02.09.2020

TURNER piety group

ONE
THE WATERFRONT

URBAN DESIGN REPORT

23 Bennelong Parkway
Wentworth Point NSW 2127

S75W MOD 4 (SEPTEMBER 2020)

By: TURNER
For: PIETY THP
Project Ref. No: 18039
Nominated Architect: Nicholas Turner 6695

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04.09.2020
DLCS Quality Endorsed Company ISO 9001:2015, Registration Number 20476
Nominated Architect: Nicholas Turner 6695, ABN 86 064 084 911

01. INTRODUCTION

HISTORY OF THE CONCEPT APPROVAL AND PROPOSED APPLICATION

Current Approval MOD 2 (2013)

Building C - 9 Storeys
Building F - 9 Storeys
Proposed Bldg C & F FSA = 10,615m^2
Approved Bldg C & F FSA = 16,006m^2

Previous MOD 4 (2018)

Building C - 25 Storeys
Building F - 35 Storeys
Proposed Bldg C & F FSA = 36,534m^2

Current MOD 4 (April 2020)

Building C - 14-17 Storeys
Building F - 16-19 Storeys
Proposed Bldg C & F FSA = 16,006m^2

Proposed Revision to MOD 4 (August 2020)

Building C - 9-15 Storeys
Building F - 9-15 Storeys
Proposed Bldg C & F FSA = 13,448m^2

DESIGN STATEMENT

This proposal envisages a design outcome which is based on a merits driven approach that genuinely seeks to go further than 'business as usual' by providing better amenity for residents within the development, and to adhere to best practice urban design principles:

Respects the principles of the planning framework: The Homebush Bay West DCP establishes objectives and controls for new development to deliver an attractive, appropriate, high amenity outcome for residents and visitors. The proposed amendments to the concept plan follow the urban design principles of this DCP. They create a street and block structure that optimises legibility, permeability and efficiency, and allow for a high quality architectural and landscape design that contributes positively to the character of the public domain.

Recognition of wider context: The overall built form of Wentworth Point has evolved from a typical perimeter block outcome with uniform heights (DCP 2004), to a Hybrid form characterised by a combination of stepping mid rise buildings with taller towers, creating a diversity of heights. This includes the recently approved 16 storey building at 6-8 Baywater Drive, within the context of the southern end of Wentworth Point. The proposed amendments to the concept plan at 23 Bennelong Parkway are consistent with the urban design rationale of the scheme at Baywater Drive.

Marrying with adjoining context: The proposal is respectful to it's context and aligned with the design intent of the as-built scheme. To date the built form of the approved DAs within the development has varied from the original concept envelope. This variation has allowed for stepping in the facade alignment, and substantial indents in the built form that result in an improved streetscape. The proposed 2020 amendments continue this fine grain pattern of indents and articulation, and are carefully grafted into the as-built scheme to achieve a holistic design outcome.

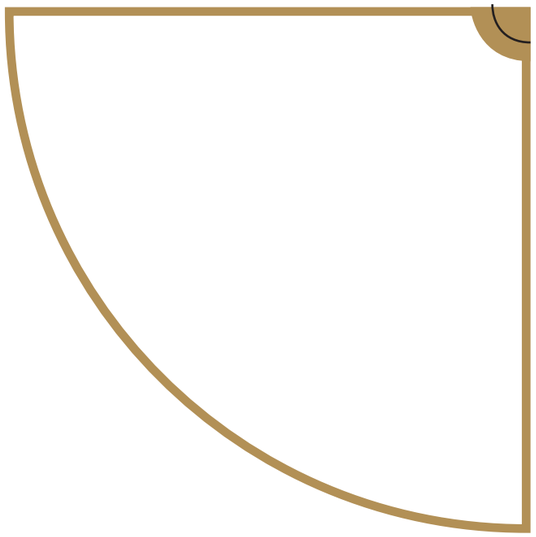
Increased amenity: The original concept plan was designed in the context of the previous RFDC, and the associated indicative scheme with it's continuous perimeter block layout needed to be amended to allow for ADG compliance. The redistribution of floor space into the taller envelopes allows for reduced building footprints and increased separation between buildings greater than that required by the ADG, and aligned with the already approved as-built component of the scheme. This reconfiguration will facilitate improved outlook, greater site permeability, and quality solar and cross ventilation to apartments.

Appropriate height: The variation in height is distributed via a stepped building form that responds to the streetscape. Building C steps from 9 to 15 storeys, in order to allow for a comfortable transition from the existing 9 storeys when viewed from the east. Building F continues this stepping, with a series of distinct buildings forms ranging in height from 9 to 15 storeys. It is proposed to landscape these stepped forms with lush vegetation that softens the buildings and mimics the sloping typography of the Woo-La-Ra mound beyond. The strong vertical emphasis to the design proposal allows for a series of slender towers forms.

Sustainability: The proposal has the potential to improve on 'business-as-usual' within the approved concept envelopes. This submission allows for the inclusion of meaningful passive design elements that will reduce the environmental impact of the allowable Floor Space. Improved ESD proprovisions, quality ADG compliance, and biophilic benefits such as increased vegetation and canopy coverage, can be made possible by this new submission. Fostering a sense of community is a key parametre for creating sustainable and safe new residential precincts, and the inclusion of the additional residents facilities on Level 9 of both Buildings C & F is aligned with this approach.

Conclusion:

This submission has responded to the previous local and state authority feedback and the proposal has been substantially amended from the previous S75w design to resolve these items. These last two remaining buildings are the final piece of the jig-saw within this prominent site and precinct, and provide for the opportunity to achieve a greater outcome. For the reasons above, we strongly believe that this proposal deserves the Department's support.



1.1 PLANNING FRAMEWORK

STRATEGIC CONTEXT

ACHIEVING BEST PRACTICE URBAN DESIGN:

A METROPOLIS OF THREE CITIES
Greater Sydney Commission: Greater Sydney Region Plan
Connecting People, March 2018

CENTRAL CITY DISTRICT PLAN
Greater Sydney Commission: Our Greater Sydney 2056
Connecting Communities, March 2018

SYDNEY GREEN GRID

GREENER PLACES

BETTER PLACED

PARRAMATTA LEP

WENTWORTH POINT DCP

PLANNING PRINCIPLES

GREATER SYDNEY

The plan is built on a vision of three cities where most residents live within 30 minutes of their jobs, education, health facilities, services and great places.

This is consistent with the 10 Directions for a Greater Sydney which establish the aspirations for the region over the next 40 years and are a core component of the vision and measure of the Plan's performance.

The plan envisions an additional 725,000 dwellings with and urban renewal supporting new and existing centres and enhanced local character.

Wentworth Point is part of the Central River City, Central City District located between the Health and Education Precinct, Rhodes, Sydney Olympic Park, Strategic Centre and the local centre of Newington. There are growing pedestrian and transport connections to each of these centres as part of the overall strategic development of the district.

The expanding Greater Sydney Green Grid brings improved health and enjoyment of the district's waterways. Bushland, biodiversity, scenic and cultural landscapes are protected. The precinct enjoys a network of open space, natural waterways including Parramatta River and the protected natural wetlands.

Cities are resilient and respond to urban impacts and climate change and manage energy, water and waste efficiently.

BETTER PLACED

BETTER FIT
Contextual, local and of its place

BETTER PERFORMANCE
Sustainable, adaptable, and durable

BETTER FOR COMMUNITY
Inclusive, connected and diverse

BETTER FOR PEOPLE
Safe, comfortable, and liveable

BETTER WORKING
Functional, efficient and fit for purpose

BETTER VALUE
Creating and adding value

BETTER LOOK AND FEEL
Engaging, inviting and attractive

GREENER PLACES

INTEGRATION
Combine Green infrastructure with urban development and grey infrastructure

CONNECTIVITY
Create an interconnected network of open space

CONNECTIVITY
Deliver multiple ecosystem services simultaneously

PARTICIPATION
Involve stakeholders in development and implementation

PARRAMATTA LEP

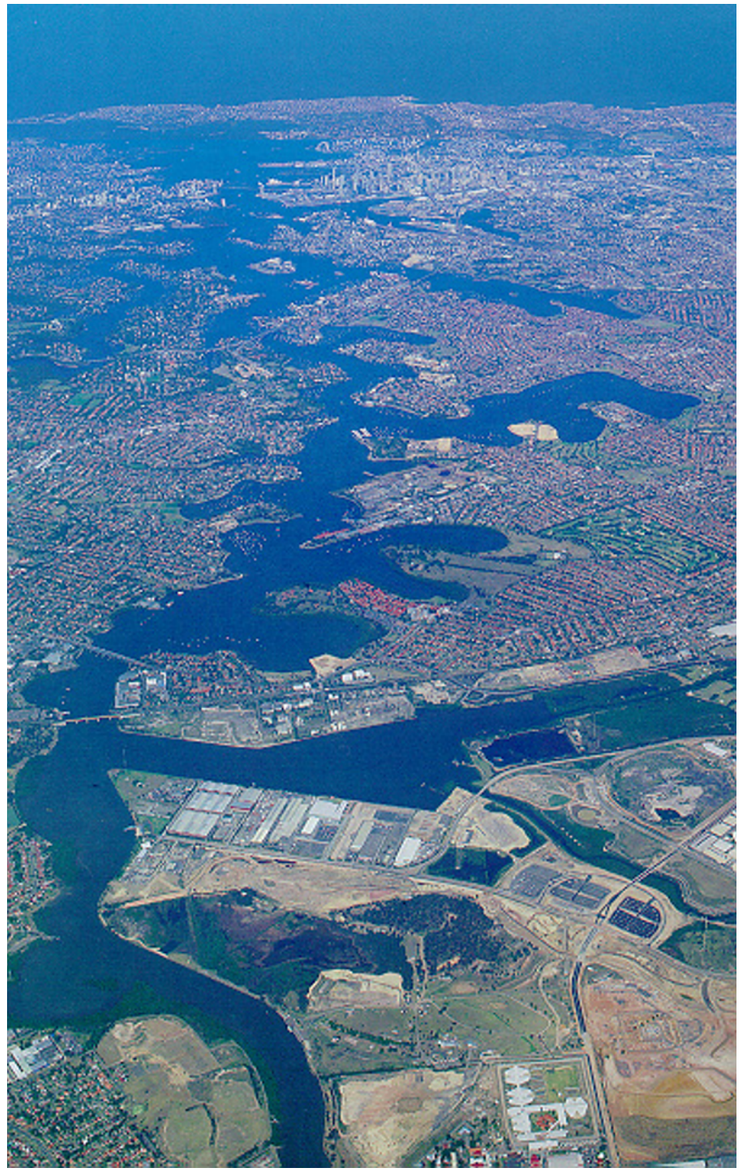
The Parramatta LEP aims to support local centres such as Wentworth Point, as important local places of development including housing, employment and recreation, that accommodates the needs of the existing and future residents.

Diversification of offering are encouraged when developments demonstrate efficient and sustainable use of energy and resources in accordance with ecologically sustainable principles.

WENTWORTH POINT DCP 2004

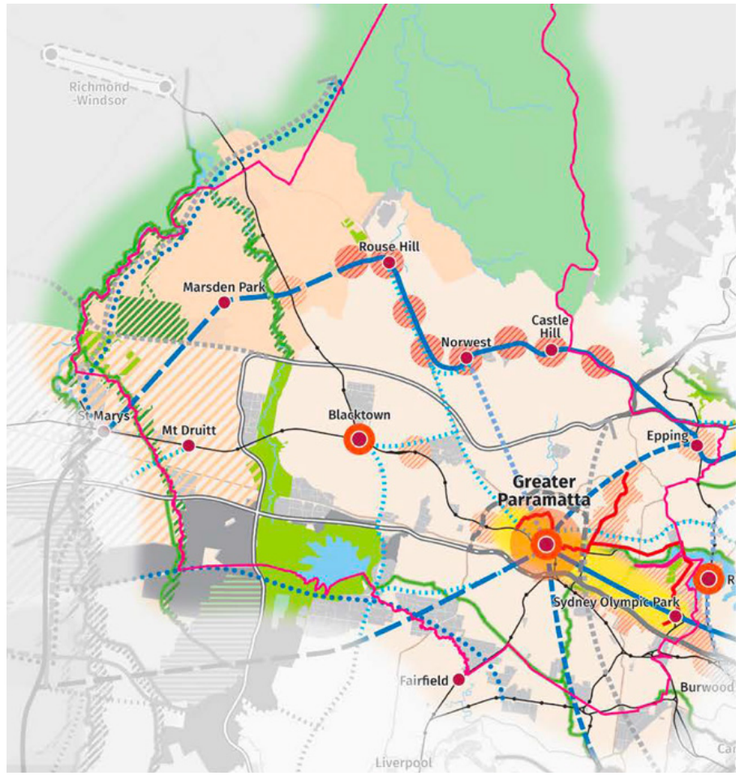
The Homebush Bay West DCP establishes objectives and controls for
new development to deliver an attractive, appropriate, high amenity and high quality environment for residents, workers and visitors.

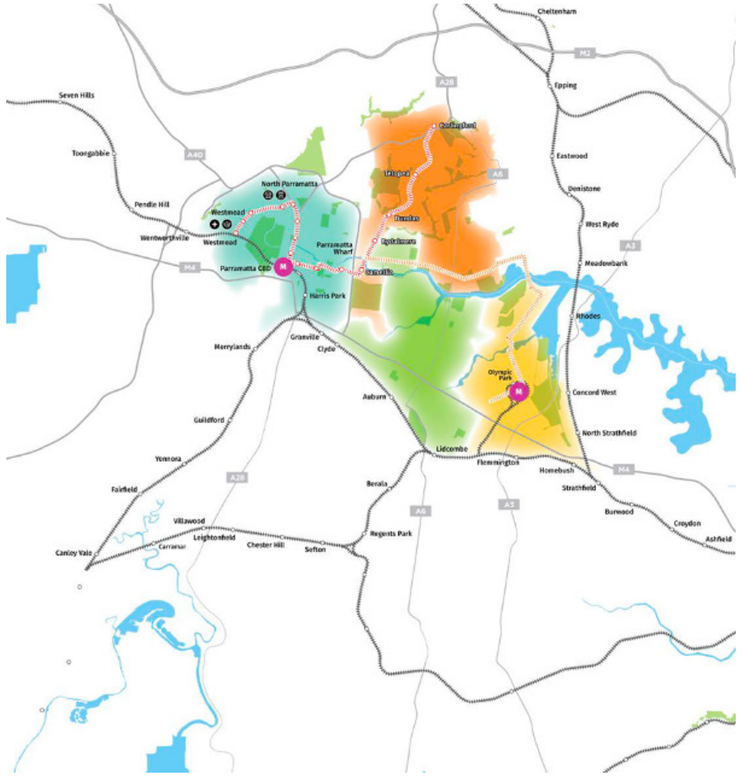
- **IDENTITY** – Create an identifiable character for Homebush BayWest
- **LAND USES** – Accommodate and locate appropriately a range and mix of uses within Homebush Bay West
- **STREET AND BLOCK STRUCTURE** – Create a street and block structure that optimises legibility, permeability and efficiency
- **OPEN SPACE NETWORK** – Create a network of public open spaces that is strongly linked to Sydney Olympic Parklands, the foreshore edge and the water, and provides for a range of recreational activities
- **ACCESSIBILITY** – Increase and enhance the opportunities for pedestrians and cyclists to access the precinct and to move safely and comfortably within the public domain.
- **ENVIRONMENTALLY SUSTAINABLE DESIGN** – Incorporate ESD principles into all stages of design, including the design of public spaces, block and site layout and built form
- **BUILT FORM** – Provide sensitive and high quality architectural and landscape design that contributes positively to the character of the public domain
- **HOUSING CHOICE** – Support opportunities for a diverse community by promoting workplace and housing choice
- **RESIDENTIAL AMENITY** – Provide a high level of residential amenity, including outdoor spaces as well
as within apartments.

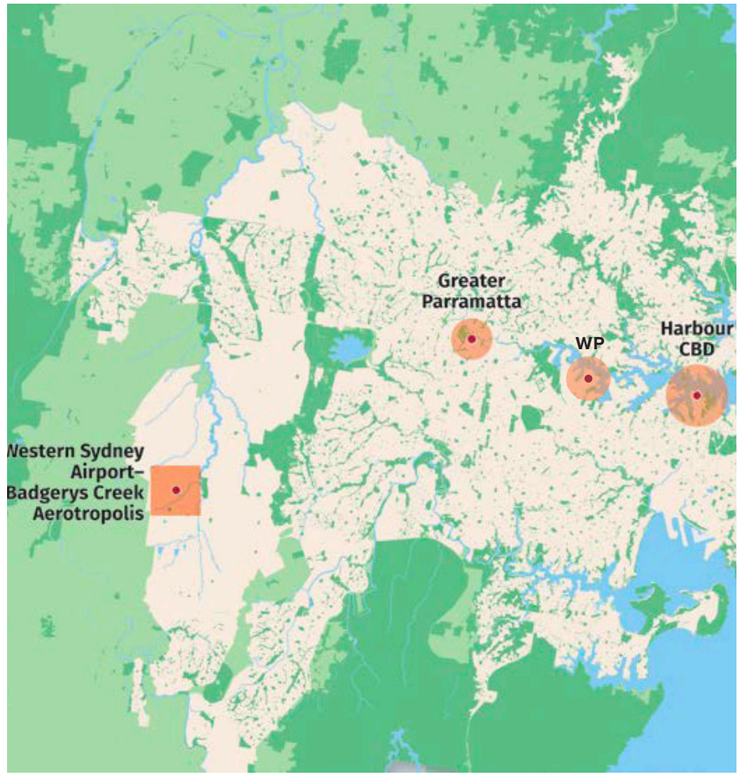


1.2. URBAN CONTEXT

URBAN CONTEXT







URBAN CONTEXT/ DISTRICT:

Wentworth Point is located within the Central City District and sits within Australia's largest urban renewal area being the Greater Parramatta and Olympic Peninsula Growth Area.

TRANSPORT NETWORKS:

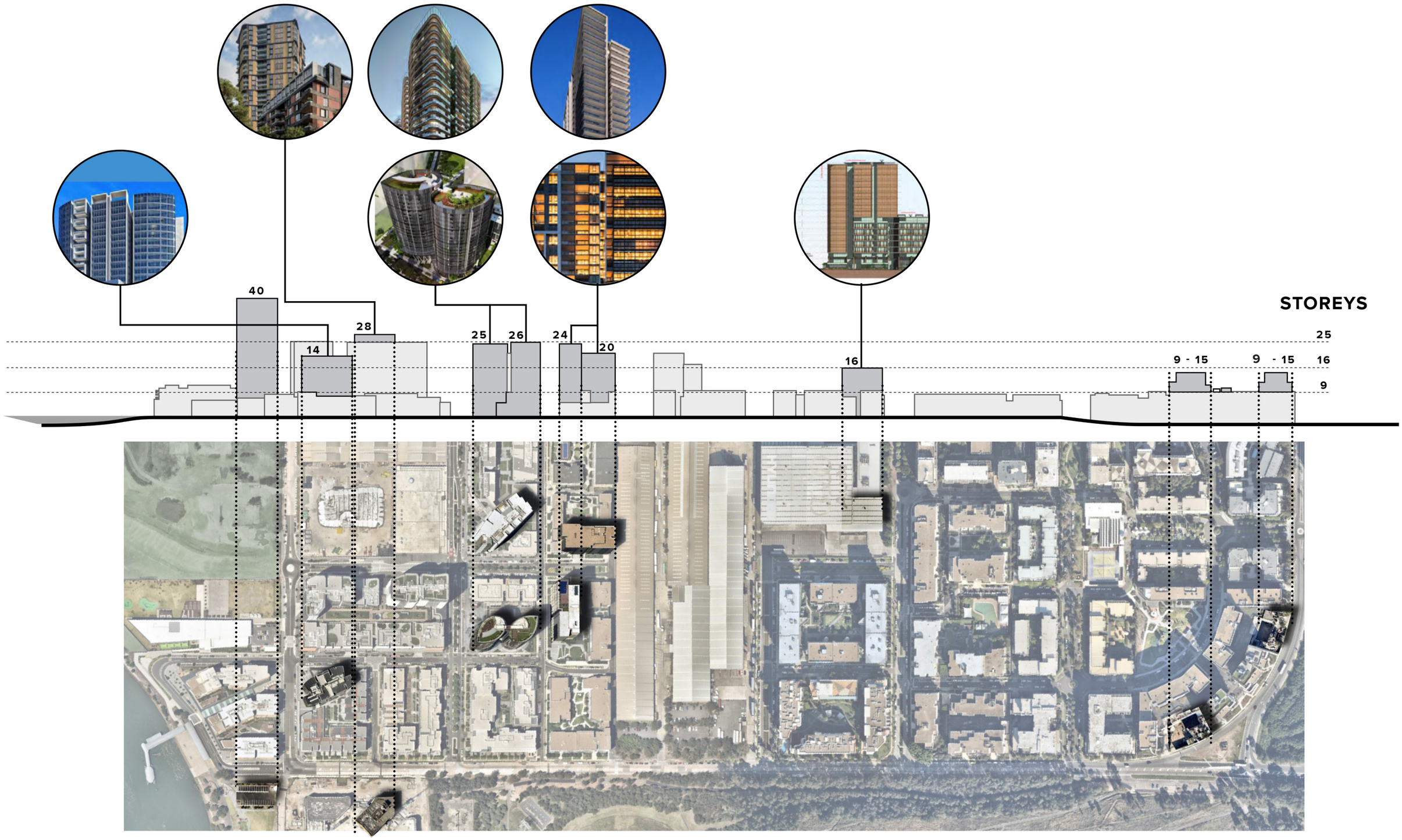
Future transport investment in the planned Sydney Metro North West
and the proposed Light Rail Stage 2 will significantly improve connectivity

GREEN SPACES:

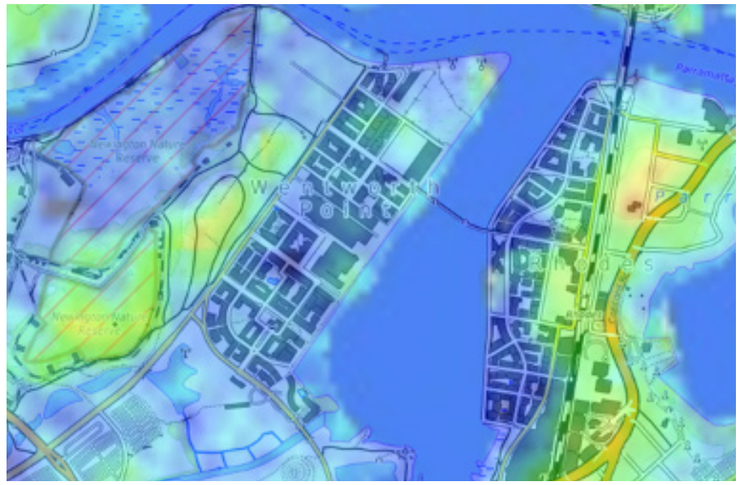
Wentworth Point is framed by significant natural amenity both in the form of parklands and river front recreation routes and investment has been identified to enhance these.

Sydney Olympic Park is also home to a major lifestyle, entertainment and sporting offer.

NEIGHBOURHOOD CONTEXT

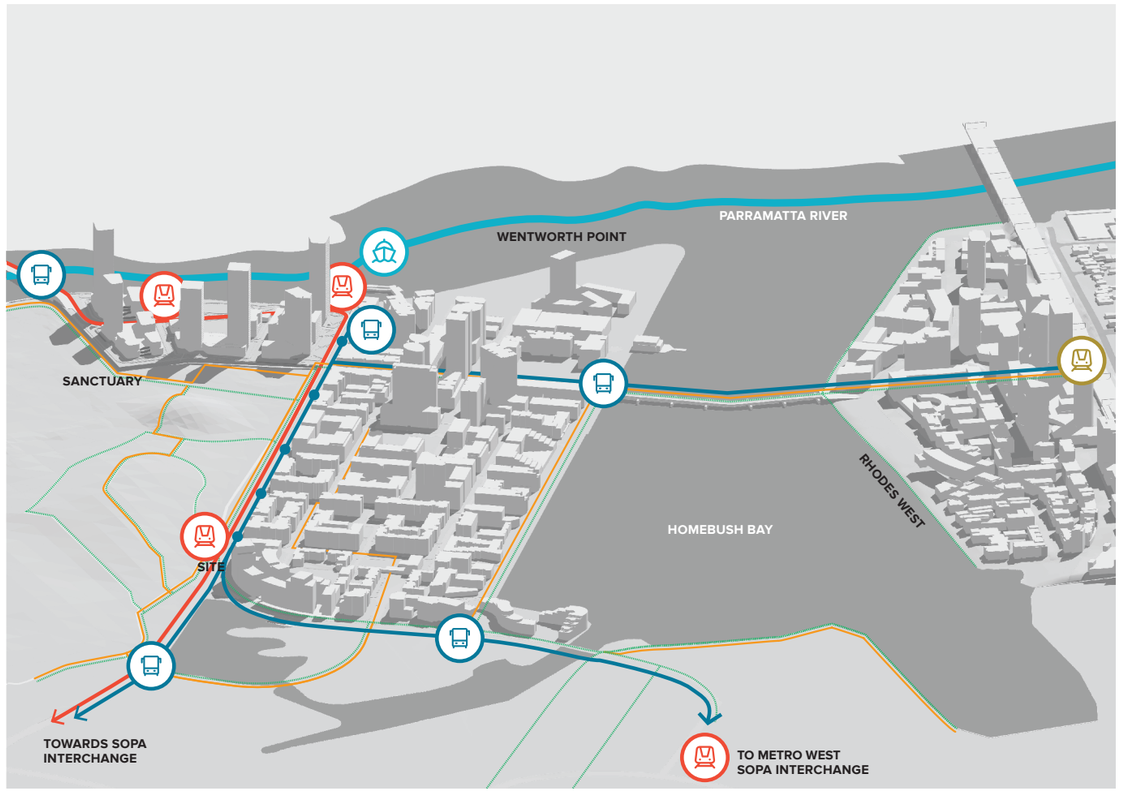


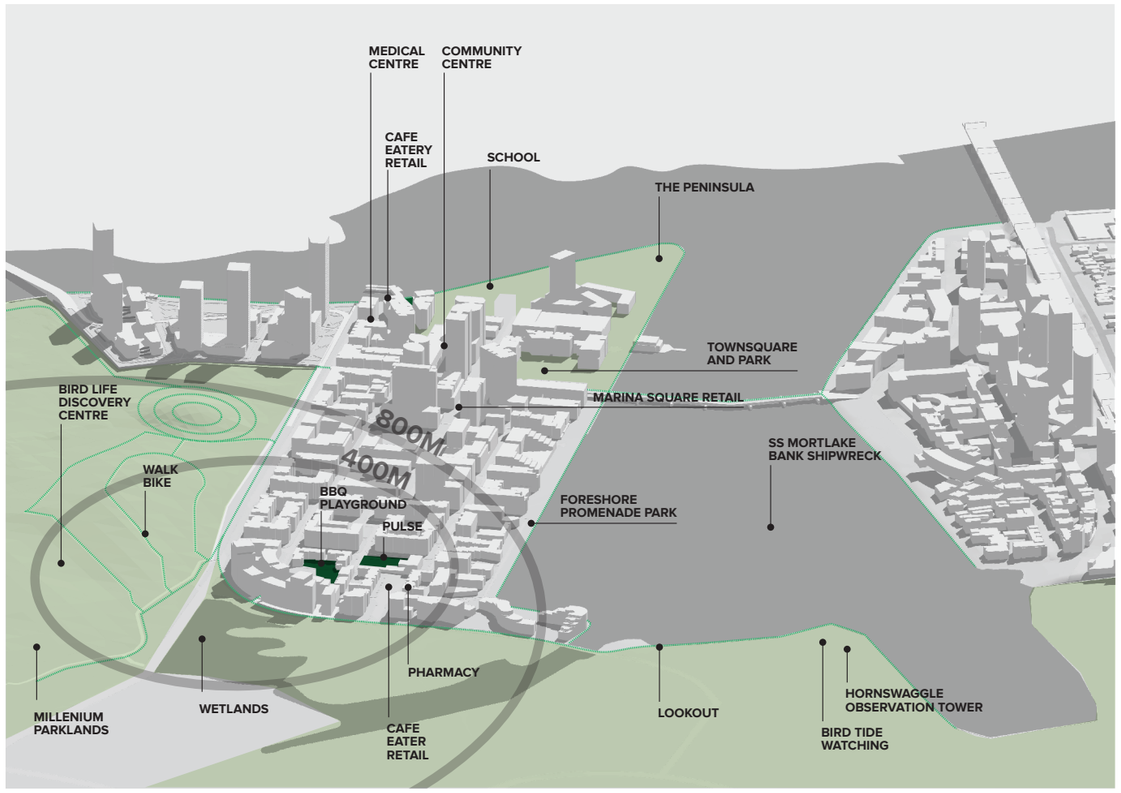
NEIGHBOURHOOD CONTEXT



- The surrounding context includes diverse natural amenity from Millenium and Woo la Ra Parklands to Narrawang Wetlands and Newington Armory, to the Parramatta River
- Topography transitions from flat land to hills with high points of AHD 29 metres at the Millenium Marker
- Landscape varies from waterways to the east and south, wetlands and tree canopies to the west

NEIGHBOURHOOD CONTEXT/ TRANSPORT NETWORKS





FERRY
BIKE PATH
PEDESTRIAN PATH
LIGHT RAIL
PROPOSED LIGHT RAIL STATION
BUS STOP
TRAIN STATION

Bike / Pedestrian Paths

TRANSPORT NETWORKS

Wentworth Point is located within the Greater Parramatta and Olympic Peninsula Growth Area which is benefiting from a number of significant public transport infrastructure investments including:

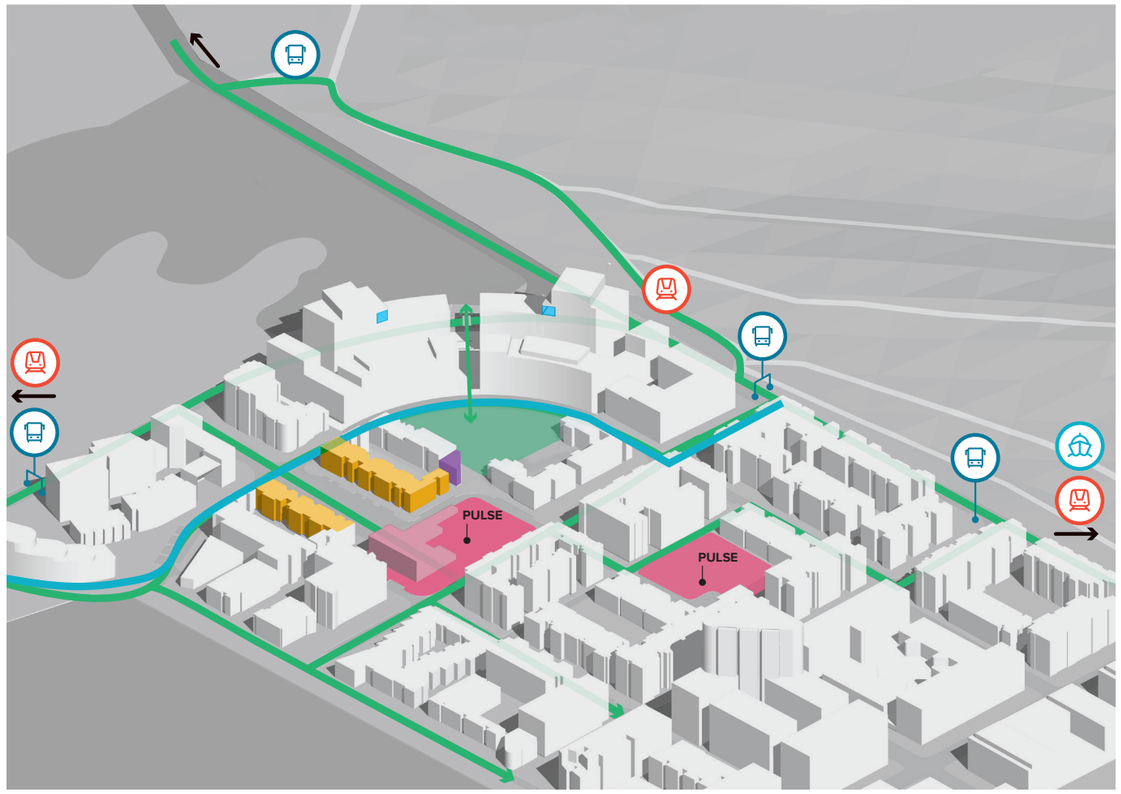
- Parramatta Light Rail Phase 2
- Sydney Metro West

GREEN SPACE / PARKS, PUBLIC AMENITIES

Wentworth Point is located within a dense cycling and walking green network connected to a larger (regional) recreational infrastructure.

Public and semi-public/communal facilities promote “Urban Villages” where residents can gather in localised and intimate spaces to break down perceived anonymity of neighbours and promote chance encounters.

SITE CONTEXT



PULSE
RETAIL / CAFE
COMMUNITY ROOMS
BAY PARK
CLUB ONE
PEDESTRIAN

CONNECTIVITY

One The Waterfront is well connected to a network of sustainable transport modes including walking, cycling and public transport with direct accesses to buses, connecting with major networks for trains and ferries.

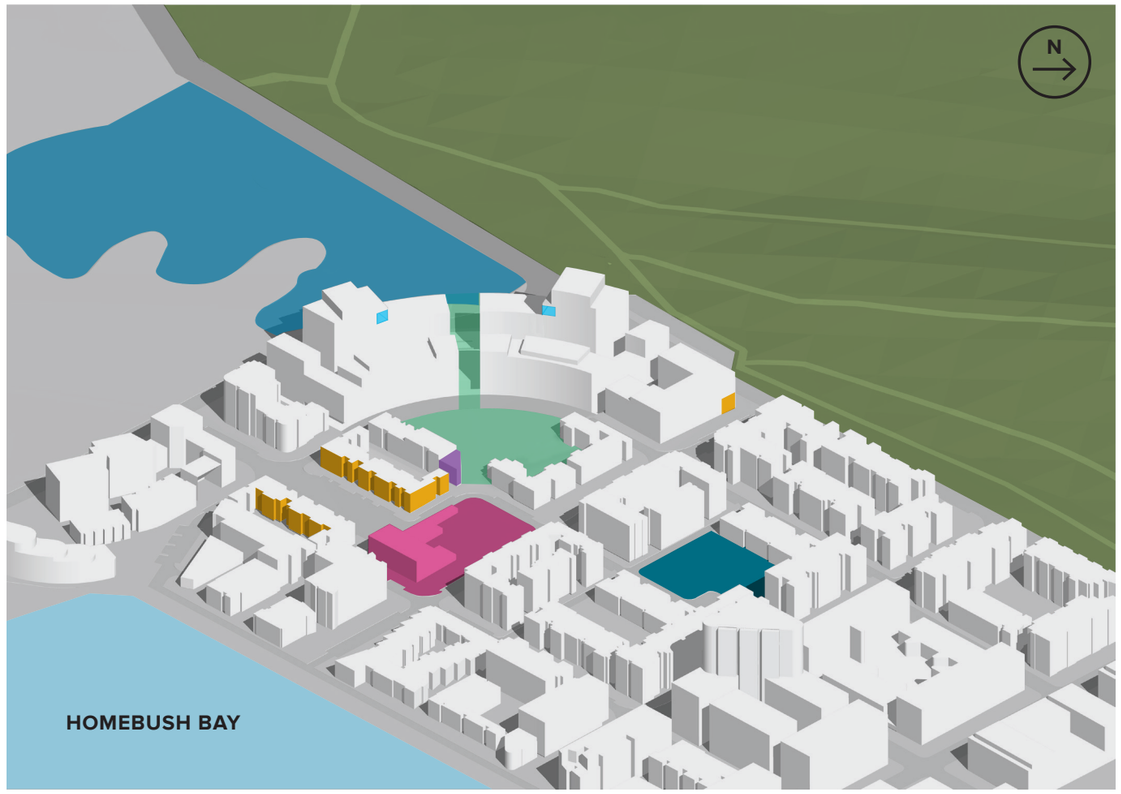
The OTW precinct will also benefit with improved transport access including the potential to be within walking distance of one of the future light rail stations and the opportunity for future metro interchange at Olympic Park.

MOTORISED VEHICLES
IN
OUT
PEDESTRIAN / BICYCLE

NOISE AND TRAFFIC

The site is at the intersection of Bennelong Parkway and Hill Road, two major entry gateways to Wentworth Point. The 8m landscaped setbacks allows for noise attenuation on those streets.

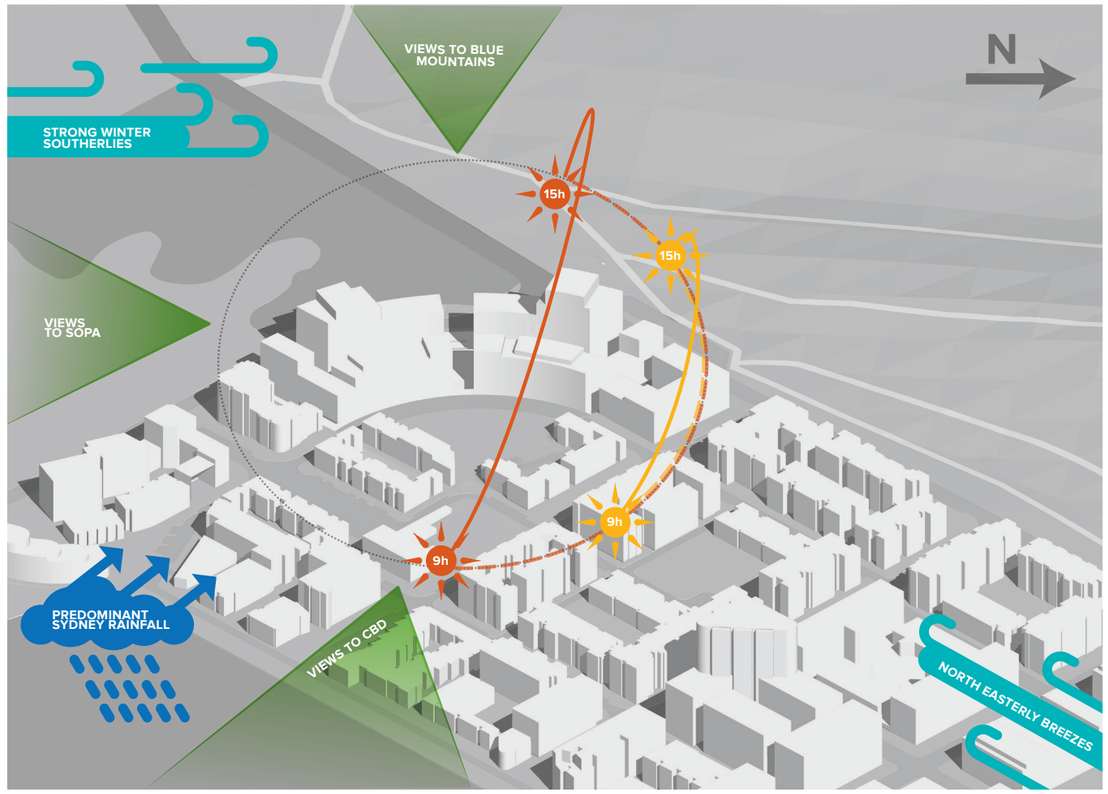
SITE CONTEXT



RETAIL / COMMERCIAL
POOL / TENNIS
OUTDOOR POOL
BAY PARK
MILLENIUM PARKLANDS
CLUB ONE
COMMUNITY ROOMS

SURROUNDINGS

The site is directly opposite vast Parklands comprised of Haslams Creek and Millennium Parklands. Breaking the continuous street wall will enhance the connection between Bay Park and the larger network of Recreational Parklands.



WINTER
SUMMER

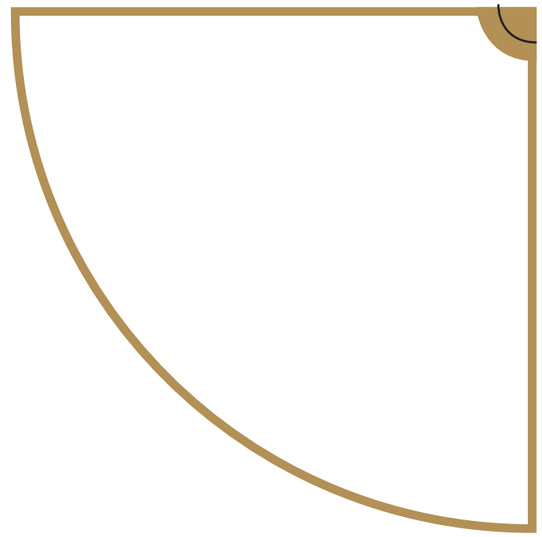
CLIMATE

The site benefits from generous open space including the public Bay Park and Communal Courtyards.

The proposed modified envelopes for the remaining unbuilt stages will allow increased sunlight into the courtyards, and will match the current solar access to Bay Park.

Refer to Shadow Analysis on page 39 - 43 for detail

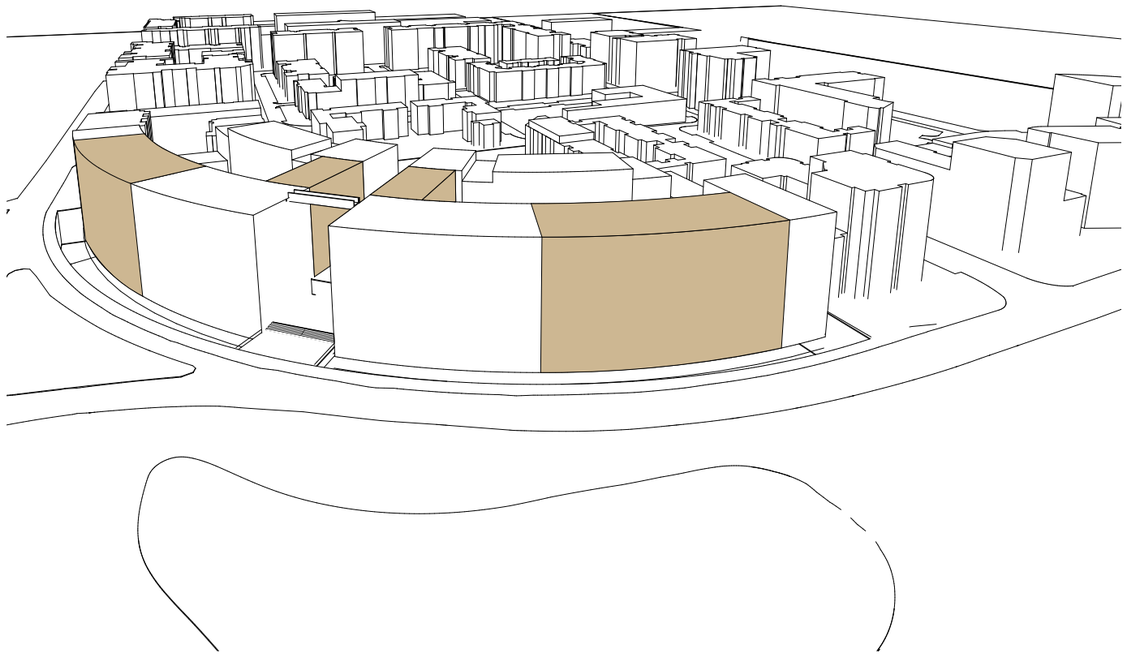
2. MERIT BASED ANALYSIS



2.1. HEIGHT, SCALE & MASSING

MASSING

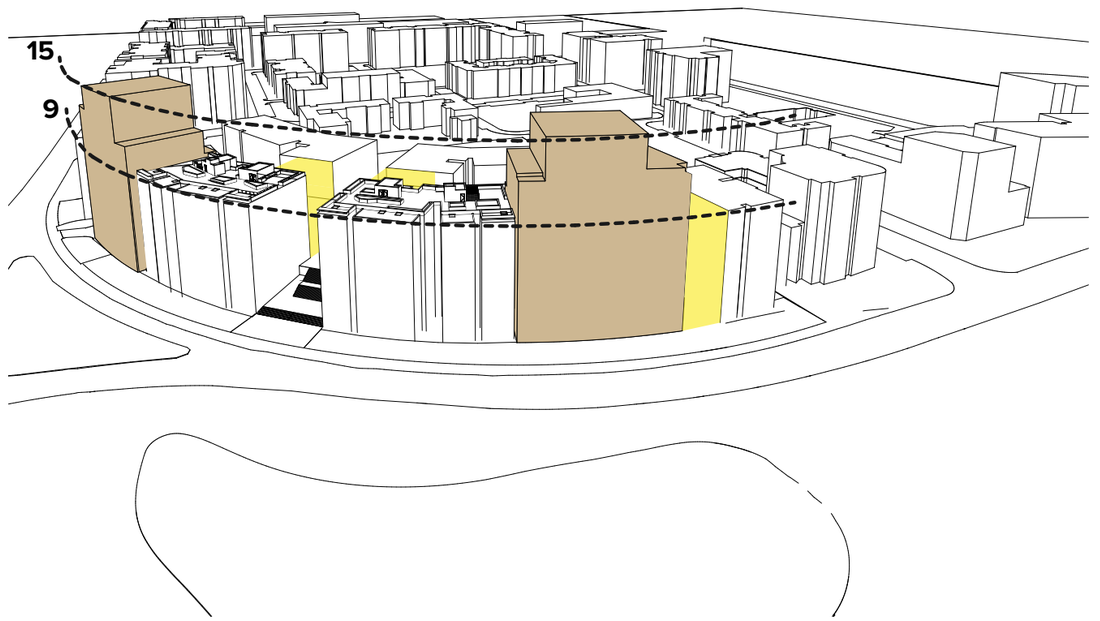
HEIGHT & DENSITY



Approved / Proposed Envelope

2013 APPROVED CONCEPT PLAN

Under the 2013 approved Concept Plan, the envelopes for the site correspond to continuous 9 storey volumes parallel to Bennelong Parkway. The approved unbuilt envelopes are shown in gold in this diagram.



Approved / Proposed Envelope

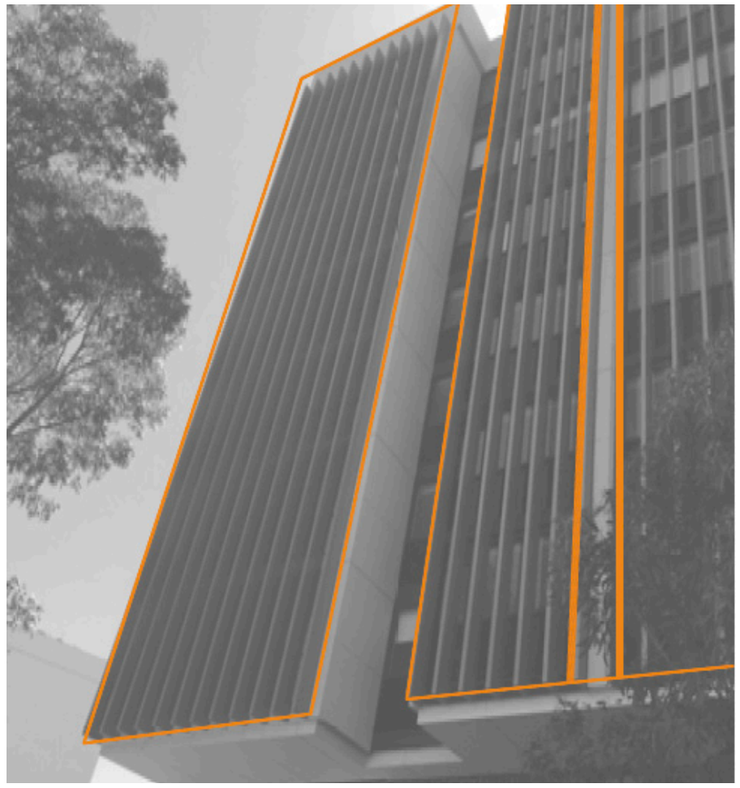
New open space after amending envelope

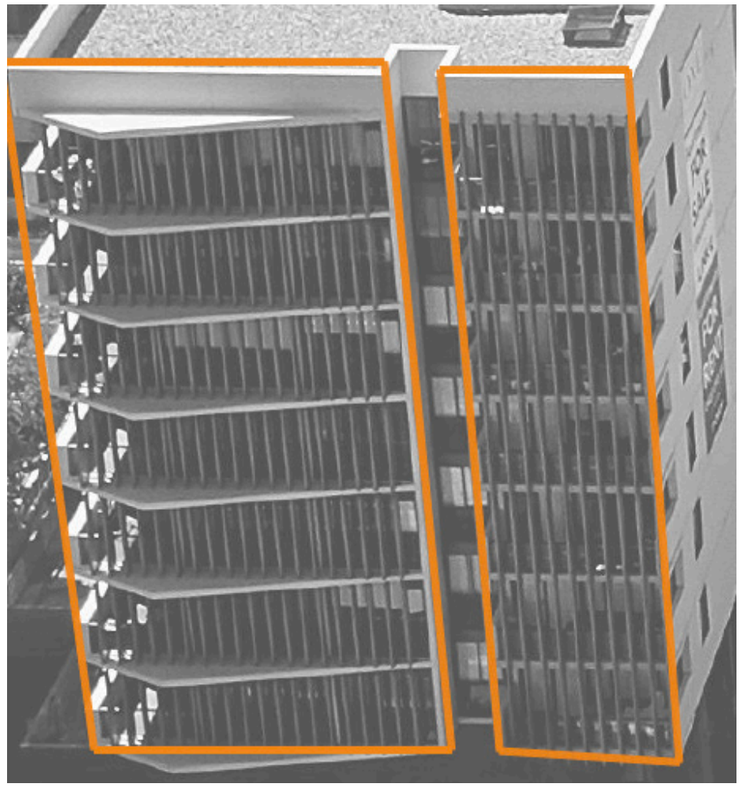
2020 PROPOSED MODIFICATION

The proposed buildings are stepped in height ranging from 9-15 storeys for Building C and 9-15 storeys for Building F, to provide for varied building forms, façade modulation and visual interest.

MASSING

STREETSCAPE & CONTEXT





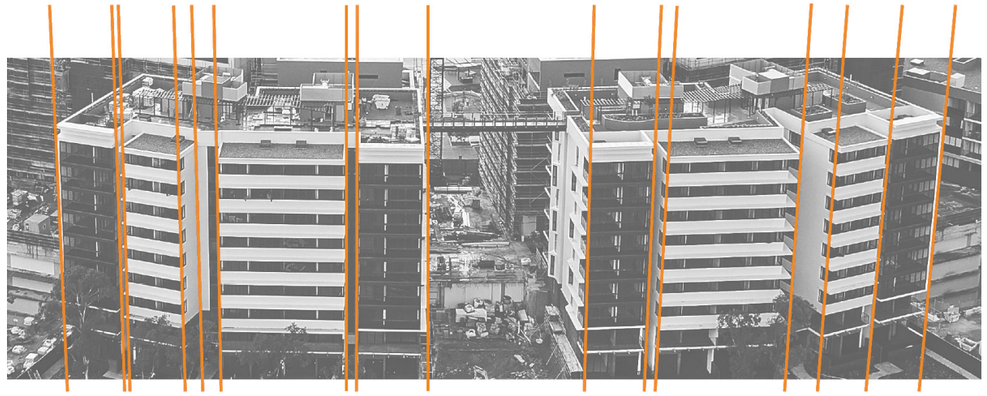
EXISTING CONTEXT

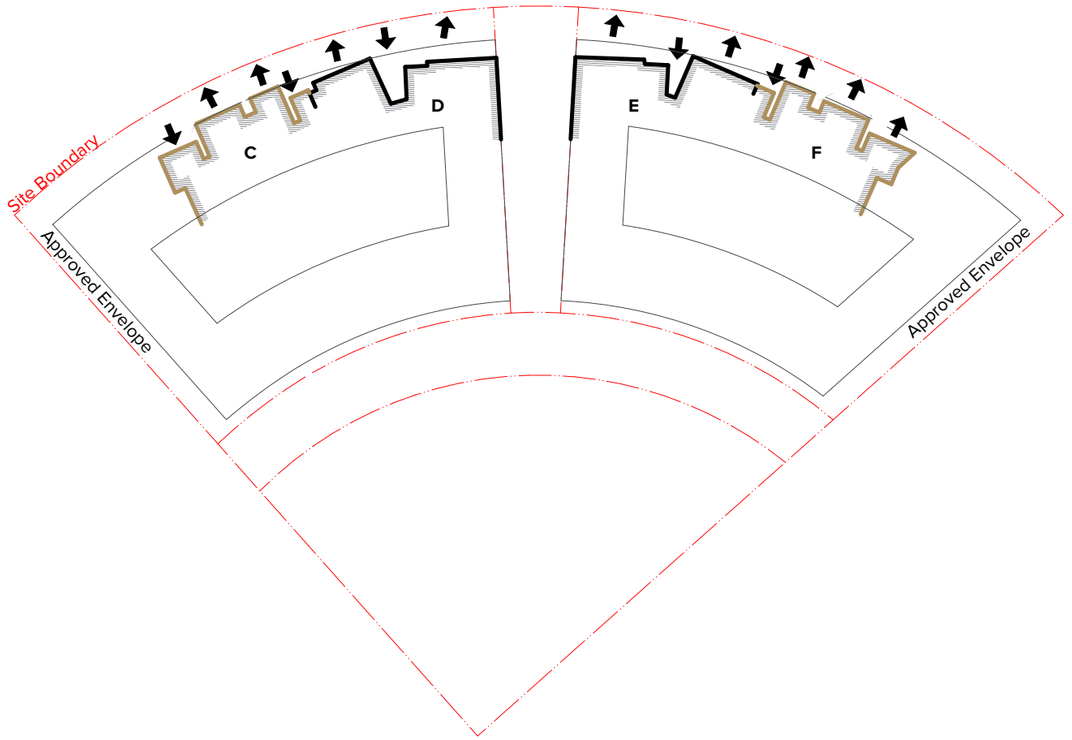
The modulation of the existing façade is enhanced with strong vertical architectural elements.

The façade steps within the development along the curved Bennelong parkway.

MASSING

STREETSCAPE & CONTEXT





EXISTING CONTEXT

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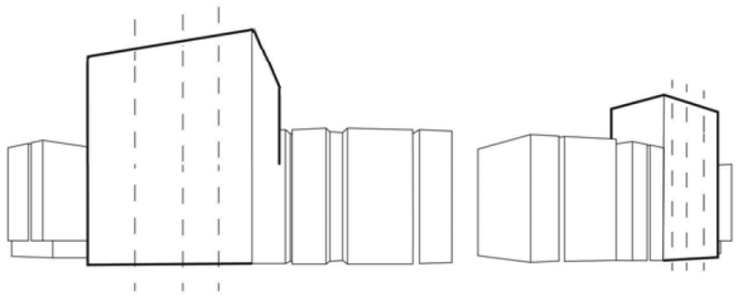
The façade steps within the development along the curved Bennelong parkway.

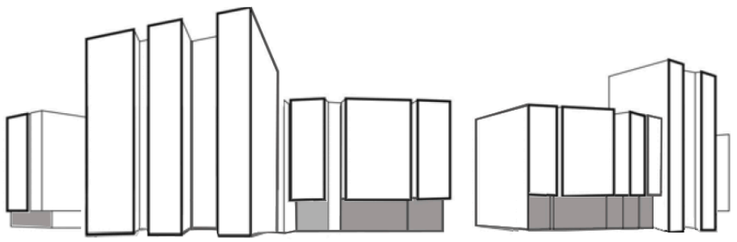
MASSING

STREETSCAPE & CONTEXT



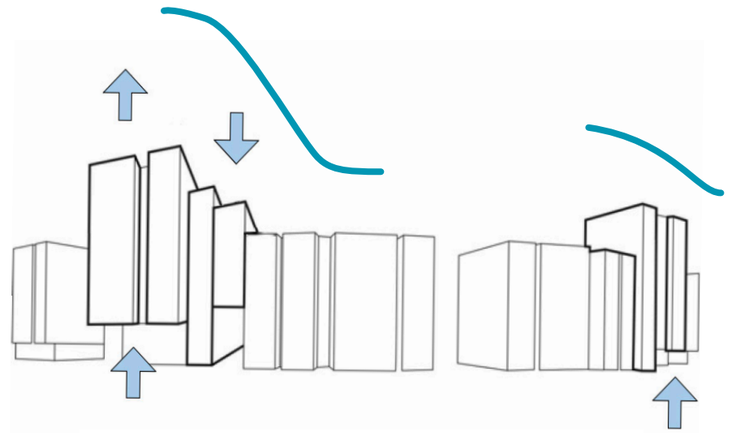
APPLYING THE CONTEXTUAL GRID

Vertical Expression



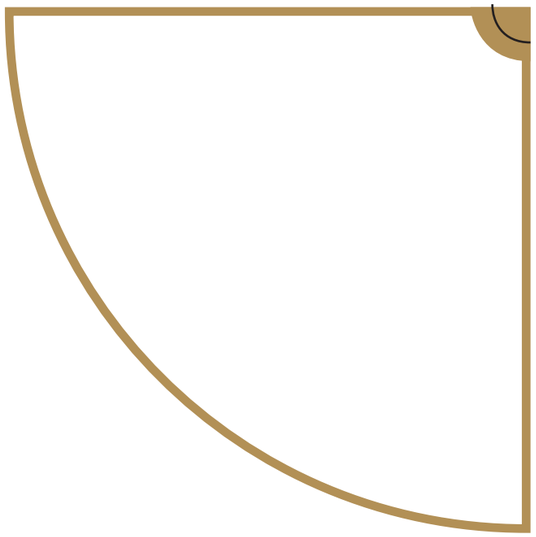
ADAPTATION OF FACADE MODULATION

Façade articulation (varying planes and stepping)



ADJUSTMENT OF MASSING EMBRACING THE NATURAL AND BUILT CONTEXTUAL ELEMENTS.

Drawing from surrounding natural and built context, variation in height responds to the transitioning topography, landscape, and built forms. Heights of the new buildings gradually increase toward the north in stepped forms, referencing the topography and vegetation beyond Hill Road and the transitioning heights of Wentworth point, creating interesting skylines and opportunities for landscaped roof terraces.



2.2. BUILDING DEPTH & SEPARATION

BUILDING DEPTH & SEPARATION

URBAN CONTROL DIAGRAM

Current Approved Building Area Envelope*

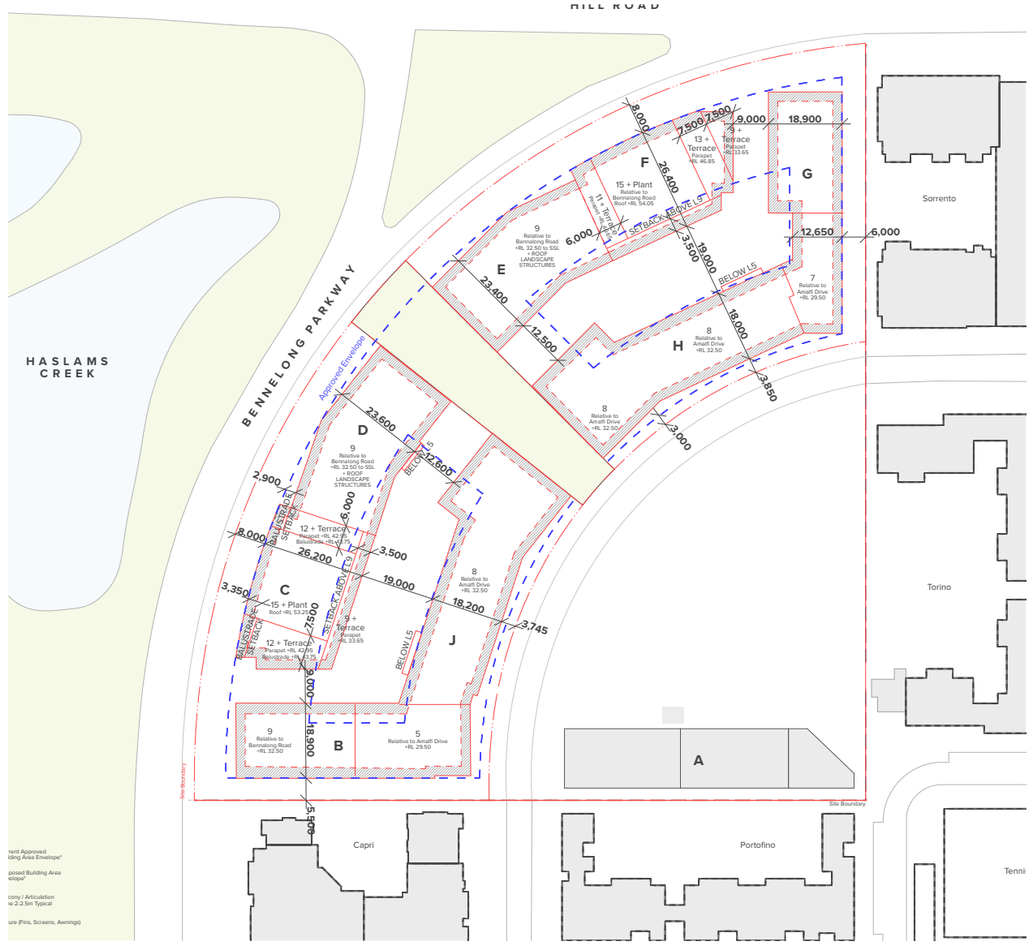
Proposed Building Area Envelope*

Balcony / Articulation Zone 2-2.5m Typical

* Excluding Architecture Feature (Fins, Screens, Awnings)

2013 APPROVED CONCEPT PLAN

The current approved envelope varies from 4-9 stories and with two fully enclosed courtyards.



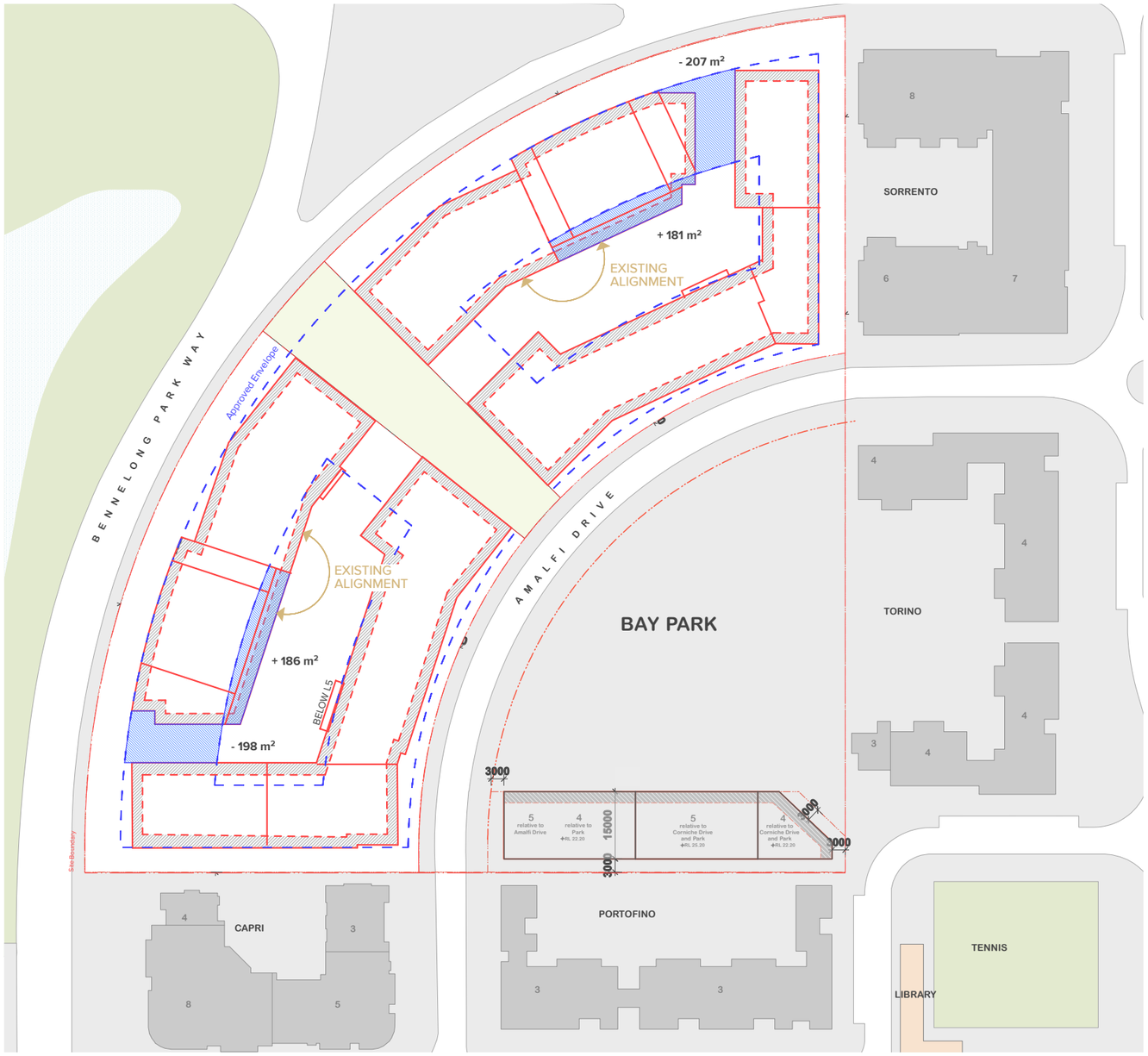
AUGUST 2020 PROPOSED MODIFICATION

The proposed envelope has been updated to capture progressive development approvals and existing built forms.

The revised envelope has been reduced to a stepped form varying from 9-15 stories. New setbacks have been introduced to the envelope above L9 at the courtyard for improved views to the sky from the courtyard. At the side setback, additional steps have been included in the envelope in relation to existing windows opposite.

BUILDING DEPTH & SEPARATION

SITE COVERAGE



AUGUST 2020 PROPOSED MODIFICATION

The proposed envelope aligns with the approved existing as built forms at the courtyard.

The proposed amendment to the remaining Building C and F envelope transfers volume from the sides of each courtyard to a taller form with reduced footprint, for improved amenity of daylight, ventilation, outlook and permeability.

The revised envelope reduces the overall site coverage.

SEPP 65 Apartment Design Guide p35 recommends "Buildings that have smaller depths over a greater height deliver better residential amenity than those with greater depth and lower height"

BUILDING DEPTH & SEPARATION

ADG COMPARISON

In response to recent submissions and DPIE letter dated 07 of July 2020, envelopes have been further refined to provide, generally 19 meter setbacks across courtyards, increases in side setbacks opposite habitable rooms windows and additional setbacks above level 9 for increased solar access and views to the sky.

The proposed envelope responds to the existing as-built context for building separation. The proposed envelope meets or exceeds ADG requirements for separation from the existing buildings. Refer to the following detailed plans showing relationships to existing habitable rooms primary and secondary windows.

The envelopes define the minimum setbacks. Final DA plans will be within these envelopes (i.e. may be setback further).

SEPP 65 Apartment Design Guide

p29 "The gross floor area of the building is typically 25-30% less than that of the envelope"

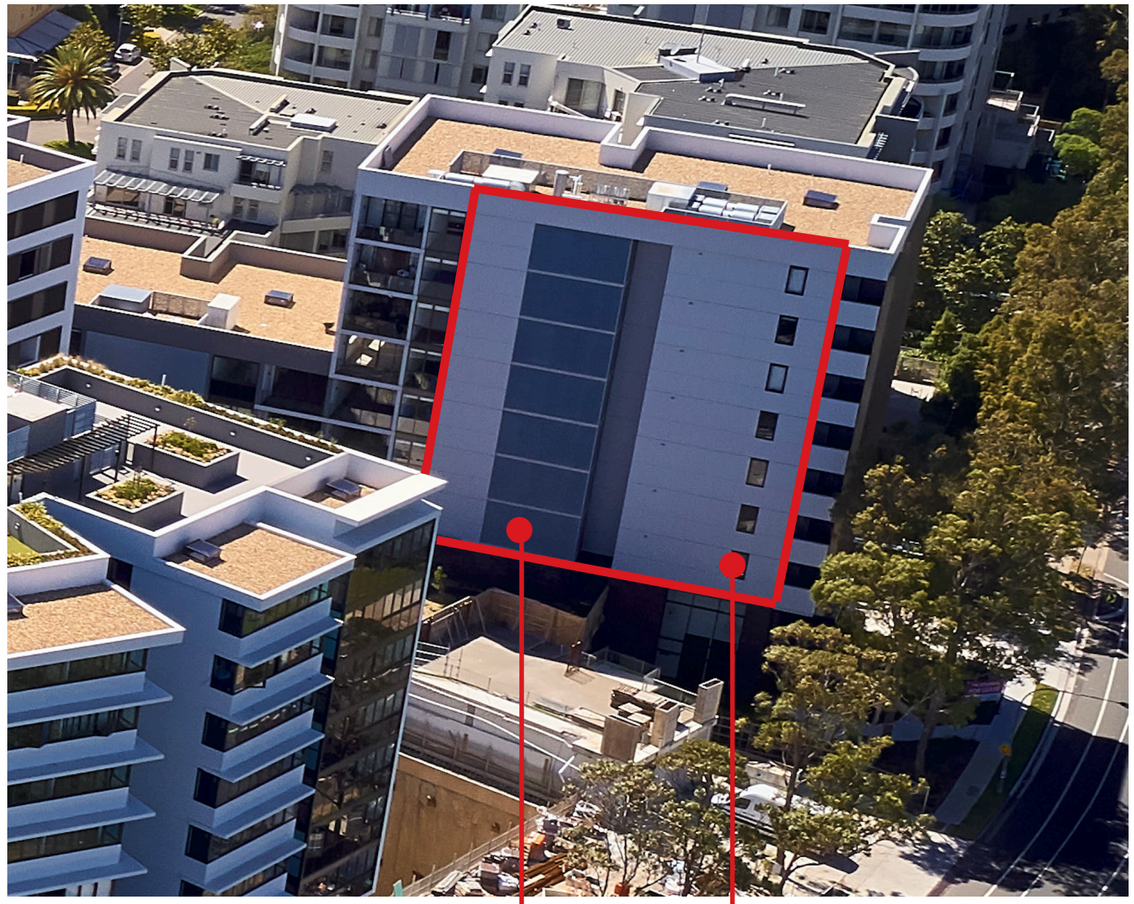
p34 " ensure building depths support apartment layouts that meet the objectives, design criteria and guidance within the ADG"

BUILDING DEPTH & SEPARATION

EXISTING CONTEXT INFORMING ADG SEPARATION REQUIREMENTS

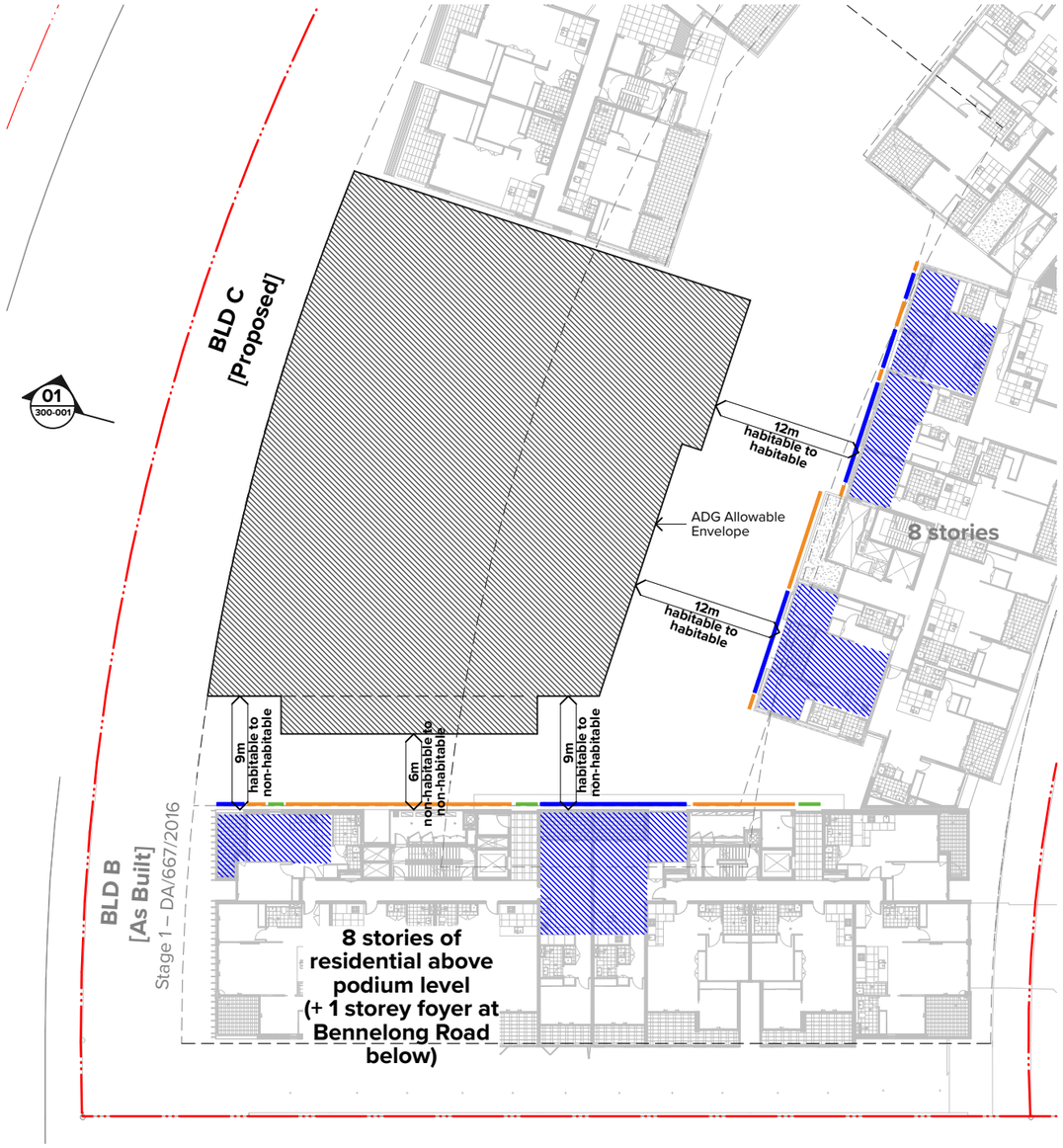
As-built view of Building G

As-built view of Building B

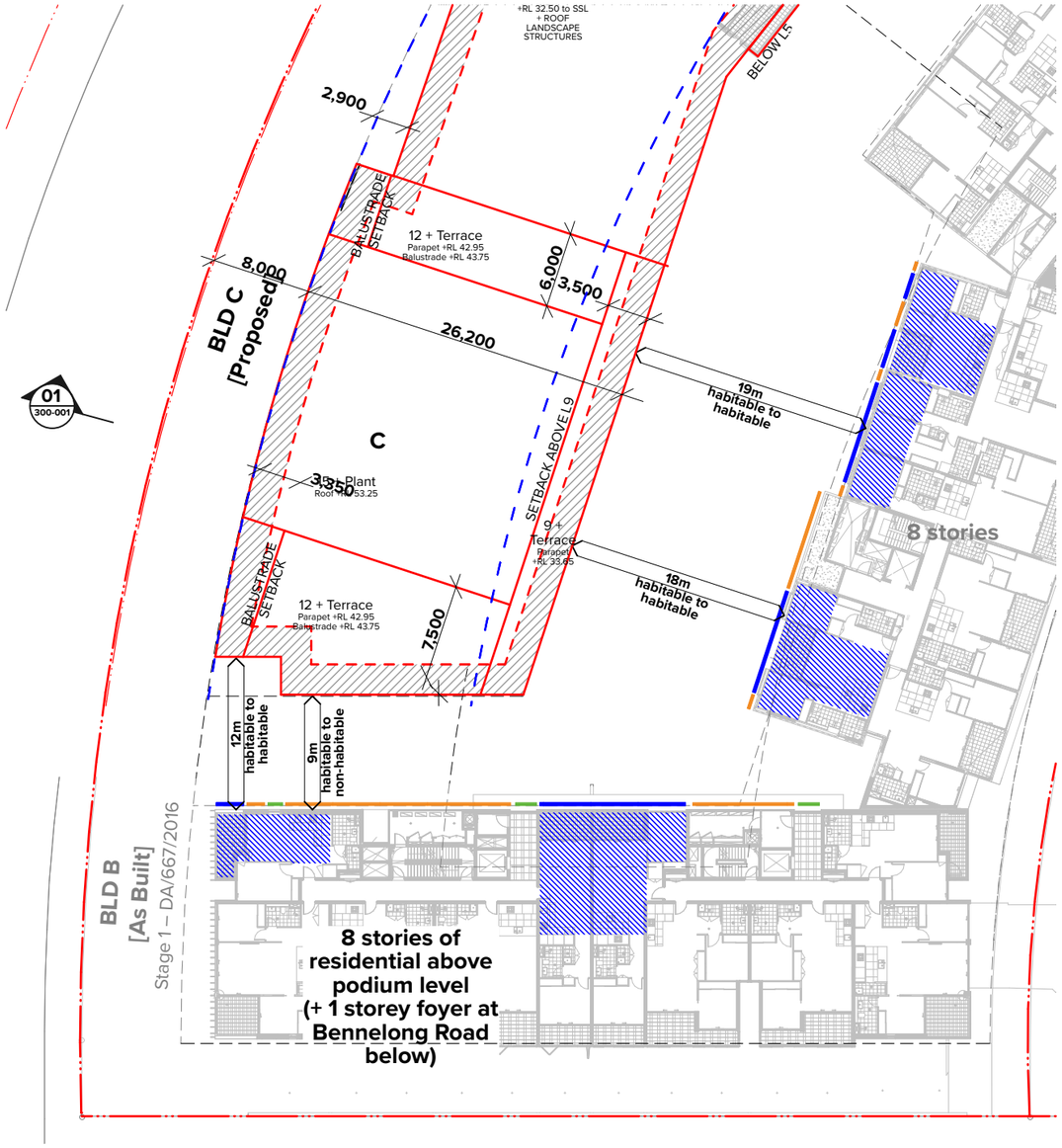


BUILDING DEPTH & SEPARATION

ADG COMPARISON BUILDING C - TYPICAL LOWER LEVEL



Lower ADG Envelope - Level 2



Lower Proposed Concept Envelope - Level 2

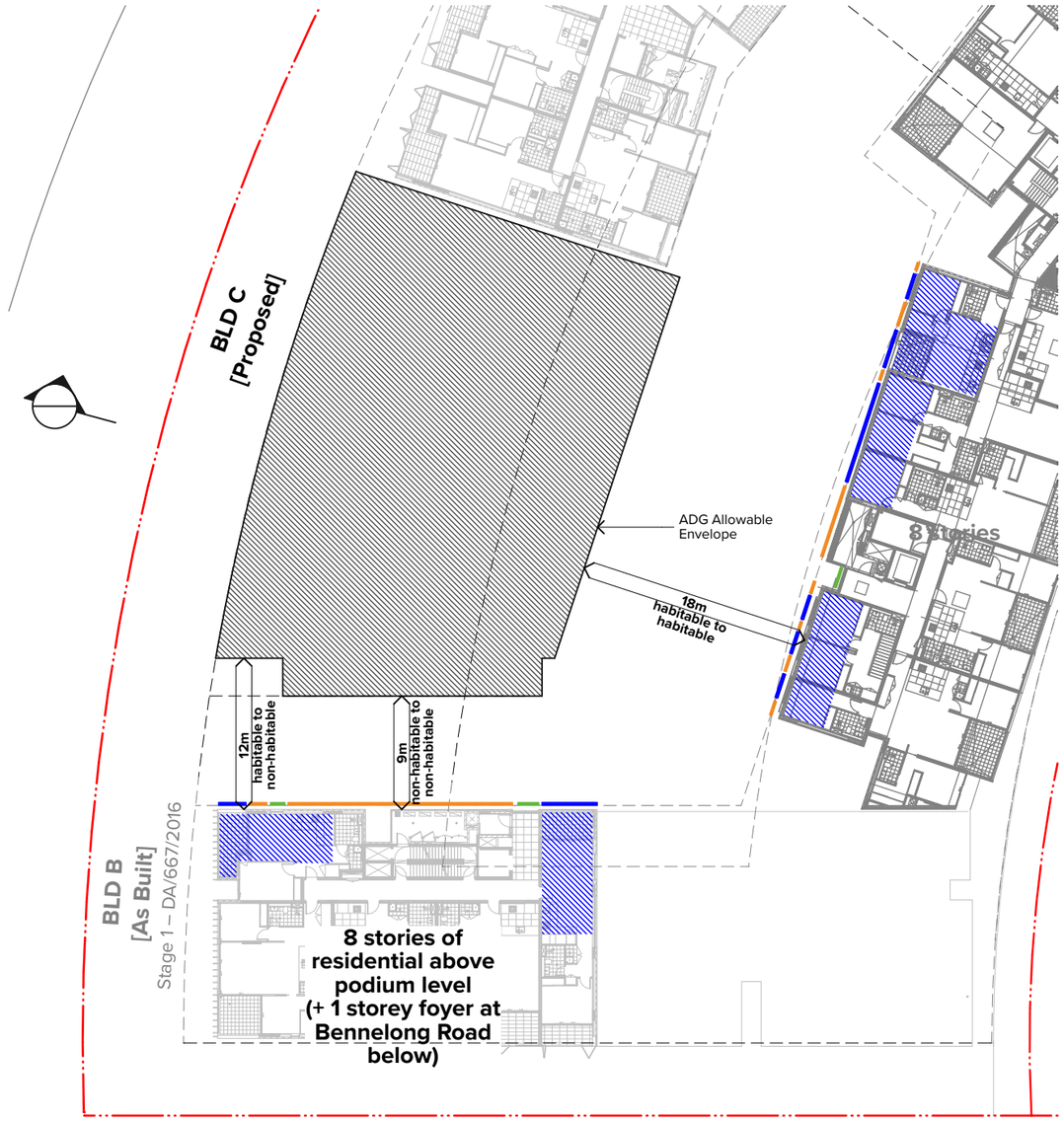
Habitable - Primary

Habitable - Secondary

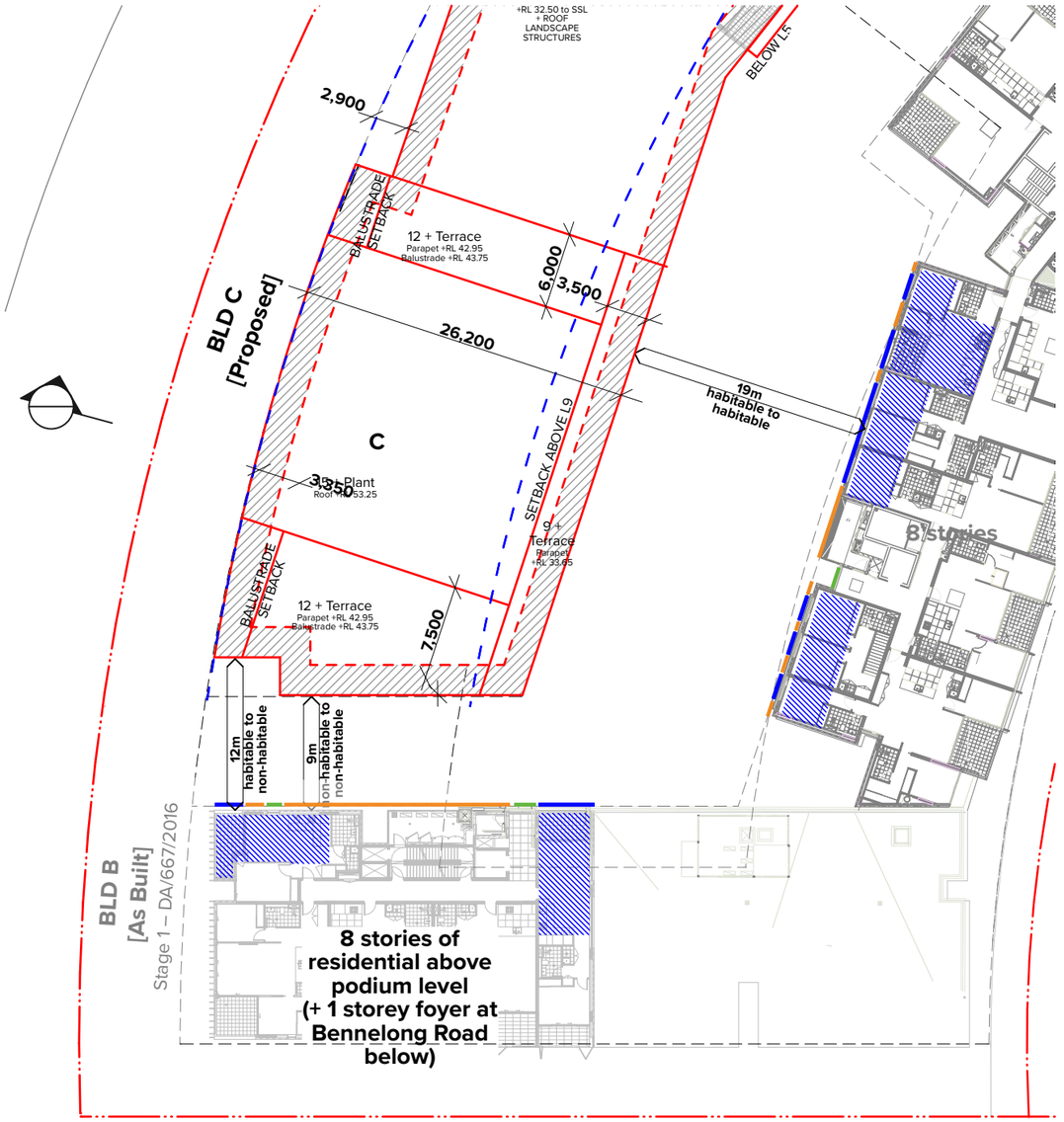
Non Habitable

BUILDING DEPTH & SEPARATION

ADG COMPARISON BUILDING C - TYPICAL MID LEVEL



Mid ADG Envelope - Level 7



Mid Proposed Concept Envelope - Level 7

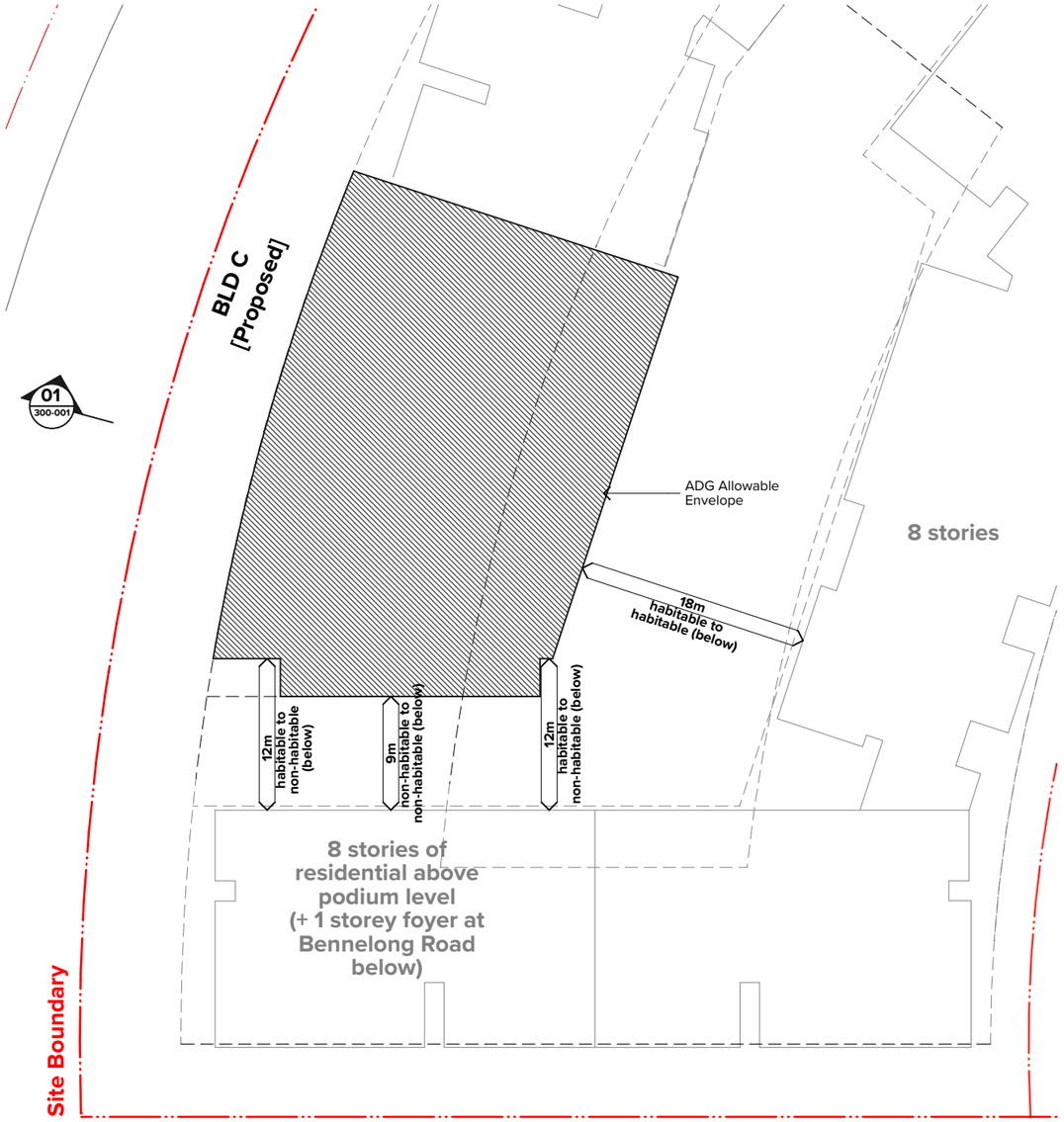
Habitable - Primary

Habitable - Secondary

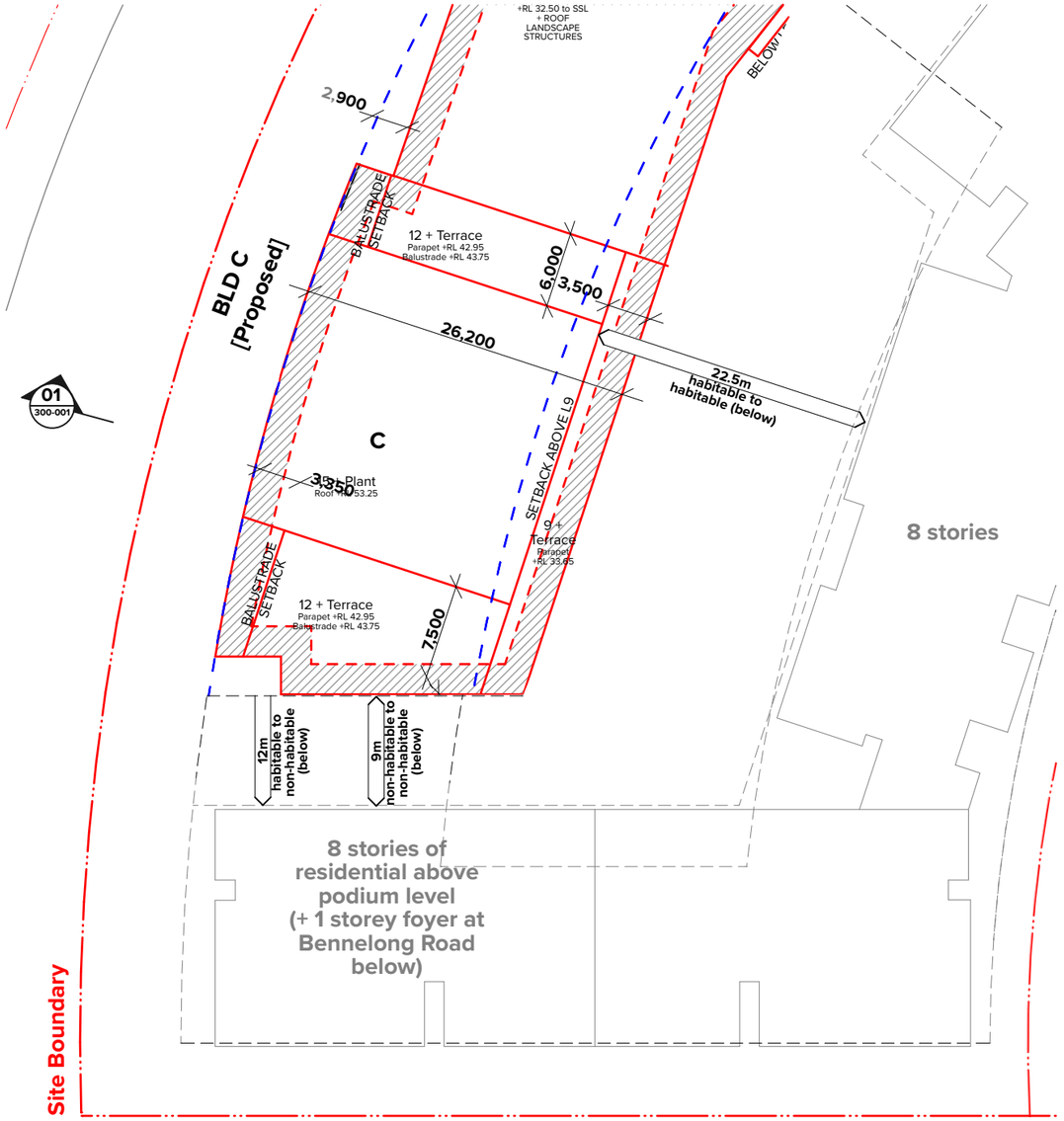
Non Habitable

BUILDING DEPTH & SEPARATION

ADG COMPARISON BUILDING C - TYPICAL UPPER LEVEL



Upper ADG Envelope - Level 10



Upper Proposed Concept Envelope - Level 10

Habitable - Primary

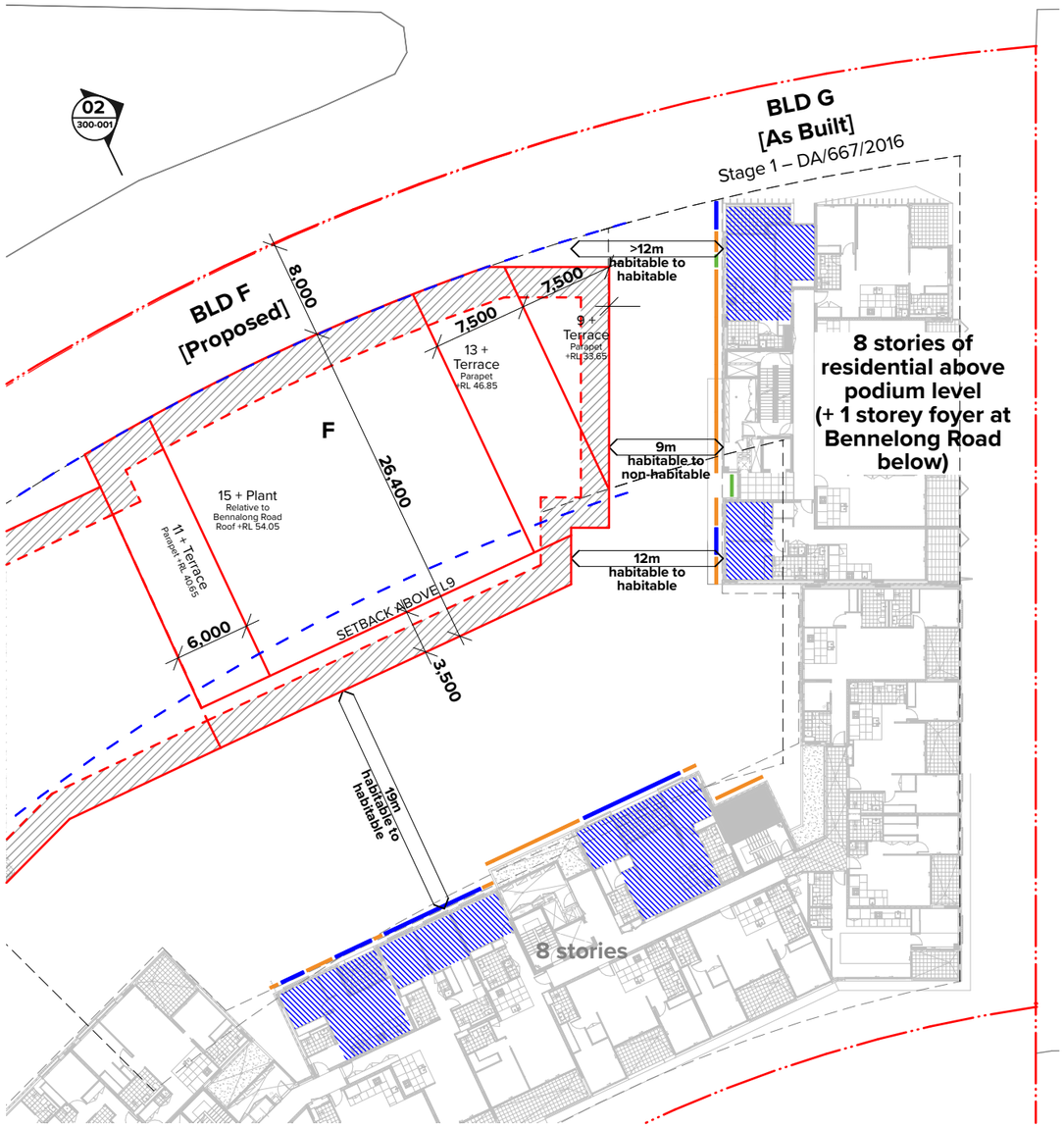
Habitable - Secondary

Non Habitable

BUILDING DEPTH & SEPARATION

ADG COMPARISON BUILDING F - TYPICAL LOWER LEVEL

Lower ADG Envelope - Level 2



Lower Proposed Concept Envelope - Level 2

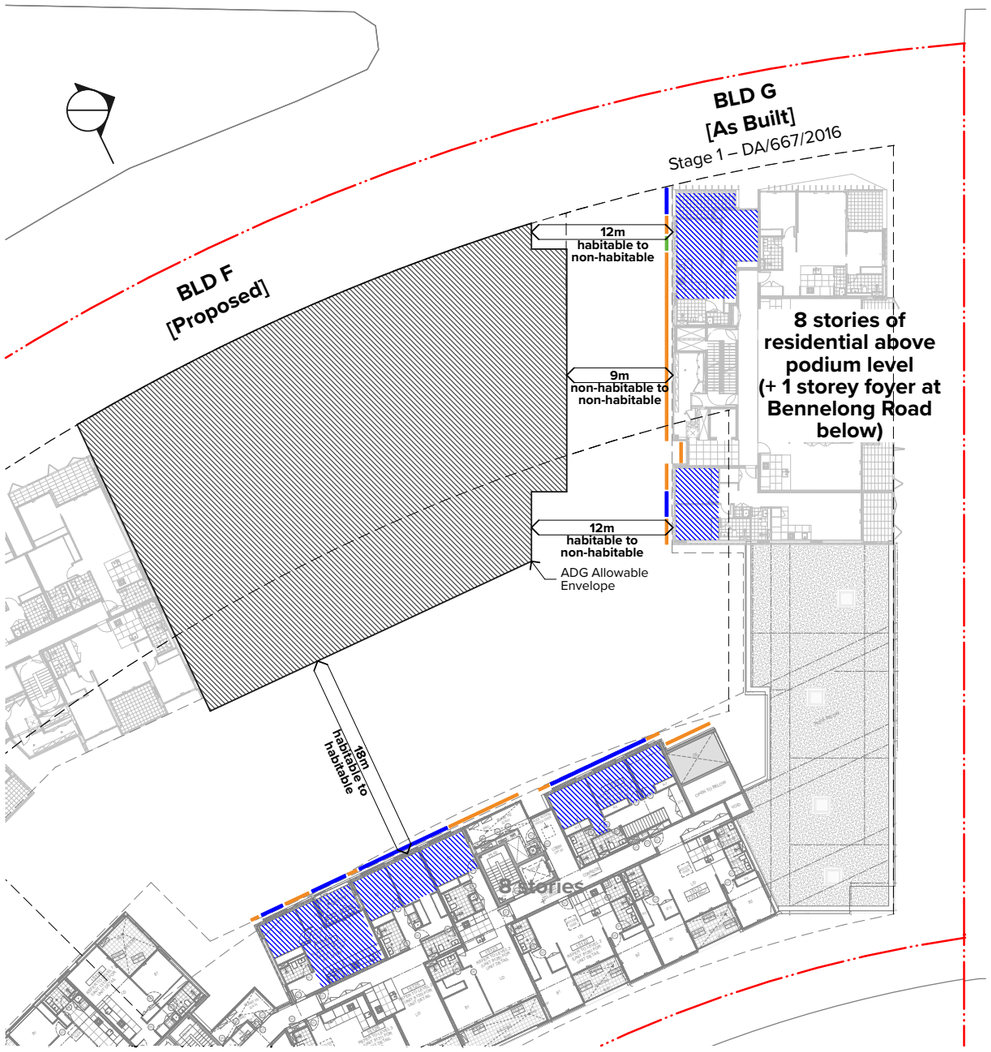
Habitable - Primary

Habitable - Secondary

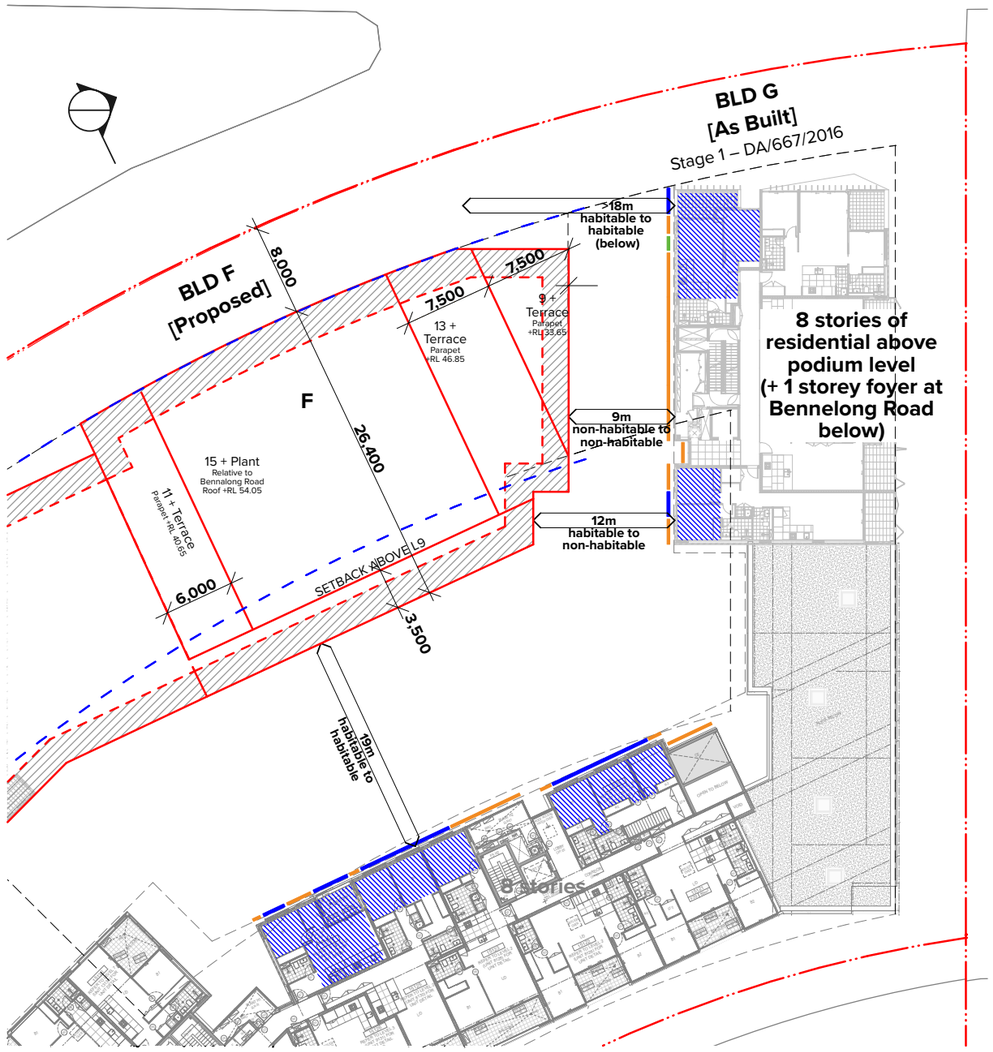
Non Habitable

BUILDING DEPTH & SEPARATION

ADG COMPARISON BUILDING F - TYPICAL MID LEVEL



Mid ADG Envelope - Level 7

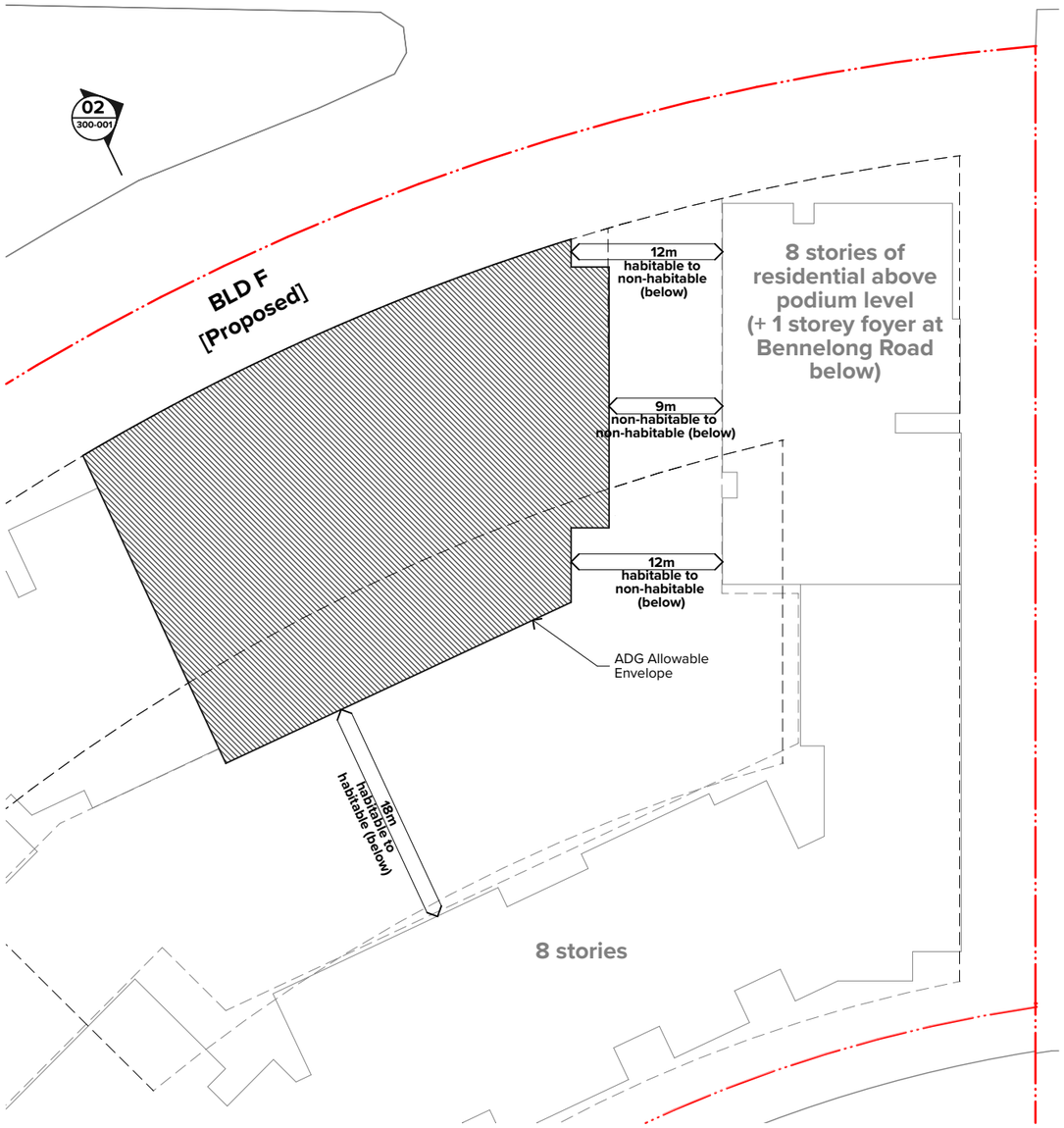


Mid Proposed Concept Envelope - Level 7

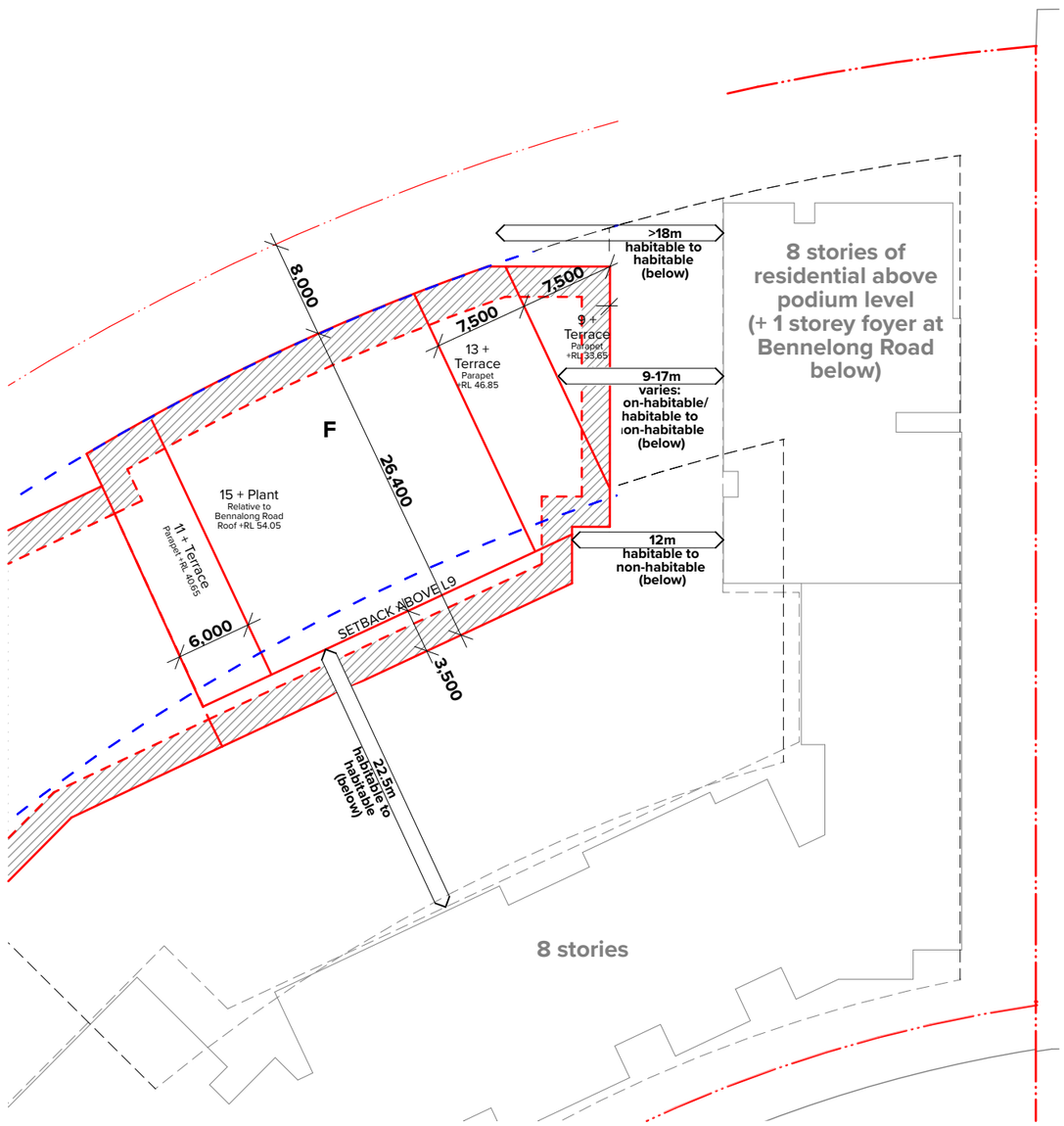
- Habitable - Primary
- Habitable - Secondary
- Non Habitable

BUILDING DEPTH & SEPARATION

ADG COMPARISON BUILDING F - TYPICAL UPPER LEVEL



Upper ADG Envelope - Level 10



Upper Proposed Concept Envelope - Level 10

Habitable - Primary

Habitable - Secondary

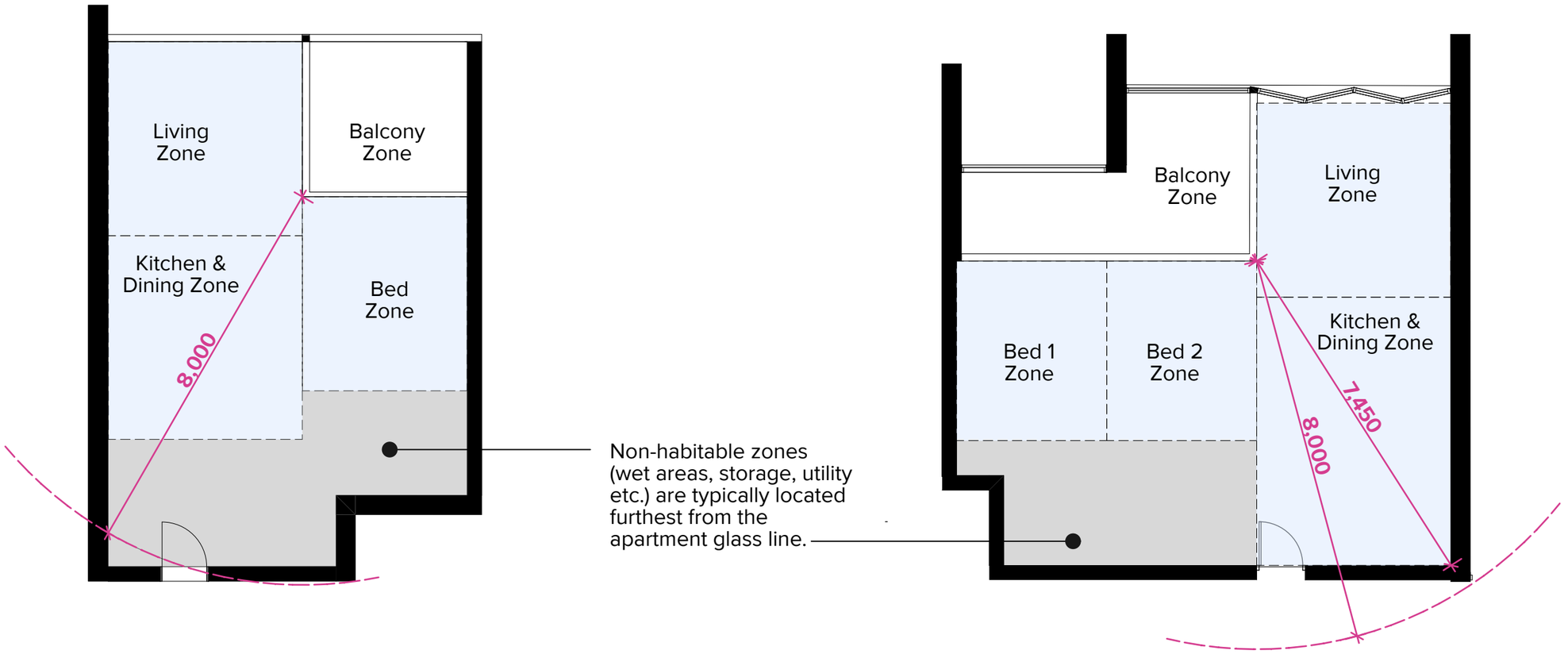
Non Habitable

04.09.2020
DLCS Quality Endorsed Company ISO 9001:2015, Registration Number 20476
Nominated Architect: Nicholas Turner 6695, ABN 86 064 084 911

BUILDING DEPTH

ILLUSTRATIVE APARTMENT LAYOUTS

The proposed building envelope includes articulation zones. The final building depth will be less than the envelope and further reduced at balconies (glassline to glassline)



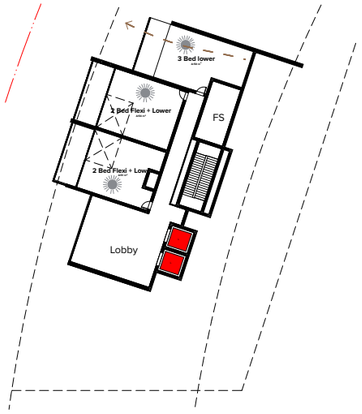
Typical 1 Bed Apartment
Indicative Layout

Typical 2 Bed Apartment
Indicative Layout

2.3. SOLAR ANALYSIS

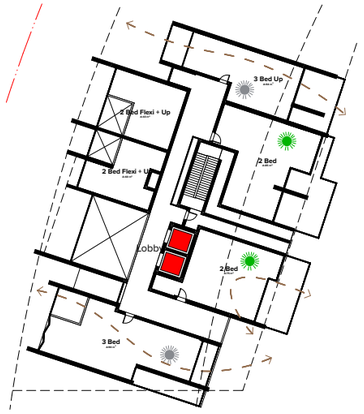
MERIT SUMMARY

NEW DWELLINGS - BUILDING C



1 Ground Level

	<15 min. -> 2Hours Solar Access	0
	> 2Hours Solar Access	0
	No Direct Sun Light	3
	Cross Ventilation	1

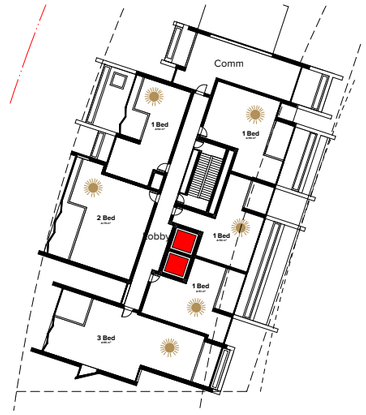


2 Level 01

	<15 min. -> 2Hours Solar Access	0
	> 2Hours Solar Access	1
	No Direct Sun Light	2
	Cross Ventilation	2

3 Level 02 - 08

	<15 min. -> 2Hours Solar Access	0
	> 2Hours Solar Access	3
	No Direct Sun Light	1
	Cross Ventilation	6

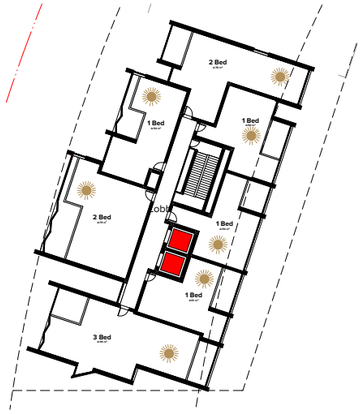


4 Level 09

	<15 min. -> 2Hours Solar Access	0
	> 2Hours Solar Access	6
	No Direct Sun Light	0
	Cross Ventilation	

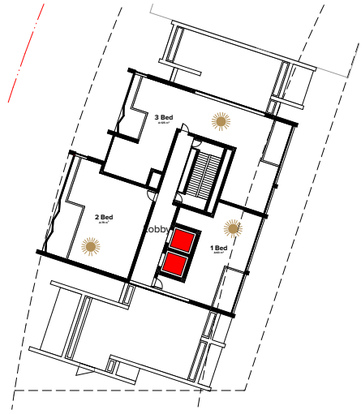
5 Level 10

	<15 min. -> 2Hours Solar Access	0
	> 2Hours Solar Access	7
	No Direct Sun Light	0
	Cross Ventilation	



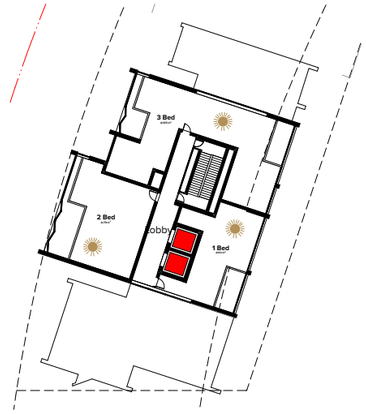
6 Level 11

	<15 min. -> 2Hours Solar Access	0
	> 2Hours Solar Access	7
	No Direct Sun Light	0
	Cross Ventilation	



7 Level 12

	<15 min. -> 2Hours Solar Access	0
	> 2Hours Solar Access	3
	No Direct Sun Light	0
	Cross Ventilation	



8 Level 13 - 14

	<15 min. -> 2Hours Solar Access	0
	> 2Hours Solar Access	3
	No Direct Sun Light	0
	Cross Ventilation	

Apartment Amenity (With reference to Apartment Design Guide)

Building C

Solar Access (Objective 4A-1, Design Criteria 1)

Minimum % of apartments achieving 2 hours solar access: ≥ 70%
Actual % of apartments achieving 2 hours solar access: 64 apartments = 70%

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

Minimum % of apartments to be naturally ventilated: ≥ 60%
Actual % of apartments that are naturally ventilated: 45 apartments = 71%

No Direct Sunlight (Objective 4A-1, Design Criteria 3)

Minimum % of apartments achieving no direct sunlight: ≤ 15%
Actual % of achieving no direct sunlight: 12 apartments = 13.2%

Building C & F Total

Solar Access (Objective 4A-1, Design Criteria 1)

Minimum % of apartments achieving 2 hours solar access: ≥ 70%
Actual % of apartments achieving 2 hours solar access: 137 apartments = 74.4%

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

Minimum % of apartments to be naturally ventilated: ≥ 60%
Actual % of apartments that are naturally ventilated: 90 apartments = 71.5%

No Direct Sunlight (Objective 4A-1, Design Criteria 3)

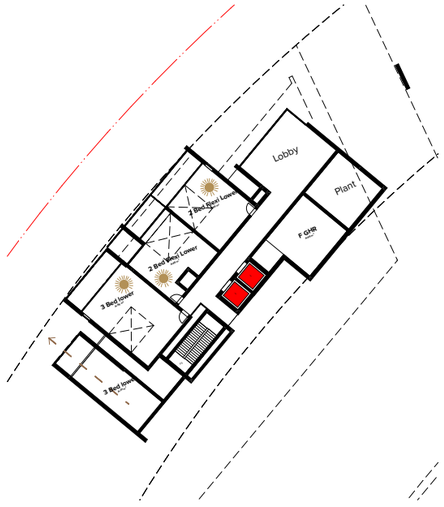
Minimum % of apartments achieving no direct sunlight: ≤ 15%
Actual % of achieving no direct sunlight: 21 apartments = 11.5%

2020 PROPOSED MODIFICATION

The illustrative plans for the proposed modification of Building C & F achieves a minimum of 2h Solar access to 70.3 - 78.5% of apartments, no direct sunlight to 13.2 - 9.7% of apartments, and 72.6 - 70.3% cross ventilated apartments.

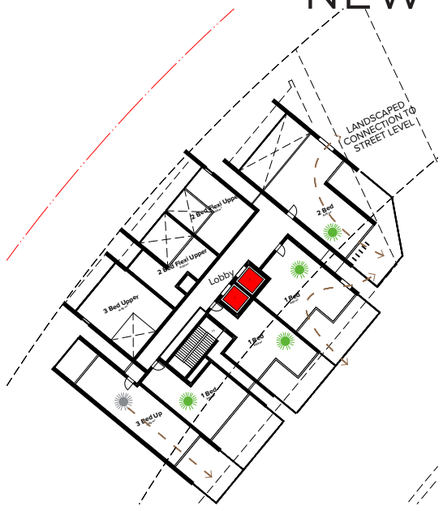
MERIT SUMMARY

NEW DWELLINGS - BUILDING F



1 Ground Level

<15 min. -> 2Hours Solar Access	0
> 2Hours Solar Access	3
No Direct Sun Light	0
Cross Ventilation	1

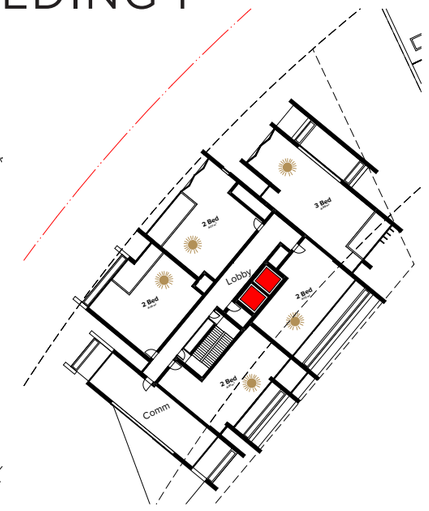


2 Level 01

<15 min. -> 2Hours Solar Access	0
> 2Hours Solar Access	0
No Direct Sun Light	1
Cross Ventilation	2

3 Level 02 - 08

<15 min. -> 2Hours Solar Access	0
> 2Hours Solar Access	4
No Direct Sun Light	1
Cross Ventilation	6

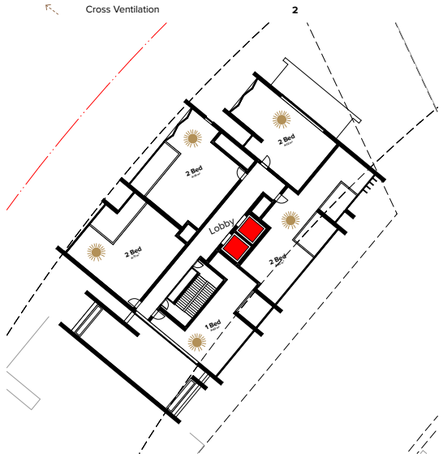


4 Level 09

<15 min. -> 2Hours Solar Access	0
> 2Hours Solar Access	5
No Direct Sun Light	1
Cross Ventilation	

5 Level 10

<15 min. -> 2Hours Solar Access	0
> 2Hours Solar Access	5
No Direct Sun Light	0
Cross Ventilation	

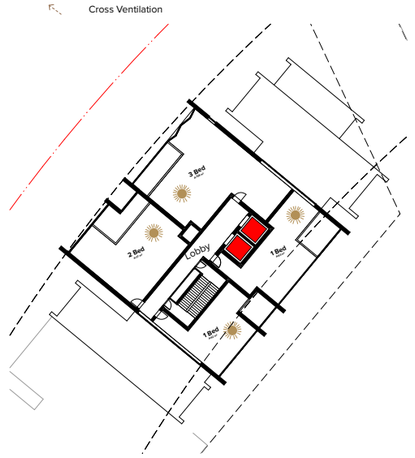


6 Level 11

<15 min. -> 2Hours Solar Access	0
> 2Hours Solar Access	5
No Direct Sun Light	0
Cross Ventilation	

7 Level 12

<15 min. -> 2Hours Solar Access	0
> 2Hours Solar Access	5
No Direct Sun Light	0
Cross Ventilation	



8 Level 13 - 14

<15 min. -> 2Hours Solar Access	0
> 2Hours Solar Access	4
No Direct Sun Light	0
Cross Ventilation	

Apartment Amenity (With reference to Apartment Design Guide)

Building F

Solar Access (Objective 4A-1, Design Criteria 1)

Minimum % of apartments achieving 2 hours solar access: ≥ 70%
Actual % of apartments achieving 2 hours solar access: 73 apartments = 78.5%

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

Minimum % of apartments to be naturally ventilated: ≥ 60%
Actual % of apartments that are naturally ventilated: 45 apartments = 70.3%

No Direct Sunlight (Objective 4A-1, Design Criteria 3)

Minimum % of apartments achieving no direct sunlight: ≤ 15%
Actual % of achieving no direct sunlight: 9 apartments = 9.7%

Building C & F Total

Solar Access (Objective 4A-1, Design Criteria 1)

Minimum % of apartments achieving 2 hours solar access: ≥ 70%
Actual % of apartments achieving 2 hours solar access: 137 apartments = 74.4%

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

Minimum % of apartments to be naturally ventilated: ≥ 60%
Actual % of apartments that are naturally ventilated: 90 apartments = 71.5%

No Direct Sunlight (Objective 4A-1, Design Criteria 3)

Minimum % of apartments achieving no direct sunlight: ≤ 15%
Actual % of achieving no direct sunlight: 21 apartments = 11.5%

2020 PROPOSED MODIFICATION

The illustrative plans for the proposed modification of Building C & F achieves a minimum of 2h Solar access to 70.3 - 78.5% of apartments, no direct sunlight to 13.2 - 9.7% of apartments, and 72.6 - 70.3% cross ventilated apartments.

SOLAR ACCESS
SUMMARY

Criteria		2013 Approved Concept Modified for as built A,B,D,E,G,H,J	2018 Previous MOD4	August 2020 Proposed MOD4
Building Height	Overall Site	8-9 Storeys	25-35 Storeys	9-15 Storeys
Apartment Numbers (Approx.)	Sites C&F only Overall site	99/71/6 = 176 209/405/27 = 641	127/240/36=403 304/578/56 =938	82/88/14 = 184 182/452/41 = 649
Carparking (Approx.)	Overall site	850	1132	552 Existing + 298 New = 850
Communal Open Space At Ground Level (Approx.)*	Site Area = 25,570sqm (25% = 6,392.5sqm)	12,875 sqm 50.4% of Site Area	12,722 sqm 49.8% of Site Area	12,911 sqm 50.5% of Site Area
Roof top Gardens + Amenities		+ 1,813 sqm 7% of Site Area	+ 1,813 sqm 7% of Site Area	+ 1,813 sqm 7% of Site Area
Direct Solar Access to Public and Communal Open Space Average mid winter 9am – 3 pm	**Courtyard**	Average 423 / 3,335 sqm (based on as built BEA + C,F BEA) 12.6%	3,342 sqm (based on current approved BEA) 7.9%	Average 374 / 3,371 sqm (based on as built BEA + C,F BEA) 11.1%
at Ground Level (excludes Rooftop Gardens)	**Bay Park** 4,868 sqm	78%	78%	78%
	Overall Site (Courtyard, Through site link, Bay Park, Side, Front & Back Setbacks)	45%	43%	45%
	Wetlands	97.1%	89.8%	96%
Direct Solar Access to Private Dwellings (min 2 hour solar access to Apartment Buildings mid winter 9am – 3 pm)**	Within Site: Buildings A,B,D,E,G,H,J Buildings C, F Total	 346 / 465 123 / 176 469 / 641 (73.2%)	 Min 70%	 340 / 465 137 / 184 477 / 649 (73.4%)
	Neighbouring Apartment Buildings	No impact on neighbouring buildings, from remaining unbuilt portion of BEA (buildings C and F)	Additional Shadow Any apartments affected retain minimum 2hrs solar access.	No impact on neighbouring buildings, from remaining unbuilt portion of BEA (buildings C and F).

* Based on Building Envelope Area (BEA), including 6060 sqm Public Park and Through Site Link, excluding Rooftop Communal Gardens

SOLAR ACCESS

ADG SOLAR & CROSS VENT SUMMARY TABLE

	Stories	Building C	1B	2B	3B	Solar	NDS	CV	Building F	1B	2B	3B	Solar	NDS	CV
Level 14	15	452	1	1	1	3		N/A	448	2	1	1	4	0	N/A
Level 13	14	452	1	1	1	3		N/A	448	2	1	1	4	0	N/A
Level 12	13	452	1	1	1	3		N/A	448	2	2	1	5	0	N/A
Level 11	12	477	4	2	1	7		N/A	473	1	4	0	5	0	N/A
Level 10	11	477	4	2	1	7		N/A	473	1	5	0	5	0	N/A
Level 9	10	477	4	1	1	6		N/A	471	0	4	1	5	1	N/A
Level 8	9	477	4	4	0	6	1	6	537	4	4	0	7	1	6
Level 7	8	556	4	4	0	6	1	6	537	4	4	0	7	1	6
Level 6	7	556	4	4	0	5	1	6	545	4	4	0	7	1	6
Level 5	6	556	4	4	0	5	1	6	545	4	4	0	6	1	6
Level 4	5	556	4	4	0	5	1	6	545	4	4	0	6	1	6
Level 3	4	556	4	4	0	4	1	6	545	4	4	0	5	1	6
Level 2	3	556	4	4	0	3	1	6	545	4	4	0	4	1	6
Level 1	2	420	0	2	1	1	2	2	406	3	1	0	0	1	2
Ground	1	150	0	2	1	0	3	1	212	0	2	2	3	0	1
		Building C							**Building F**						
FSA		6,718	43	40	8	64	12	45	6,730	39	48	6	73	9	45
			47%	44%	9%	70.3%	13.2%	72.6%		42%	52%	6%	78.5%	9.7%	70.3%
Total			91							93		184			

Solar = min. 2 hours direct solar access between 9am and 3pm in mid-winter.
NDS = less than 15min of direct sunlight between 9am and 3pm in mid winter.
CV = natural cross ventilation

EXISTING APARTMENT SOLAR ANALYSIS

SUMMARY

When comparing the existing as built apartments plus current approved and proposed envelopes for Building C and F Turner undertook a detailed shadow study of existing apartments potentially impacted by the current or proposed Building C and F envelopes as requested by the Department. Turner have used sun eye diagrams in lieu of elevational shadow diagrams in order to see every apartment in the development at each 15min interval between 9am and 3pm in mid winter. Turner have also added a markup of existing DA Approved Solar Access Diagrams by Stanisic, with mark up to explain the key to apartment identification for the sun eye studies. Building B,H, and J were the subject of the study. Other existing buildings, including Building E, are not impacted by the envelopes of Building C or F:

The overall development exceeds ADG requirements within the site:

- 73.4 % of apartments receive min 2 hours of direct sunlight in midwinter, compared to 73.2% of apartments under the current approved concept envelope.
- 73% of existing apartments receive minimum 2 hours of sun mid-winter.
- Less than 15% of apartments receive no direct sun in mid-winter.

Sun Eye studies demonstrate that, under the proposed building envelope:

- 6 Existing apartments that achieve min 2 hours sunlight under the approved envelope will change to achieving between 1.5-1.75 hours of sunlight in mid-winter. Of these apartments, three retain min. 2 hours of solar access to the balcony.
- 5 apartments that achieve min 15mins sunlight under the approved envelope will will change to achieving receiving no direct sun in mid-winter. Of these apartments, all retain at least 1.75 hours solar access to the balcony.
- 4 apartments that achieve min 60-105 mins sunlight under the approved envelope will will change to receiving 30-45mins of sunlight in mid-winter. Of these apartments, two apartments retain min. 2 hours solar access to the balcony.
- 8 apartments that currently achieve no direct sunlight in mid-winter under the approved envelope will change to receiving 15-90mins of sunlight in mid-winter to living area and balconies.

EXISTING APARTMENT SOLAR ANALYSIS

SUMMARY OF DETAILED ANAYLSIS

Turner review at 15 min intervals: approx. hours of solar access between 9am and 3pm in mid-winter

Building B

Existing Apartment	Approved 9 Story BEA C & F + As Builts	Approved 9 Story BEA C & F + As Builts	Proposed 9-15 Story BEA C & F + As Builts	Proposed 9-15 Story BEA C & F + As Builts
Location Key	Living Rooms	Balconies	Living Rooms	Balconies
B1				
Level 1 B1.1	1.5	1.5	1.5	1.5
Level 2 B1.2	1.5	1.75	1.5	1.75
Level 3 B1.3	1.75	>/=2	1.75	>/=2
Level 4 B1.4	>/=2	>/=2	>/=2	>/=2
B2				
Level 1 B2.1	1.75	>/=2	1.75	>/=2
Level 2 B2.2	>/=2	>/=2	>/=2	>/=2
Level 3 B2.3	>/=2	>/=2	>/=2	>/=2
Level 4 B2.4	>/=2	>/=2	>/=2	>/=2
Level 5 B2.5	>/=2	>/=2	>/=2	>/=2
Level 6 B2.6	>/=2	>/=2	>/=2	>/=2
Level 7 B2.7	>/=2	>/=2	>/=2	>/=2
B3				
Level 1 B3.1			1.0	1.0
Level 2 B3.2			1.0	1.0
Level 3 B3.3			1.0	1.0
Level 4 B3.4			1.0	1.0
Level 5 B3.5			1.5	1.5
Level 6 B3.6			1.5	1.5
Level 7 B3.7			1.5	1.5
Level 8 B3.8	>/=2*	>/=2	>/=2*	>/=2

Total		
Min 2hrs Solar	8	8
NDS	7	0

Building H

Existing Apartment	Approved 9 Story BEA C & F + As Builts	Approved 9 Story BEA C & F + As Builts	Proposed 9-15 Story BEA C & F + As Builts	Proposed 9-15 Story BEA C & F + As Builts
Location Key	Living Rooms	Balconies	Living Rooms	Balconies
H1				
Level 1 H1.1	>/=2	>/=2	1.5	1.5
Level 2 H1.2	>/=2	>/=2	1.5	1.75
Level 3 H1.3	>/=2	>/=2	1.5	1.75
Level 4 H1.4	>/=2	>/=2	1.75	>/=2
Level 5 H1.5	>/=2	>/=2	1.75	>/=2
Level 6 H1.6	>/=2	>/=2	1.75	>/=2
Level 7 H1.7	>/=2	>/=2	>/=2	>/=2
Level 8 H1.8	>/=2	>/=2	>/=2	>/=2
H2				
Level 1 H2A.1	1.75	>/=2	1.75	>/=2
H2B.1	1.5	>/=2	1.75	>/=2
Level 2 H2.2				
Level 3 H2.3	0.25	>/=2		1.75
Level 4 H2.4	0.75	>/=2		1.75
Level 5 H2.5	1.0	>/=2		1.75
Level 6 H2.6	1.25	>/=2		1.75
Level 7 H2.7	1.25	>/=2		>/=2
Level 8 H2.8	>/=2	>/=2	>/=2	>/=2
H3				
Level 1 H3.1				
Level 2 H3.2		0.25		0.25
Level 3 H3.3		1.0		1.0
Level 4 H3.4		1.25	0.25	1.5
Level 5 H2.5	>/=2	>/=2	>/=2	>/=2
Level 6 N/A (double st.)				
Level 7 H2.7	>/=2	>/=2	>/=2	>/=2
Level 8 N/A (double st.)				

Total		
Min 2hrs Solar	11	5
NDS	5	9

Building J

Existing Apartment	Approved 9 Story BEA C & F + As Builts	Approved 9 Story BEA C & F + As Builts	Proposed 9-15 Story BEA C & F + As Builts	Proposed 9-15 Story BEA C & F + As Builts
Location Key	Living Rooms	Balconies	Living Rooms	Balconies
J1				
Level 1 J1.1	1.0	1.5	0.5	0.5
Level 2 J1.2	1.0	1.75	0.5	0.5
Level 3 J1.3	1.25	>/=2	0.5	0.5
Level 4 J1.4	1.5	>/=2	0.75	0.75
Level 5 J1.5	1.25	>/=2	1.25	>/=2
Level 6 J1.6	1.75	>/=2	1.75	>/=2
Level 7 J1.7	>/=2	>/=2	>/=2	>/=2
Level 8 J1.8	>/=2	>/=2	>/=2	>/=2
J2				
Level 1 J2.1	>/=2	>/=2	>/=2	>/=2
Level 2 J2.2	>/=2	>/=2	>/=2	>/=2
Level 3 J2.3	>/=2	>/=2	>/=2	>/=2
Level 4 J2.4	>/=2	>/=2	>/=2	>/=2
Level 5 J2.5	>/=2	>/=2	>/=2	>/=2
Level 6 J2.6	>/=2	>/=2	>/=2	>/=2
Level 7 J2.7	>/=2	>/=2	>/=2	>/=2
Level 8 J2.8	>/=2	>/=2	>/=2	>/=2
J3				
Level 1 J3.1		0.5		0.5
Level 2 J3.2		0.75		0.75
Level 3 J3.3		1.00		1.00
Level 4 J3.4		1.75		1.75
Level 5 J3.5		1.75		1.75
Level 6 J3.6		1.75		1.75
Level 7 J3.7		1.75		1.75
Level 8 J3.8	>/=2	1.75	>/=2	1.75
J4				
Level 1 J4.1				
Level 2 J4.2				
Level 3 J4.3				
Level 4 J4.4				
Level 5 J4.5				
Level 6 J4.6				
Level 7 J4.7		0.25		0.25
Level 8 J4.8	>/=2	0.25	>/=2	0.25

Total		
Min 2hrs Solar	12	12
NDS	14	14

Key

	No direct sunlight: less than 15min of direct sunlight in midwinter
	> 15 mins and < 2 hrs sunlight in midwinter
	>/=2 hrs sunlight in midwinter
	Solar access to balcony

Abbreviations

L	Living Room
BY	Balcony
NDS	No direct sunlight

Notes:

* Solar access via existing skylight, detailed analysis not undertaken

Studies are approximate and based on existing as built drawings provided by others

Site summary

	Min 2 hour solar access Units A,B,D,E,G,H,J	C,F	Total	No direct sun Units A,B,D,E,G,H,J	C,F	Total
Current DA approvals + remaining unbuilt portion of C and F	346 / 465*	123 / 176	469 / 641	</= 69 / 465*	26 / 176	95 / 641
	74%	70%	73.2%	15%	15%	14.8%
Current DA approvals + 2020 Proposed Concept Plan 9-15 stories	340 / 465*	137 / 184	477 / 649	</= 70 / 465*	20 / 184	90 / 649
	73%	74%	73.4%	15%	11%	13.9%

*Note: Existing apartment statistics based on
- DA approved drawings and design statement by Stanisic Architects,
- final as built apartment numbers and
- Turner review of apartments impacted by approved or proposed C and F envelopes

Refer to appendix 2 for solar studies.

SOLAR ACCESS TO OPEN SPACES

DAYLIGHT AND SOLAR ACCESS

The precinct development greatly exceeds minimum ADG requirements for provision of Communal/Public Open Space and hours of direct solar access to these spaces.

ADG Objective 3D-1

Design Criteria 1:

Communal open space has a minimum area equal to 25% of the site (i.e 6,392.5sqm)

One the Water Front provision:

12,911 sqm or 50.5% of the site including Bay Park, Courtyards, Landscaped setbacks, and Through Site Link plus 1,813 sqm or Buildings D and E Rooftop Gardens

Design Criteria 2:

Developments to achieve a minimum of 50% direct sunlight to the principle usable part of the communal open space for a minimum of 2 hours between 9 am and 3 pm on 21 June (mid winter).

One the Water Front provision:

Bay Park (4868 sqm) achieves achieve direct sunlight to an average of 78% of the area for 6 hours between 9 am and 3 pm on 21 June (mid winter).

The combined communal open spaces at ground level (12,911 sqm) achieve an average of 45% of direct sunlight for 6 hours between 9 am and 3 pm on 21 June (mid winter).

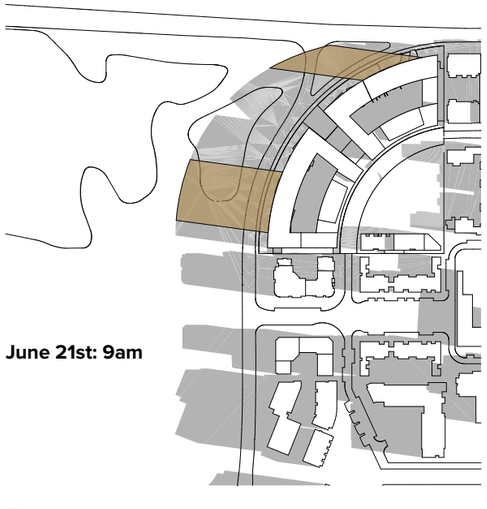
The rooftop gardens (1,813 sqm) achieve direct sunlight to an average of 78.5% of the area for 6 hours between 9 am and 3 pm on 21 June (mid winter)."

There is a generous provision of open spaces for different uses with the development site, well in excess of ADG minimum requirements for proportion of open space and access to direct sunlight. It is not an ADG requirement to provide 2 hours of sunlight to each open space. The existing courtyard is a transition space to access lobby entries and private terraces. This space is heavily shaded under the approved concept envelope with only minor increase to the shadowing under the proposed concept envelope.

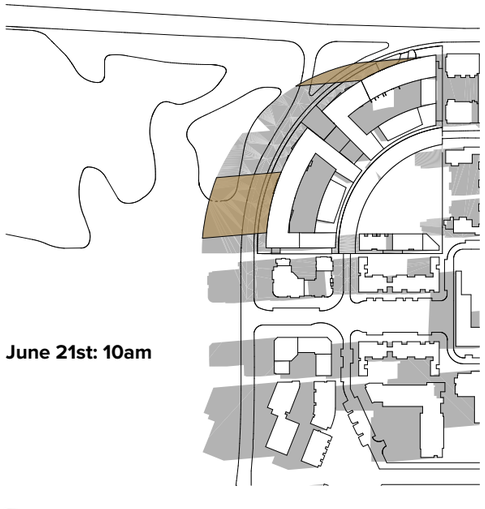
Images of the existing courtyards - transitional landscape spaces.

SOLAR ACCESS TO OPEN SPACES

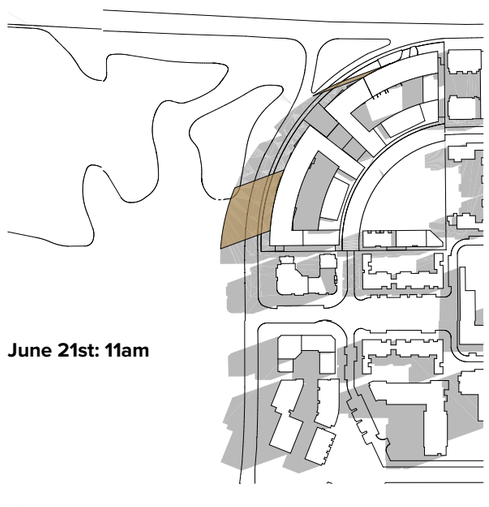
DAYLIGHT AND SOLAR ACCESS



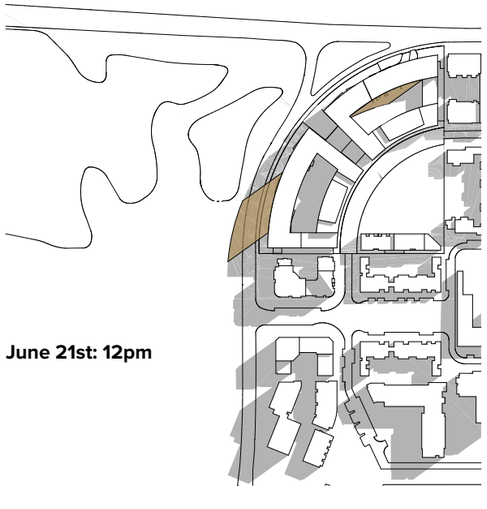
June 21st: 9am



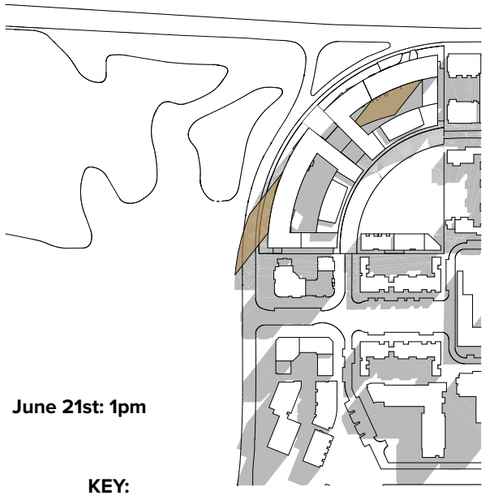
June 21st: 10am



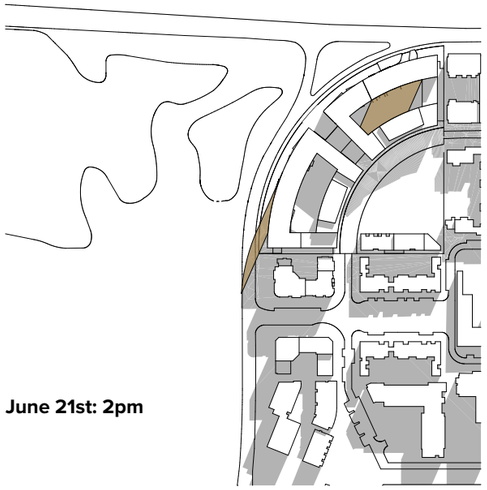
June 21st: 11am



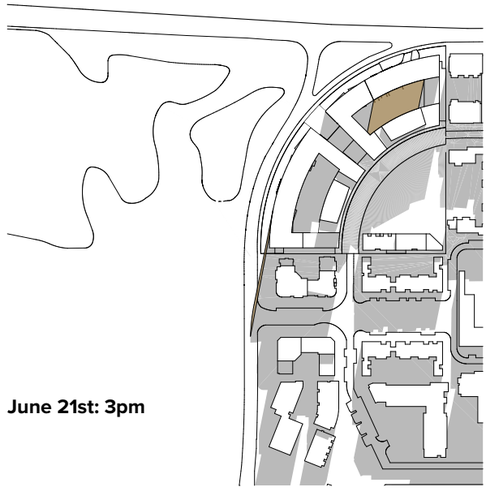
June 21st: 12pm



June 21st: 1pm



June 21st: 2pm



June 21st: 3pm

KEY:

Shadow of Remaining Un-built Envelope - Approved Concept Envelope

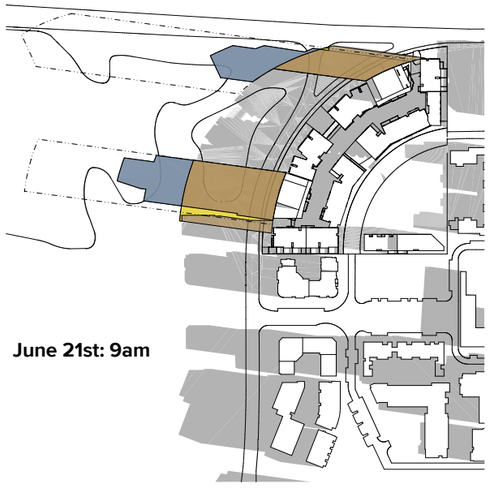
Shadows of Existing approved Concept Envelope and Neighbouring Buildings

2013 APPROVED CONCEPT PLAN - 9 STOREYS

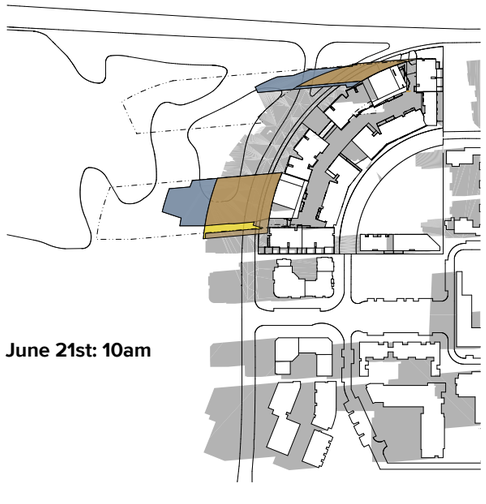
Shadow study: overshadowing of outdoor open spaces

N

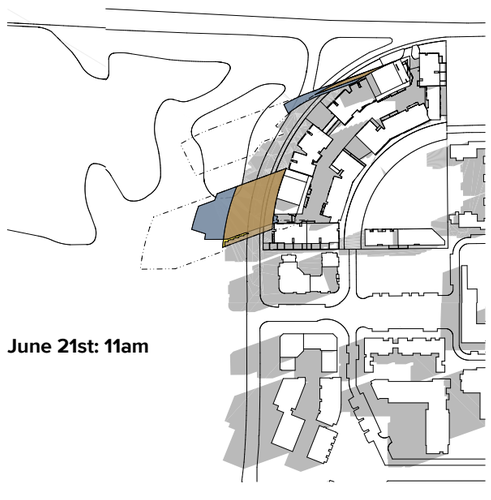
SOLAR ACCESS TO OPEN SPACES



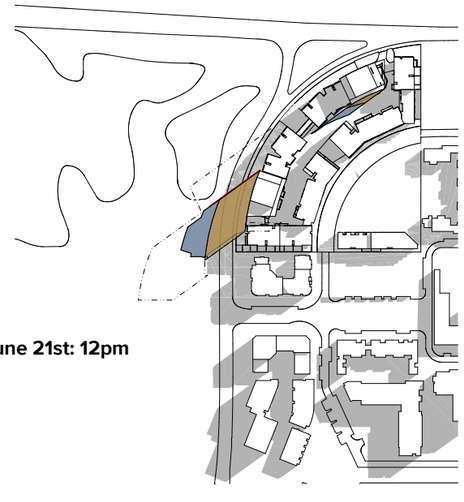
June 21st: 9am



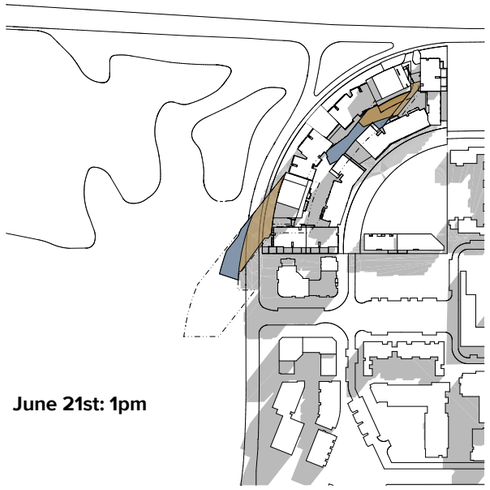
June 21st: 10am



June 21st: 11am



June 21st: 12pm



June 21st: 1pm

June 21st: 2pm

June 21st: 3pm

Shadow from remaining unbuilt portion of 2013 approved Concept Envelope (building C and F)

Additional shadow from remaining unbuilt portion of 2020 MOD 4 Proposed Envelope compared to 2013 approved Concept Envelope (building C and F)

Reduction in shadow from remaining unbuilt portion of 2020 MOD 4 Proposed Envelope compared to 2013 approved Concept Envelope (building C and F) (dashed outline indicates gain in solar access to apartments above ground level)

Shadow cast by previous 2018 MOD 4 proposed envelope (building C and F)

Shadow of existing as-built 2013 Approved Concept Envelope and Neighbouring Buildings

COMPARISON

2020 Proposed Modification: Increase/Decrease in overshadowing of outdoor open spaces

N

COURTYARD ANALYSIS

EXISTING / AS-BUILT - 2013

June 21st: 9am
5 sqm
0.1%

June 21st: 10am
210 sqm
6.3%

June 21st: 11am
560 sqm
16.7%

June 21st: 12pm
717 sqm
21.4%

June 21st: 1pm
905 sqm
27.0%

June 21st: 2pm
483 sqm
14.4%

June 21st: 3pm
84 sqm
2.5%

Courtyard Space
3,355 sqm

Average Solar Access
12.6%

Communal Open Space Courtyard Solar Access

Shadow of existing built 2013 Approved Concept Envelope and Neighbouring Buildings

COURTYARD ANALYSIS

PROPOSED - AUGUST 2020

June 21st: 9am
4 sqm
0.1%

June 21st: 10am
132 sqm
3.9%

June 21st: 11am
572 sqm
17.0%

June 21st: 12pm
550 sqm
16.3%

June 21st: 1pm
510 sqm
15.1%

June 21st: 2pm
520 sqm
15.4%

June 21st: 3pm
346 sqm
10.2%

Courtyard Space
3,371 sqm

Average Solar Access
11.1%

Communal Open Space Courtyard Solar Access

Shadow of existing built 2013 Approved Concept Envelope, Proposed Mod 4 2020 BEA and Neighbouring Buildings

LEVEL 9 ROOFTOP ANALYSIS

PROPOSED - AUGUST 2020

June 21st: 9am
1556 sqm
85.5%

June 21st: 10am
1433 sqm
79.0%

June 21st: 11am
1326 sqm
73.1%

June 21st: 12pm
1229 sqm
67.8%

June 21st: 1pm
1335 sqm
73.6%

June 21st: 2pm
1507 sqm
83.1%

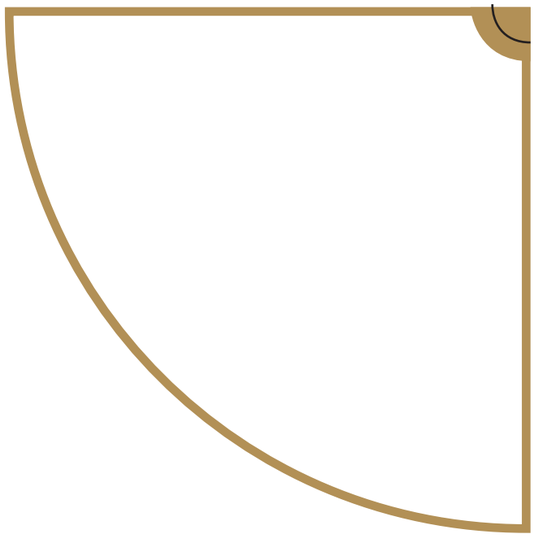
June 21st: 3pm
1580 sqm
87.1%

Rooftop Space
1,813 sqm

Average Solar Access
78.5%

Rooftop Communal Space Solar Access

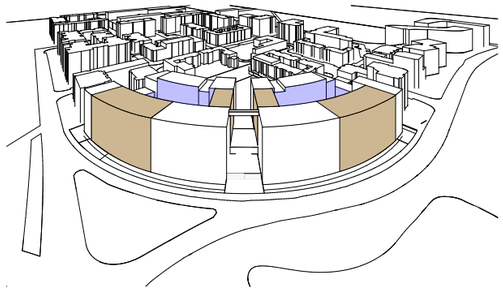
Shadow of existing built 2013 Approved Concept Envelope, Proposed Mod 4 2020 BEA and Neighbouring Buildings

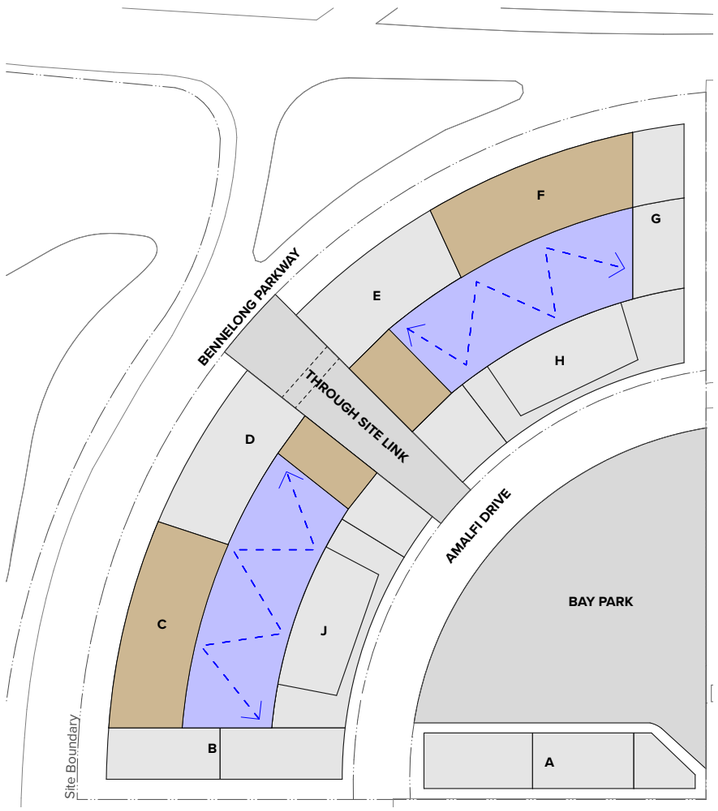


2.4. VIEWS & OUTLOOK

MERIT SUMMARY

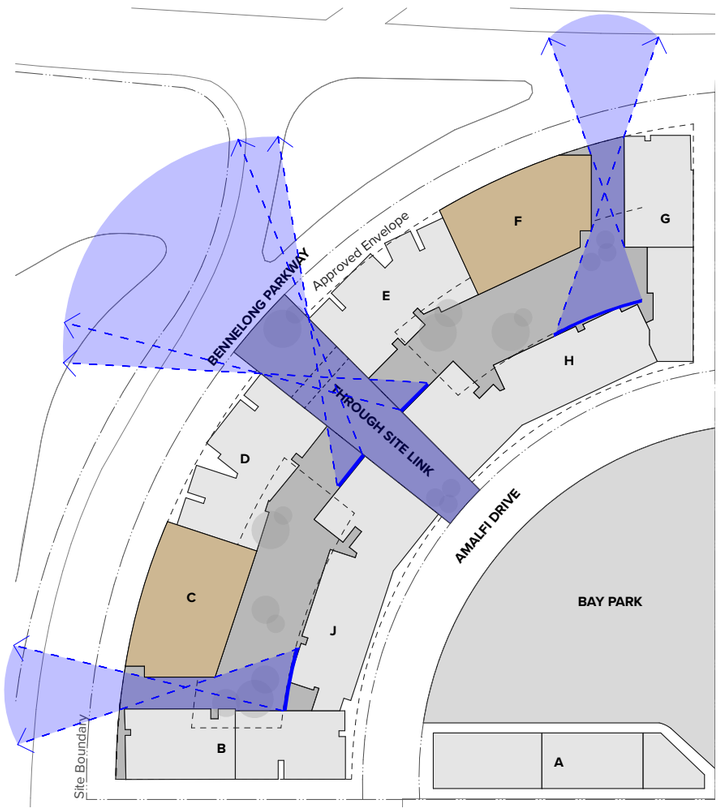
NEW DWELLINGS - OUTLOOK





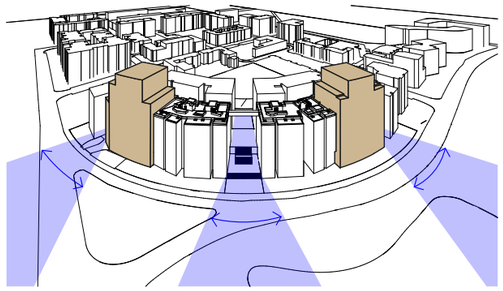
2013 APPROVED CONCEPT PLAN

Enclosed courtyards offering no outlook to the surrounding wetlands and parklands.



2020 PROPOSED MODIFICATION
TYPICAL

40 Existing apartments gain views to the wetlands/parklands and an additional 48 apartments have widened outlook within the courtyards.



2020 PROPOSED MODIFICATION
ABOVE LEVEL 9

Upper units benefit from 360* views towards Parramatta City, the Blue Mountains, Sydney CBD and Sydney Olympic Park.

MERIT SUMMARY

NEW DWELLINGS - OUTLOOK

City View Water View Greenery View

2020 PROPOSED MODIFICATION

Increased Outlook for Existing Residences and Communal Courtyard. Substantial district views open up across the wetlands and parklands to the south west, and towards SOPA and Parramatta. Many apartments also benefit from improved outlook into the substantially increased courtyards. and into the thought site link connecting Bay Park to Bennelong Parkway

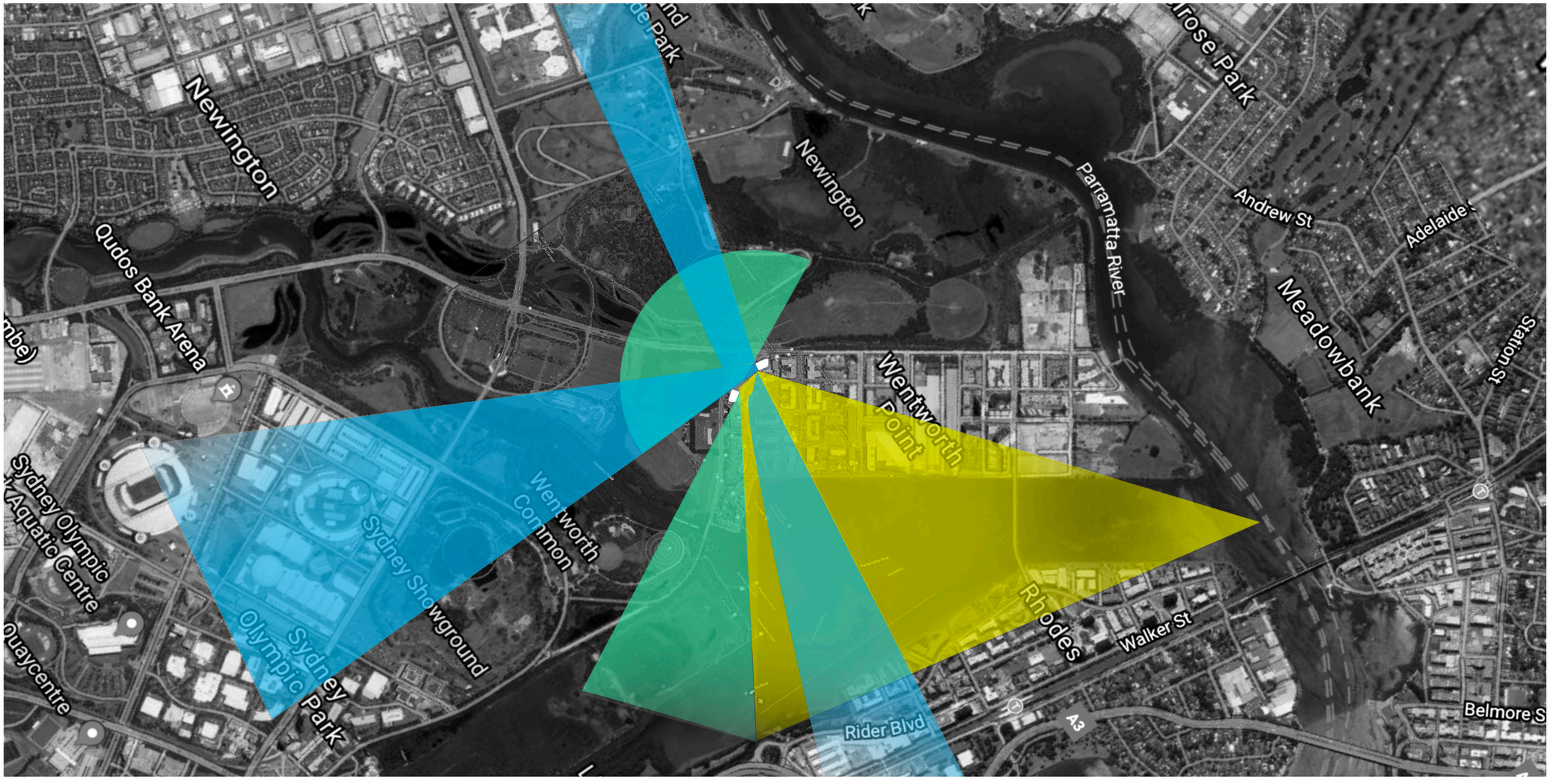
City View Water View Greenery View

2020 PROPOSED MODIFICATION

Increased Outlook for New Residences of remaining stages. More apartments benefit from district views towards the south and west, also across Parramatta River and towards Sydney CBD

MERIT SUMMARY

EXISTING ROOF GARDENS - OUTLOOK



- The existing outlook to key aspects of wetlands, SOPA, city and Parramatta River are predominantly to the east and west
- The proposed additional height to Buildings C and F will not have significant impact to the outlook from the existing rooftop gardens.

VIEWS FROM ROOF

KEY ASPECTS

1 Sydney Olympic Park (South)

2 Wetlands (South West)

3 Parramatta (West)

4 Parklands (NW)

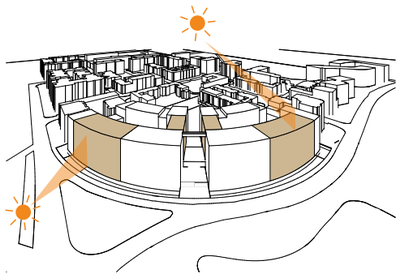
5 Bay Park and Wentworth Point (North)

6 Parramatta River (East)

7 Bay Park (East)

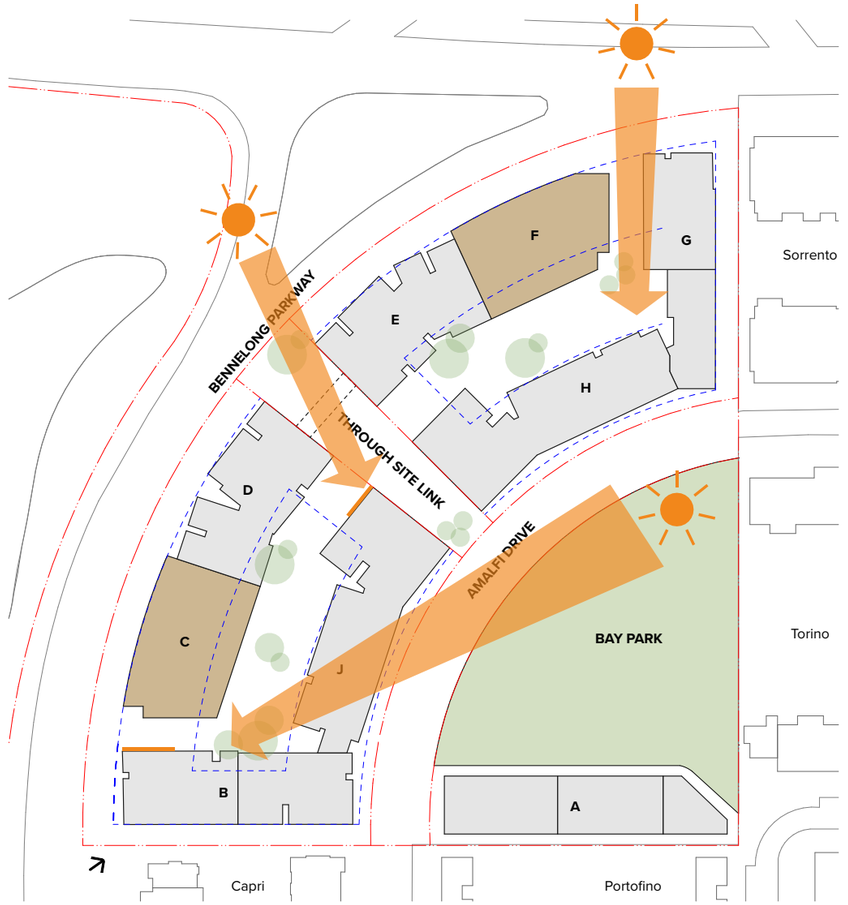
AMENITY

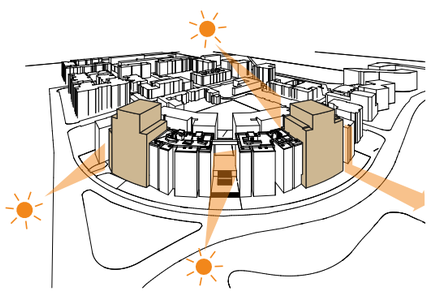
EXISTING DWELLINGS & COMMUNAL OPEN SPACE - SOLAR ACCESS



2013 APPROVED ENVELOPE

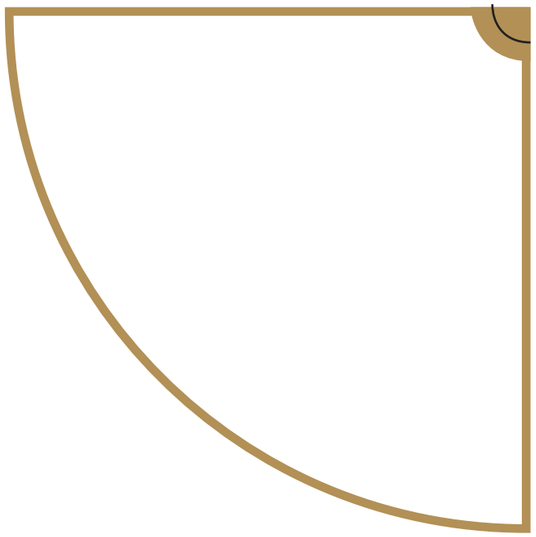
The remaining approved unbuilt envelope will fully enclose the courtyards and block daylight and direct sunlight from the courtyards and adjacent apartments.





2020 PROPOSED ENVELOPE

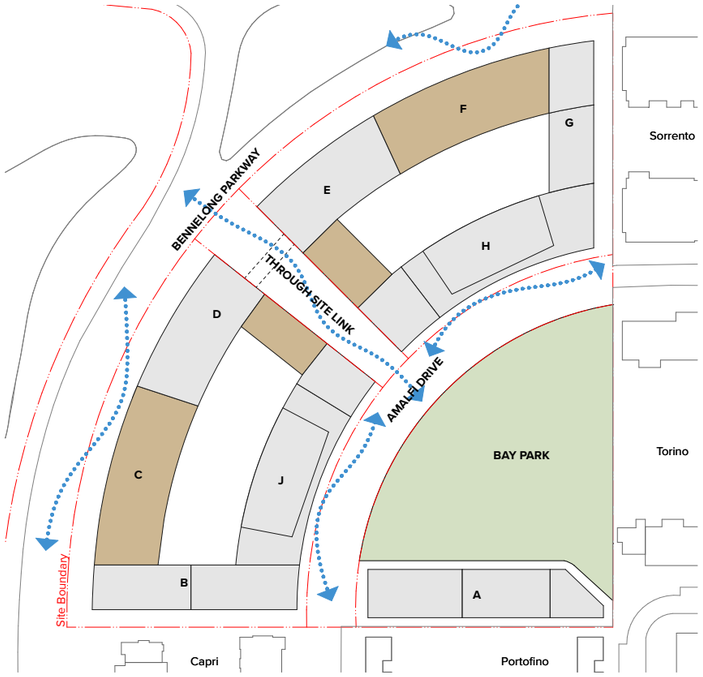
The proposed amended Building Area Envelopes (BEA) provide greater opportunities for daylight access and direct solar access to the courtyards, adjacent existing apartments, and new apartments.



2.5. PUBLIC & COMMUNAL AMENITY

PUBLIC & COMMUNAL AMENITY

VENTILATION

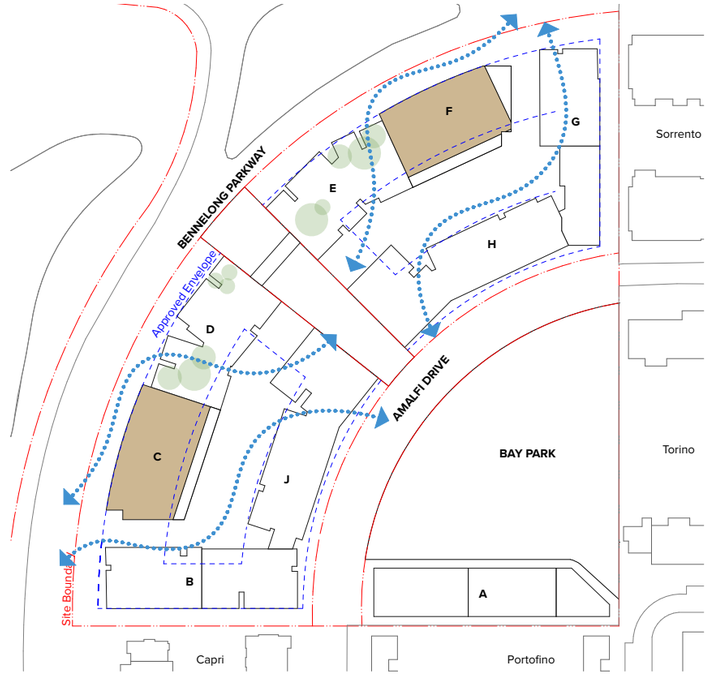


2013 APPROVED CONCEPT PLAN

The enclosed courtyard allows for limited air flow/ air permeability into the courtyards.

2020 PROPOSED MODIFICATION
TYPICAL

The proposed design with open courtyards provides greater ventilation into the communal open space giving a better thermal comfort into the rooms/units facing those courtyards.



2020 PROPOSED MODIFICATION
ABOVE LEVEL 9

Units levels above L9 have full access to natural breezes.

PUBLIC & COMMUNAL AMENITY

OPEN SPACE

2013 APPROVED CONCEPT PLAN

The courtyard area contained by the 2013 current approved envelope is 3,335 sqm. Total area is 12,875m2 of Communal open space including Bay Park, communal courtyard.

(50.4% of Site Area)

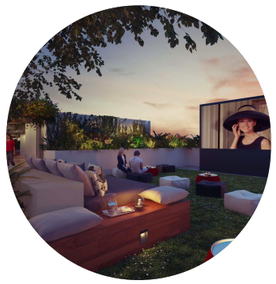
2020 PROPOSED MODIFICATION
GROUND LEVEL

The courtyard area contained by the 2020 proposed envelope is 3,371 sqm. Total area is 12,911m2 of Communal open space including Bay Park, communal courtyard. (50.5% of Site Area)

2020 PROPOSED MODIFICATION
LEVEL 9

In addition to the open space at ground level, the proposal includes Community Facilities at L9 connecting to roof gardens above building D and E,

for the amenity of all residents (an addition of 7% of site area).



PUBLIC & COMMUNAL AMENITY

CONNECTIVITY

2013 APPROVED CONCEPT PLAN

The through site link provides connections from Bay Park to Bennelong Parkway with views to the Wetlands.

The enclosed courtyards do not allow for further permeability.

2020 PROPOSED MODIFICATION
GROUND LEVEL

The proposed “open courtyard” design allows for greater permeability between Bennelong Parkway through to Bay Park. The courtyards are proposed to be accessed by residents with gated entries, with the public benefiting from the improved visual connections and passive surveillance of the open spaces. Additional gardens in the new side setbacks will include a portion of public open space

2020 PROPOSED MODIFICATION
LEVEL 9

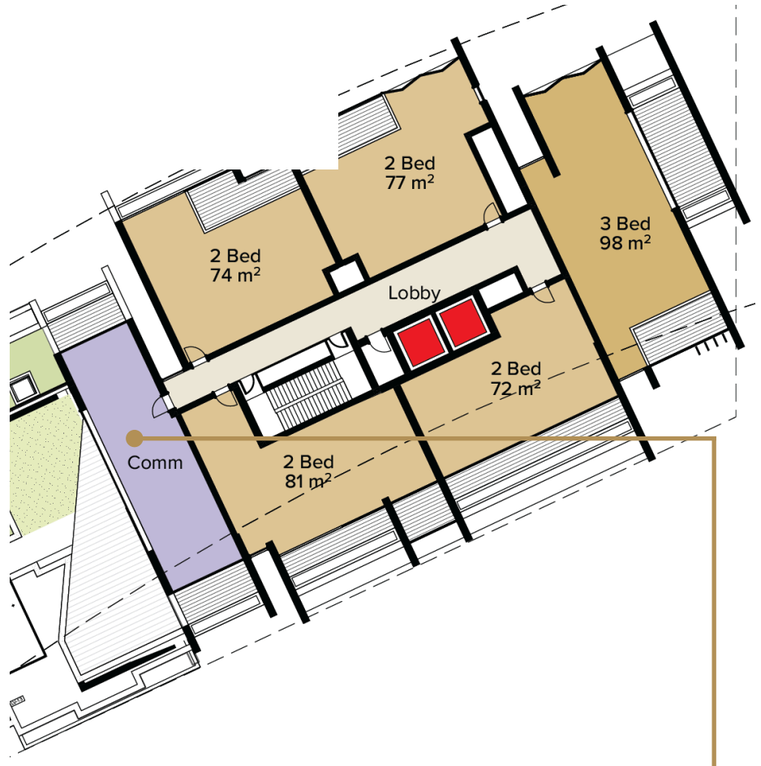
Building F Skyclub will include additional landscaped undercover outdoor spaces, transitioning to the existing and enhanced roof gardens. The Sky Park will increase visual connections to the Narrawang Wetlands and provide learning opportunities regarding the Wetlands

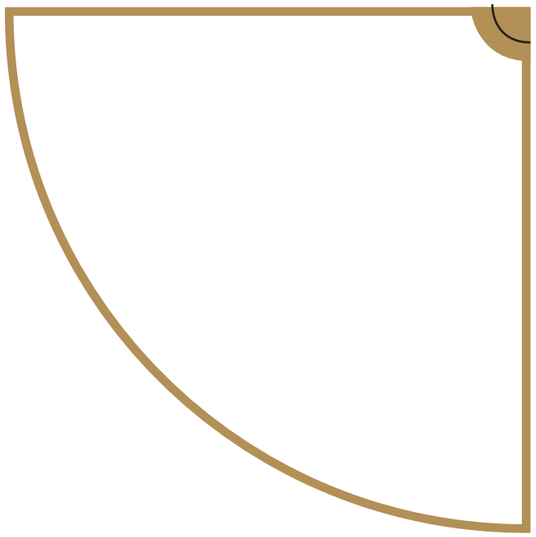
POTENTIAL

RESIDENT'S COMMUNITY ROOMS

BUILDINGS C+F LEVEL 9

New indoor community rooms of min. 100 sqm will be provided in building C and F, connecting to the existing roof gardens.

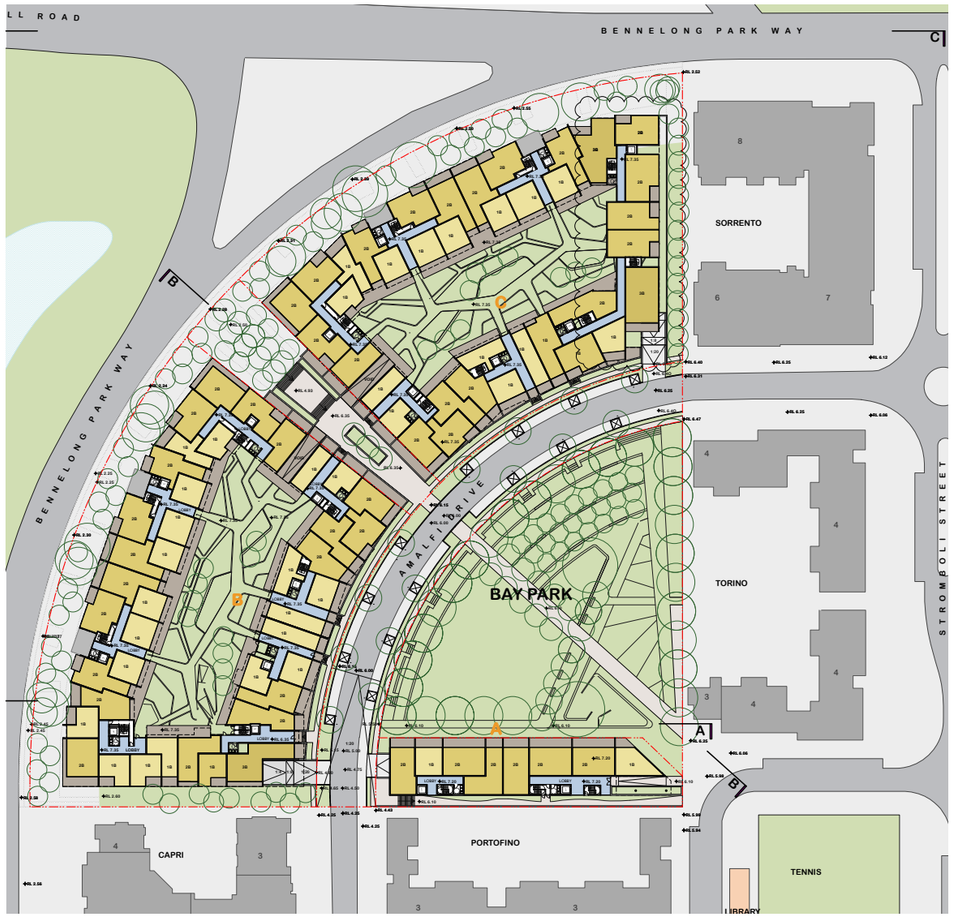




2.6. FLOOR SPACE & YIELD ANALYSIS

FLOOR SPACE

POTENTIAL YIELD, PARKING



2013 APPROVED CONCEPT PLAN

A notional apartment mix for the sites of 209 x 1 bedroom, 405 x 2 bedroom and 27 x 3 bedroom apartments, with a common basement with a car parking capacity for 850 cars for approximately 641 apartments. The remaining unbuilt portion includes 99 x 1 bedroom apartments, 71 x 2 bedroom apartments and 6 x 3 bedroom apartments

2020 PROPOSED MODIFICATION

Illustrative plans show an approximate final apartment mix of 182(28%) x 1 Bedroom, 452(69%) x 2 Bedroom and 41(6%) x 3 Bedroom units
(649 total). The common basement will include provision for 850 car spaces.

FLOOR SPACE

APPROVED FSA

2013

LEVEL	BUILDING C	BUILDING F
8	635	628
7	635	628
6	635	628
5	635	628
4	635	628
3	635	628
2	635	628
1	635	628
GROUND	635	246
	5,345	**5,270**

Total Floor Space Area	*10,615*
Approved FSA	*16,006*

SHORTFALL FSA

	5,391m²

2020 PROPOSED MODIFICATION

The Approved Floor Space Area for 23 Bennelong Avenue site under the current Concept Plan is 50,045m² of Floor Space Area.

The Built Floor Space Area for DA1, DA2 and DA3 amounts to a total of 34,039m²of Floor Space Area.

Under the 2013 approved Concept Plan, the remaining approved FSA for the buildings C and F equals 16,006m².

2020

LEVEL	BUILDING C	BUILDING F
14	271	310
13	271	310
12	271	373
11	477	380
10	477	462
9	470	482
8	552	552
7	552	552
6	542	543
5	551	547
4	551	546
3	544	547
2	551	551
1	411	416
GROUND	151	212
	6,642	**6,783**

Total Floor Space Area	*13,448*
Approved FSA	*16,006*

04.09.2020
DLCS Quality Endorsed Company ISO 9001:2015, Registration Number 20476
Nominated Architect: Nicholas Turner 6695, ABN 86 064 084 911

2.7. ADG COMPLIANCE SUMMARY

MERIT SUMMARY

NEW DWELLINGS - ADG

ADG Objective		2020 Proposed MOD4
2A, 3A	*Planning controls should be developed taking into account:* – *Sunlight and daylight access* – *Orientation and overshadowing* – *Natural ventilation* – *Visual and acoustic privacy* – *Ceiling heights* – *Communal open space* – *Deep soil zones* – *Public domain interface* – *Noise and pollution.* *Controls need to be tested to ensure the desired density and massing can be accommodated within the building height and setback controls* *Site analysis illustrates that design decisions have been based on opportunities and constraints of the site conditions and their relationship to the surrounding context*	Refer to Report Section 02 Context Proposal addresses site conditions and context to achieve the required objectives
2B	*Building envelopes should be 25-30% greater than the achievable floor space in order to facilitate adequate building articulation and achieve amenity goals*	Building envelopes are 25-30% greater than the achievable floor space. Illustrative plans are highly articulated with good amenity
2C	*Ensure that building height controls respond to:* – *The desired number of storeys* – *The minimum floor to floor heights required for future building uses* – *The desired future scale and character of the local area* – *Landform and heritage*	Refer to Report Section 03 Merit Based Analysis - Massing Proposed heights respond to transitioning local context in natural and built environment and provide added amenity to public and communal open space and private dwellings

MERIT SUMMARY

NEW DWELLINGS - ADG

ADG Objective		2020 Proposed MOD4
2D	*Floor Space Ratios should be set which are consistent with achieving other parameters such as building height, building envelope and setbacks to:* – *Align with the optimum capacity of the site* – *Work with the desired density of the local area* – *Provide opportunities for building articulation* *The allowable gross floor area should only 'fill' approximately 70% of the building envelope*	Approved FSA for the site of 50,045 sqm Proposed total FSA is 47,487 Total floor space areas are less than 70% of the proposed BEA envelopes for Buildings C and F Refer to Report Section 03 Merit Based Analysis – Floor Space
2E, 4D	*Use a range of appropriate maximum apartment depths of 12-18m from glass line to glass line* *An apartment building depth of 10-18 metres is noted as appropriate. At a detailed level this dimension is held to refer most directly to 'street-wall' buildings with small or no building separation to their ends. Freestanding towers may be deeper but must demonstrate how satisfactory levels of daylight and natural ventilation are to be achieved (for example by the use of larger windows)* *The layout of rooms within an apartment is functional, well organised and provides a high standard of amenity* *Environmental performance of the apartment is maximised*	Building depths are to achieve good daylight and natural ventilation and apartment depths to allow for design achieving 8m max from rear of kitchen to glass Apartments achieve high degree of amenity – daylight, ventilation and outlook with good access to midwinter sun and shading in summer
2F	*To ensure adequate amenity, especially daylight and privacy levels, minimum building separations are offered but may be varied to zero.* *For buildings 9 storeys and over (>25 metres):* – *24 metres between habitable rooms/balconies.* – *18 metres between habitable rooms/balconies and non-habitable rooms.* – *12 metres between non-habitable rooms. For buildings 5-8 storeys (13-25 metres):* – *18 metres between habitable rooms/balconies.* – *13 metres between habitable rooms/balconies and non-habitable rooms.* – *9 metres between non-habitable rooms. For buildings 3-4 storeys (12 metres or less):* – *12 metres between habitable rooms/balconies.* – *9 metres between habitable rooms/balconies and non-habitable rooms.*	Refer to Report Section 03 Merit Based Analysis – Building Separation Proposed Envelopes achieve ADG objectives for building separations

MERIT SUMMARY

NEW DWELLINGS - ADG

ADG Objective		2020 Proposed MOD4
2G, 2H	*Generally street setbacks should be between 1 and 10 metres although they may be reduced to zero where deemed appropriate.* *Side and rear setbacks are to be appropriate to the context and should assist in achieving amenity, especially adequate daylight.*	Street, side and rear setbacks appropriate to context and to assist in achieving amenity, especially adequate daylight
3B	*Building types and layouts respond to the streetscape and site while optimising solar access within the development* *Overshadowing of neighbouring properties is minimised during mid-winter*	Proposed building forms are sited to minimise overshadowing of open spaces and existing dwellings while maximising solar access to new dwellings Refer to Report Section 03 Merit Based Analysis – Amenity and Solar Access
3C	*Transition between private and public domain is achieved without compromising safety and security* *Amenity of the public domain is retained and enhanced*	Generous landscaping buffers are provided between the private and public domain Private open spaces are clearly defined. Apartments are located to provide passive surveillance to open spaces
3D	*An adequate area of communal open space is provided to enhance residential amenity and to provide opportunities for landscaping.* *Communal open space is designed to allow for a range of activities, respond to site conditions and be attractive and inviting* *Communal open space is designed to maximise safety* *Public open space, where provided, is responsive to the existing pattern and uses of the neighbourhood*	Communal open space is more than double the minimum requirement of 25% of site area A range of functions are provided in the communal open spaces including public park and playground, transitional spaces and quiet zones with seating and outlook to the wetlands, communal landscaped gardens and roof gardens and outdoor cinema
3E	*Deep soil zones provide areas on the site that allow for and support healthy plant and tree growth. They improve residential amenity and promote management of water and air quality*	Deep soil is 21.3% of the overall site area, well in excess of the ADG minimum 6.25%

MERIT SUMMARY

NEW DWELLINGS - ADG

ADG Objective		2020 Proposed MOD4
3F	*Adequate building separation distances are shared equitably between neighbouring sites, to achieve reasonable levels of external and internal visual privacy* *Site and building design elements increase privacy without compromising access to light and air and balance outlook and views from habitable rooms and private open space*	Visual privacy is achieved between dwellings through apartment orientation and building separation, recessed balconies and screening
3G	*Building entries and pedestrian access connects to and addresses the public domain* *Access, entries and pathways are accessible and easy to identify* *Large sites provide pedestrian links for access to streets and connection to destinations*	Double height lobbies clearly identify building entries. Entries are framed by soft landscaping. Pathways connect to the through site link and public pedestrian and transport networks
3H	*Vehicle access points are designed and located to achieve safety, minimise conflicts between pedestrians and vehicles and create high quality streetscapes*	Vehicle entries are separated from pedestrian entries
3J	*Car parking is provided based on proximity to public transport in metropolitan Sydney and centres in regional areas* *Parking and facilities are provided for other modes of transport* *Car park design and access is safe and secure* *Visual and environmental impacts of underground car parking are minimised* *Visual and environmental impacts of on-grade car parking are minimised* *Visual and environmental impacts of aboveground enclosed car parking are minimised*	Secure parking is provided for residents and visitors in basement parking Refer to traffic report for more information Vehicle entries are discrete and separated from pedestrian routes Carparks are below ground level or set back behind active building frontages at Bennelong Parkway (apartments and lobbies)
4A	*Optimise the number of apartments receiving sunlight to habitable rooms, primary windows and private open space* *Daylight access is maximised where sunlight is limited* *Design incorporates shading and glare control, particularly for warmer months.*	70.3 - 78.5% of apartments in Building C and F achieve min 2 hours of solar access in mid-winter. Refer to illustrative plans - Amenity The proposal increases daylight into the courtyards Illustrative plans: recessed balconies and screening provides shading in summer

MERIT SUMMARY

NEW DWELLINGS - ADG

ADG Objective		2020 Proposed MOD4
4B	*All habitable rooms are naturally ventilated* *The layout and design of single aspect apartments maximises natural ventilation* *The number of apartments with natural cross ventilation is maximised to create a comfortable indoor environment for residents*	Illustrative apartment layouts allow for all habitable rooms to be located on a façade and naturally ventilated The illustrative plans achieve no. of apartments achieving natural cross ventilation are in excess of ADG requirements
4C	*Ceiling height achieves sufficient natural ventilation and daylight access* *Ceiling height increases the sense of space in apartments and provides for well-proportioned rooms* *Ceiling heights contribute to the flexibility of building use over the life of the building*	3.1m floor to floor heights allow to design for 2.7m high ceilings in habitable areas and 2.4m high ceilings in non-habitable areas Additional floor to floor heights are provided at LGF apartments and at Level 9 Sky Club to allow ceiling heights of at least 3.0m in habitable rooms
4O, 4P	*Landscape design is viable and sustainable* *Landscape design contributes to the streetscape and amenity* *Appropriate soil profiles are provided* *Plant growth is optimised with appropriate selection and maintenance*	Landscaping is integral to the building including public, communal and private landscaped areas Landscape design varies corresponding with the differing location and functions
4Q	*Universal design features are included in apartment design to promote flexible housing for all community members* *A variety of apartments with adaptable designs are provided* *Adaptable housing should be provided in accordance with the relevant council policy* *Apartment layouts are flexible and accommodate a range of lifestyle needs*	The illustrative plans and carparking is designed for 15% adaptable apartments and 20% liveable apartments. All apartments are provided with lift access. Many apartments have ground/podium level garden terraces or roof terraces.
4U	*Development incorporates passive environmental design* *Development incorporates passive solar design to optimise heat storage in winter and reduce heat transfer in summer* *Adequate natural ventilation minimises the need for mechanical ventilation*	The development proposes sustainable initiatives. Refer to Report Section 04 for more information

MERIT SUMMARY

NEW DWELLINGS - ADG

ADG Objective		2020 Proposed MOD4
4G	*Adequate, well-designed storage is provided in each apartment* *Additional storage is conveniently located, accessible and nominated for individual apartments*	Minimum storage provisions are achieved or exceeded within apartments Basement storage is provided
4H, 4J	*Noise transfer is minimised through the siting of buildings and building layout* *Noise impacts are mitigated within apartments through layout and acoustic treatments* *In noisy or hostile environments the impacts of external noise and pollution are minimised through the careful siting and layout of buildings* *Appropriate noise shielding or attenuation techniques for the building design, construction and choice of materials are used to mitigate noise transmission*	The proposal will provide improved conditions for existing and new apartments by siting many apartments further from Bennelong Parkway/ existing dwellings. Openings between building B and C, F and G and at the through site link allows for greater noise dissipation
4K	*A range of apartment types and sizes is provided to cater for different household types now and into the future* *The apartment mix is distributed to suitable locations within the building*	The proposed building form creates opportunities for a wider range of apartment typologies. Illustrative plans include a mix of 1, 2 and 3 bed apartments including double height apartments and apartments with roof terraces.
4L	*Street frontage activity is maximised where ground floor apartments are located* *Design of ground floor apartments delivers amenity and safety for residents*	Illustrative plans propose double height townhouse style apartments facing Bennelong Parkway at LGF/L1 and generous double height lobbies to Building C and F
4M, 4N	*Building facades provide visual interest along the street while respecting the character of the local area* *Building functions are expressed by the façade* *Roof treatments are integrated into the building design and positively respond to the street* *Opportunities to use roof space for residential accommodation and open space are maximised* *Roof design incorporates sustainability features*	The illustrative design draws from the existing context while introducing innovation and providing a high level of visual interest from the street and Bay Park Stepping forms with roof terraces and gardens create a highly articulated roof form Facades are notched and stepped in relation to the existing buildings, roof gardens and for permeability for views and light

MERIT SUMMARY

NEW DWELLINGS - ADG

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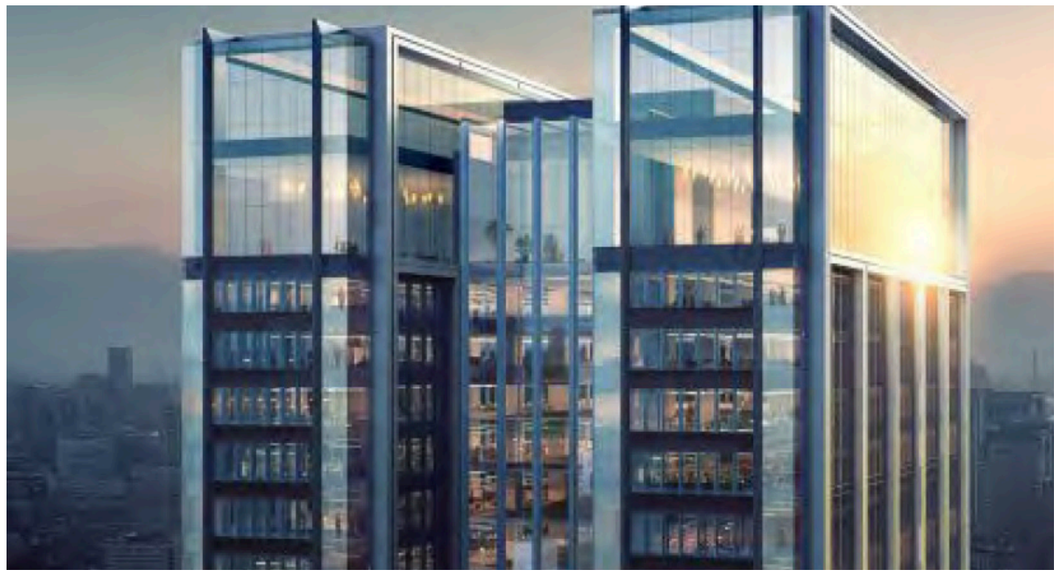
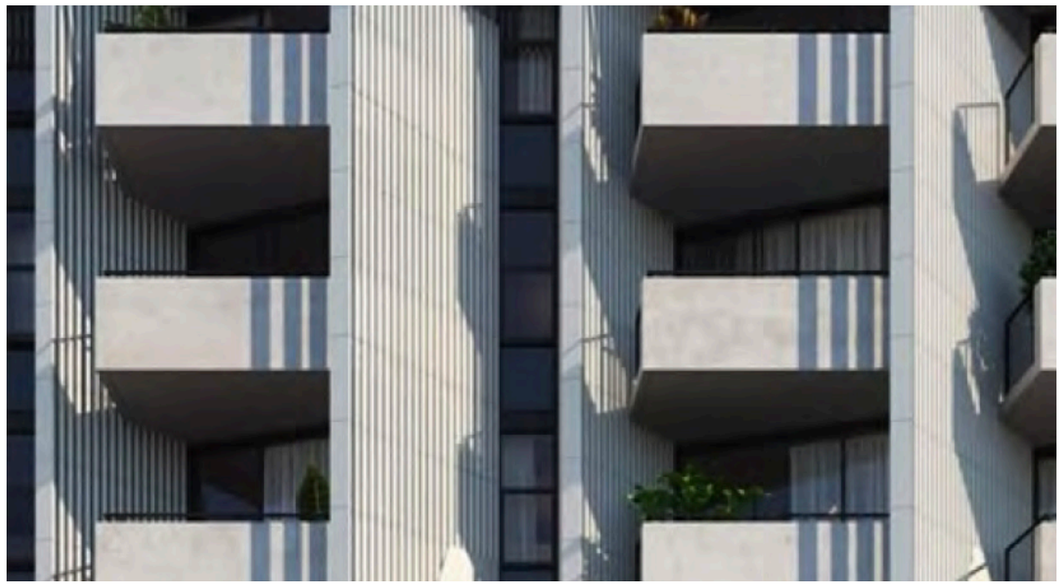
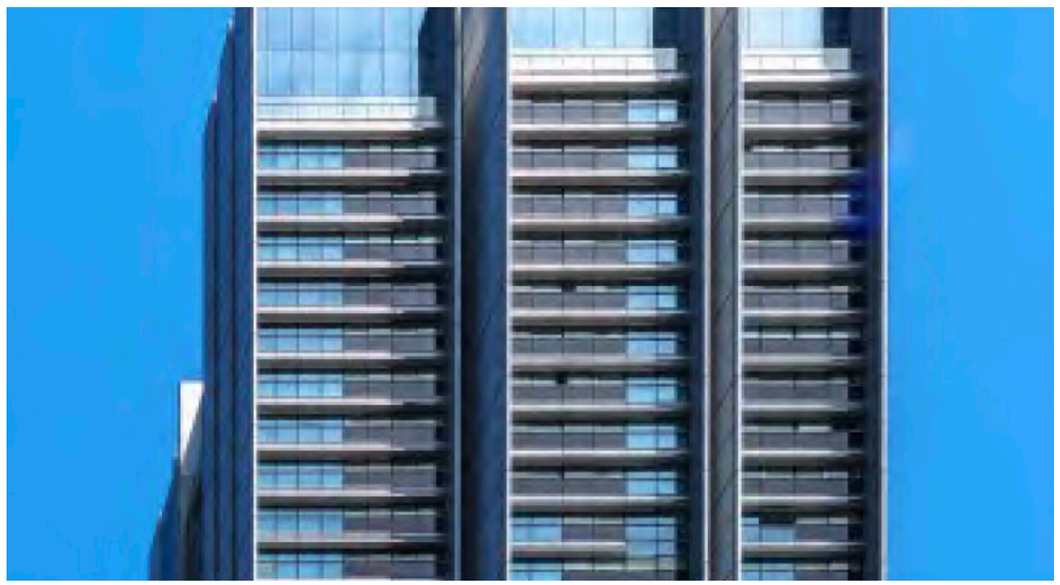
3. DESIGN EXCELLENCE

INSPIRATION

Possible precedents drawn from the Urban and Natural context

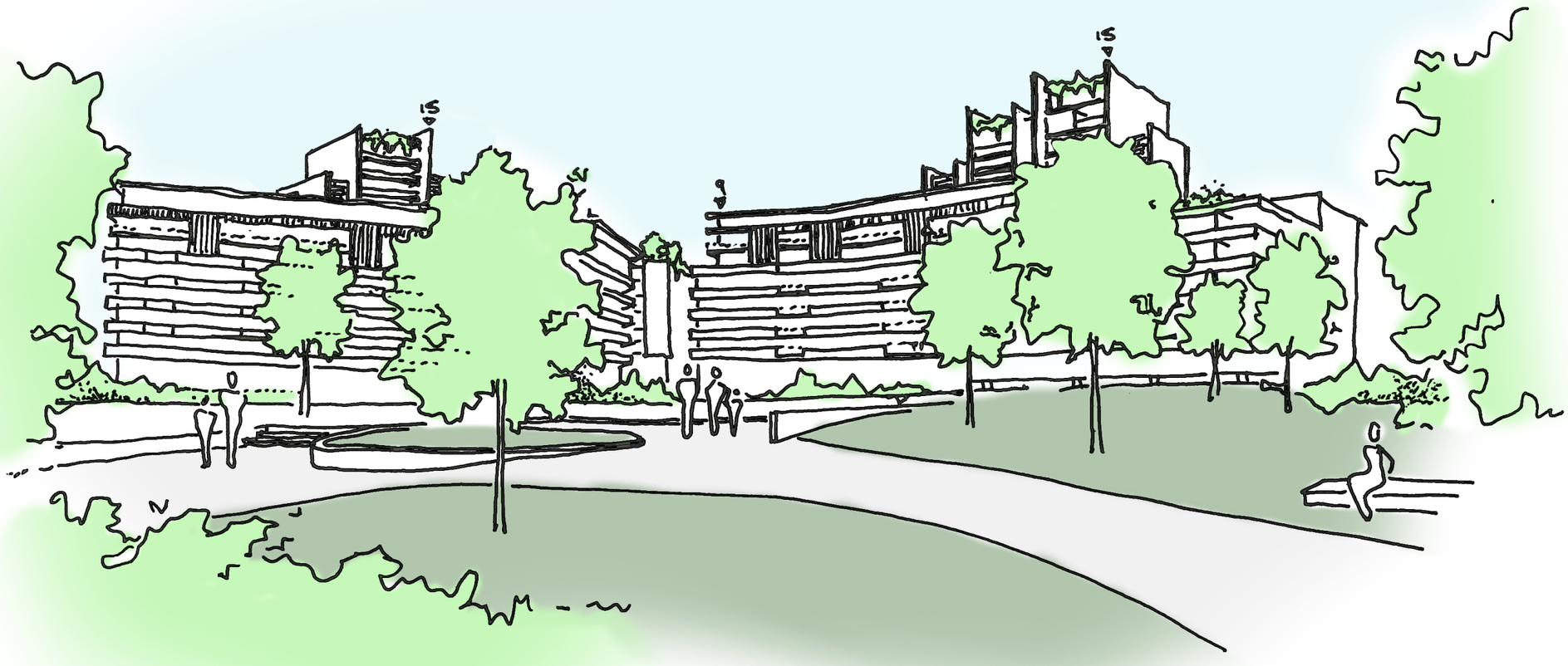






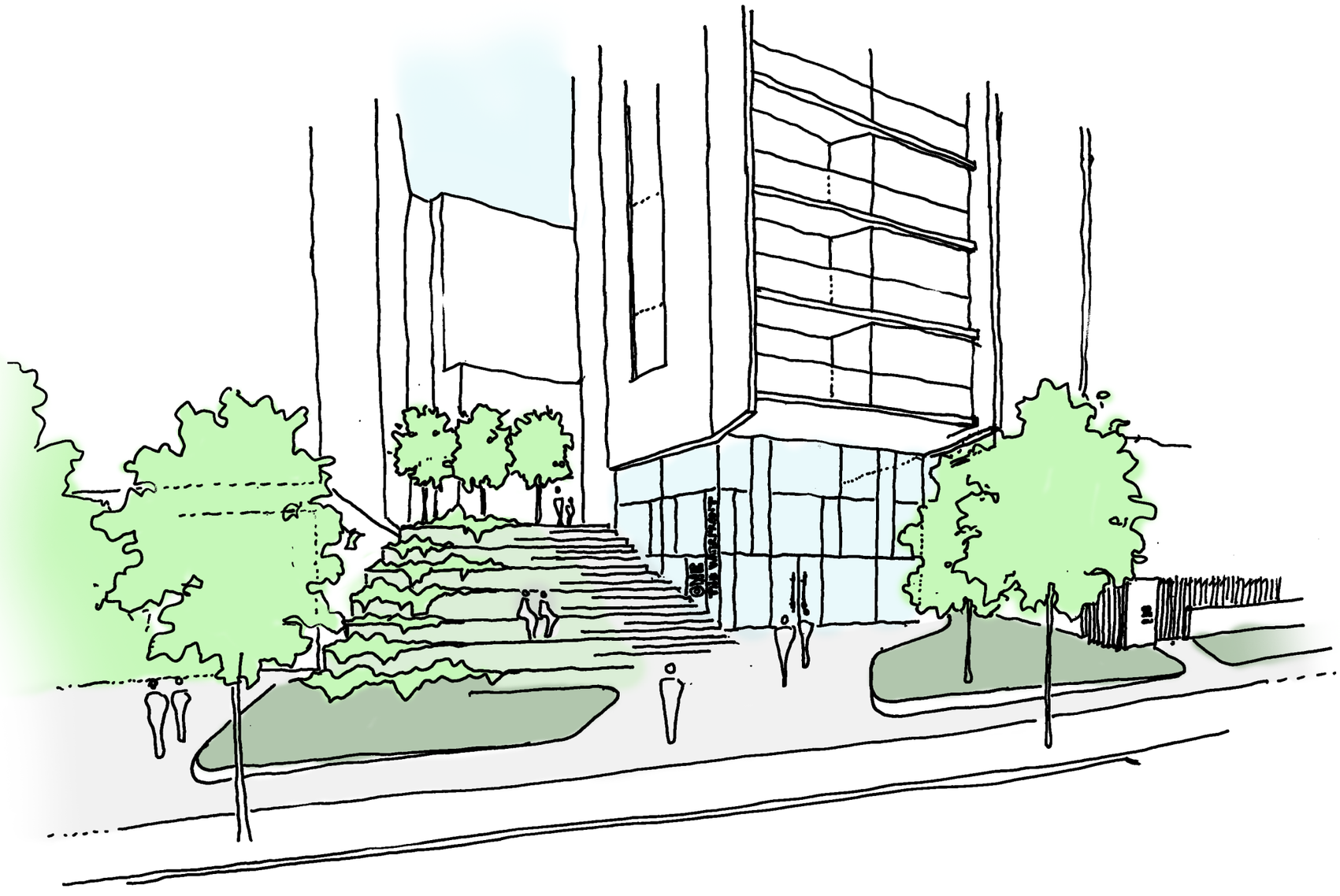
BUILDINGS WITHIN LANDSCAPE

VIEW FROM NORTH AT BAY PARK

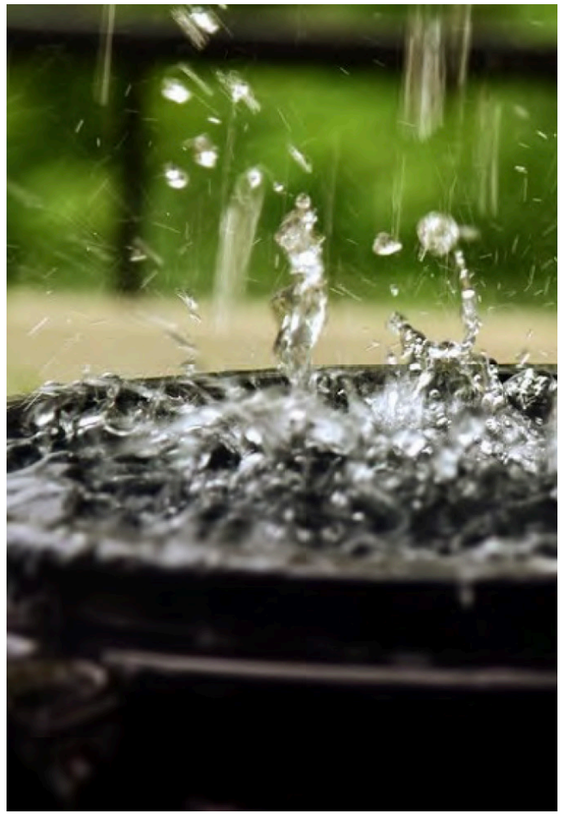


LANDSCAPE WITHIN BUILDINGS

VIEW OF BUILDING F LOBBY & IMPROVED PUBLIC DOMAIN

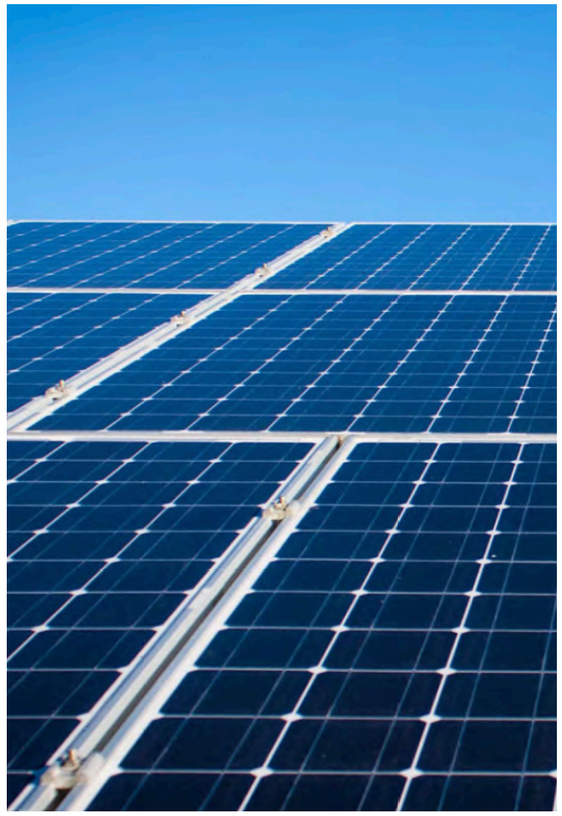


INNOVATION & SUSTAINABILITY



RAINWATER HARVESTING

COMMUNITY GARDENS



SOLAR PANELS

PASSIVE SOLAR SHADING

Sustainable Initiatives:

Refer to ESD report for target Sustainability Initiatives for the project.

SITE PERSPECTIVES

Building F at the junction of Hill Road and Bennelong Parkway

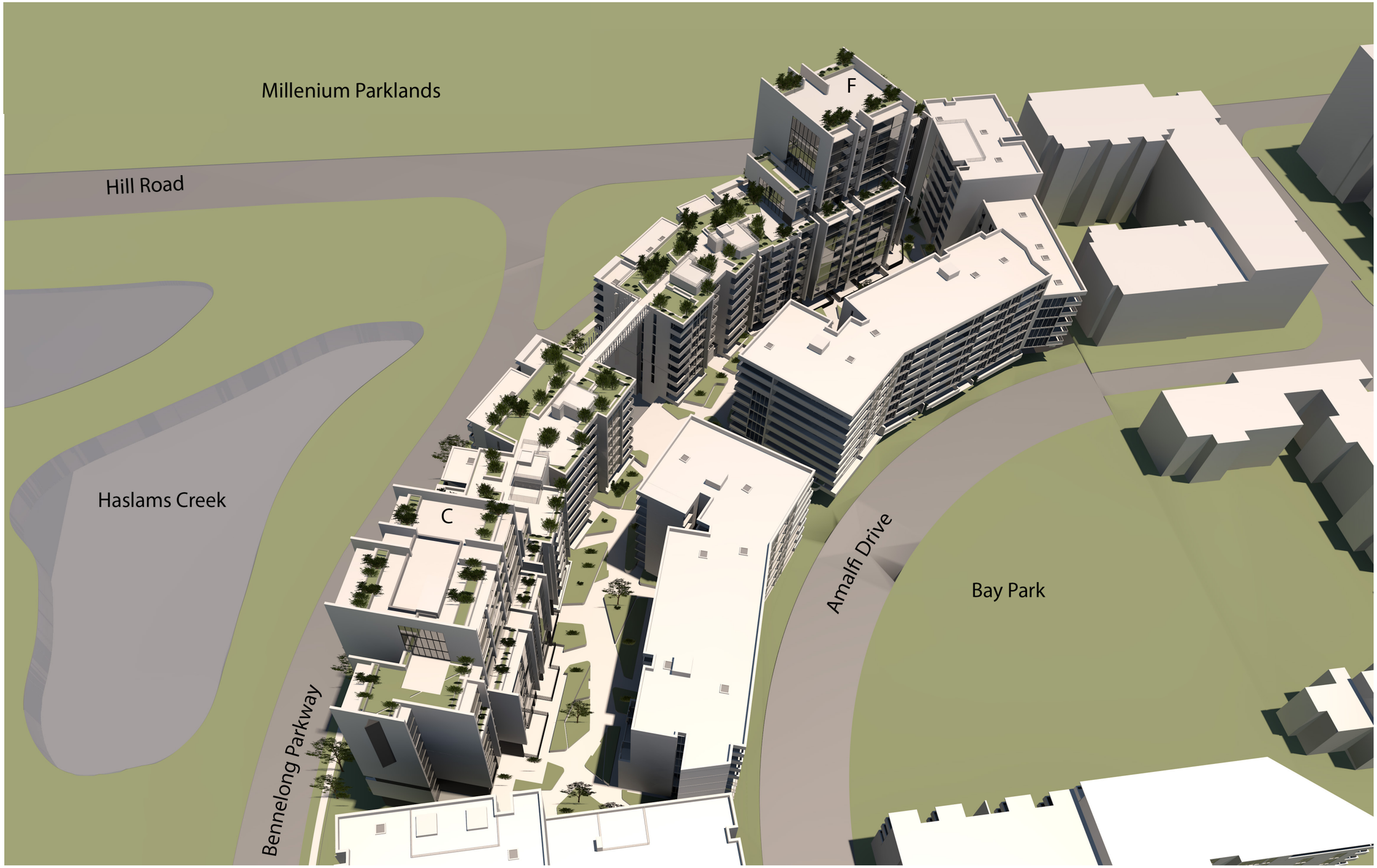
SITE PERSPECTIVES

04.09.2020
DLCS Quality Endorsed Company ISO 9001:2015, Registration Number 20476
Nominated Architect: Nicholas Turner 6695, ABN 86 064 084 911

SITE PERSPECTIVES

Building C at Bennelong Parkway

SITE PERSPECTIVES



CONCLUSION

This submission allows for a design outcome that improves upon the existing concept envelopes including better ADG compliance, site permeability, communal facilities, and potential sustainability initiatives. The submission is a merits driven approach that genuinely seeks to go further than 'business as usual' by providing better amenity for residents within the development. The design is respectful of it's adjoining context, and can facilitate an improved urban design outcome. The submission has responded to the previous local and state authority feedback and the proposal has been substantially amended from the previous S75w design to resolve these items. These last two remaining buildings are the final piece of the jig-saw within this prominent site and precinct, and provide for an opportunity for design excellence.

Illustrative scheme for 23 Bennelong Parkway : Achieving a planning framework that will allow for contextually appropriate outcome

04.09.2020
DLCS Quality Endorsed Company ISO 9001:2015, Registration Number 20476
Nominated Architect: Nicholas Turner 6695, ABN 86 064 084 911

02.09.2020

TURNER piety group

ONE
THE WATERFRONT

URBAN DESIGN REPORT

23 Bennelong Parkway
Wentworth Point NSW 2127

S75W MOD 4 (SEPTEMBER 2020)

By: TURNER
For: PIETY THP
Project Ref. No: 18039
Nominated Architect: Nicholas Turner 6695