscaping) - 282.1m²

Additional Indoor Communal Assets

- Tower 1 Gym - 67.2m²
- Tower 1 Dining- 96.0m²
- Basement Music and Golf Room - 71.7m²

These outdoor areas total 3014.9m², which is well in excess of the 1681.4m² (25% of total site area) required under the Apartment Design Guide.

Once the indoor areas and areas of passive landscape areas of 1300m² are included, the total area of all communal spaces, landscape spaces and planting is 4549.5m² or 67.6% of the total gross site area.

As part of this uplift design additional amenities are proposed including indoor music and golf rooms, exterior communal spas and rooftop yoga space.



1. The Pool



2. The Pool Deck



3. Roof Terrace



3.04

FACADE

The facade design is consistent with the submitted S4.55-4 Modification.

The facade consist of the following elements:

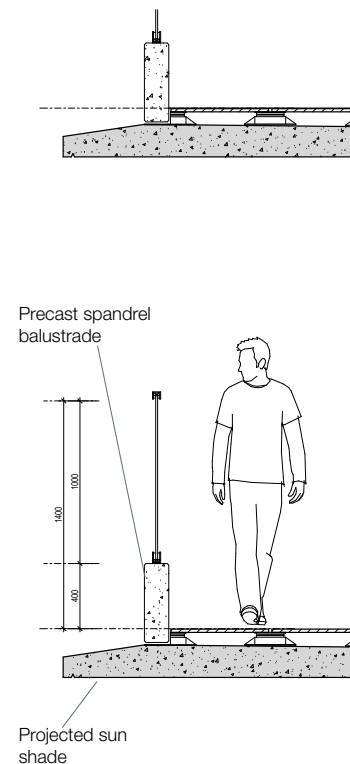
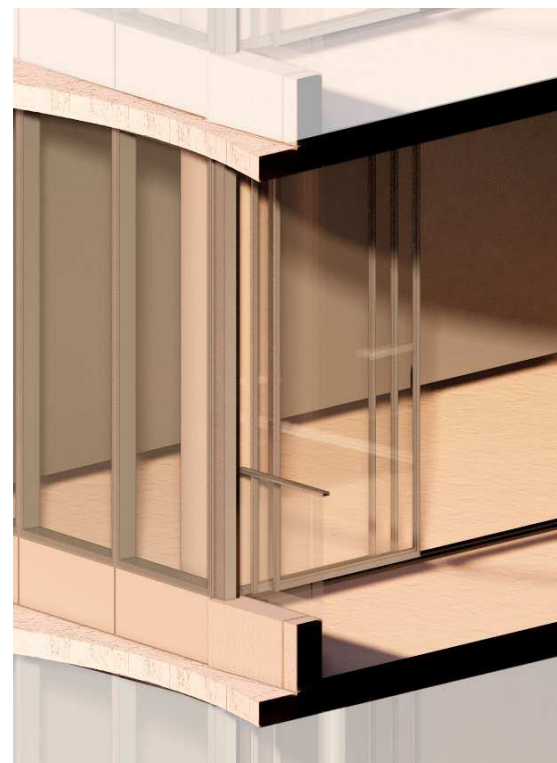
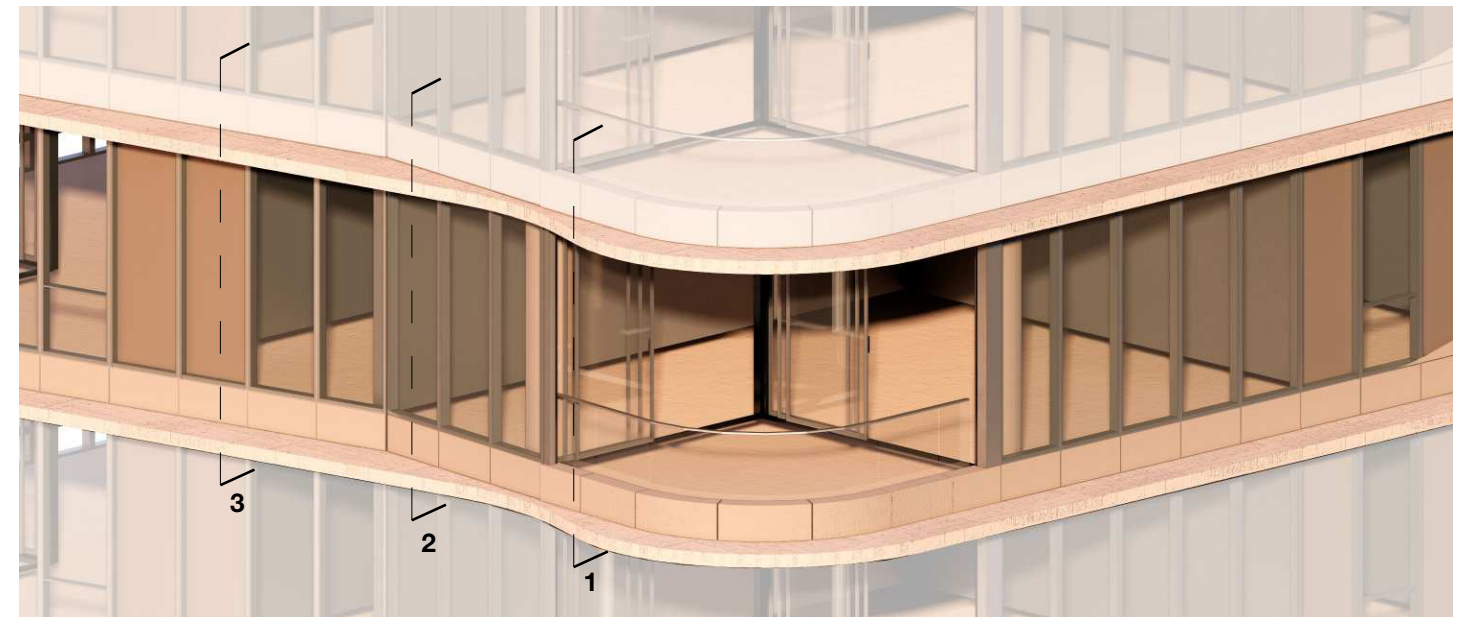
Typical Balustrade

Concrete and glazing used to emphasise continuous horizontal banding throughout the facade. The height of concrete is designed to ensure views out from the apartment are still achieved when seated at the lounge or dining table.

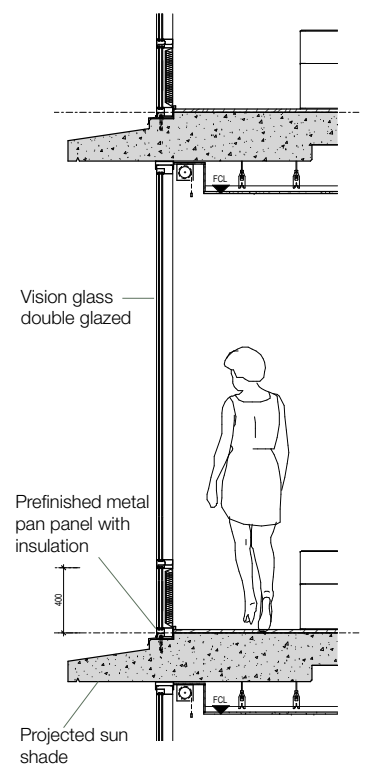
Typical Window with Spandrel

The use of a full height window system ensures a performance tested envelope and high quality factory finish. The lower spandrels panel is a pre-finished metal pan panel to emphasise the horizontal banding of the facade design. The sun shade projection distance shades the facade and is balanced with the solid to glass wall ratio and ESD principles for design excellence.

Indicative details subject to technical design development with specialist contractor input.



Section 1
Typical balustrade with spandrel



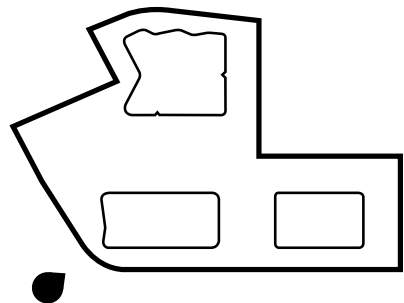
Section 2
Typical window with spandrel

3.05 MATERIALITY

The materiality is consistent with the submitted S4.55-4 Modification.

The proposed materials provide the same material / colour scheme for the 3 towers for a unified precinct.

The materials are distinguished between the podium and towers to provide a rich texture and visual interest at the lower levels.

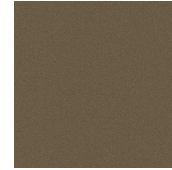


Holdsworth Ave/ Marshall Ave Street View -
Consistent With DA/ S4.55-4

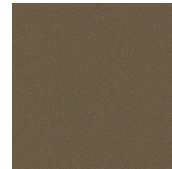
CF02
NAWKAW STYLE CONCRETE FINISH
EQUIVALENT TO DULUX NUTCRACKER



CS01
ALUMINIUM CLADDING SYSTEM
EQUIVALENT TO DULUX
ELECTRO MEDIUM BRONZE



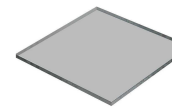
MF01
METAL FINISH
EQUIVALENT TO DULUX
ELECTRO MEDIUM BRONZE



GT01
GLAZING
CLEAR



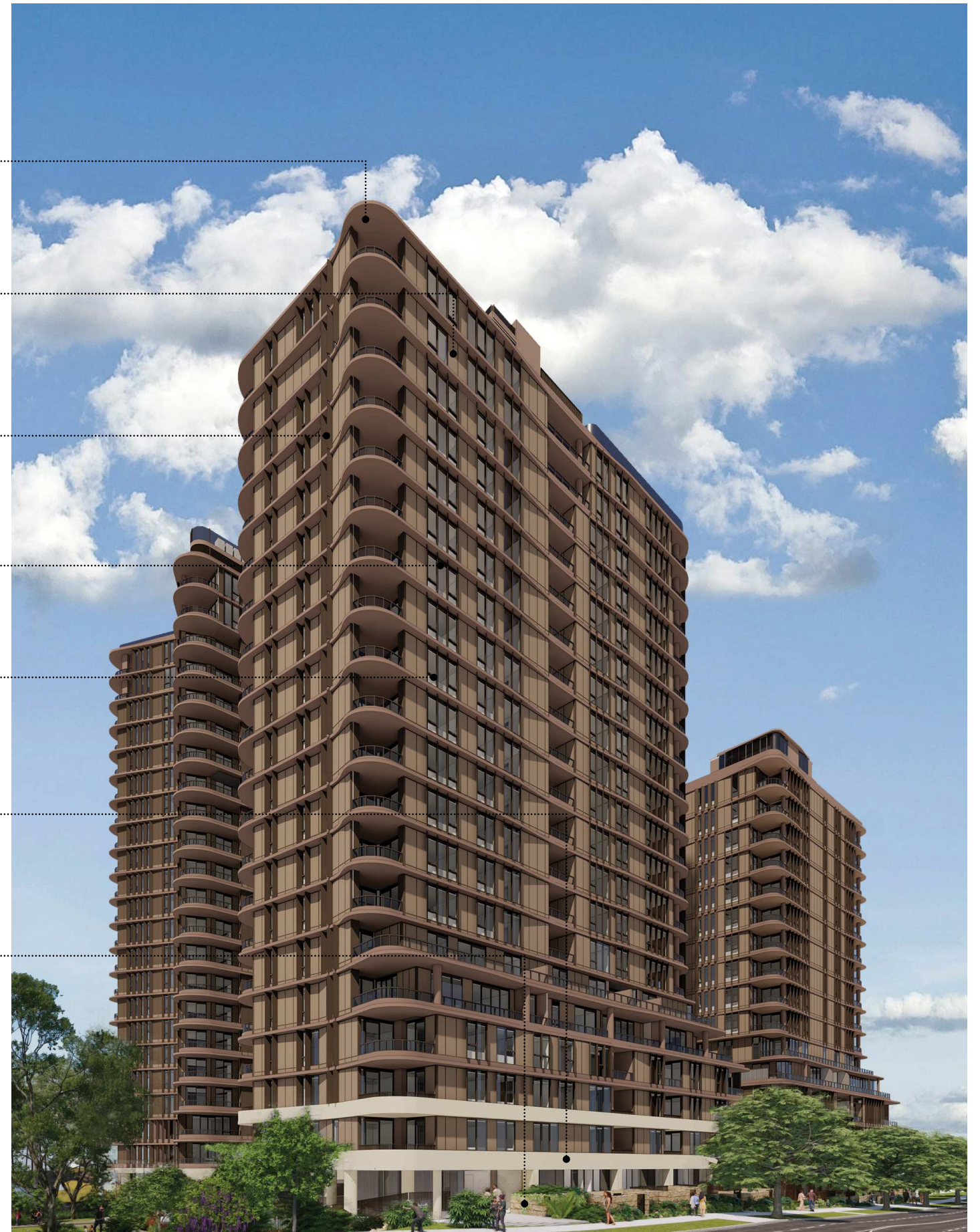
GT02
GLAZING
NEUTRAL TINT



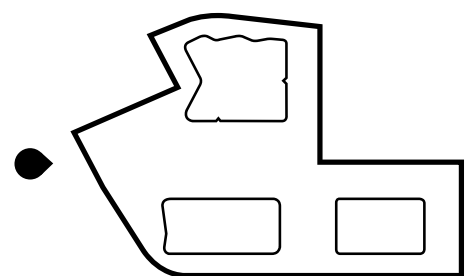
CF01
NAWKAW STYLE CONCRETE FINISH
EQUIVALENT TO DULUX FIJI SANDS
(PODIUM)



ST01
STONE FINISH
TEXTURED SANDSTONE
(PODIUM)



3.06 EXTERIOR VIEWS



Marshall Avenue Street View -
Consistent With DA/ S4.55-4



S4.55-6 MODIFICATION

4.0

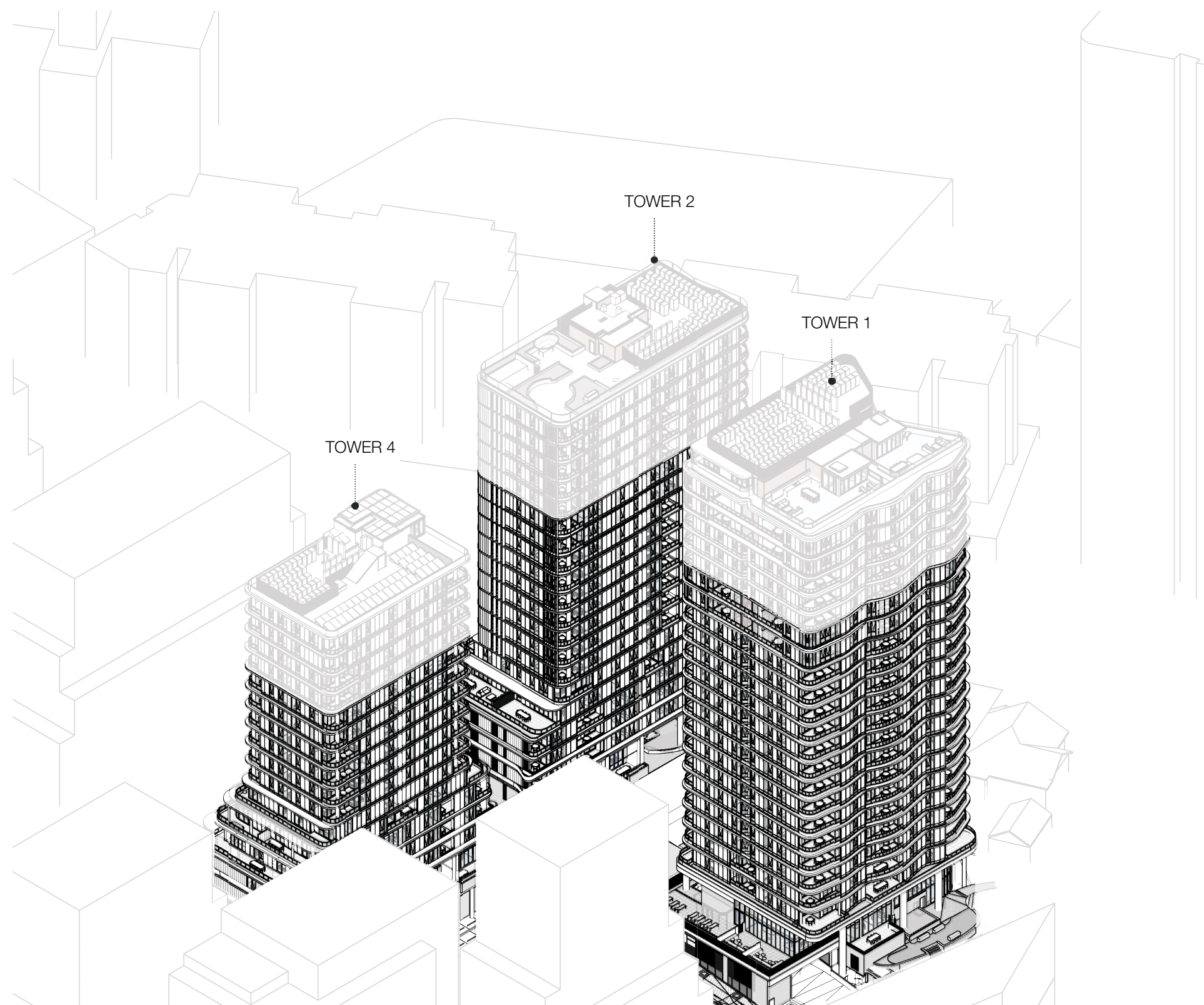
4.0	Analysis	24
4.01	3D Massing	25-26
4.02	Key Development Statistics	27
4.03	Sections	28
4.04	Elevations	29
4.05	Tower 1 Plans	30-32
4.06	Tower 2 Plans	33-34
4.07	Tower 4 Plans	35-36

ANALYSIS

4.01

3D MASSING

The proposed massing for the development is substantially similar to the approved massing. The additional mass is within the approved building footprint with additional levels added to the three towers to accommodate the affordable housing GFA.



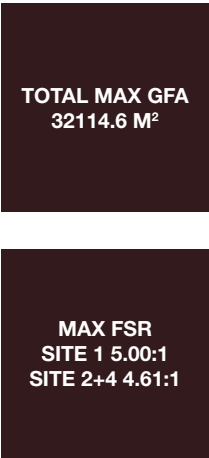
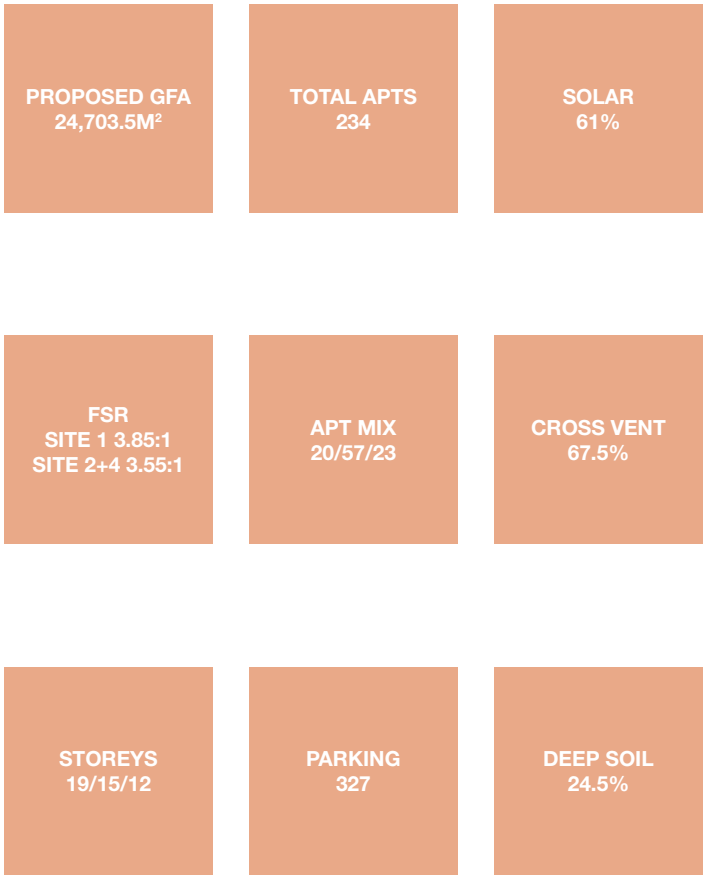
Legend

■	Approved S4.55-2 Building Extent
■	Additional Massing from S4.55-6 Modifications For Infill Affordable Housing Uplift

4.01

KEY DEVELOPMENT STATISTICS

Approved:
DA79/2022 S4.55-2 Determined 5/10/23

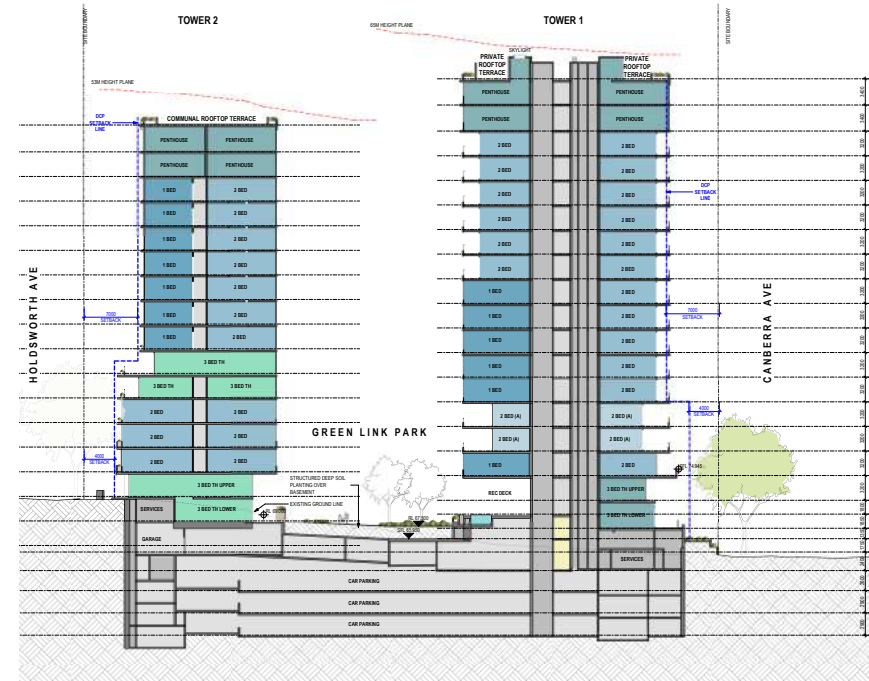


Proposed:
S4.55-6 Modifications For In-Fill Affordable Housing Uplift



4.02 SECTIONS

Approved:
DA79/2022 S4.55-2 Determined 5/10/23



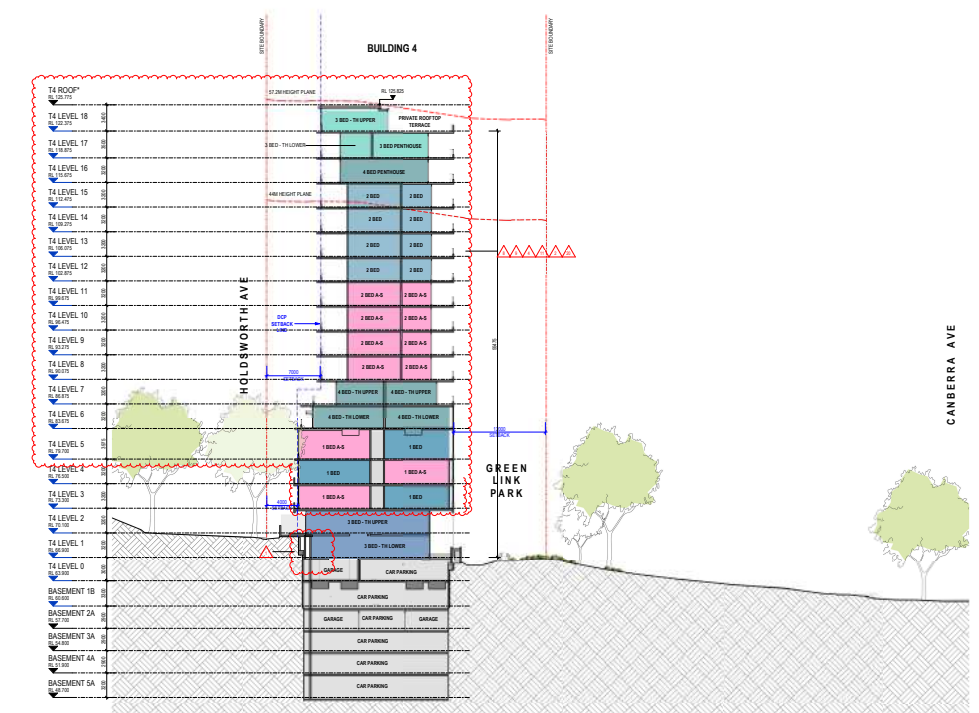
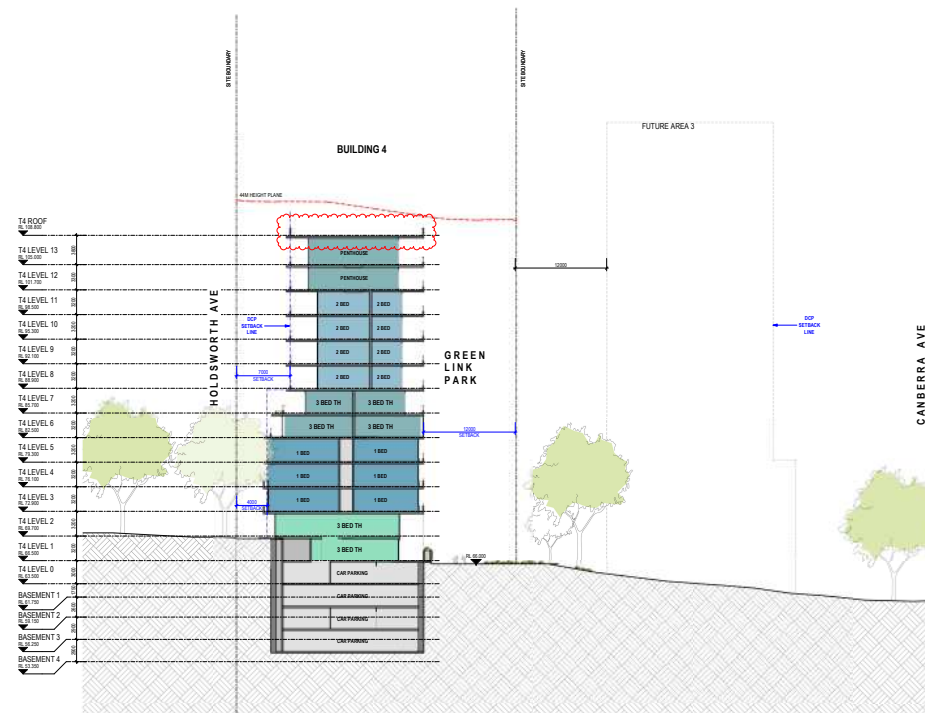
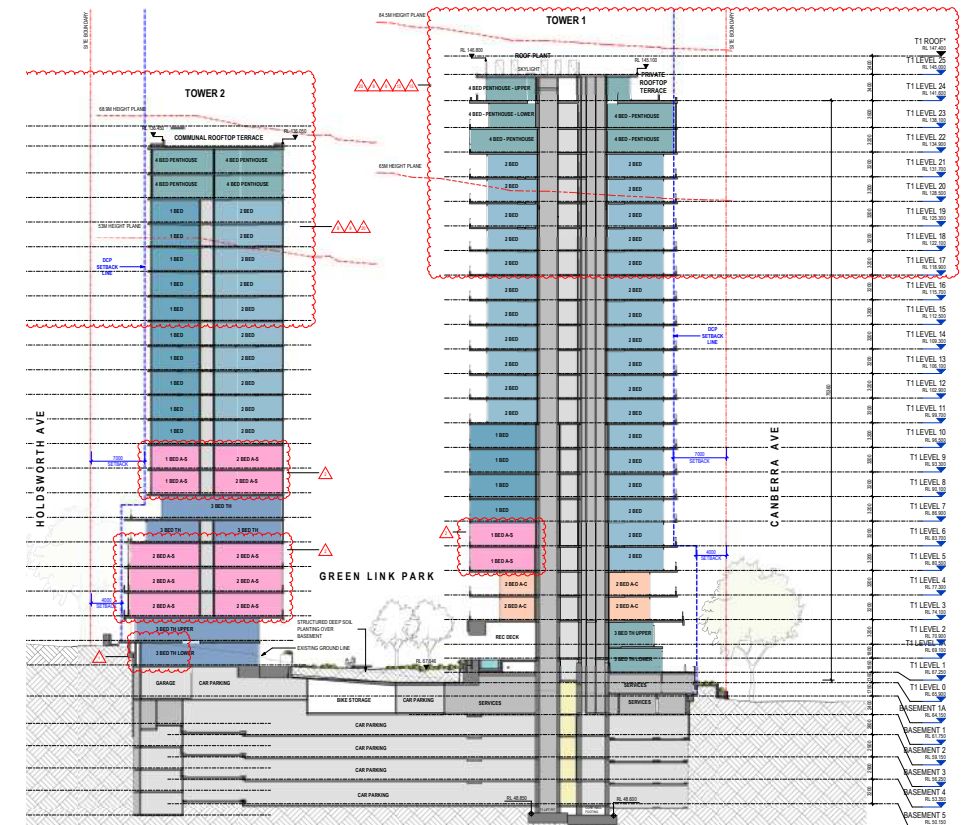
Key sections of the project compared to the approved S4.55-2 Modification.

1 1/2 levels of basement parking are added.
Tower 1 has 5 full levels added and more internal penthouse space added on the roof. The high roof has an expanded mechanical / hot water plant area to cater for the increased unit numbers.

Tower 2 has 5 full levels added.

Tower 4 has 4 full levels added and additional internal penthouse space added to the roof.

Proposed:
S4.55-6 Modifications For In-Fill Affordable Housing Uplift



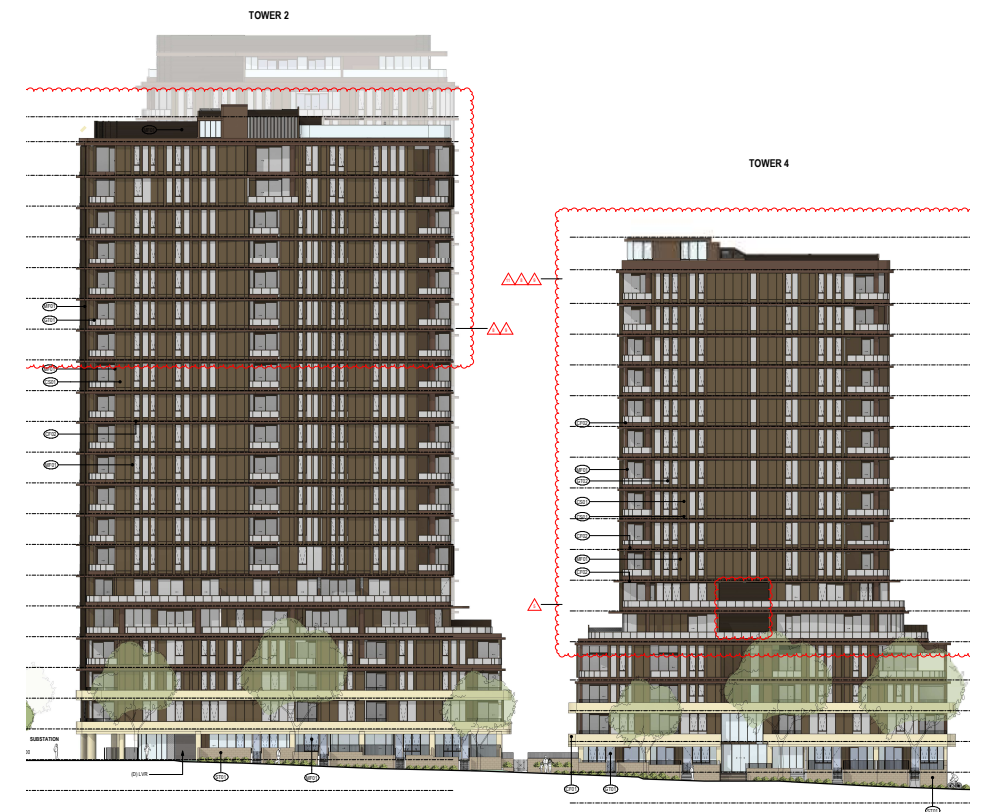
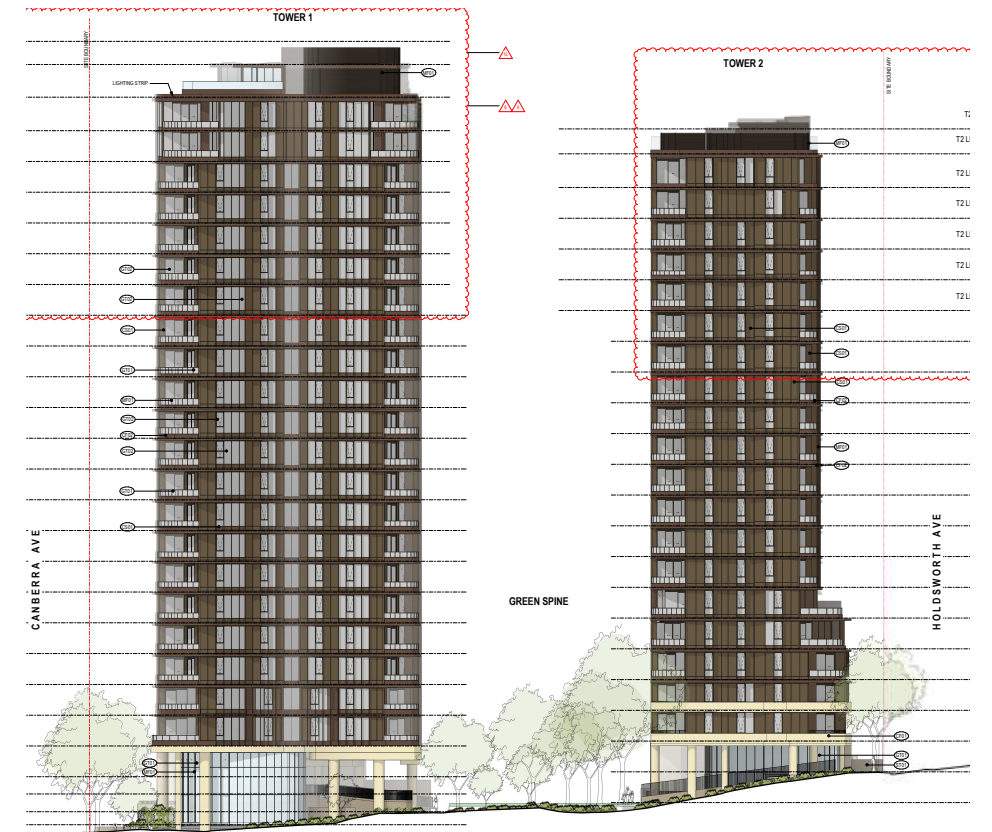
4.03 ELEVATIONS

Approved:
DA79/2022 S4.55-2 Determined 5/10/23

Proposed:
S4.55-6 Modifications For In-Fill Affordable Housing Uplift

North (from the public park) and West (Holdsworth Ave)
Elevations of the Proposed vs Approved Schemes.

5 additional levels to Towers 1 and 2, 4 additional levels to
Tower 4.



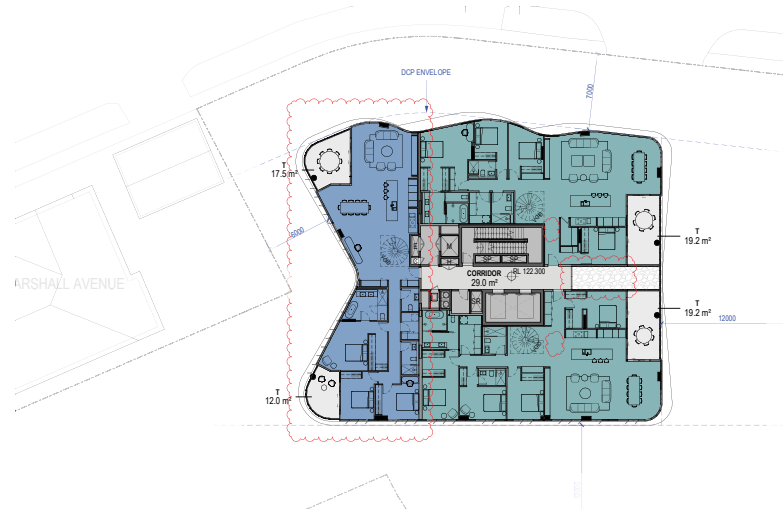
4.04 TOWER 1 PLANS

The typical floorplate from levels 11-16 is repeated for levels 17-21. The penthouse level layouts are moved up to levels 22-23 with revisions to accommodate 2 dual level penthouses. A larger roof plant area is provided to service the increased unit numbers.

Approved:
DA79/2022 S4.55-2 Determined 5/10/23



T1 LEVEL 17

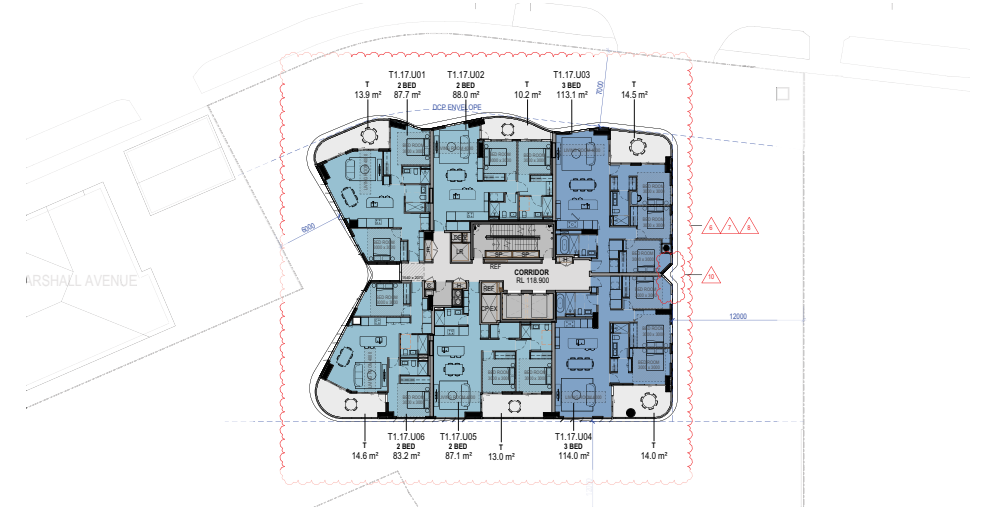


T1 LEVEL 18

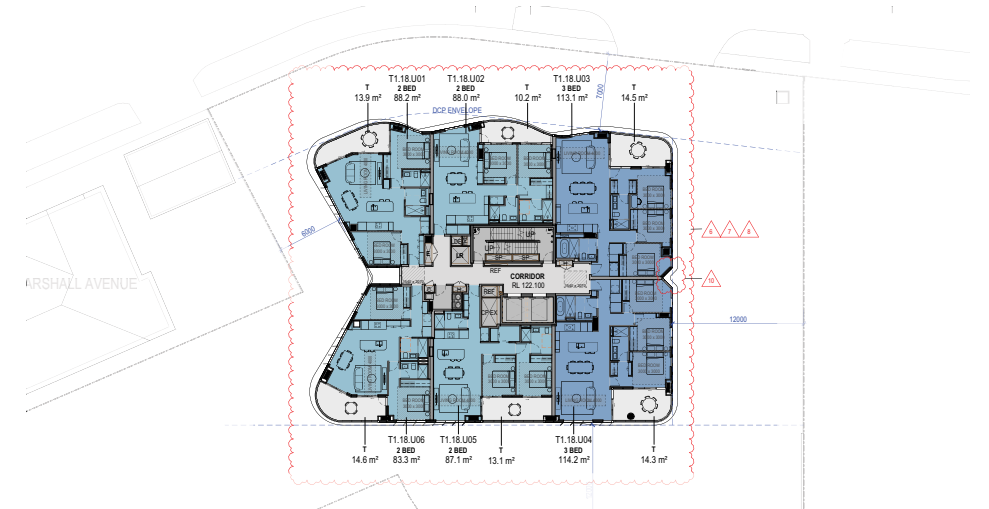


T1 LEVEL 19

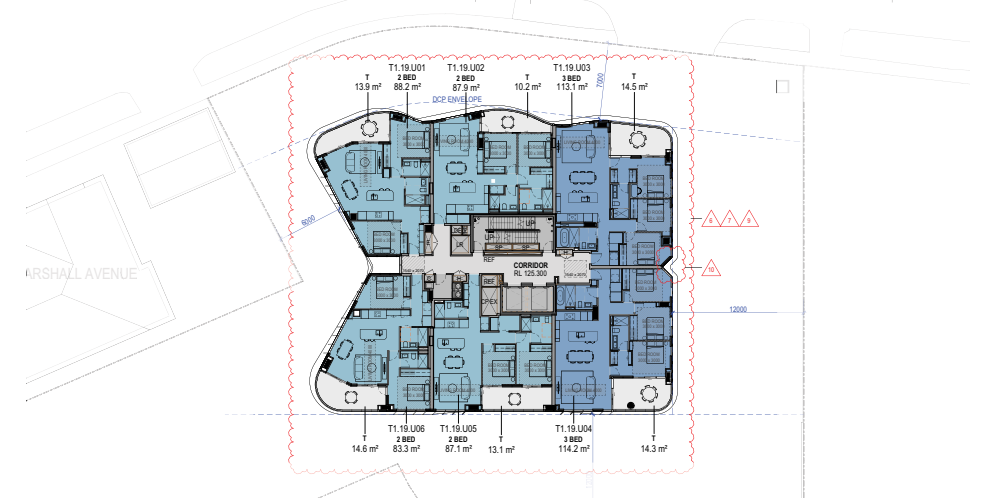
Proposed:
S4.55-6 Modifications For In-Fill Affordable Housing Uplift



T1 LEVEL 17



T1 LEVEL 18



T1 LEVEL 19

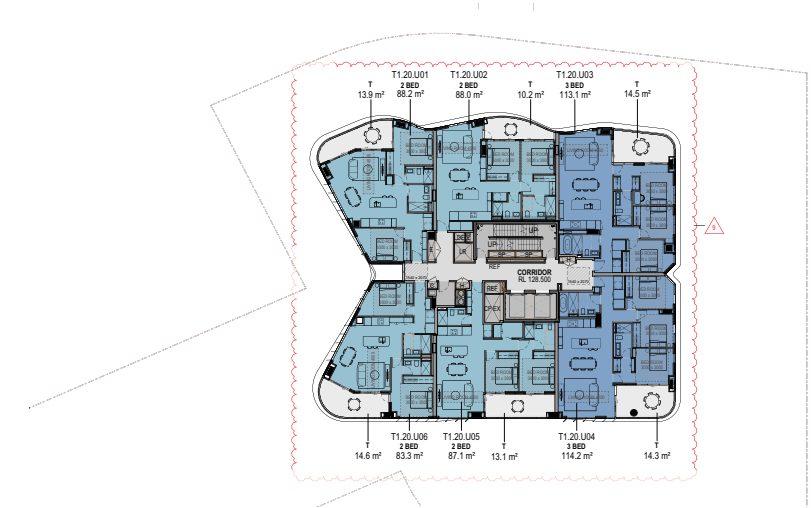
4.05 TOWER 1 PLANS

Approved:
DA79/2022 S4.55-2 Determined 5/10/23

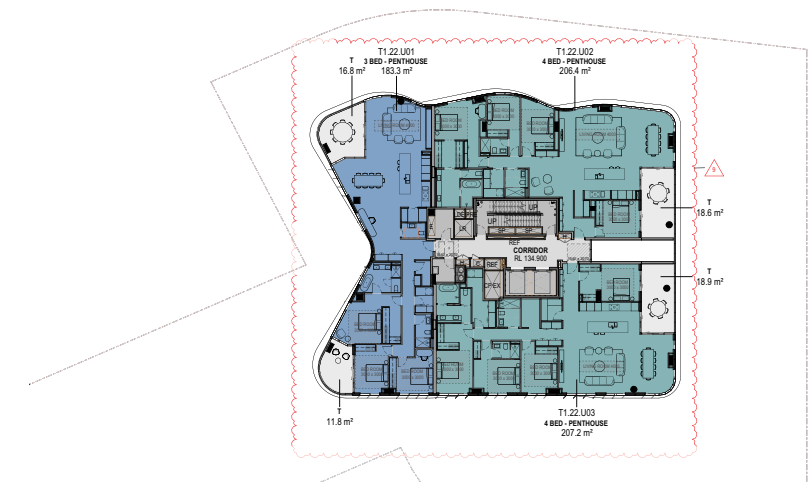


T1 ROOF/ LEVEL 20

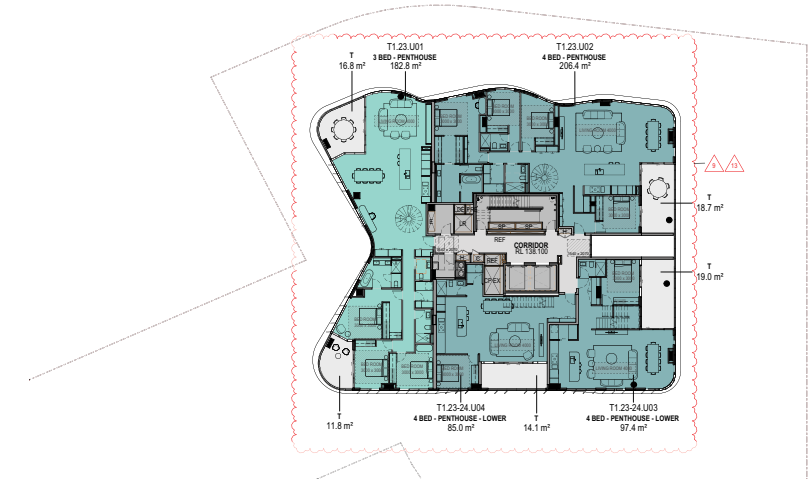
Proposed:
S4.55-6 Modifications For In-Fill Affordable Housing Uplift



T1 LEVEL 20 - LEVEL 21



T1 LEVEL 22



T1 LEVEL 23

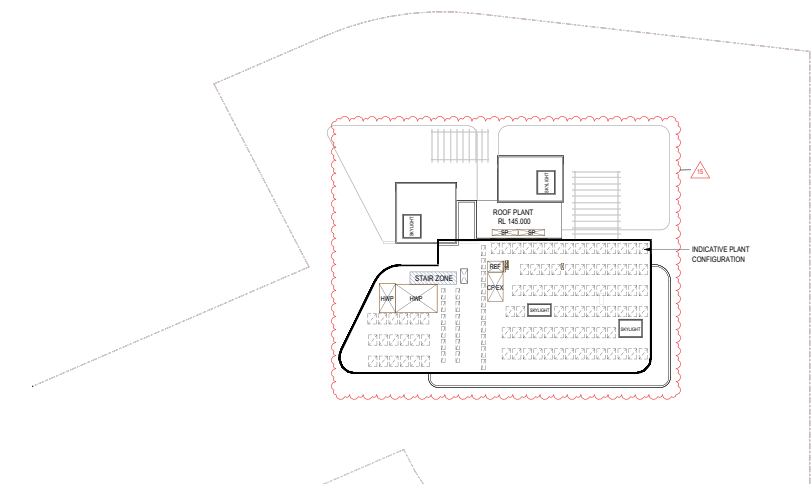
Approved:
DA79/2022 S4.55-2 Determined 5/10/23

Proposed:
S4.55-6 Modifications For In-Fill Affordable Housing Uplift

4.05 TOWER 1 PLANS



T1 LEVEL 24

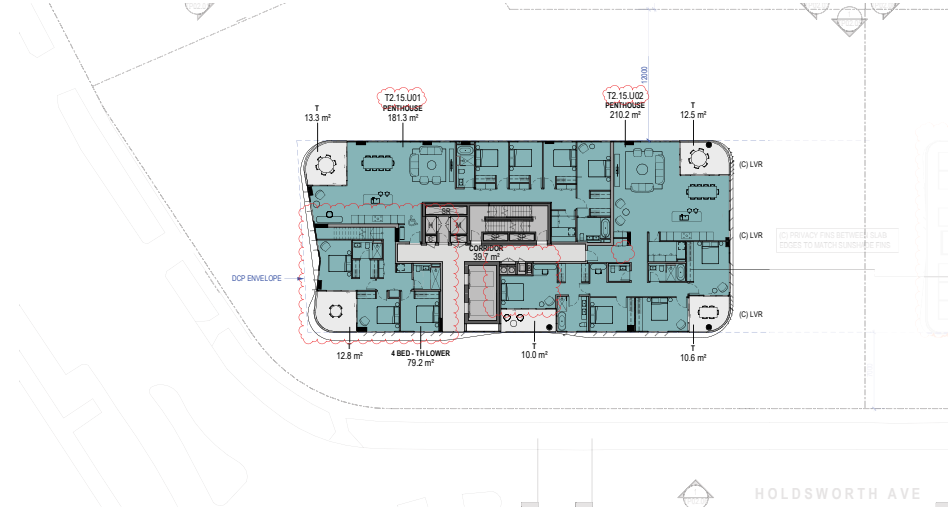


T1 ROOF

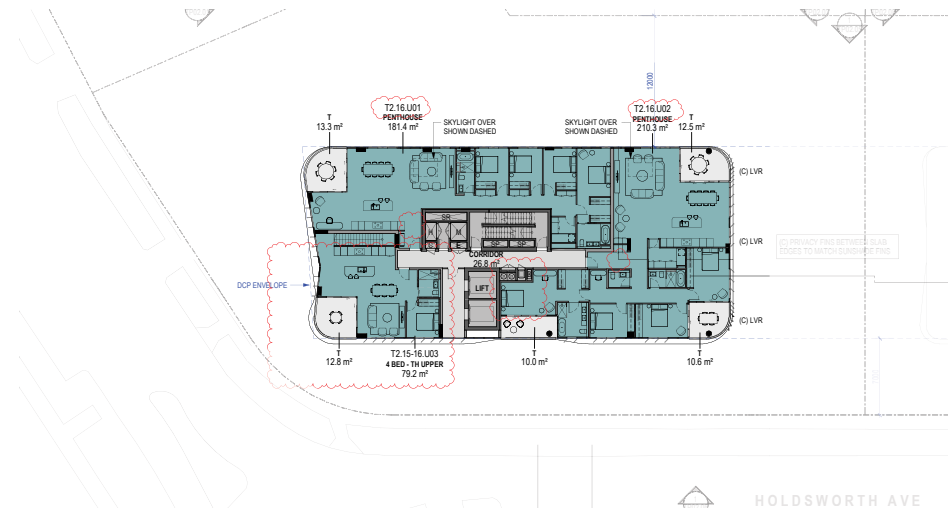
4.05 TOWER 2 PLANS

The typical floorplate from levels 8-14 is repeated for levels 15-19. The penthouse level layouts are moved up to levels 20-21. A larger roof plant area is provided to service the increased unit numbers.

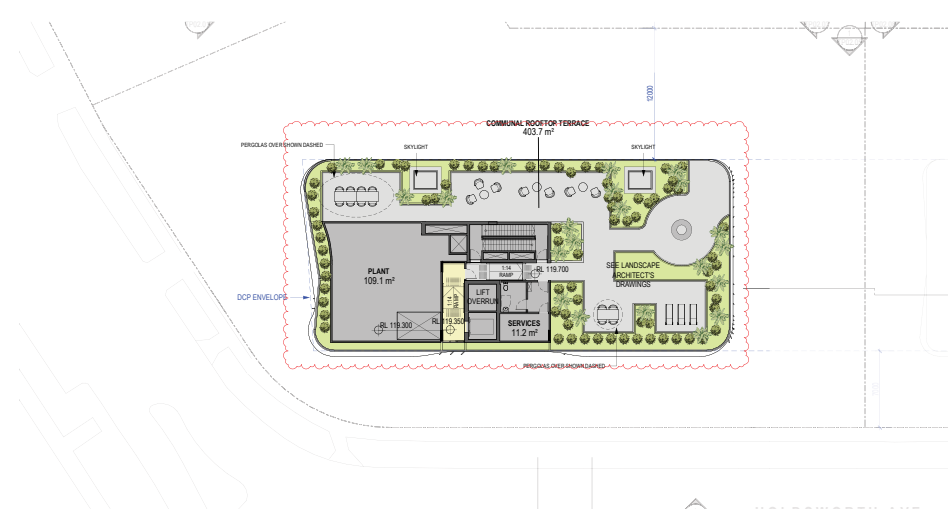
Approved:
DA79/2022 S4.55-2 Determined 5/10/23



T2 LEVEL 15

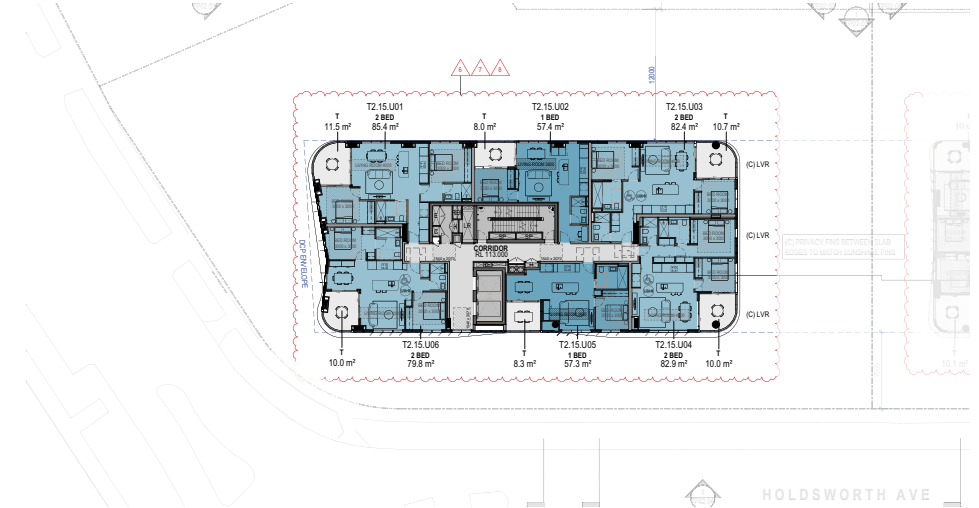


T2 LEVEL 16

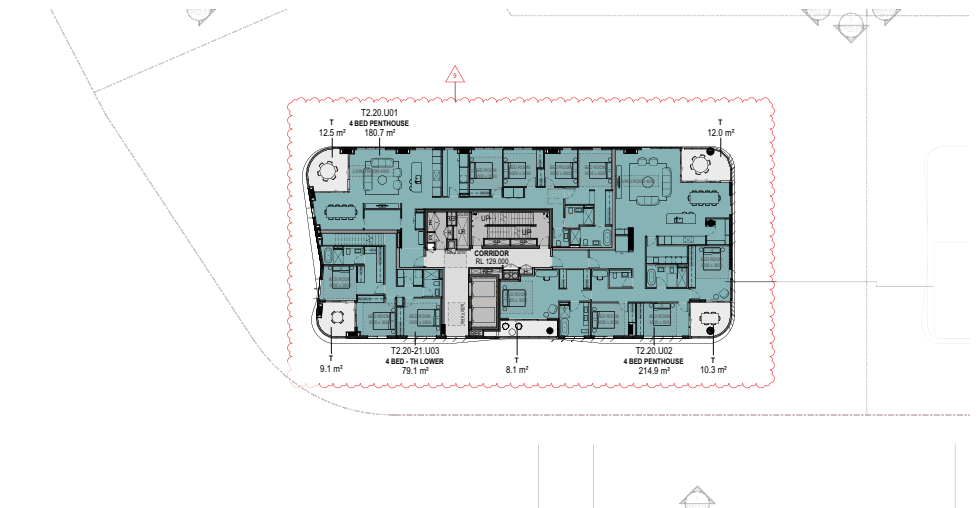


T2 LEVEL 17

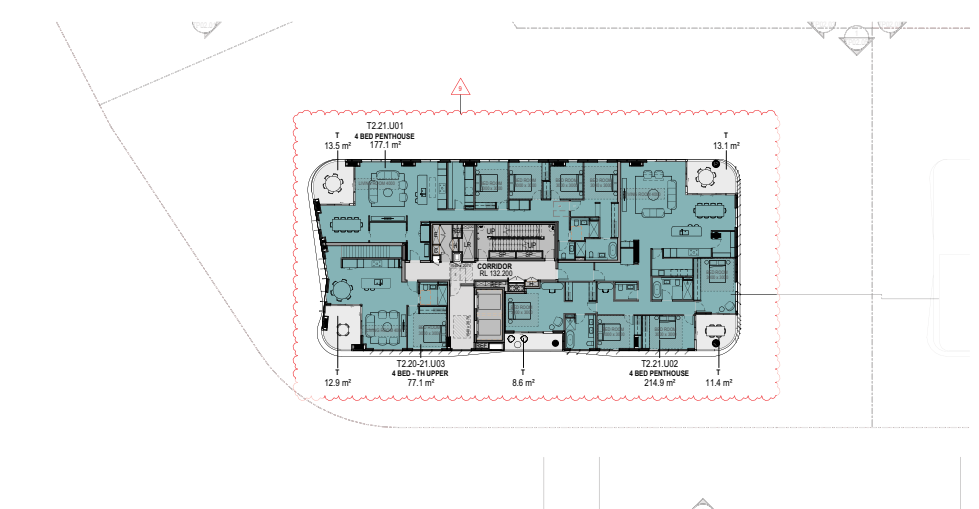
Proposed:
S4.55-6 Modifications For In-Fill Affordable Housing Uplift



T2 LEVEL 15-19



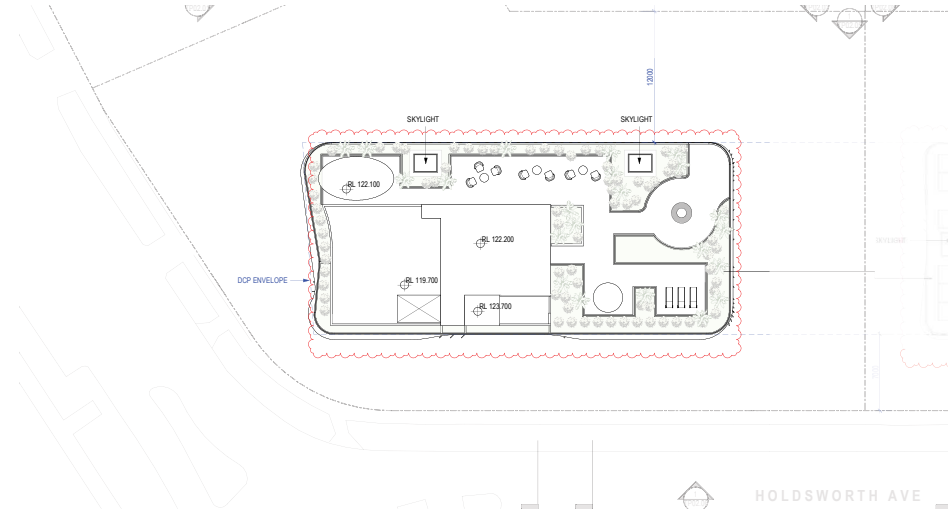
T2 LEVEL 20



T2 LEVEL 21

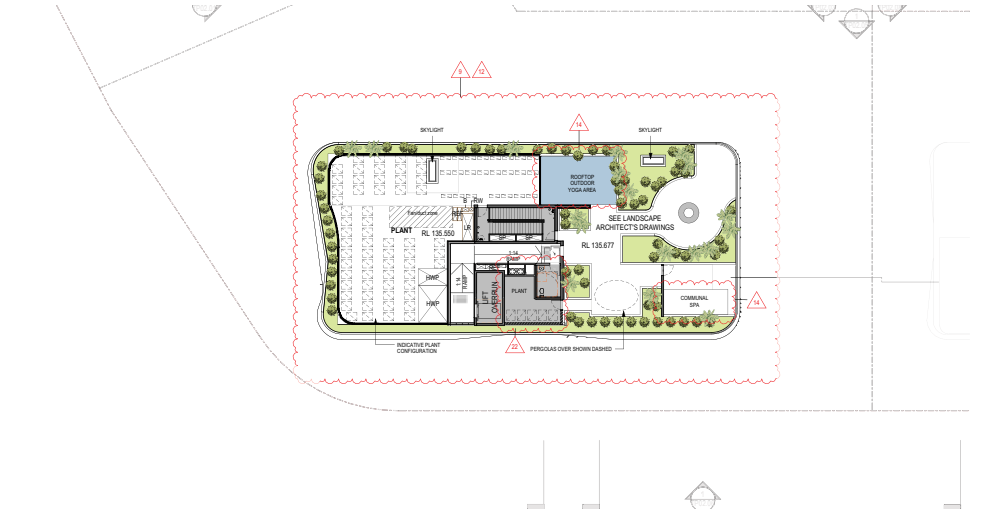
4.06 TOWER 2 PLANS

Approved:
DA79/2022 S4.55-2 Determined 5/10/23

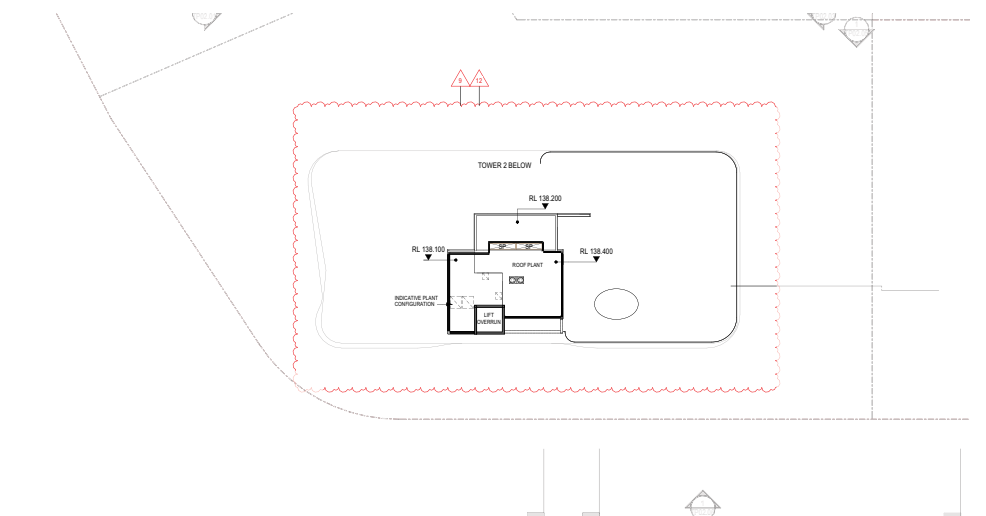


T2 ROOF / LEVEL 18

Proposed:
S4.55-6 Modifications For In-Fill Affordable Housing Uplift



T2 LEVEL 22

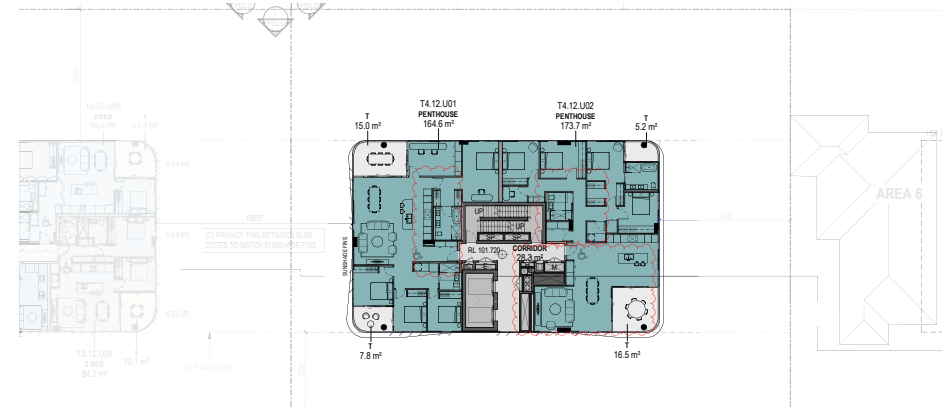


T2 ROOF

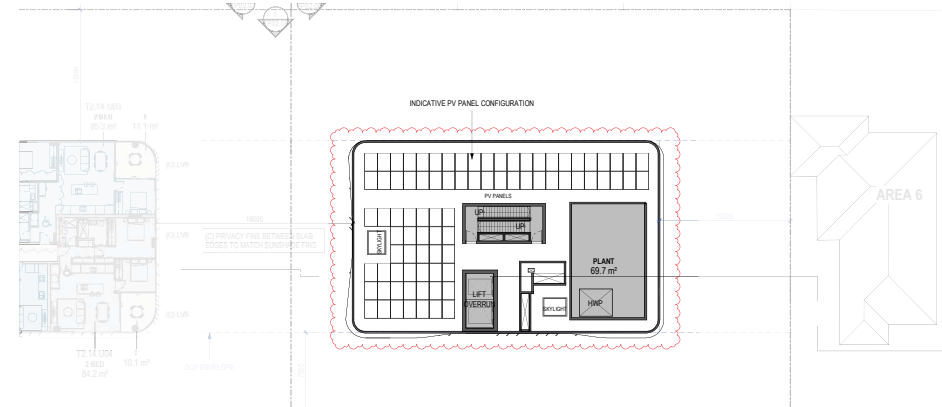
4.06 TOWER 4 PLANS

The typical floorplate from levels 8-11 is repeated for levels 12-15. The penthouse level layouts are moved up to levels 16 and 17. The level 17 penthouse layout is revised to accommodate 3 penthouse, one dual level with private terrace on roof. The rooftop plant area is expanded to service the increased unit numbers.

Approved:
DA79/2022 S4.55-2 Determined 5/10/23

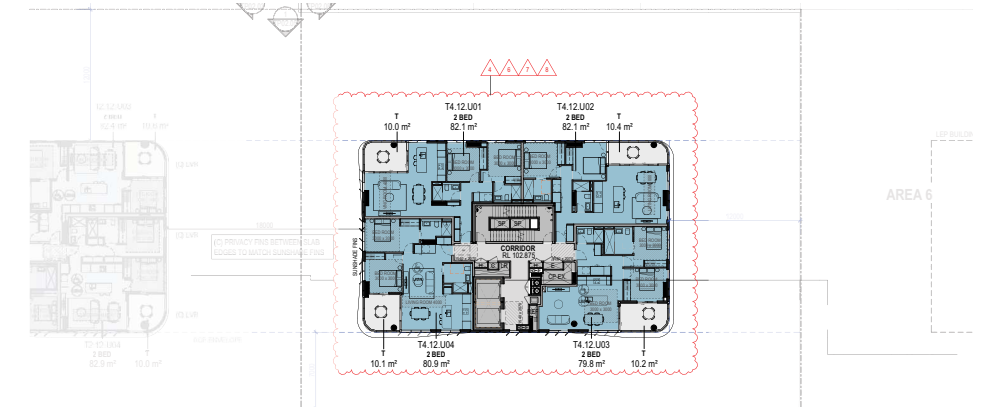


T4 LEVEL 12 - LEVEL 13

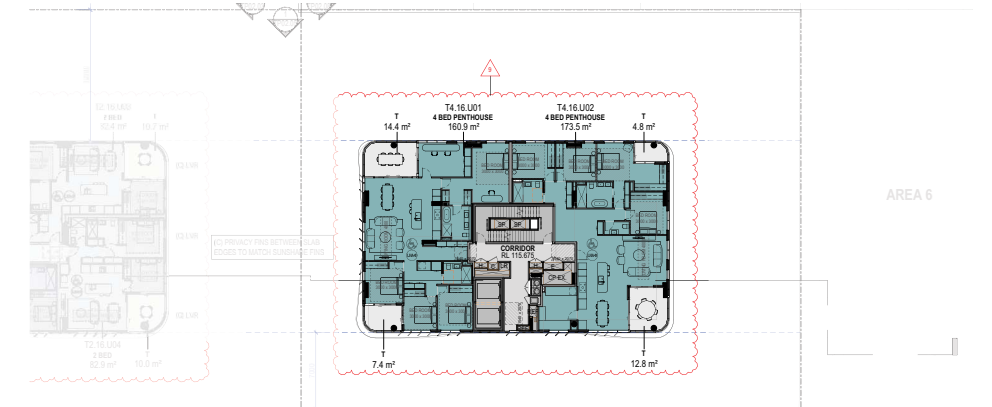


T4 ROOF / LEVEL 14

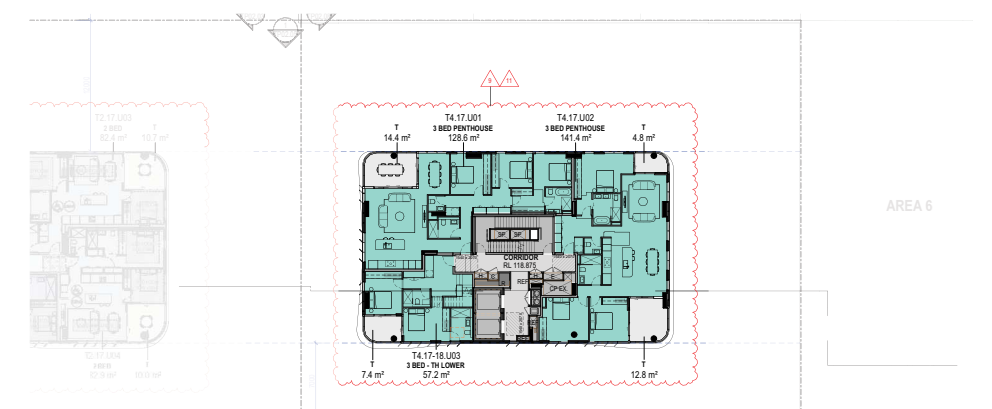
Proposed:
S4.55-6 Modifications For In-Fill Affordable Housing Uplift



T4 LEVEL 12 - LEVEL 15



T4 LEVEL 16

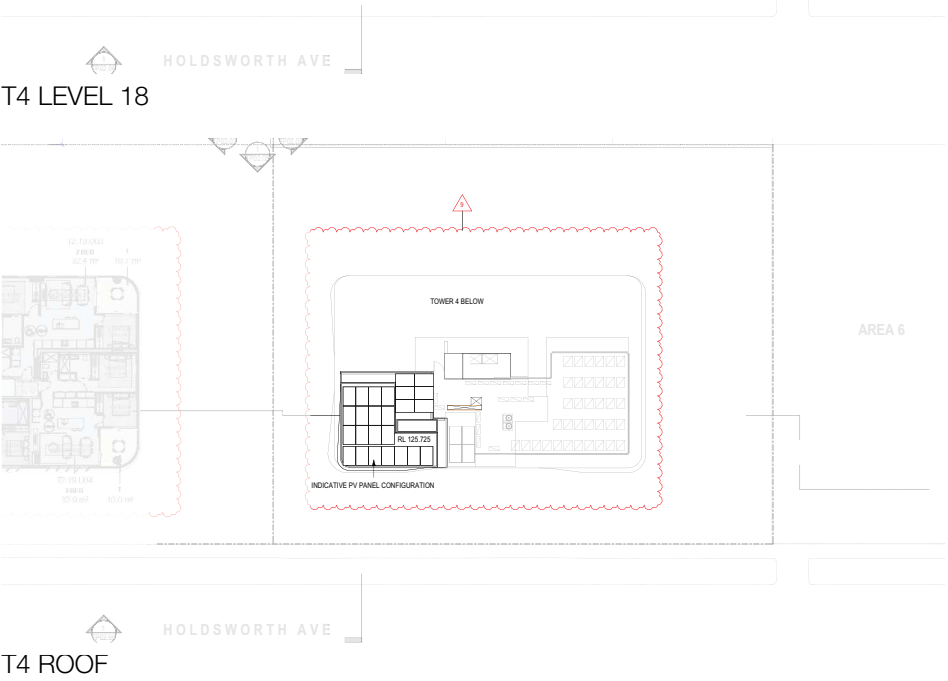
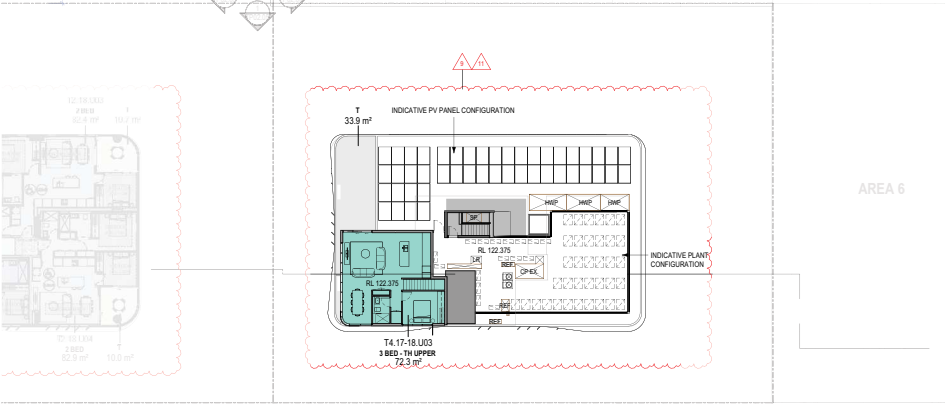


T4 LEVEL 17

4.07
TOWER 4 PLANS

Approved:
DA79/2022 S4.55-2 Determined 5/10/23

Proposed:
S4.55-6 Modifications For In-Fill Affordable Housing Uplift



5.0

AREAS 1, 2 AND 4 ST LEONARDS SOUTH

5.0	Shadow & Solar Analysis	37
5.01	Shadow Analysis	38-39
5.02	Solar Eye View	40

SHADOW & SOLAR ANALYSIS

5.01

SHADOW ANALYSIS

Note :

- Area 7-11, massing, stepping and RLs modelled as per DA approval, DA number: PAN-108292
- Area 5, massing, stepping and RLs modelled as per DA approval, DA number: 33/2024
- Other area massings are as per St Leonards's South DCP building envelope control (massing stepping and setback) and storey limit control. LEP FSR is not calculated as it can be not estimated at massing stage. The topography outside of the site is generated using Forma



9AM WINTER SHADOW STUDY

The additional uplift shadow to sites 12 and 14 may impact proposed rooftop communal areas for future DAs, based on the DCP envelopes. The roofs for these sites are not overshadowed after 9am and can achieve 2 hr winter solar access throughout the day.

Legend

<div></div>	Pre Uplift Shadow Extent
<div></div>	Post Uplift Shadow Extent
<div></div>	Shadow Extent Of Context



10AM WINTER SHADOW STUDY

The additional uplift shadow to site 6 may impact proposed rooftop communal areas for futures DAs, based on the DCP envelopes. The roof will achieve 2 hr winter solar impact throughout the day -before 10am and after 2pm. Site 6 does not have an active DA and no potential uplift is shown.

Sites Impacted By Uplift Shadow

Site Address	9am	10am	11am	12pm	1pm	2pm	3pm
2 Duntroon					X		
4-6 Duntroon						X	X
Site 3			X	X	X	X	X
Site 5							X
Site 6		X	X	X	X		
Site 12	X						
Site 14	X	X					



11AM WINTER SHADOW STUDY

The additional uplift shadow to site 3 may impact proposed rooftop communal areas for futures DAs, based on the DCP envelopes. Site 3 does not have an active DA. The roof will not achieve 2 hr winter solar access if an uplift is not applied for.



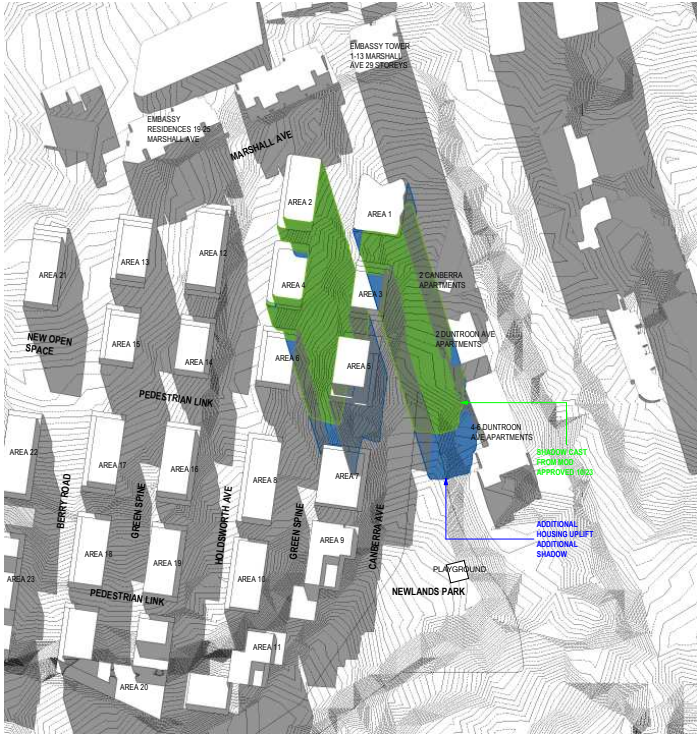
12PM WINTER SHADOW STUDY

5.01

SHADOW ANALYSIS

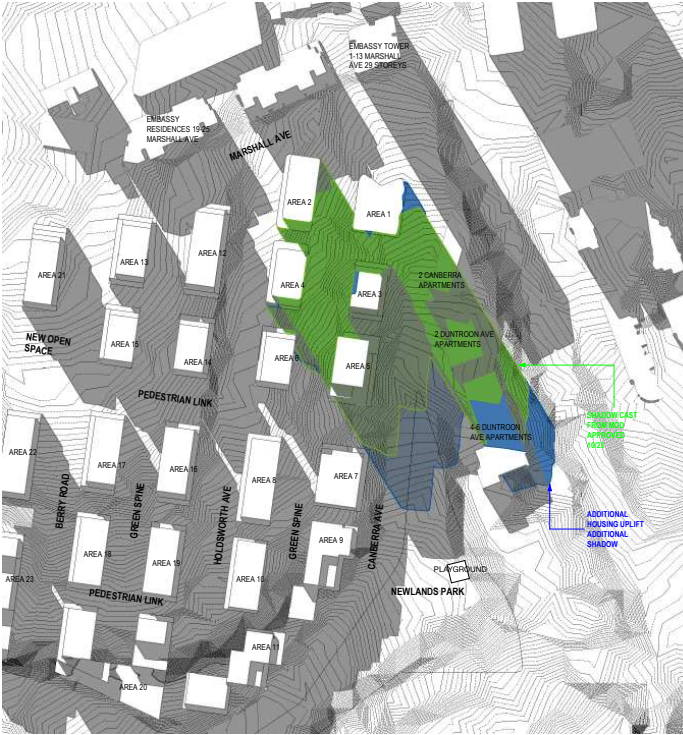
Note :

- Area 7-11, massing, stepping and RLs modelled as per DA approval, DA number: PAN-108292
- Area 5, massing, stepping and RLs modelled as per DA approval, DA number: 33/2024
- Other area massings are as per St Leonards's South DCP building envelope control (massing stepping and setback) and storey limit control. LEP FSR is not calculated as it can be not estimated at massing stage. The topography outside of the site is generated using Forma



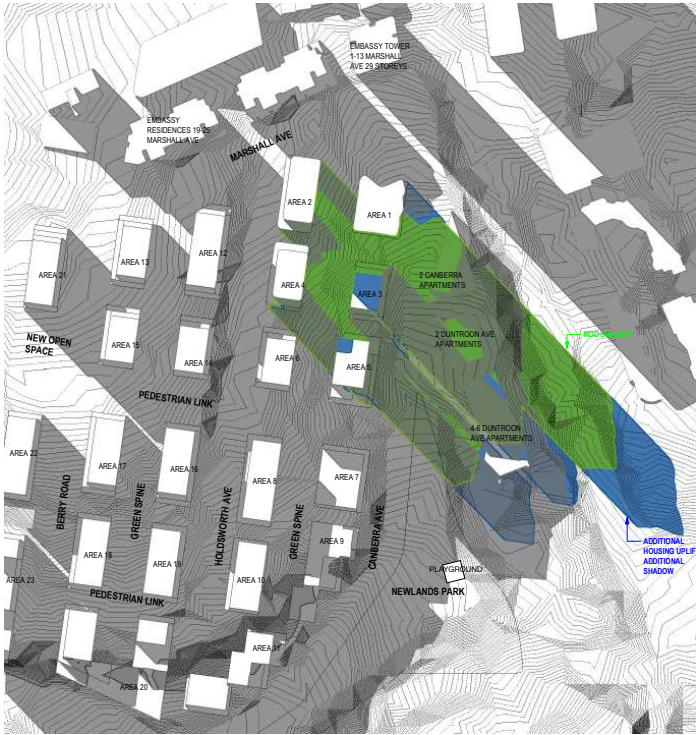
1PM WINTER SHADOW STUDY

2 Duntroon has minor overshadowing from the uplift at 1pm. The North corner of Newlands Park is overshadowed by the uplift at 1pm, there is no significant park infrastructure in this location.



2PM WINTER SHADOW STUDY

4-6 Duntroon has minor overshadowing from the uplift at 2pm. The site is able to achieve 2hr winter solar access before 1pm.



3PM WINTER SHADOW STUDY

Legend

	Pre Uplift Shadow Extent
	Post Uplift Shadow Extent
	Shadow Extent Of Context

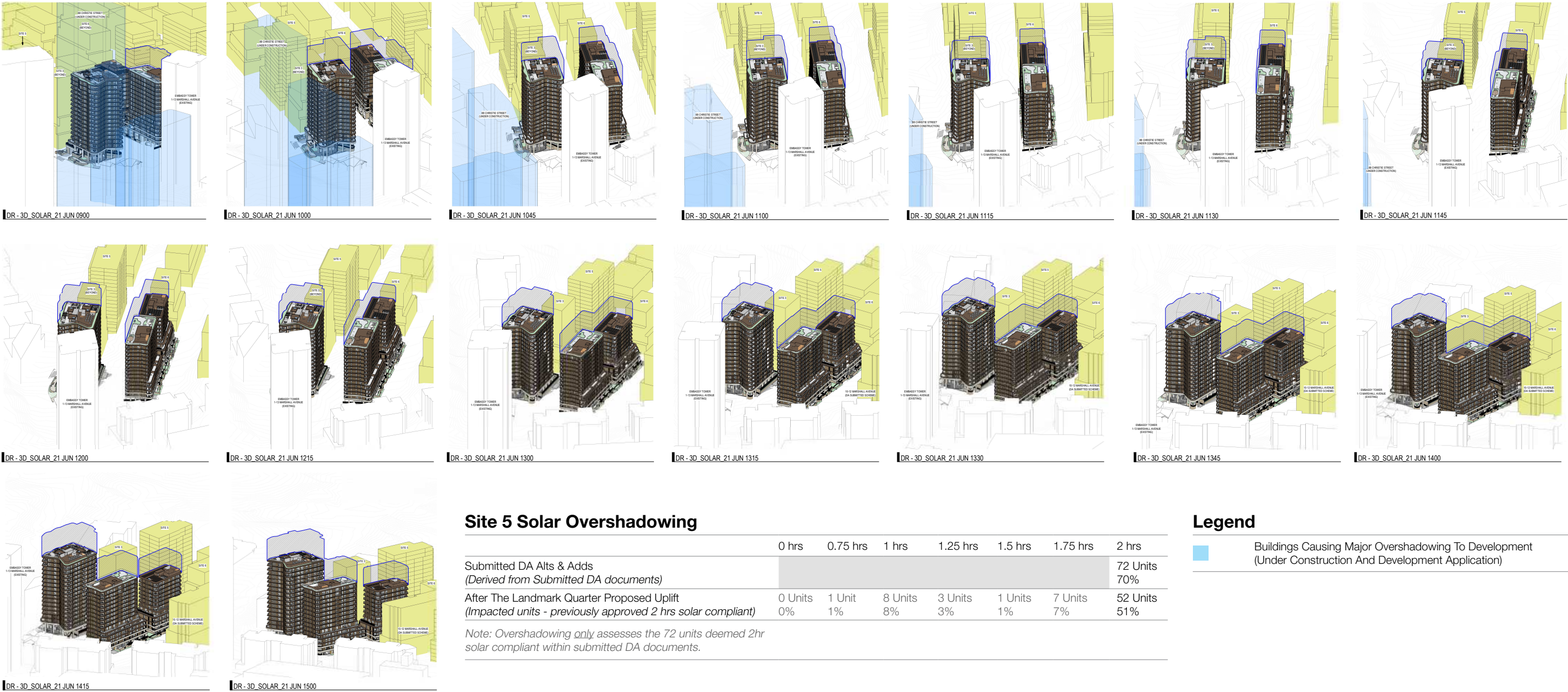
Sites Impacted By Uplift Shadow

Site Address	9am	10am	11am	12pm	1pm	2pm	3pm
2 Duntroon					X		
4-6 Duntroon						X	X
Site 3			X	X	X	X	X
Site 5							X
Site 6		X	X	X	X		
Site 12	X						
Site 14	X	X					

5.02

SOLAR EYE VIEW

Solar studies have been undertaken to evaluate the winter solar access impact of the additional tower uplift on the surrounding buildings. Buildings on Duntroon Avenue and west side of Holdsworth Avenue will be minimally impacted from this development, with overshadowing primarily in the late afternoon and early morning respectively. Sites 7-11 to the south of the development are not impacted by the uplift, as they sit in the shadow of expected development on sites 5 and 6. Sites 3 and 6 do not have current DAs submitted to council and are excluded from this analysis. Site 5 is oriented east-west with apartments facing Canberra Ave and the Green Spine. The uplift proposed does not affect balconies and living areas facing east to Canberra Avenue. The uplift proposed for towers 2 and 4 will overshadow lower level west facing apartments from approximately 12:15. Detailed summary of impact on solar access to units for site 5 is included in table below.



6.0

VIEW IMPACT ANALYSIS

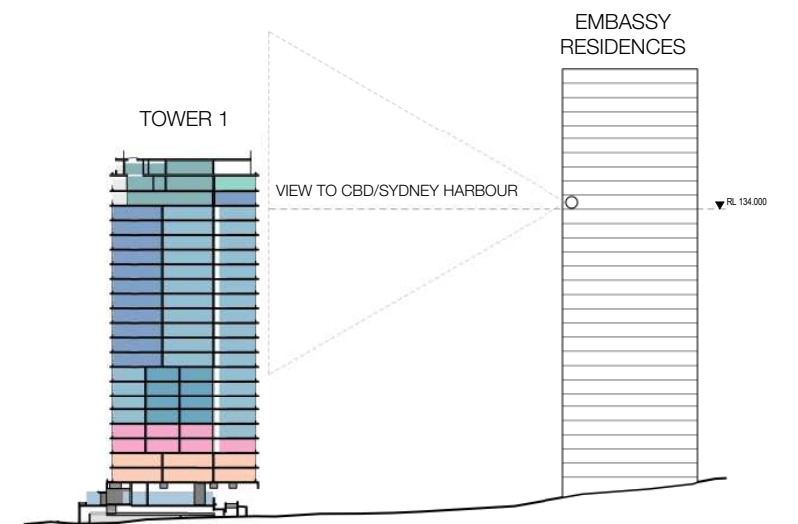
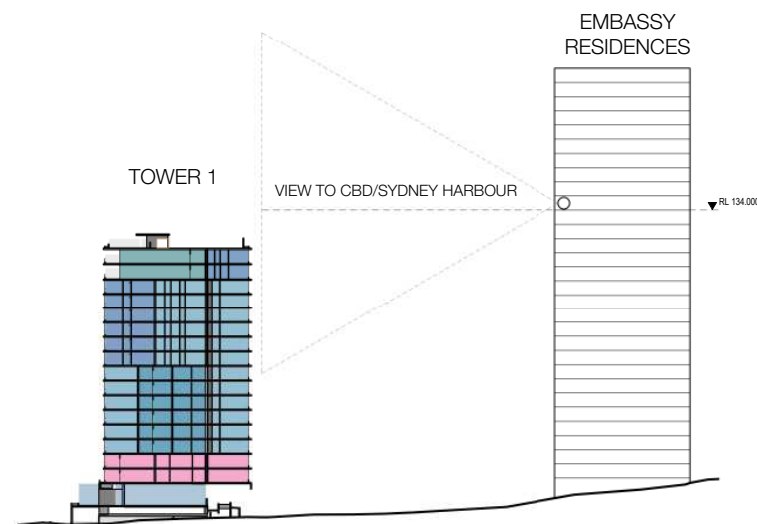
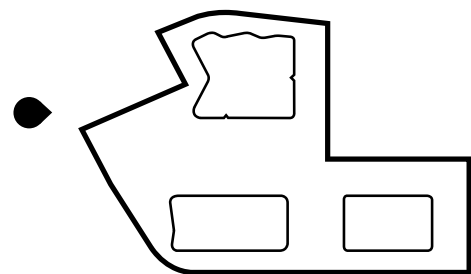
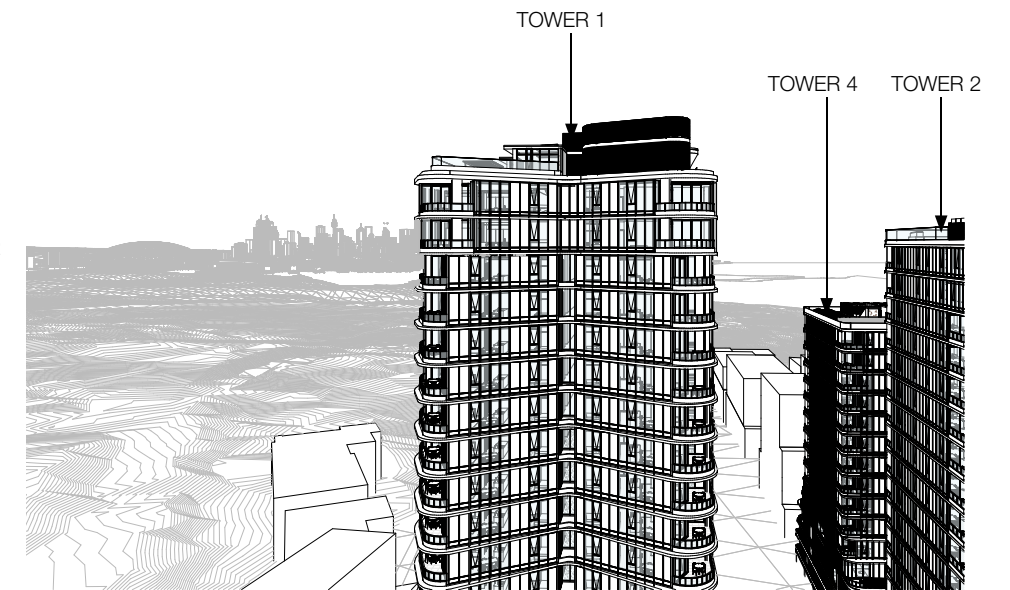
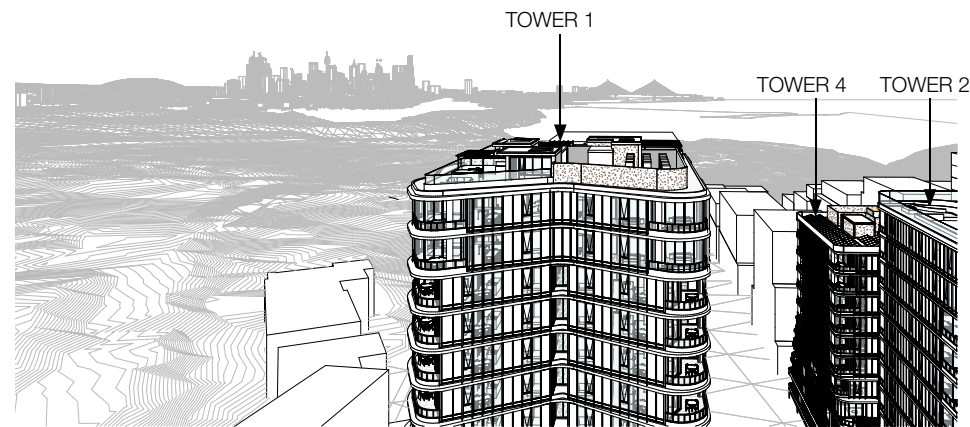
6.01 VIEW FROM EMBASSY RESIDENCES

Notes:

The camera view is set up approximately from the Embassy Residences building, 2 floors above the approved building height.

Approved:
DA79/2022 S4.55-2 Determined 5/10/23

Proposed:
S4.55-6 Modifications For In-Fill Affordable Housing Uplift





rothelowman

Brisbane, Melbourne, Sydney, Gold Coast, Perth

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