

SITE CONTEXT

The subject site is located adjacent to Redfern Station and is bound by Rosehill Street to the east, Margaret Street to the north, Cornwallis Lane to the west and a collection of neighbourhood terrace housing to the south. This is a key strength as the site has multiple access points from the various interfacing streets and lane. Also, the site benefits from being next door to Gibbons St Reserve. Locating the highest density near the highest amenity is a key town planning principle. The topography slopes down towards the southern end of the site with views orientated towards the rail corridor to the north. Another key strength of the site is

that it is highly accessible both physically and visually to the adjacent major roads, which service high frequency bus routes and nearby bus stops. The site is also surrounded by public open spaces, approximately 2 minutes walk to nearby parks. The site has the potential to become a transitional zone between Redfern Station/Town Centre and the Australian Technology Park precinct to the west. Also, the site is impacted on by an aviation height limit of 45.75m (as prescribed by Civil Aviation Safety Authority) and an obstacle limitation surface (OLS) height limit of 74-81m AHD.





A two storey commercial building with recessed entries, with carparking located at the rear of the site.



Views from Gibbons Street to Gibbons Street Reserve and apartments.



Views east from Redfern Station to mixed use towers and Redfern TOD precinct.



Boundary Street looking east



Cornwallis Lane looking north.



Margaret Street interface.



Gibbons Street views to Daniel Dawson Reserve and nearby apartments (Spencer Lane/Botany Road)



Local cafe, corner of Boundary Street & Gibbons Street

PEOPLE PROFILE

The vision is underpinned by an understanding of local user groups and their needs.

POPULATION

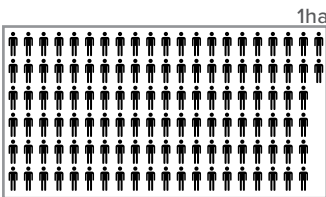
REDFERN

CURRENT POPULATION (2016)

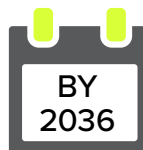
14,217



POPULATION DENSITY OF
121.93 P/HA



CITY OF SYD
**FORECAST
TO GROW BY
39%***

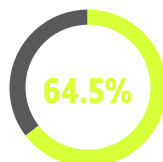
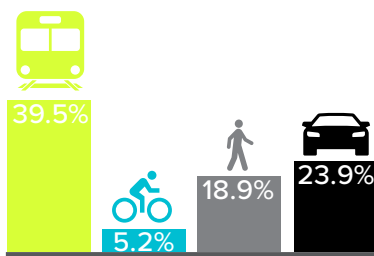


POINT OF INTEREST:

REDFERN WILL BE ACCOMMODATING A SIGNIFICANT AMOUNT OF GROWTH FOR THE CITY OF SYDNEY AREA. HIGH DENSITY RESIDENTIAL & MIXED USE DEVELOPMENT IS INCREASING, AND WITH IT, A GROWING POPULATION DENSITY. IN ORDER TO FURTHER ENHANCE REDFERN'S LIVEABILITY IT IS IMPORTANT TO FOLLOW EXISTING DEVELOPMENT PATTERNS COMBINING RESIDENTIAL, MIXED USE & COMMUNITY VALUES.

WORK

MODE OF TRANSPORT TO WORK

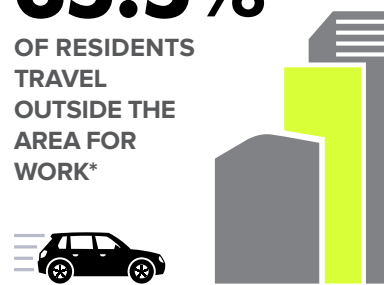


OF LOCAL WORKERS LIVE IN THE AREA*



35.5%

OF RESIDENTS TRAVEL OUTSIDE THE AREA FOR WORK*



MOST PEOPLE WORK IN

19%



PROFESSIONAL, SCIENTIFIC & TECHNICAL



9%

HEALTH CARE & SOCIAL ASSISTANCE

POINT OF INTEREST: DIVERSIFYING

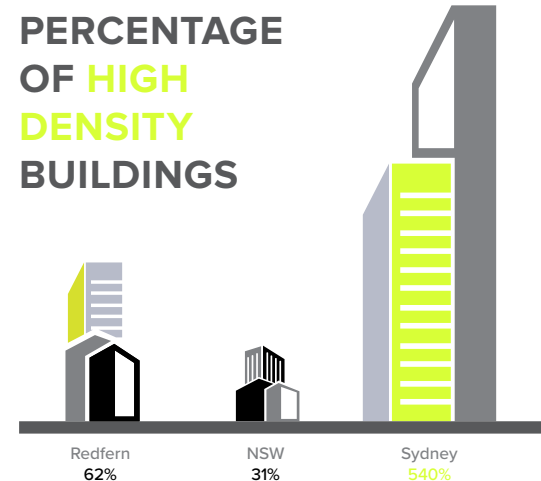
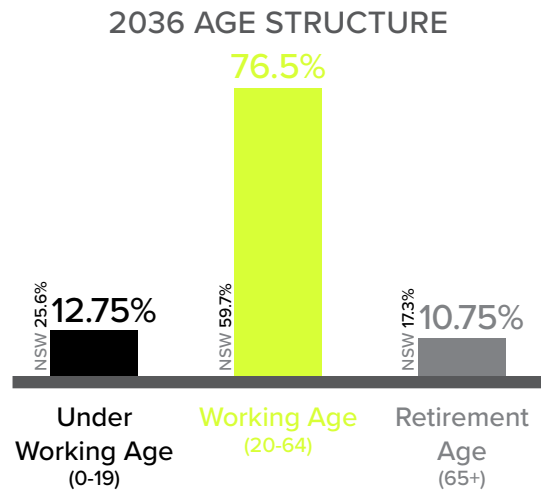
THE LOCAL ECONOMY AND INCREASING JOBS CAN HELP TO RETAIN LOCAL WORKERS AND SAVE ON TIME AND TRANSPORT COSTS. THIS MAY BE DONE BY ADAPTING EXISTING UNDERUTILISED COMMERCIAL SPACE TO ACCOMMODATE NEW USES (E.G. ARTISTS, RETAIL, EDUCATION, ACCOMMODATION, F&B).

* Statistics relate to City of Sydney LGA

LIVE



POINT OF INTEREST:
REDFERN HAS A HIGH NUMBER OF LONE PERSON HOUSEHOLDS (35%) A GROWING YOUTH & WORKING POPULATION. ADDITIONAL DIVERSE & AFFORDABLE MEDIUM - HIGH DENSITY HOUSING OPTIONS SHOULD BE CONTINUED TO BE INTRODUCED IN REDFERN TO ACCOMMODATE THE GROWING NUMBER OF YOUNG PEOPLE, SMALL HOUSEHOLDS AND EMPTY NESTERS/SENIORS.



ACCESS

WALK SCORE



20TH
MOST WALKABLE SUBURB IN METROPOLITAN SYDNEY

DISTANCE TO THE REDFERN CENTRE FROM CBD

30 MINS

13 MINS

18 MINS

POINT OF INTEREST:
ONE OF REDFERN'S KEY STRENGTHS IS THAT IT HAS A STRONG WALKABILITY SCORE, A RESULT OF MANY FACTORS. HIGH LEVELS OF AMENITY, ACCESS TO & AVAILABILITY OF SERVICES & PUBLIC TRANSPORT, AS WELL AS A DENSE AND DIVERSE URBAN CORE ALL CONTRIBUTE. THERE IS AN OPPORTUNITY TO BUILD ON THESE ASSETS AND FURTHER ENHANCE REDFERNS WALKABILITY AND BIKE FRIENDLY ENVIRONMENT PROMOTING ACTIVE TRAVEL AND STRENGTHEN CONNECTIONS.

PLACE PRECEDENTS

Precedent case studies have been sourced from local, national and international examples, which draw inspiration from various built form, function and urban design principles from other successful projects. This study enables the team to assess our concept against these examples and identify key lessons learned for Gibbons Place.

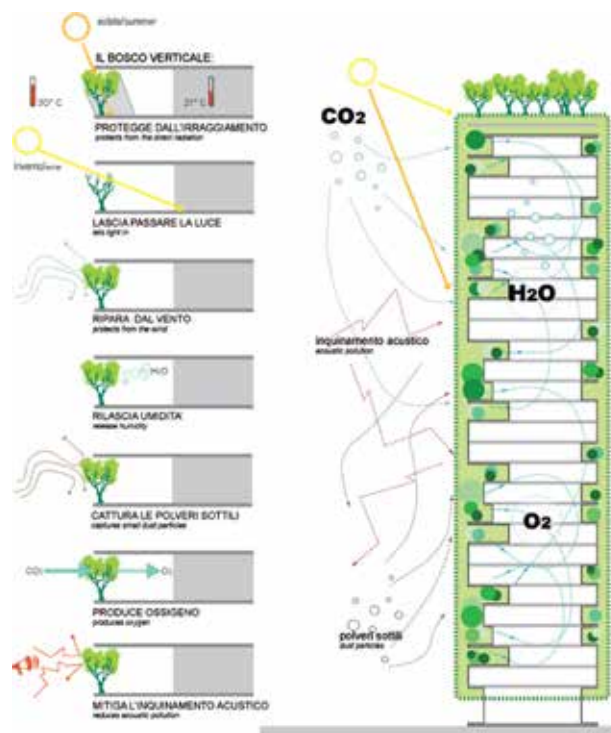
ONE CENTRAL PARK, CHIPPENDALE SYDNEY

Gibbons Place draws inspiration from the relationship that the built form of One Central Park has with its surrounding landscape and streetscape presence. The ground floor and lower pedestrian spaces are designed to generate permeability and pedestrian friendly shared environments. Internal/covered through site linkages create enclosed public spaces allowing visitors to linger whilst upper podium levels offer a range of destination retail and commercial spaces. The micro economy within the built form supports open spaces and vice versa. The built form acts as a landmark and destination from the surrounding environment whilst achieving the fine grain. The pedestrian environment is active, safe and pleasant to walk through, around and stay.



BOSCO VERTICALE, MILAN

Bosco Verticale (Vertical Forest) in Milan has been designed utilising a range of green design principles to respond to various climatic conditions, promoting environmentally responsiveness through built form design. Building functions and design mitigate a suitable micro climate increasing the apartments liveability. A similar process and built form principles have been used for Gibbons Place in addition to the sustainable urban design principles to promote healthy, active and happy lifestyles. Different levels are articulated and cantilever over one another to create private open spaces and opportunities for planting. The ground level is activated by pedestrian movement networks, children's play ground, seating and shaded public open spaces.



COMMERCIAL, RESIDENTIAL HYBRID - *BEACH & HOWE TOWER, VANCOUVER*



PLACE PRECEDENTS

ACTIVE & SAFE PEDESTRIAN LANEWAYS - KENSINGTON ST, SYDNEY



INNOVATIVE WORKING SPACES - CISCO HEADQUARTERS, SAN FRANCISCO



Retrofitting large-format commercial into smart collaborative spaces

CIVIC PLAZA SPACE - MONASH UNI, VICTORIA



GREENERY & COMMUNAL ROOF SPACES - VALLEY, AMSTERDAM



"ALWAYS DESIGN A THING
BY CONSIDERING IT IN ITS
NEXT LARGER CONTEXT
— A CHAIR IN A ROOM, A
ROOM IN A HOUSE, A HOUSE
IN AN ENVIRONMENT, AN
ENVIRONMENT IN A CITY
PLAN."

ELIEL SAARINEN

PLACE STRATEGY

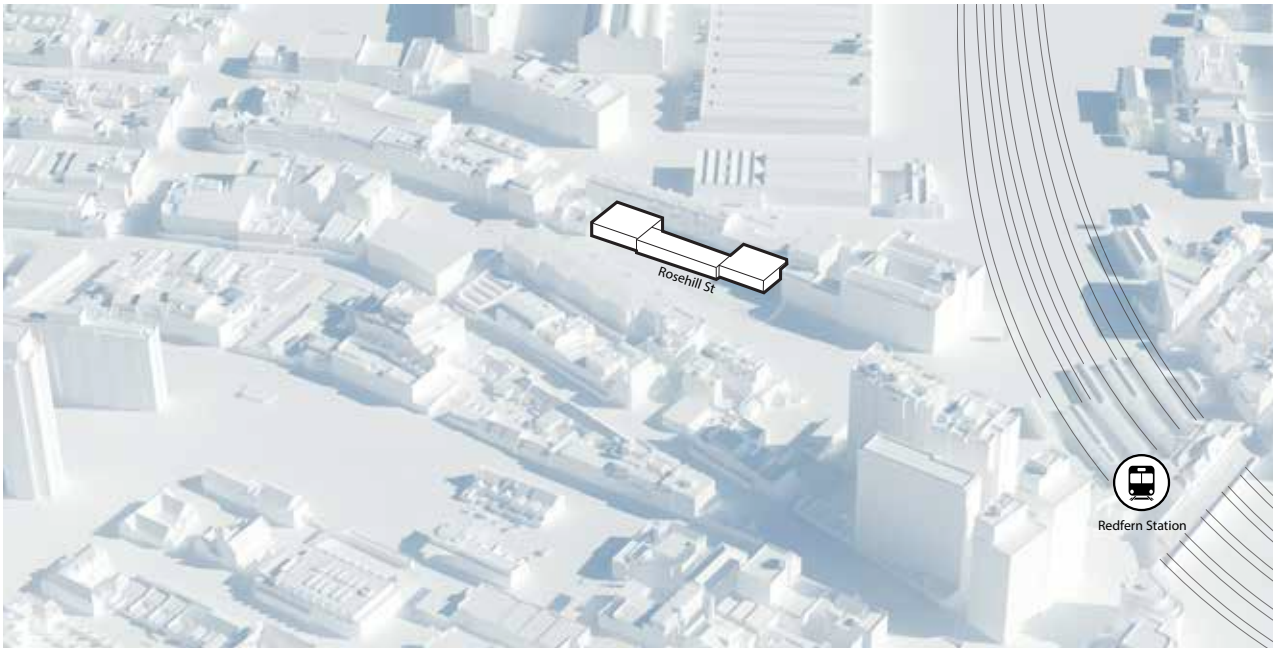
BUILDING A FRAMEWORK FOR GIBBONS PLACE

DESIGN FRAMEWORK

The concept diagrams below illustrate the key steps of the creative process in evolving the vision for Gibbons Place, addressing the matters identified by the City as important and other considerations (e.g. making better places).

EXISTING SITE

Existing development pattern shows how the site presents itself in relationship to surrounding built form. Blank facades and recessed entries do not positively contribute to public space and character. Opportunity to provide more of a presence to Gibbons Reserve, Rosehill Street & rear lane.



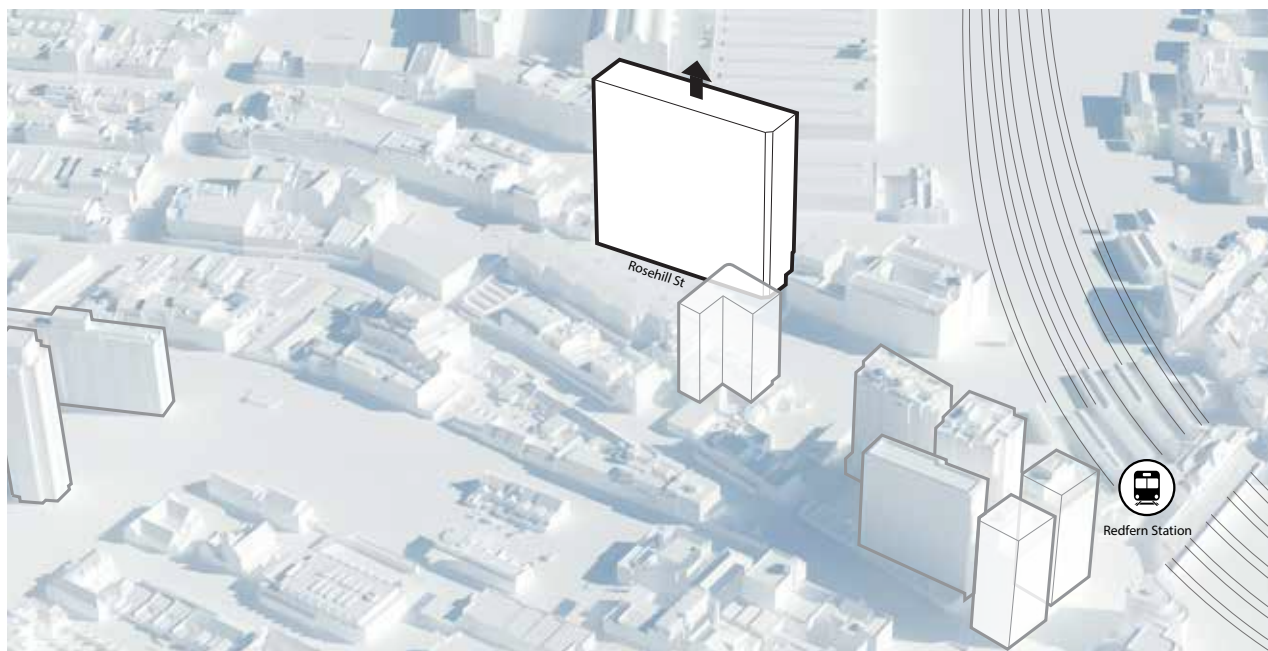
THE SITE, DEFINED

The boundary of the site is shown below, strongly defined by Rosehill Street and Cornwallis Lane. The rear lane is currently underutilised, lacking activity and amenity. The proposal aims to introduce safer, more active and engaging edges at pedestrian level.



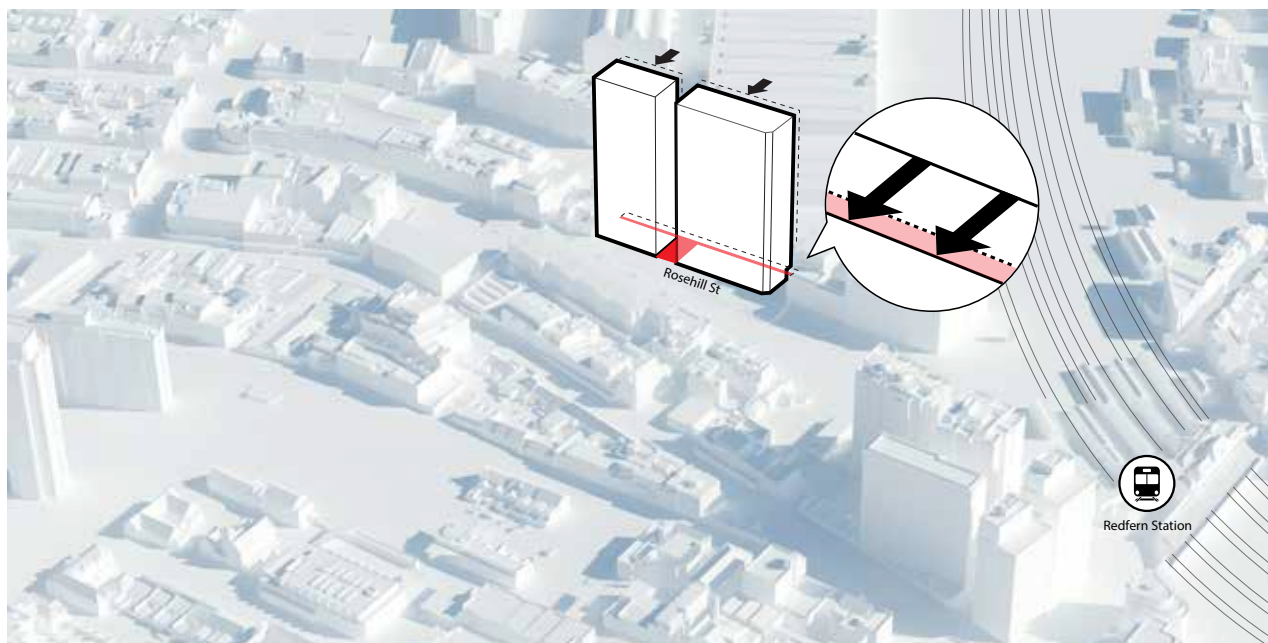
EXTRUDE MAXIMUM ENVELOPE

Based on the identified site influences, a preliminary maximum building envelope is extruded to begin testing design possibilities. A maximised envelope is key to understand the limits of bulk and scale to initiate the design process. From here we can determine impacts on functionality and amenity, refining the built form to tailor the surrounding context and incorporate various design techniques/outcomes intended for the proposal.



WIDEN LANEWAY & CREATE A THROUGH SITE LINK

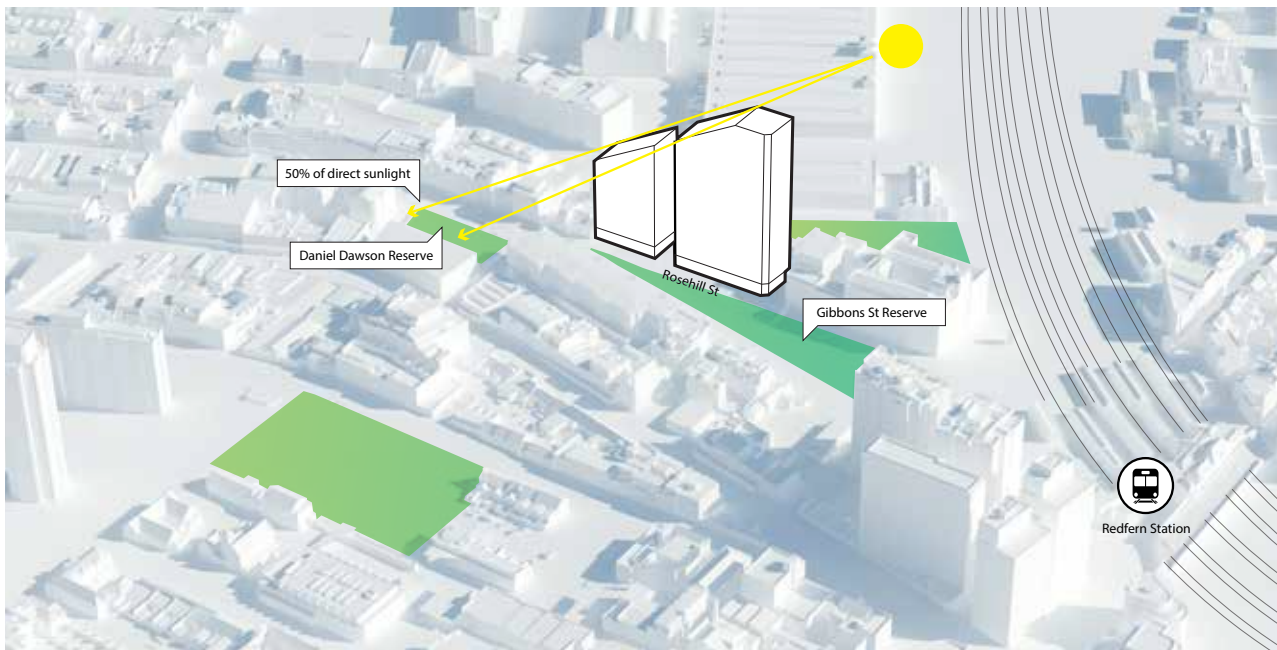
Widening the rear lane generates a more pleasant network, creating public space, areas for engagement, gathering and lingering. The possibility for a thru-site link is also a key move which breaks up the continuous built form into two smaller blocks reducing building bulk and creating permeability between the lane and Rosehill St.



DESIGN FRAMEWORK

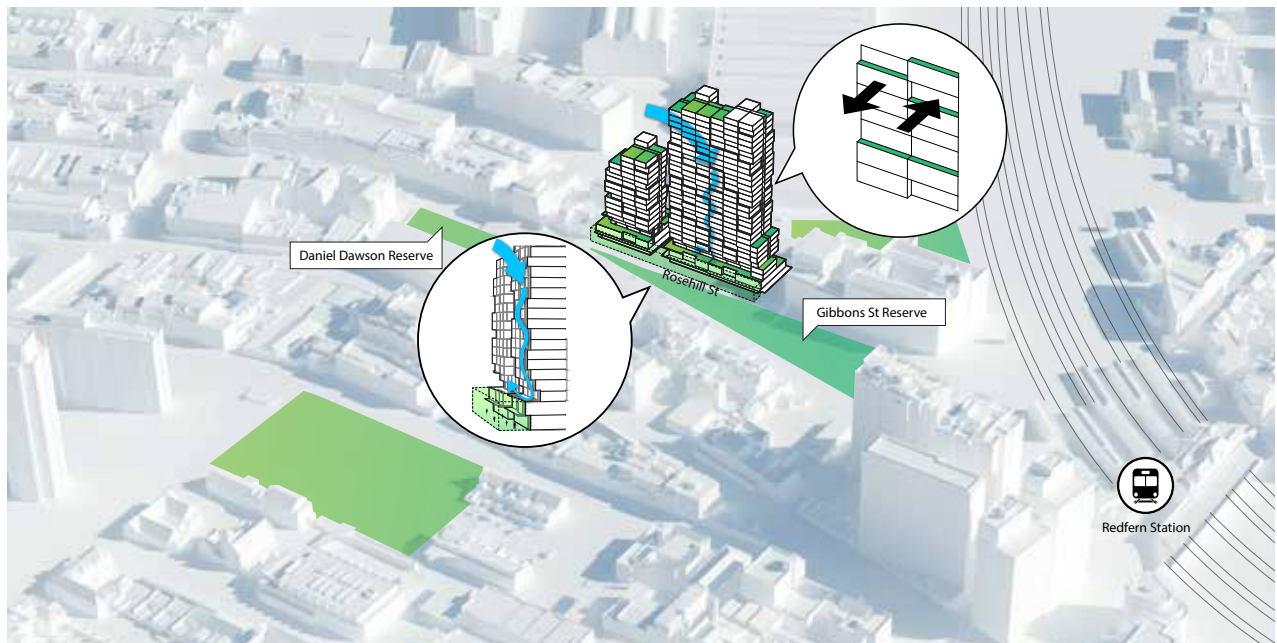
SOLAR AMENITY TO PUBLIC OPEN SPACE

By considering and analysing solar access data, built form and height are adjusted to maintain appropriate solar amenity to adjoining green spaces (Daniel Dawson Reserve) and properties. A stepped envelope towards the southern end of the site also contributes to a dynamic skyline.



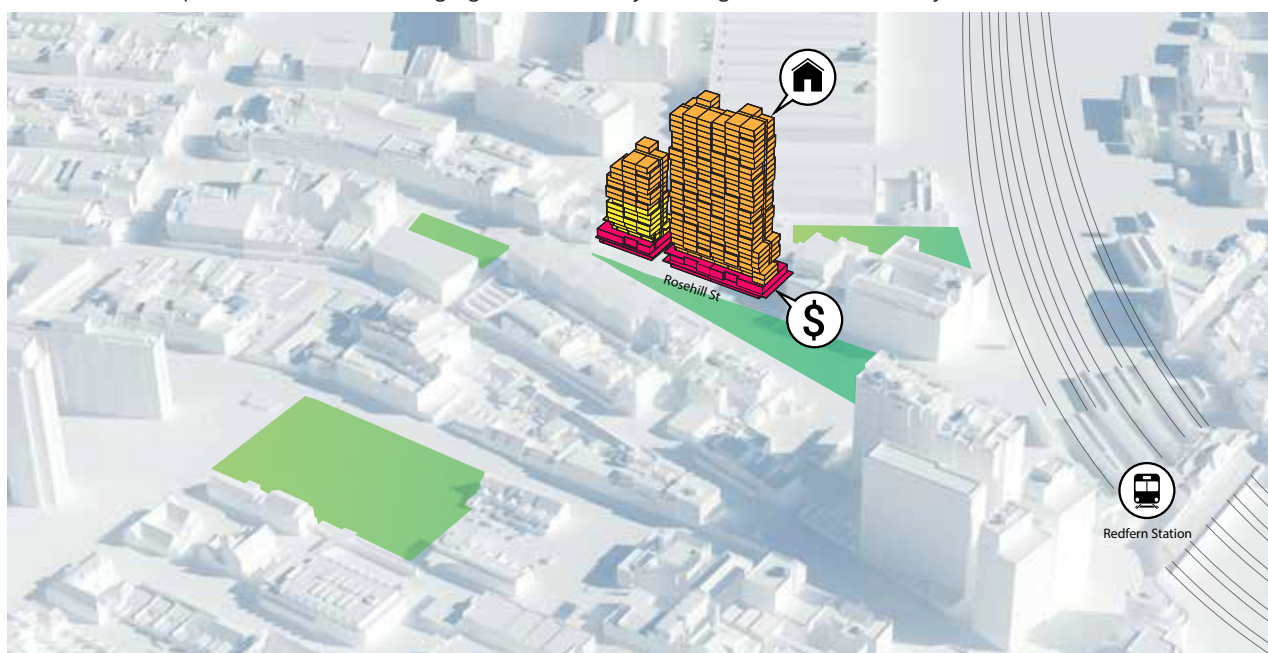
MITIGATING WIND & MICRO-CLIMATE

Staggering the articulation of building facades and a deliberate podium design reduces downward to create a pleasant micro-climate for people at street level. Further analysis and detailed justification of wind modelling is included under separate cover as part of the Planning Proposal documentation.



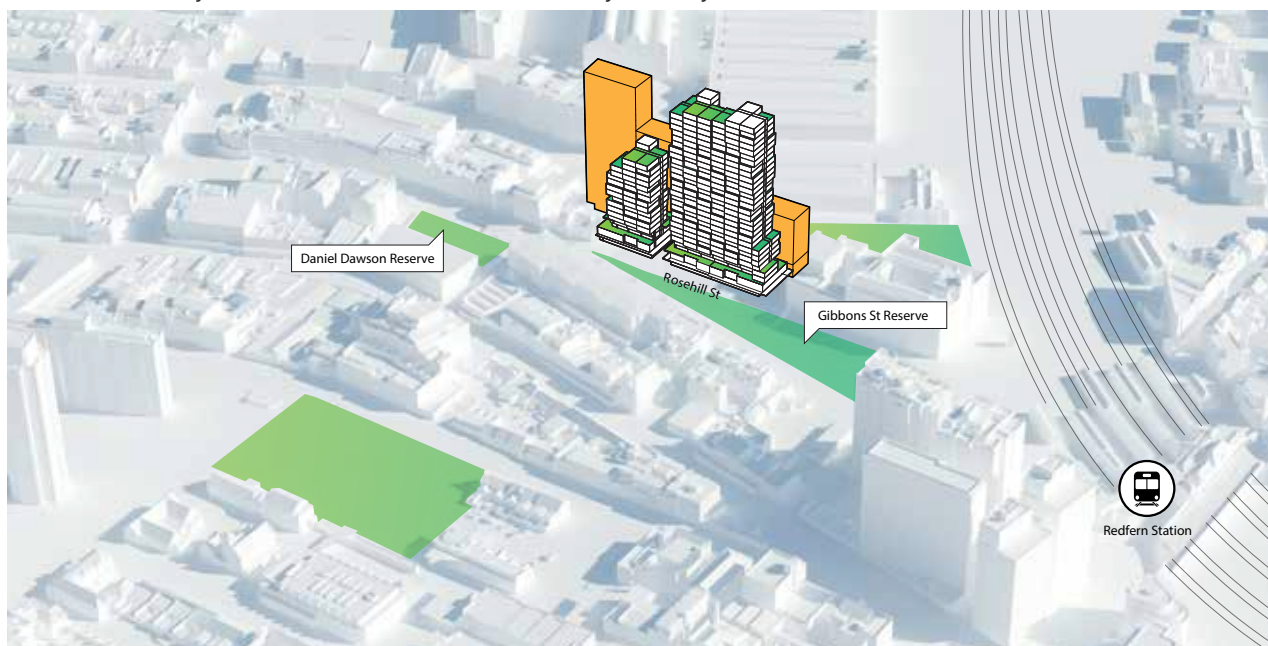
INTEGRATED MIX OF USES

In order to activate the ground level (Rosehill Street and Cornwallis Lane), adaptable, engaging and active uses are introduced to attract foot traffic and longer stays. These active uses are supported by a dense residential and commercial component above, encouraging local economy and higher levels of activity.



CHANGE OVER TIME

The Gibbons Place proposal has been considered as part of a broader urban renewal precinct, with particular attention given to the adjacent site to the west to facilitate an equitable pattern of development over time. The site envelope has evolved to ensure this equity and development potential for neighbouring sites in accordance with ADG, illustrated by a reversed tower location as one way this may occur.





5

4

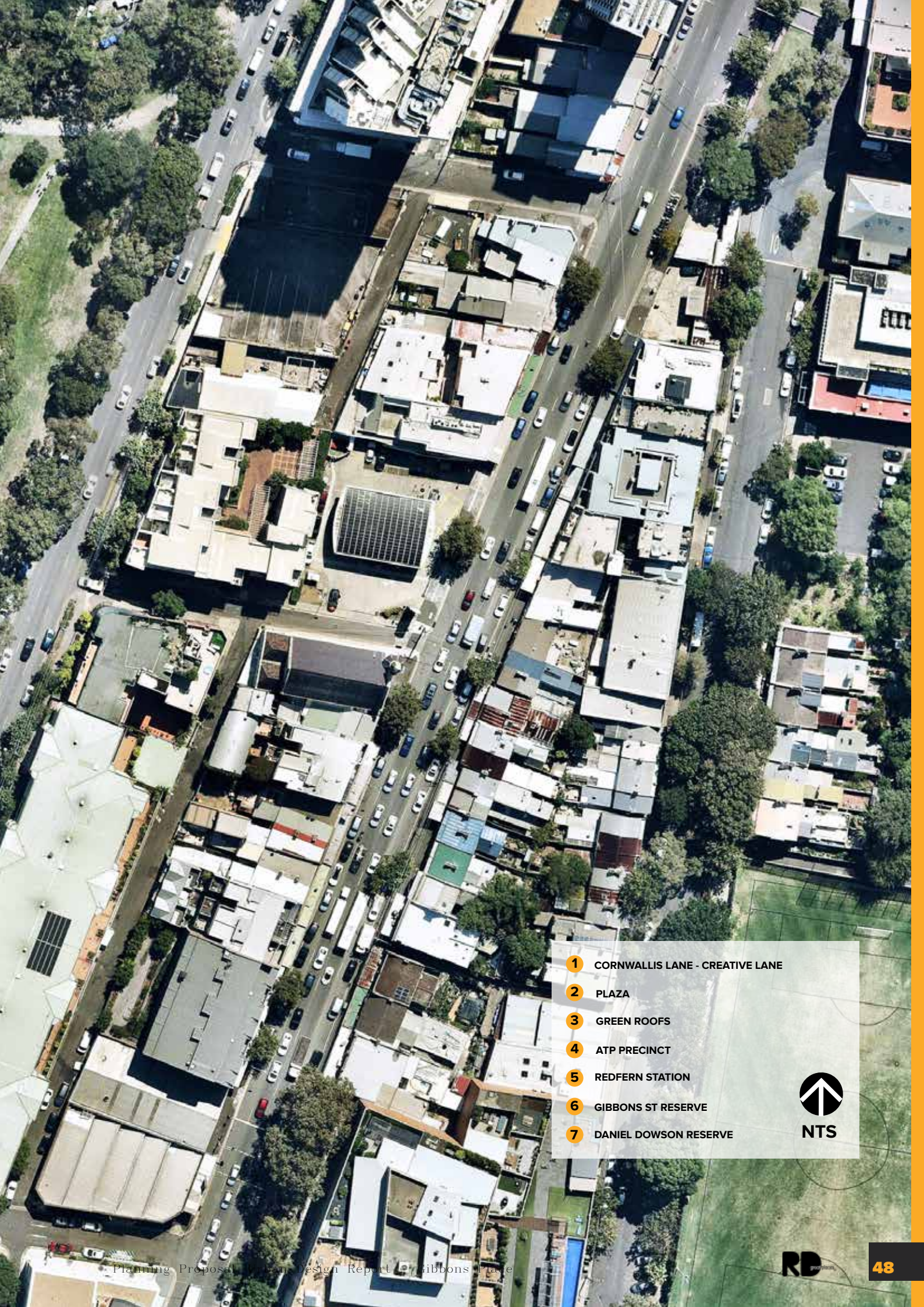
3

6

2

1

7



- 1 CORNWALLIS LANE - CREATIVE LANE
- 2 PLAZA
- 3 GREEN ROOFS
- 4 ATP PRECINCT
- 5 REDFERN STATION
- 6 GIBBONS ST RESERVE
- 7 DANIEL DOWSON RESERVE



VIEW 01:

VIEW FROM THE ROSEHILL STREET
(ILLUSTRATIVE ONLY)





LOCATION



VIEW 02:
VIEW FROM GIBBONS RESERVE
(ILLUSTRATIVE ONLY)





LOCATION



VIEW 03

VIEW FROM CORNWALLIS LANE
(ILLUSTRATIVE ONLY)





LOCATION



VIEW 04

VIEW FROM GIBBONS STREET
(ILLUSTRATIVE ONLY)





LOCATION



CREATING A PLACE FOR PEOPLE

INHERENT SUSTAINABILITY

ECONOMIC

NEW HOUSING TYPES FOR REDFERN &
DIVERSIFIED COMMERCIAL SPACES

ENVIRONMENTAL

RESPONSIVE URBAN DESIGN

SOCIAL

NEW JOBS CLOSE TO WORK

USES + ACTIVITIES

INNOVATION SPACE

NEW CREATIVE COMMERCIAL USES

REAR LANE ACTIVATION

NEW REAR LANE EXPERIENCE

COMMUNITY BENEFITS

HEALTH + WELLNESS

RECREATION + WALKING IMPROVEMENTS

WALK TO WORK

NEW JOBS CLOSER TO WORK

AGE IN PLACE

HOUSING TYPES FOR ALL AGES AT
DIFFERENT STAGES OF LIFE



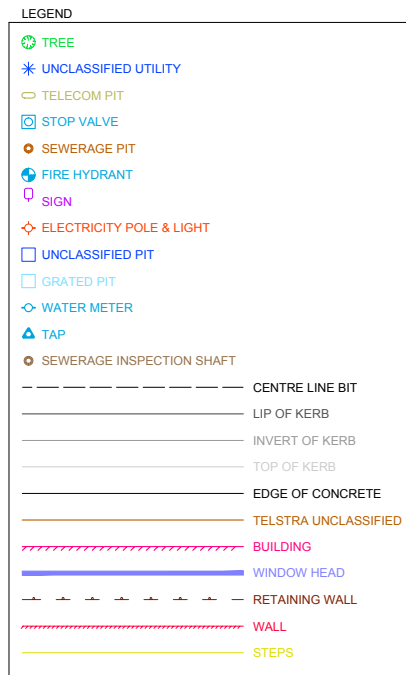


"SUSTAINABLE DEVELOPMENT IS A DYNAMIC PROCESS WHICH ENABLES ALL PEOPLE TO REALISE THEIR POTENTIAL, AND TO IMPROVE THEIR QUALITY OF LIFE, IN WAYS WHICH SIMULTANEOUSLY PROTECT AND ENHANCE THE EARTH'S LIFE SUPPORT SYSTEMS"

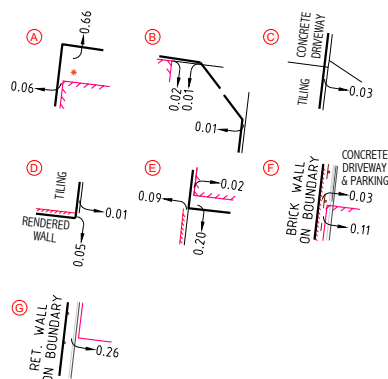
FORUM FOR THE FUTURE ANNUAL REPORT, 2000

TECHNICAL ANALYSIS

SITE SURVEY

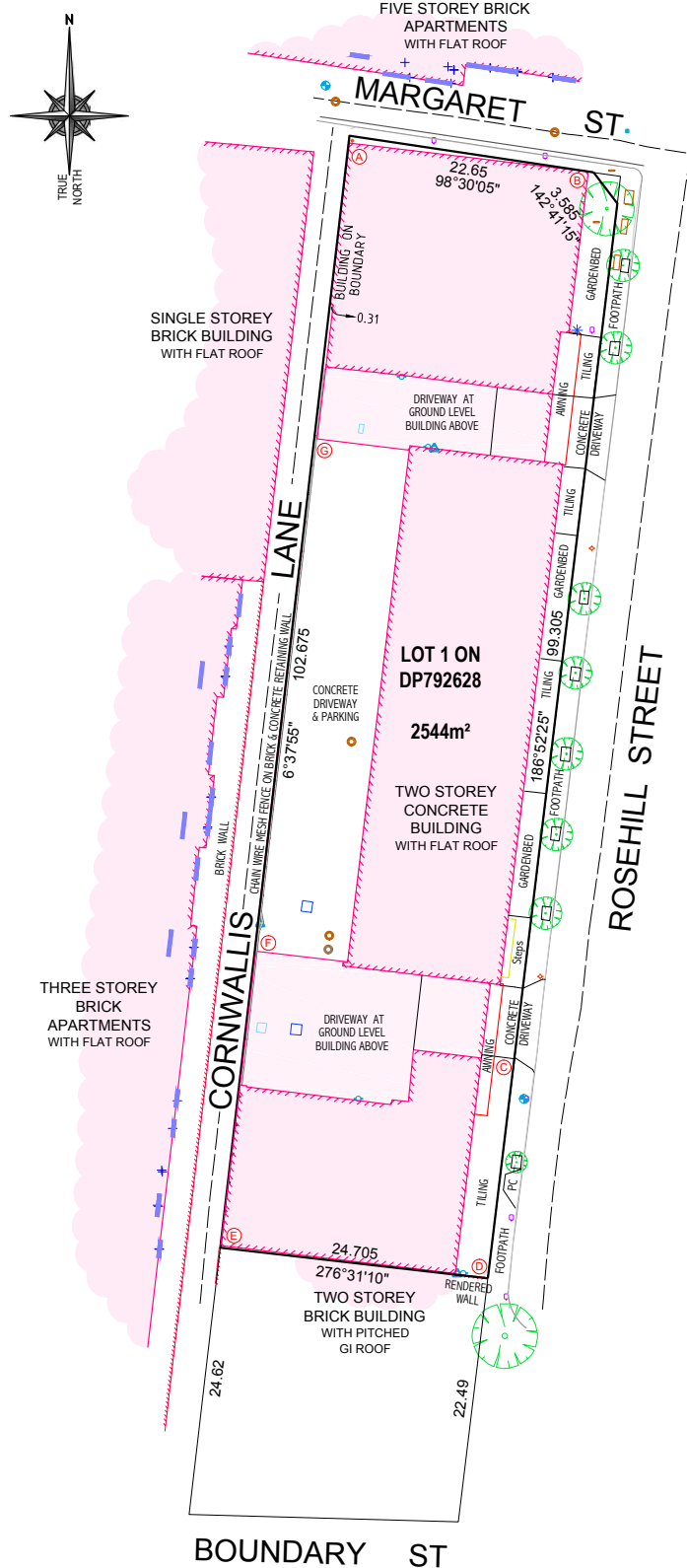


ENLARGEMENTS



NOTES:
 This plan is prepared for ROBERTS DAY from a field survey for the purpose of designing new constructions on the land and to show the relationship between the boundaries and occupation, and should not be used for any other purpose.
 For clarity, some occupation may not be shown to scale.
 Possessory Rights may have accrued to occupation location.
 The Title boundaries have been surveyed.
 Prior to any demolition, excavation or construction on the site, the relevant authorities should be contacted for the location of underground services.
 Footing locations and subsurface structures have not been located.
 Any digital data forwarded by Landair Surveys must not be altered in any way without prior approval of Landair Surveys. The data may be copied and then manipulated as required.
 This note is an integral part of the plan.
 SOME LAYERS ARE TURNED OFF FOR CLARITY OF PRINTED PLAN
 SEE AUTOCAD DRAWING FOR COMPLETE INFORMATION

CERTIFICATION BY REGISTERED SURVEYOR FOR PLAN
 I, ERIK BIRZULIS of Landair Surveys a surveyor registered under the Surveying and Spatial Information Act 2002, certify that: The land shown in the plan was surveyed in accordance with the Surveying and Spatial Information Regulation 2017, is accurate and the survey was completed on 26.04.2018
 Surveyor Identification No. 2521
 Surveyor registered under the Surveying and Spatial Information Act 2002



**ROBERTS DAY
 IDENTIFICATION PLAN
 44-78 ROSEHILL STREET,
 REDFERN**

SCALE
 0 4 8 12 16 20m
 1:400(A3)

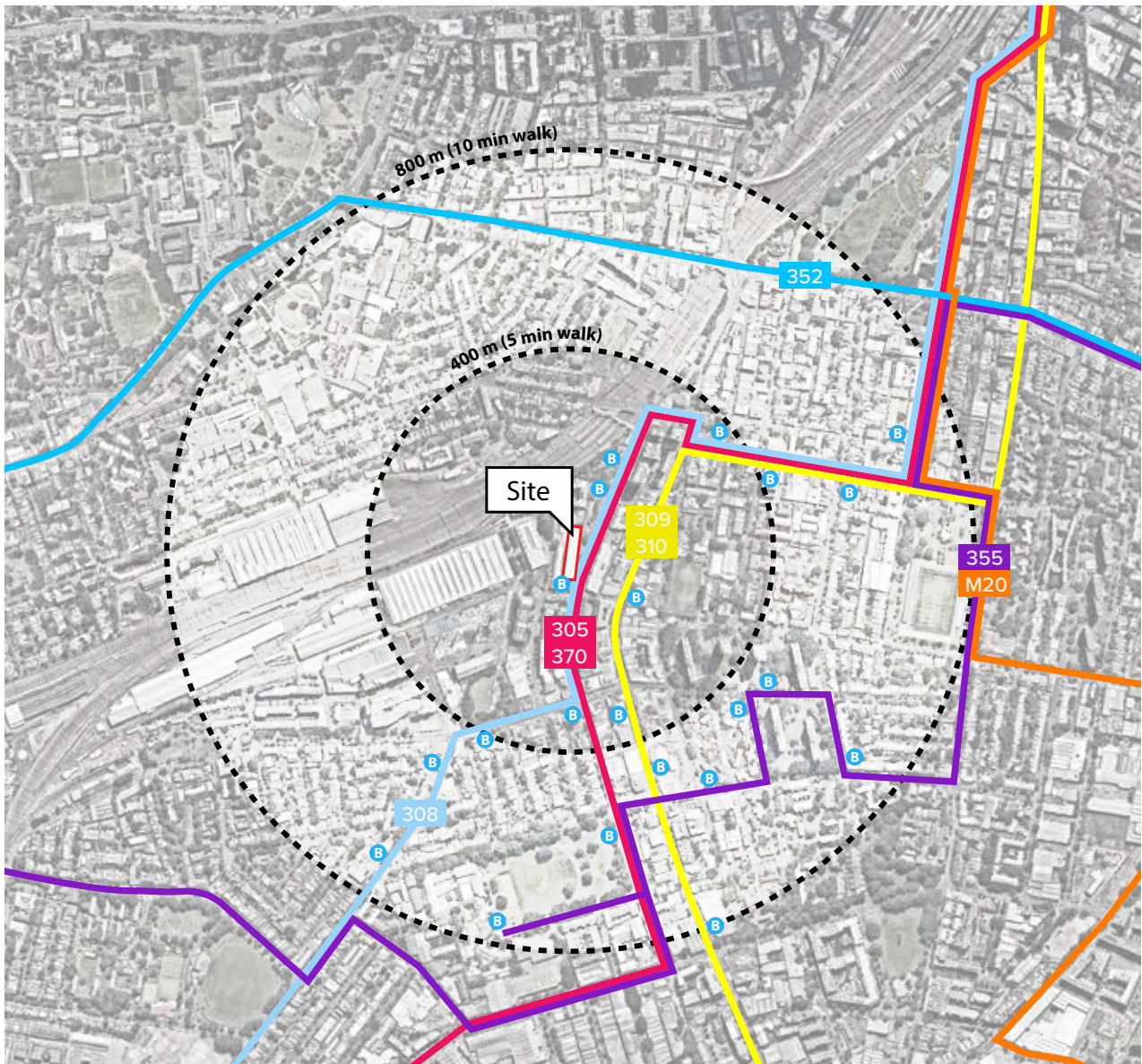
DATE OF SURVEY:
 26.04.2018 & 27.04.2018
 FIELD PARTY: MT, WA
 DRAWN BY: CC

MGA AZIMUTH VIDE PM 53330 & SSM 38398
 AHD CONNECTION VIDE SSM 38398

SHEET
 1 OF 1

Landair
 surveys
 Suite 19, Level 1, 31 Lord S
 Botany NSW 2019
 info@landair.com.au
 www.landair.com.au
 1300 130 156
 REF: 2180418-IDENT.DWG

TRANSPORT & ACCESSIBILITY

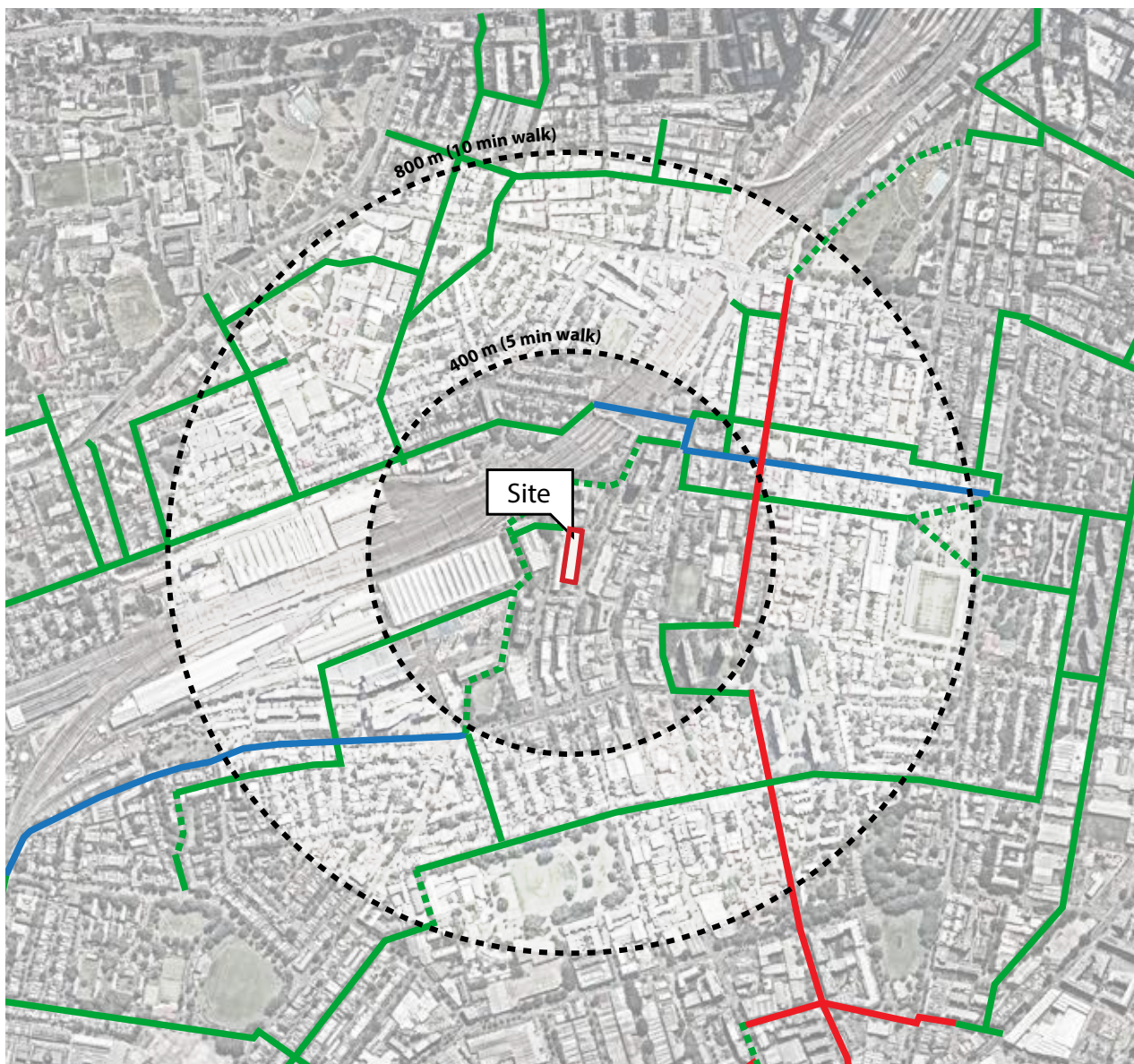


Public Transport & Car Share

In light of the above analysis map, it is recognised that the site has significant access to public transport (train, bus and future metro) within short walking distances (under 5 minutes). There are also multiple GoGet car sharing pods nearby further decreasing the site's dependence on private car usage.

Legend

- Site
- 5 minute walk
- 10 minute walk
- T Train Station
- B Bus Stop
- M Waterloo Metro Station
- GoGet GoGet Carshare
- Bus Route



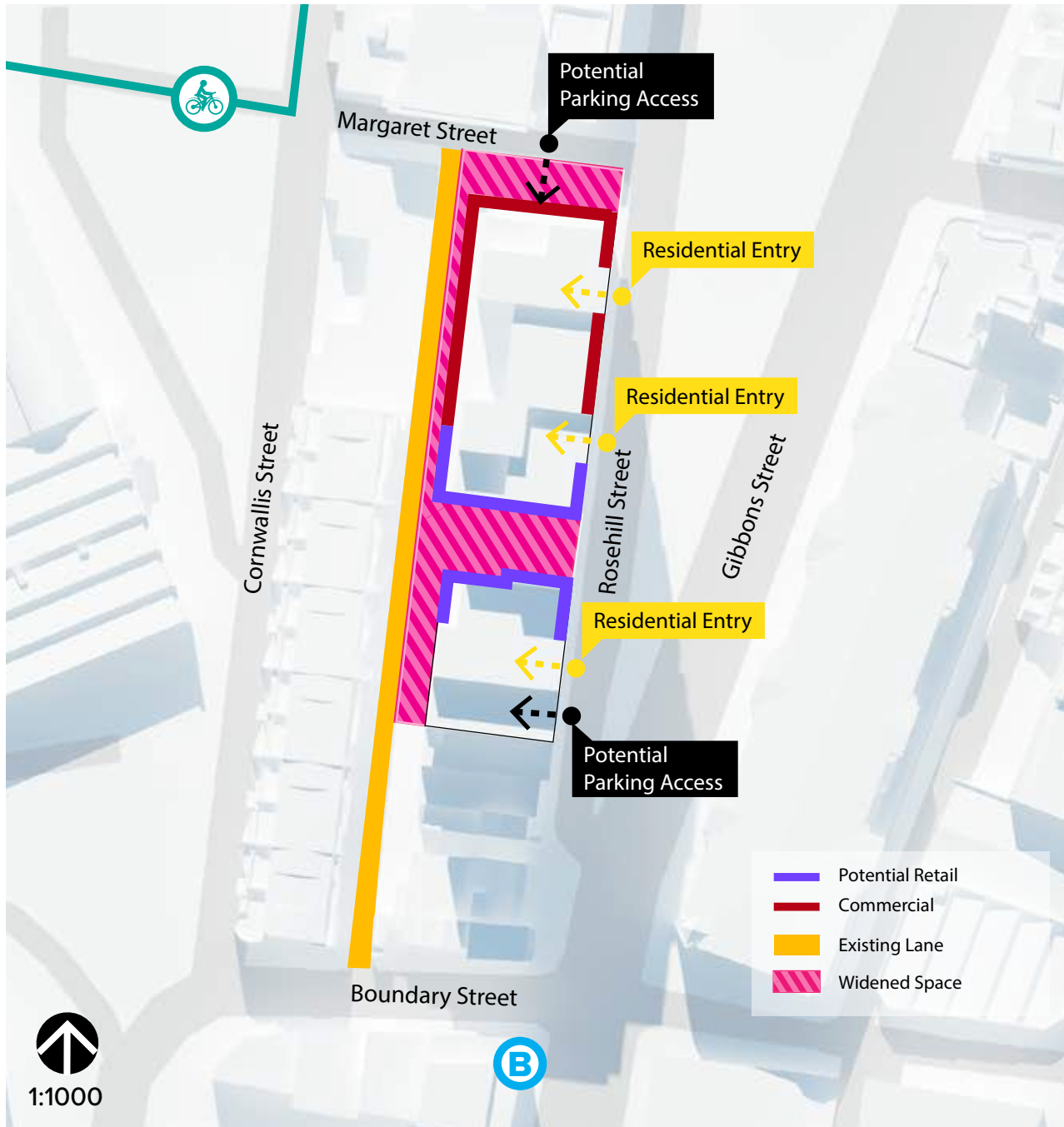
Cycle Network & Pedestrian Routes

The site has access to key multiple cycling networks which traverse north, south, east and west. In addition to the access to public transport, this further decreases the sites car dependence, and encourages a more walkable and pedestrian friendly environment.

Legend

- Site
- 5 minute walk
- 10 minute walk
- Cycle route on road low to medium traffic on road
- Cycle route on road low to medium traffic off road
- Cycle route on road heavy traffic
- Cycle route in separated cycleway

MOVEMENT & ACCESS

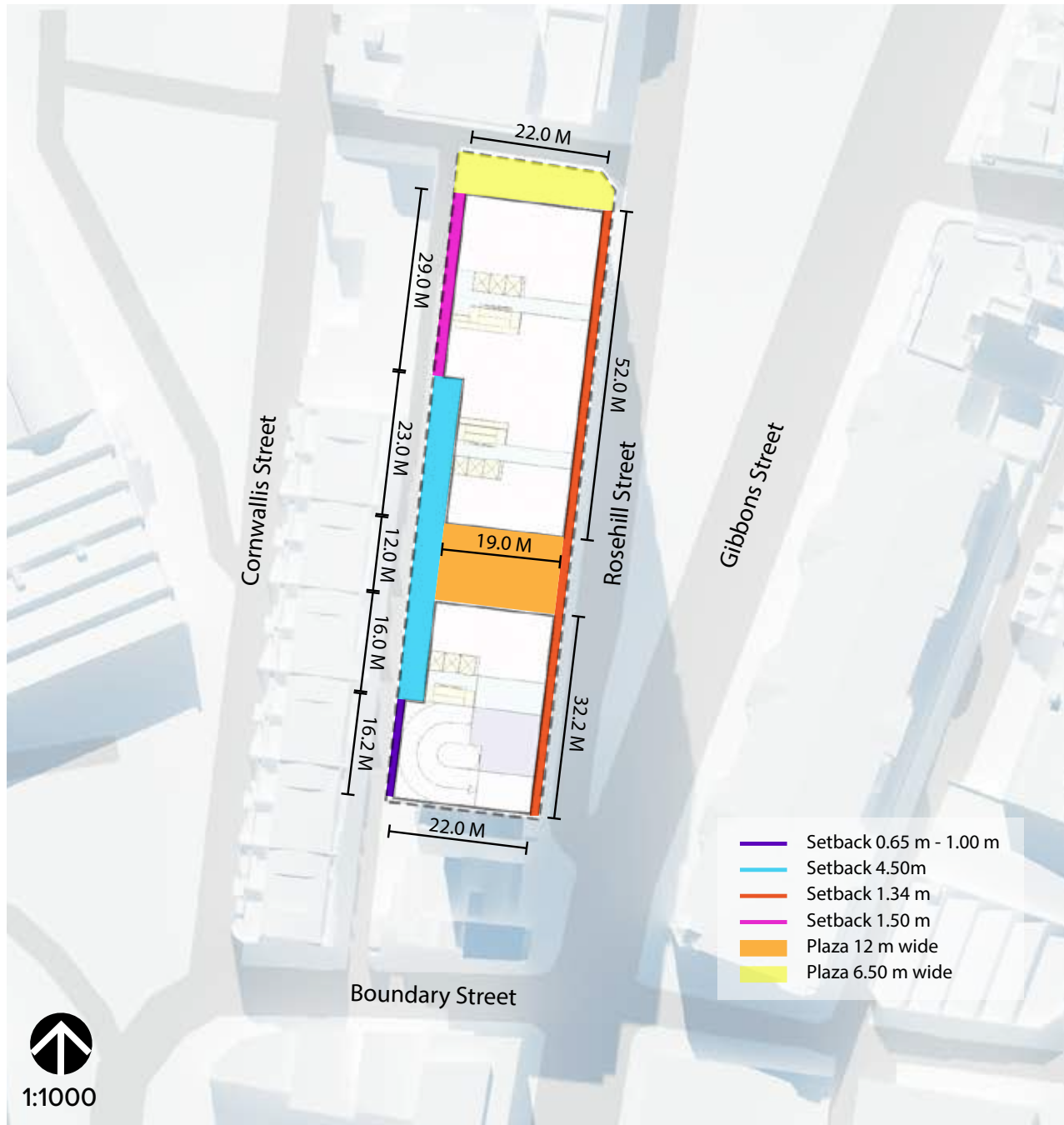


CONSIDERATIONS

- CARPARK ACCESS FROM ROSEHILL STREET
- WIDENED OF THE CORNWALLIS LANE
- RETAIL COMPONENT AROUND THE NEW PLAZA AREA
- BUS STOP ALONG GIBBONS STREET

The above diagram analyses and compares the existing lane to the widened and created public open space with emphasis on activating edges and building corners which interface with the public realm. Also, future potential parking access options are shown from Rosehill Street (existing scenario) or Margaret Street.

PROPOSED SETBACKS



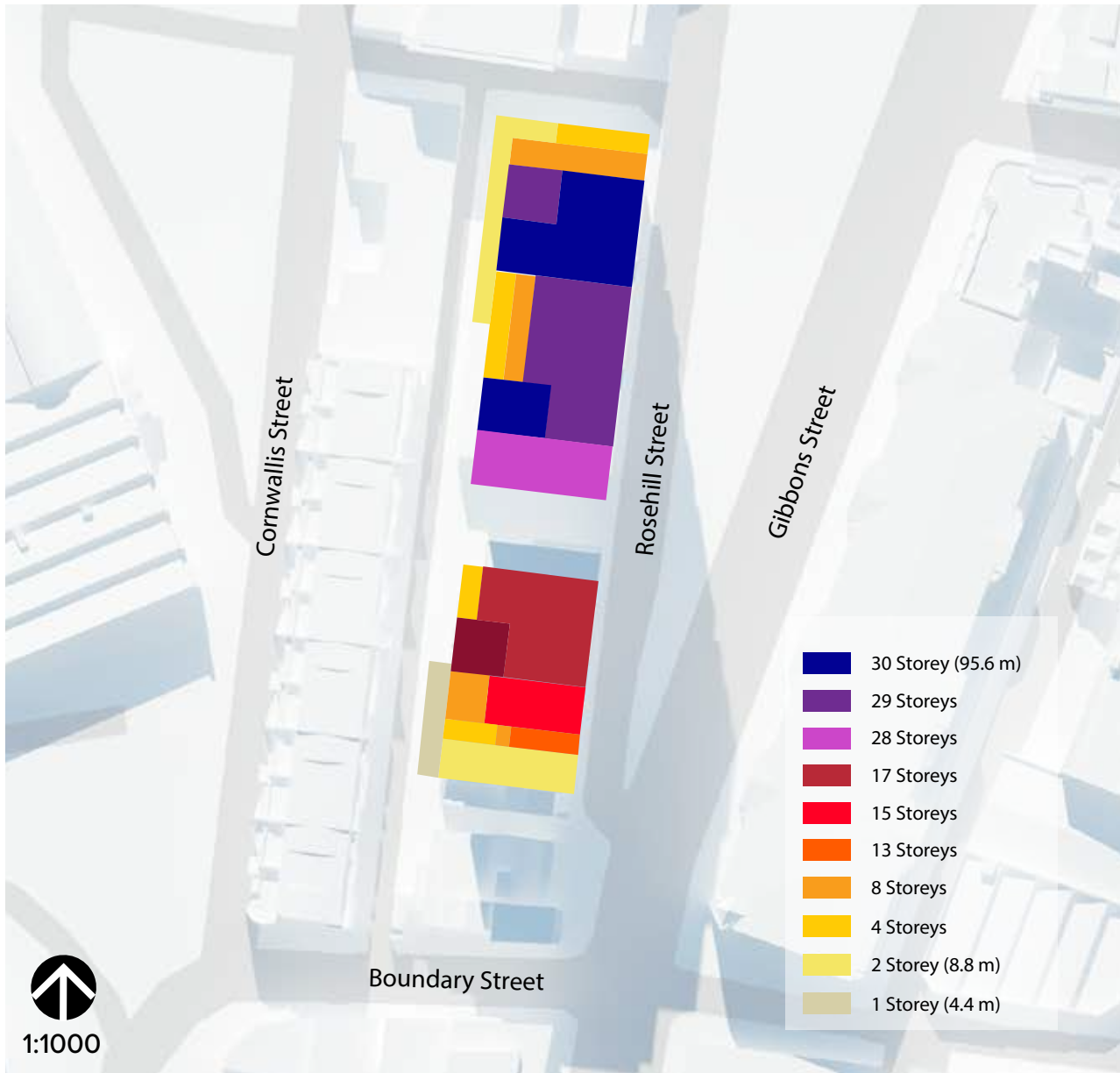
FEATURES

- **801.4 SQM WIDENED FOOTPATH ZONE**
- HEIGHT: UP TO 30 STOREYS
- ZONING: B4 MIXED USE

Setbacks to the public realm and adjacent development are highlighted above. Footpath widening and plaza space amount to a total of 801sqm of publicly accessible open space.

HEIGHT PLAN

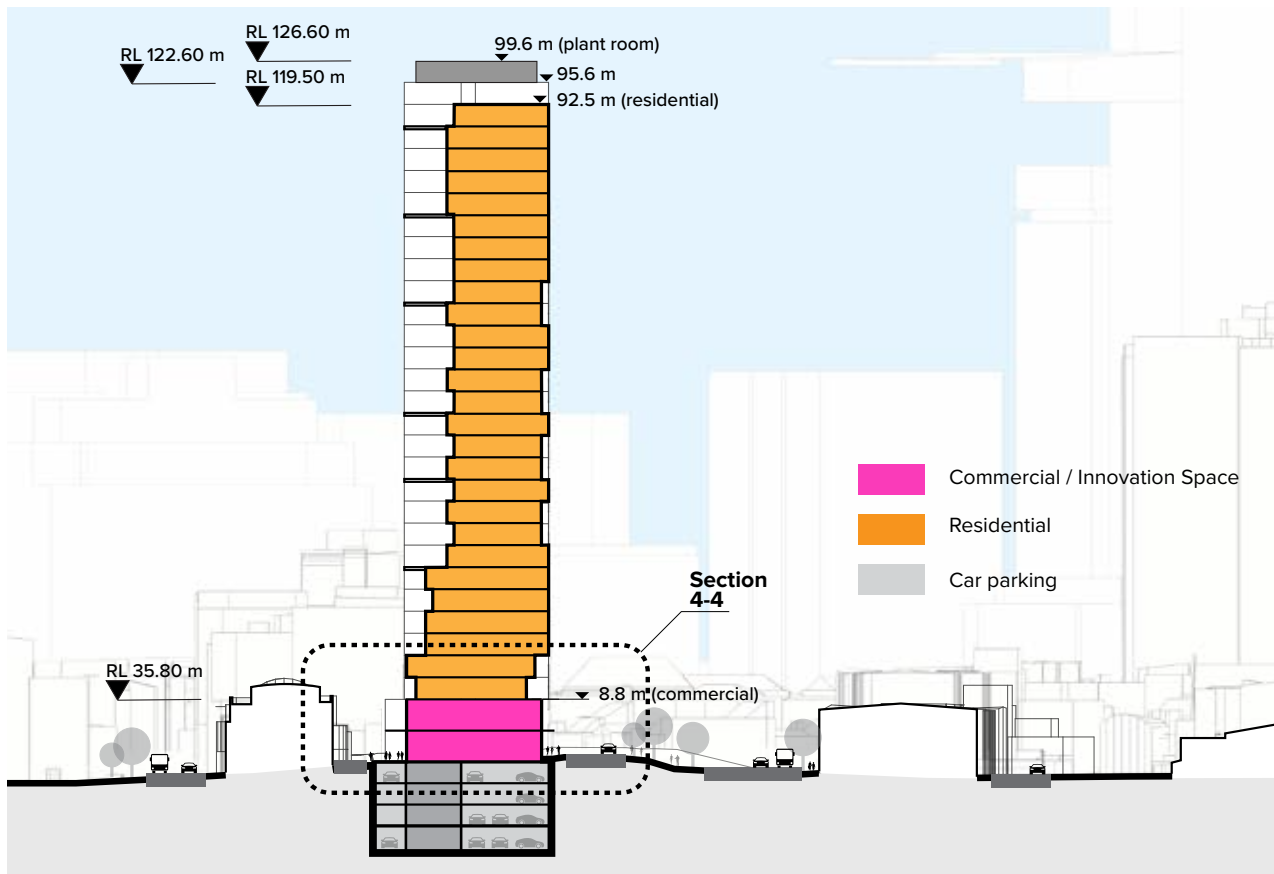
The maximum height proposed is 30 storeys (including plant equipment). Building heights then step down towards the southern end of the site (Boundary Street). The heights and building separation (adjacent page) have been carefully planned and design to ensure appropriate separation distances and solar amenity have been created.



FEATURES

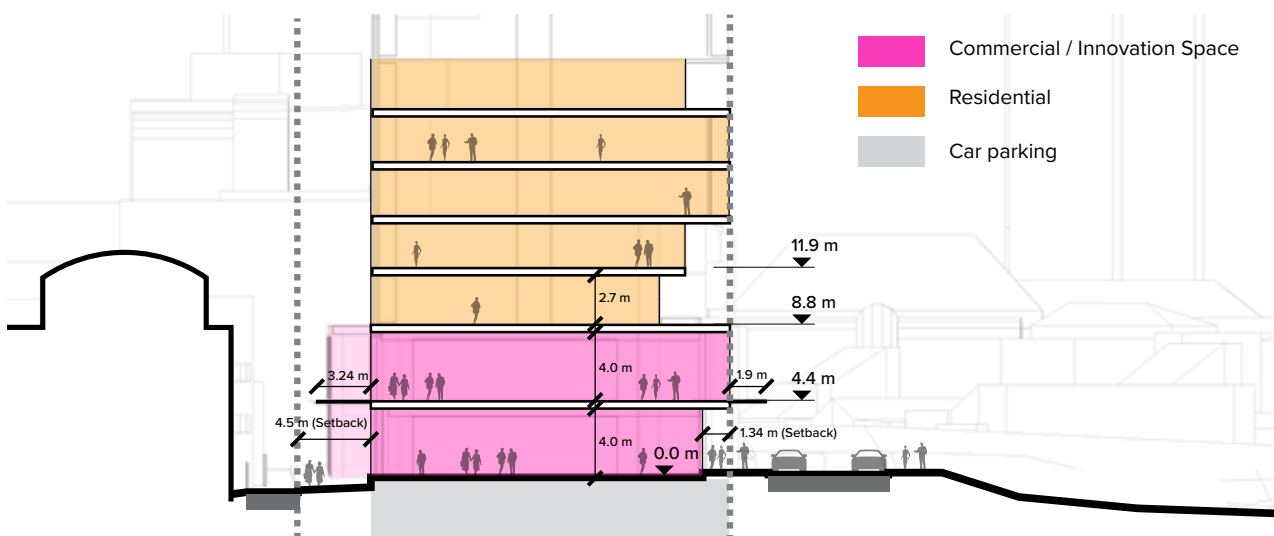
- MAX HEIGHT: UP TO 30 STOREYS
- SLENDER TOWERS
- STEPPED BUILT FORM

LAND USE CROSS SECTION



SECTION 3-3

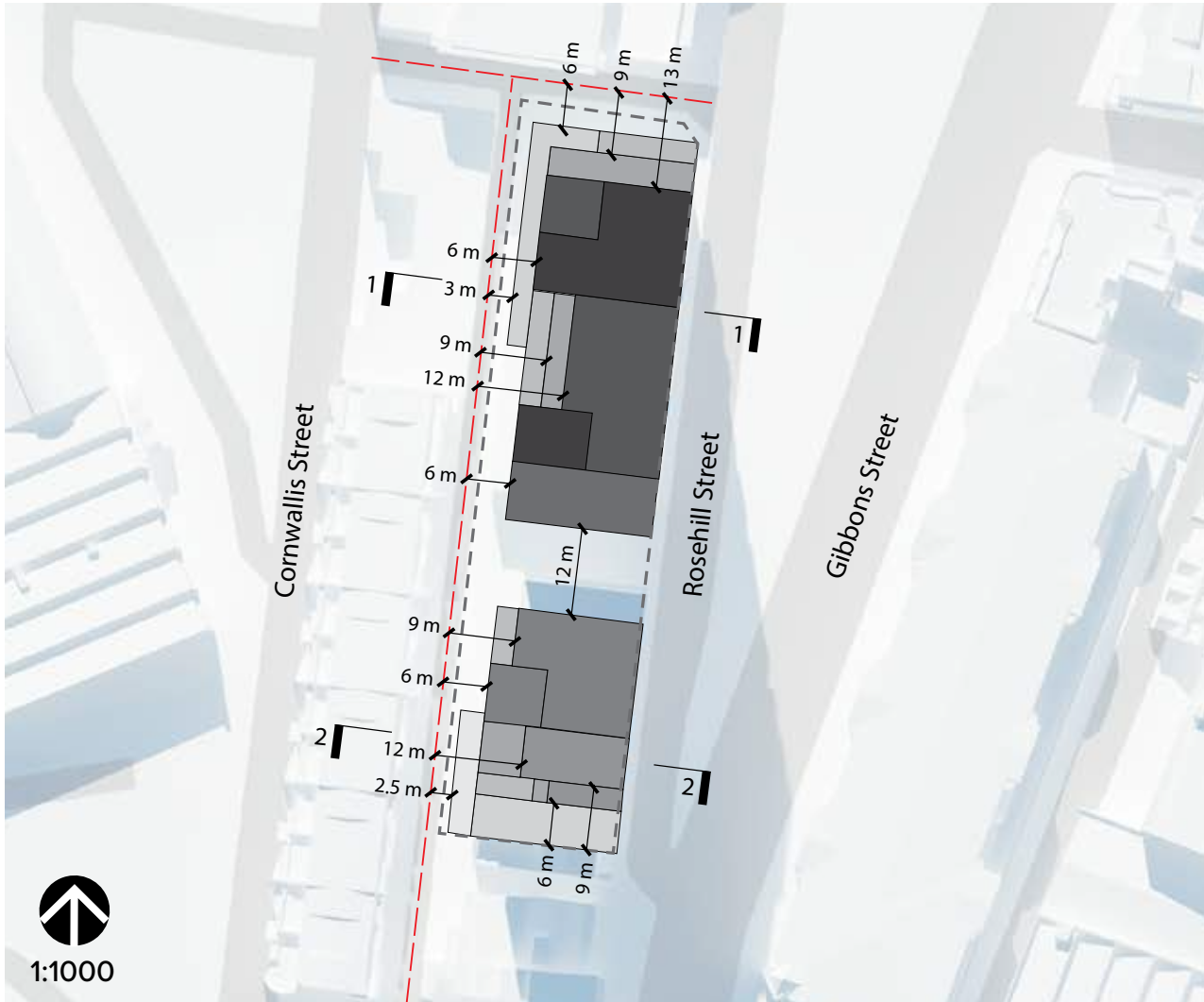
PUBLIC SPACE SECTION



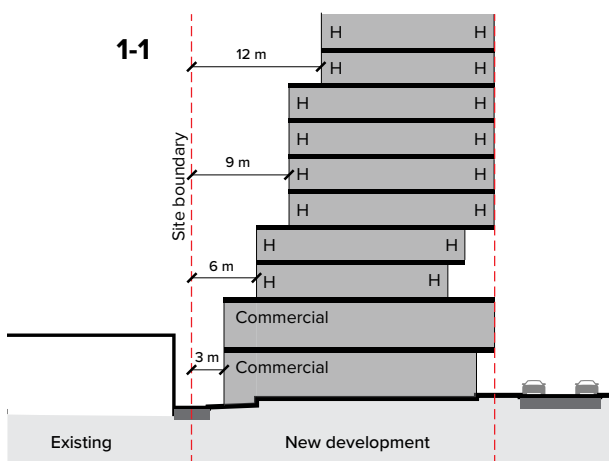
SECTION 4-4

BUILDING SEPARATION

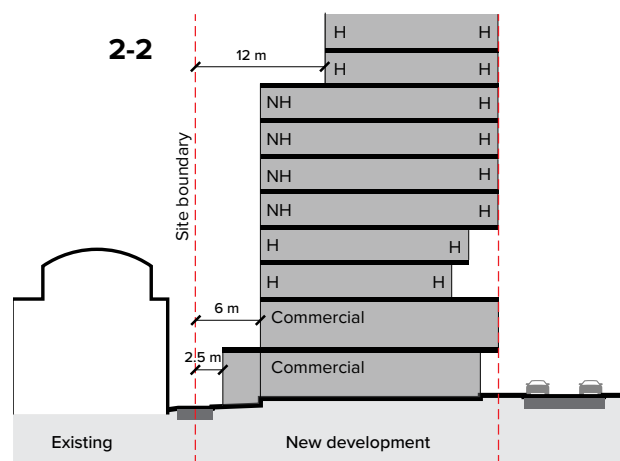
Building separation complies with the ADG and has also been considered to provide comparable development potential for the adjacent land to the west through a stepped built form approach. Designed in accordance with ADG Standards, section 1-1 and 2-2 below, detail the proposed building separation setbacks from the lot boundary.



BUILDING SEPARATION IN PLAN VIEW

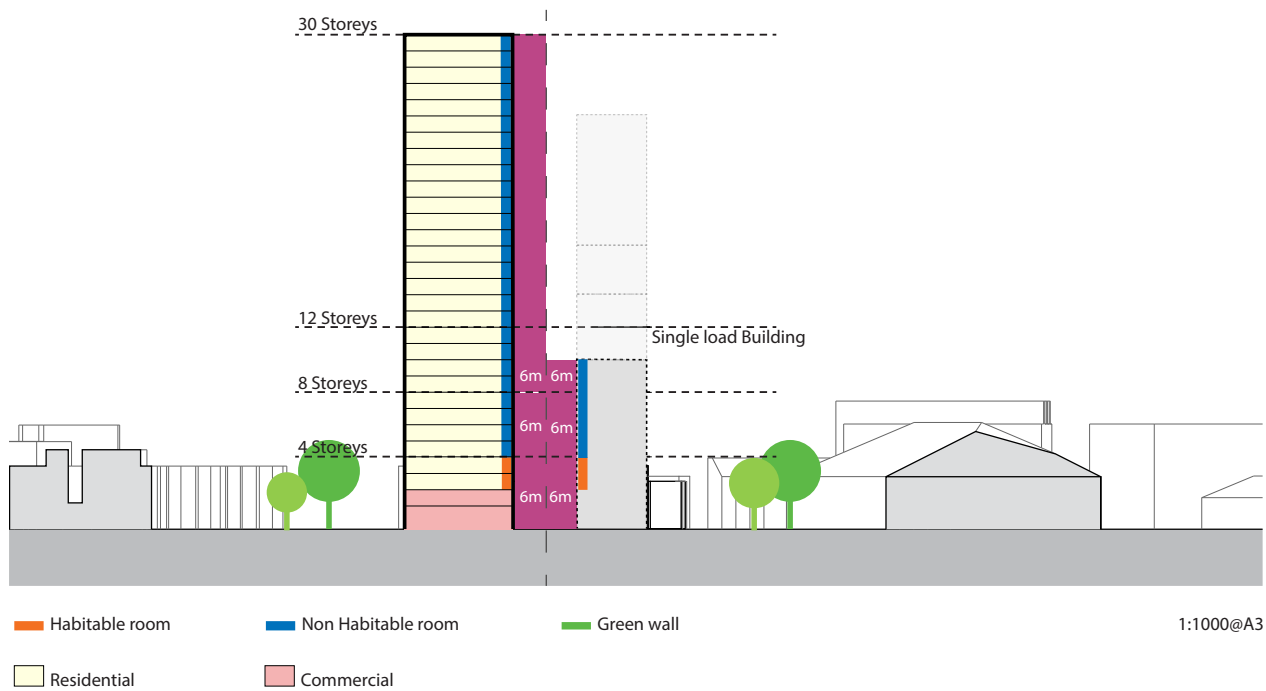


SECTION 1-1

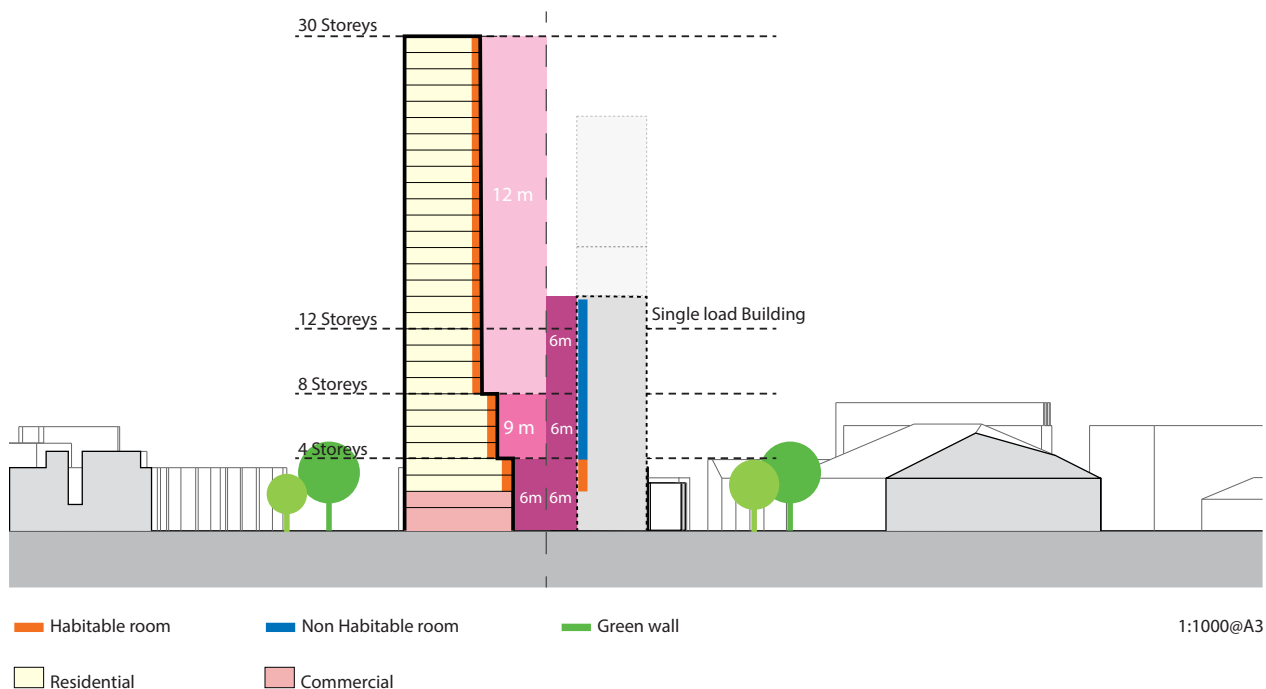


SECTION 2-2

ADJACENT ENVELOPE SCENARIO (ILLUSTRATIVE ONLY)



SECTION 2B-2B



SECTION 2C-2C

ADJACENT ENVELOPE SCENARIO (ILLUSTRATIVE ONLY)

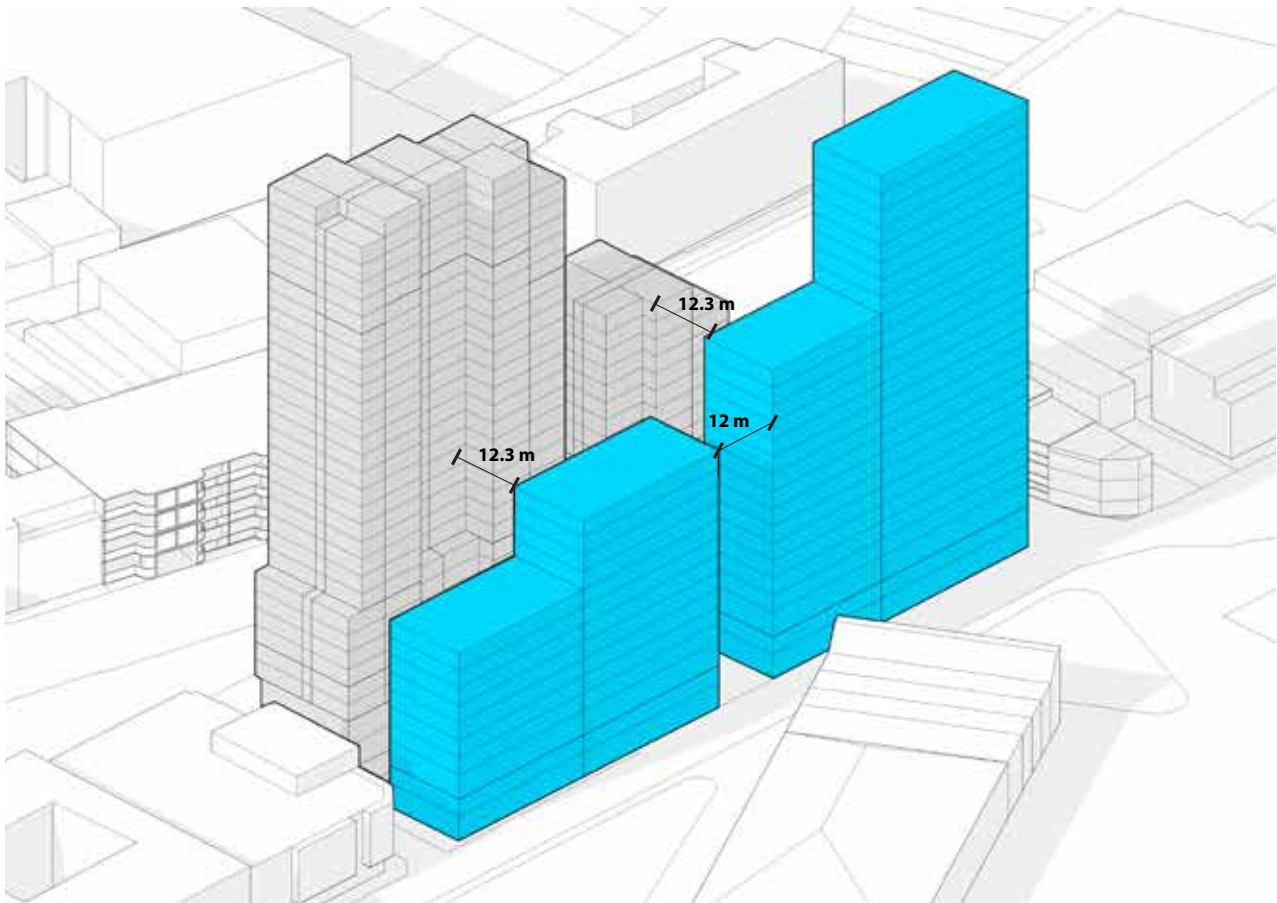
In order to maintain development equity potential for the adjacent building envelope if developed in the future, the design team has introduced compliant building separation setbacks whilst modeling the potential maximum built form for the adjacent site. The following diagrams represents (in blue) the adjacent built form envelope in the context of Gibbons Place.

The ADGs identifies building separation requirements based on building height, adjoining boundaries and visual privacy. The Gibbons Place proposal is fully compliant as per the ADG requirements for appropriate building separation distances, as detailed below:

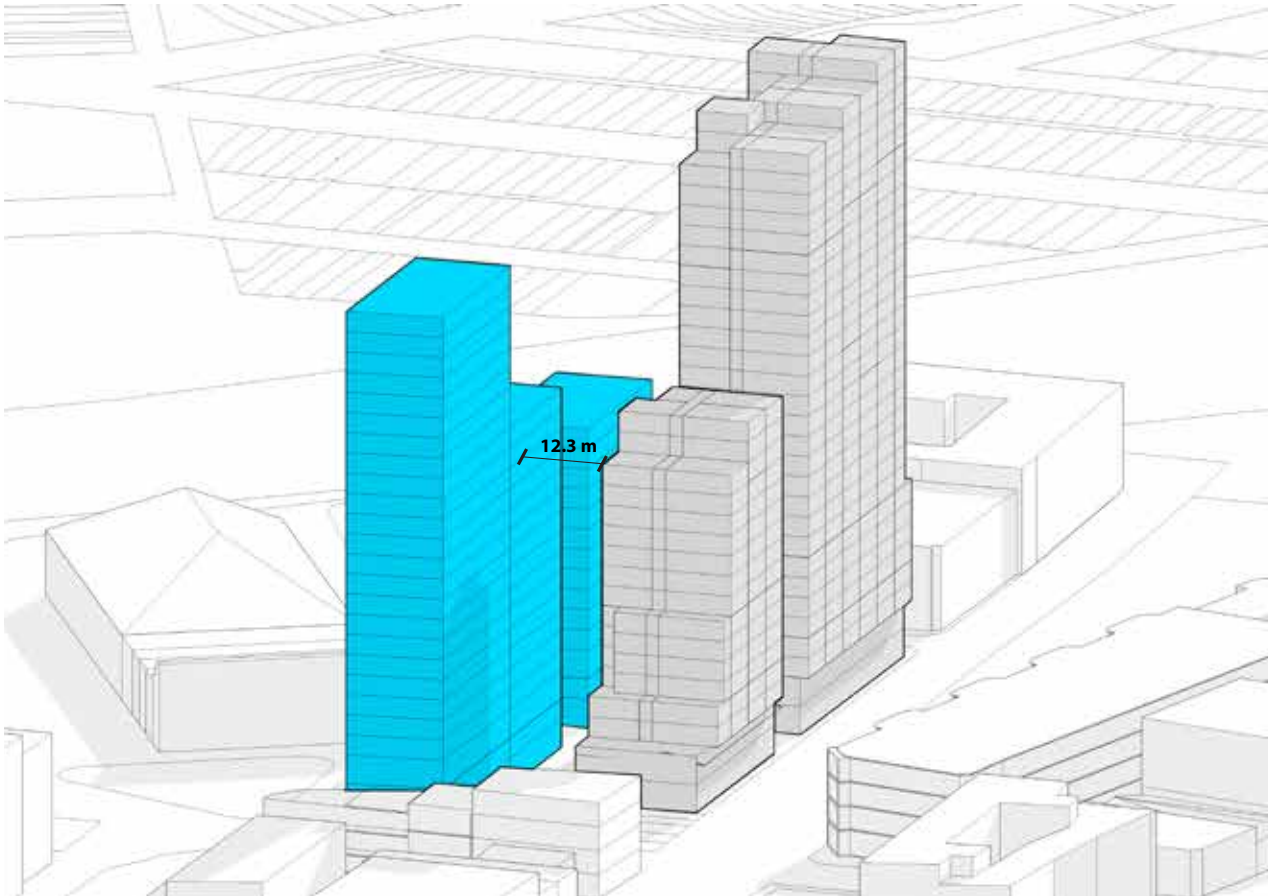
Building Separation

- 1-2 Storey Commercial: 2.5m to 3m
- 3-4 Storey Habitable Residential: 6m
- 3-8 Storey Non Habitable Residential: 6m
- 5-8 Storey Habitable Residential: 9m
- 9 Storey + Habitable Residential: 12m

The proposed building envelope at Gibbons Place has been considered to maintain development equity potential for the adjacent building envelope, if developed in the future, maximising visual privacy through a stepped built form approach, designed in accordance with ADG Standards.



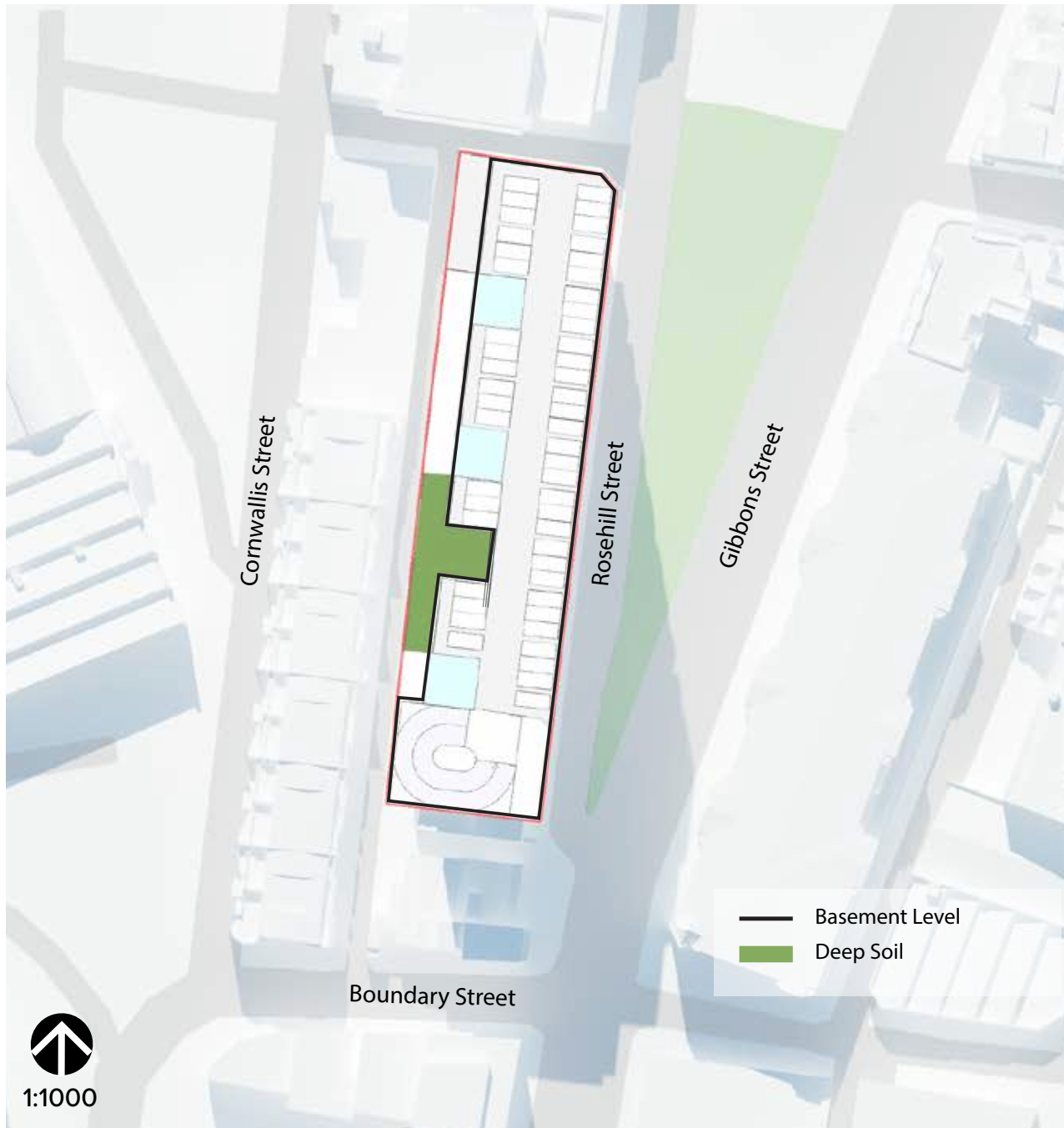
As the Gibbons Place envelope steps down towards the southern end of the site, the potential adjacent built form would increase in height towards the southern end from a lower height.



12m building separation achieved above 9 storey's between habitable spaces of Gibbons Place and potential adjacent built form (blue).

INDICATIVE FLOOR PLAN

CAR PARKING



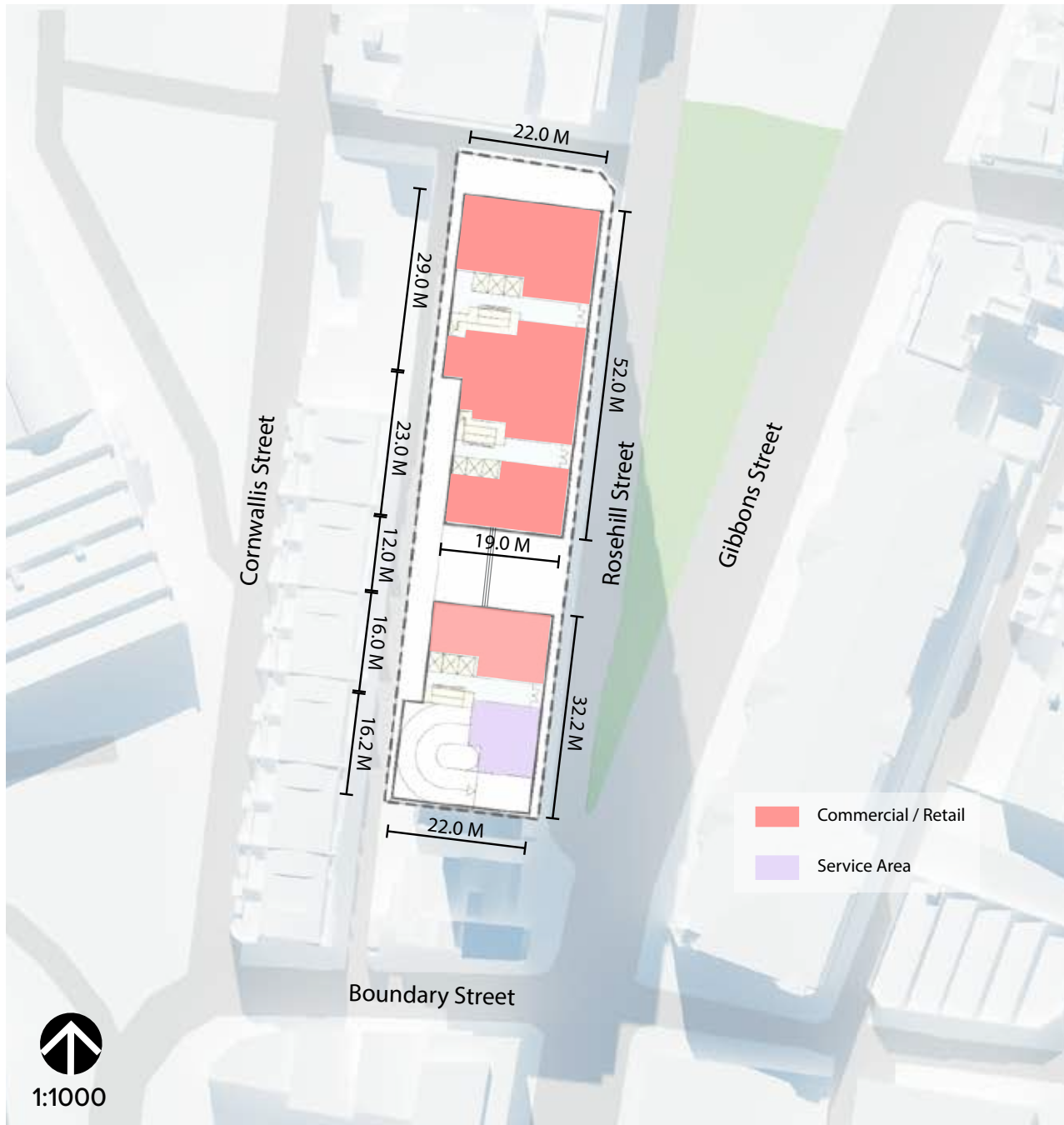
FEATURES

- **8,775 SQM BASEMENT PARKING**
- SPACES : 243
- 4 LEVELS AND A HALF OF BASEMENT
- DEEP SOIL : 280 SQM (11%)

The indicative car parking layout for Gibbons Place illustrates the possibility a total of 243 bays distributed across 4 levels and half of a basement (8,775sqm), if desired. Under this scenario, 11% of the site has been set aside for deep soil planting (280sqm), as seen above.

INDICATIVE FLOOR PLAN

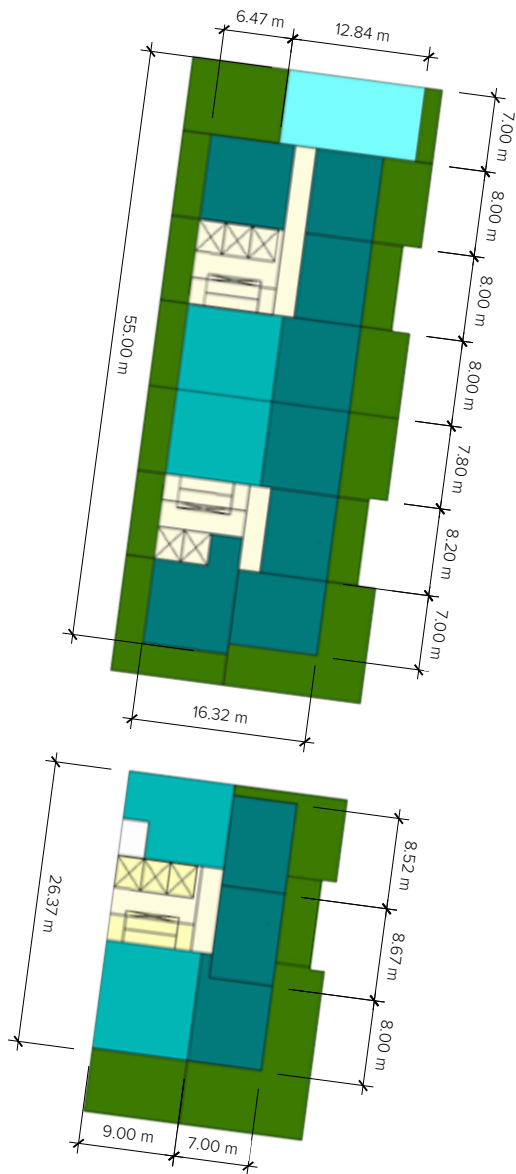
TYPICAL FLOOR - COMMERCIAL/RETAIL



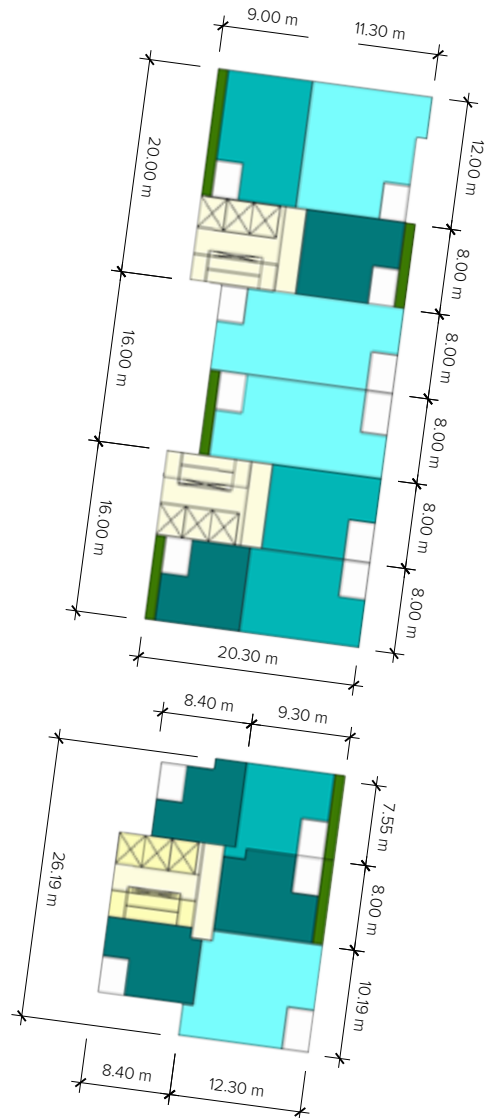
The indicative floor plan shown above shows an example floor layout which would support commercial and retail space interfaced with the plaza, rear laneway, Roshehill Street and Margaret Street. The location and orientation of these spaces are key in working with or translating to the desired urban design and activated streetscape outcome.

INDICATIVE FLOOR PLAN

UPPER FLOOR - RESIDENTIAL



3TH FLOOR - RESIDENTIAL



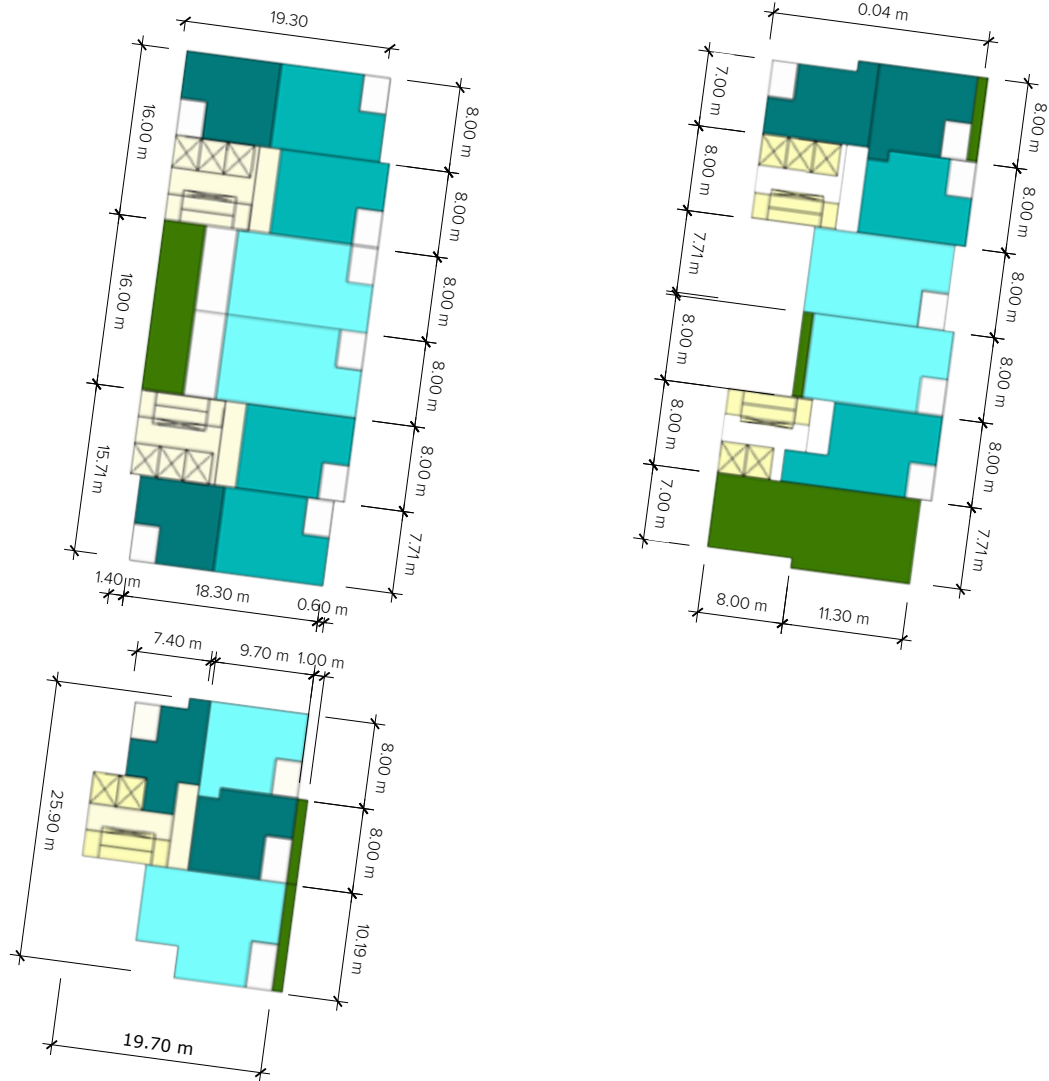
7TH FLOOR - RESIDENTIAL



1:750

INDICATIVE FLOOR PLAN

UPPER FLOORS - RESIDENTIAL



13TH FLOOR - RESIDENTIAL

29TH FLOOR - RESIDENTIAL



1:750

INDICATIVE FLOOR PLAN

1 AND 2 BEDROOM INDICATIVE LAYOUT

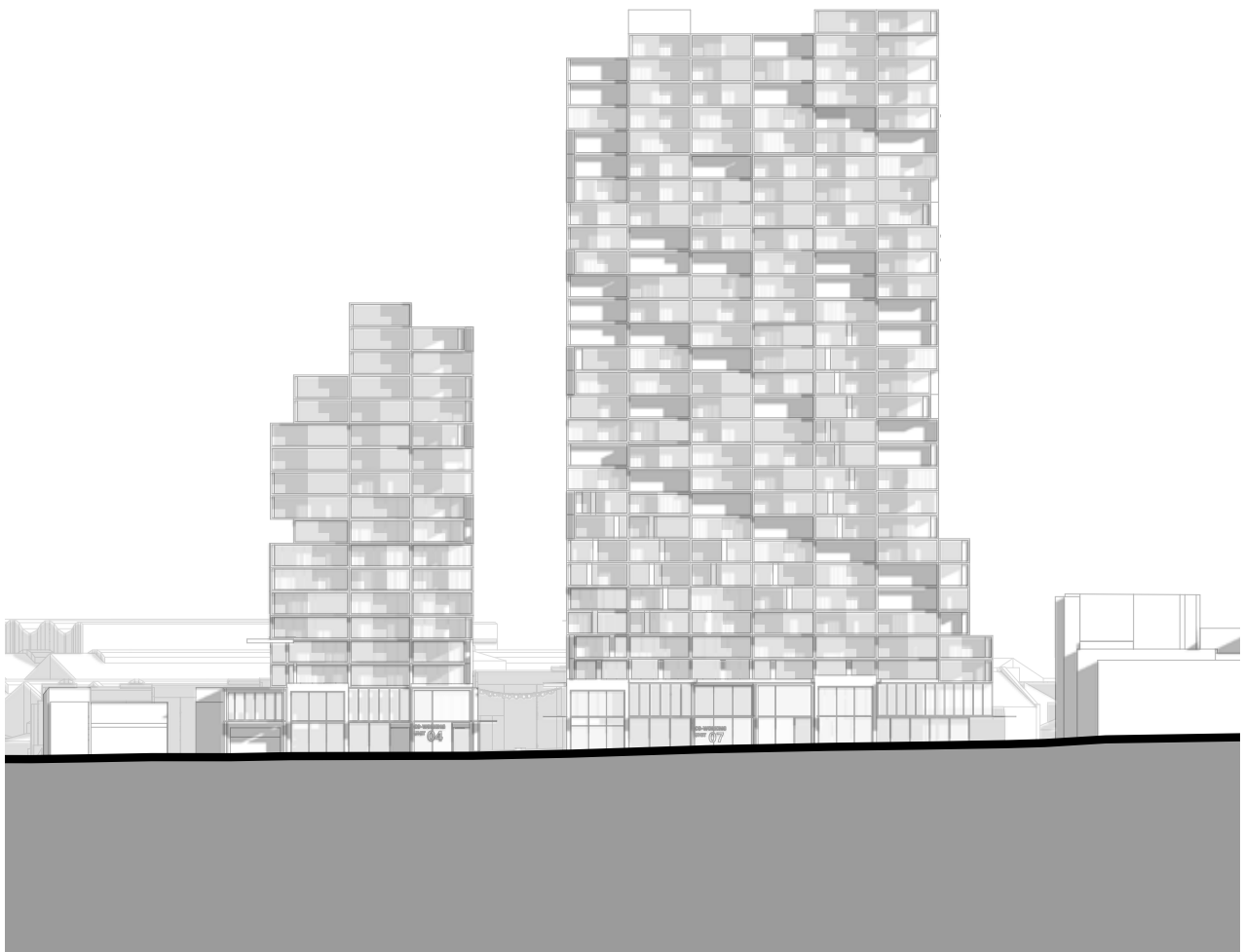
The Apartment Design Guide advises “apartment mix refers to the percentage of apartments with different numbers of bedrooms in a development. The number of bedrooms is directly related to floor area which in turn determines the yield that can be generated on the site. A mix of apartment types provides housing choice and supports equitable housing access. By accommodating a range of household types, apartment buildings support the needs of the community now and into the future. This is particularly important because apartment buildings form a significant and often long term part of the urban fabric.”





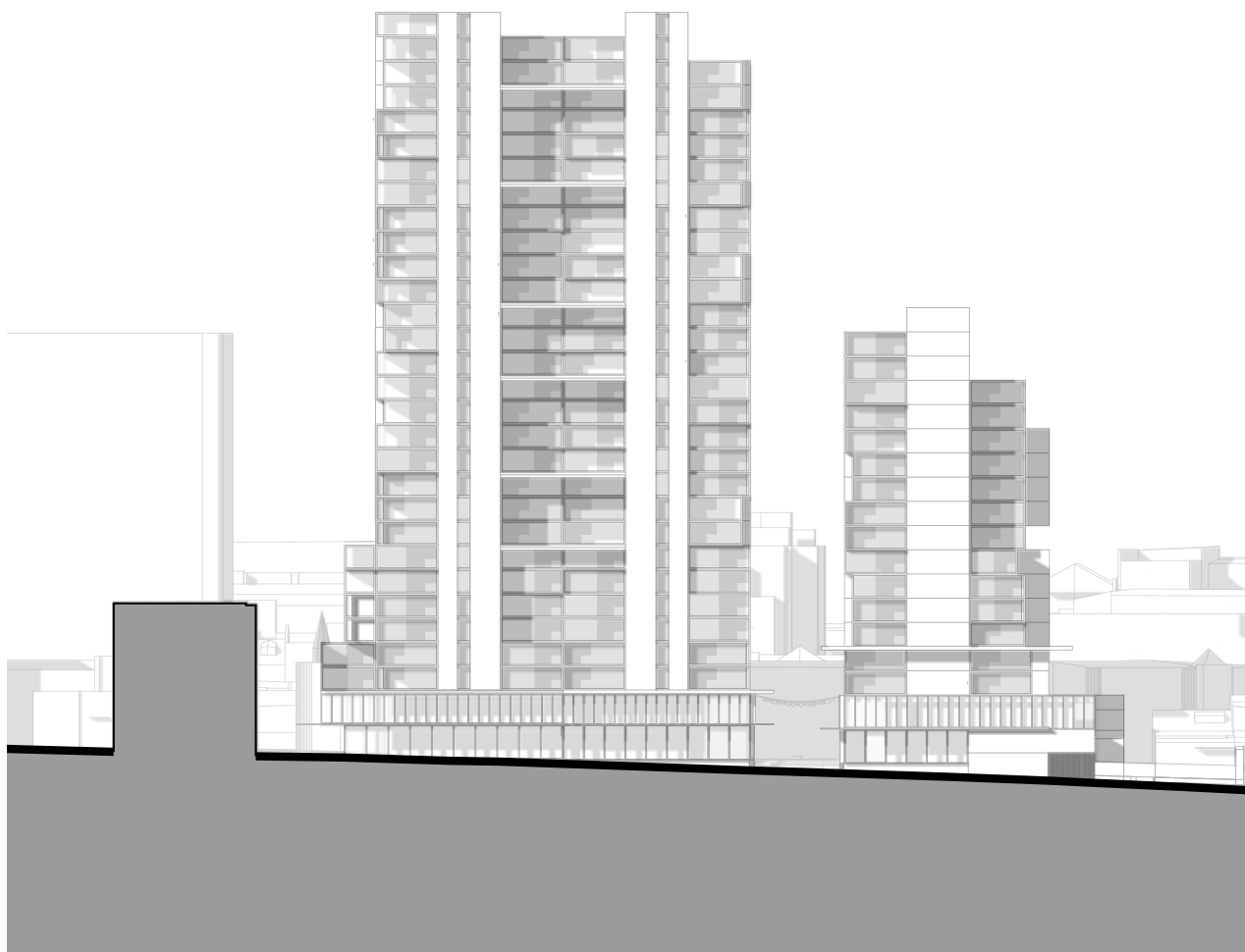
DESIGN STRATEGY

ILLUSTRATIVE ELEVATION - EAST



ROSEHILL STREET ELEVATION

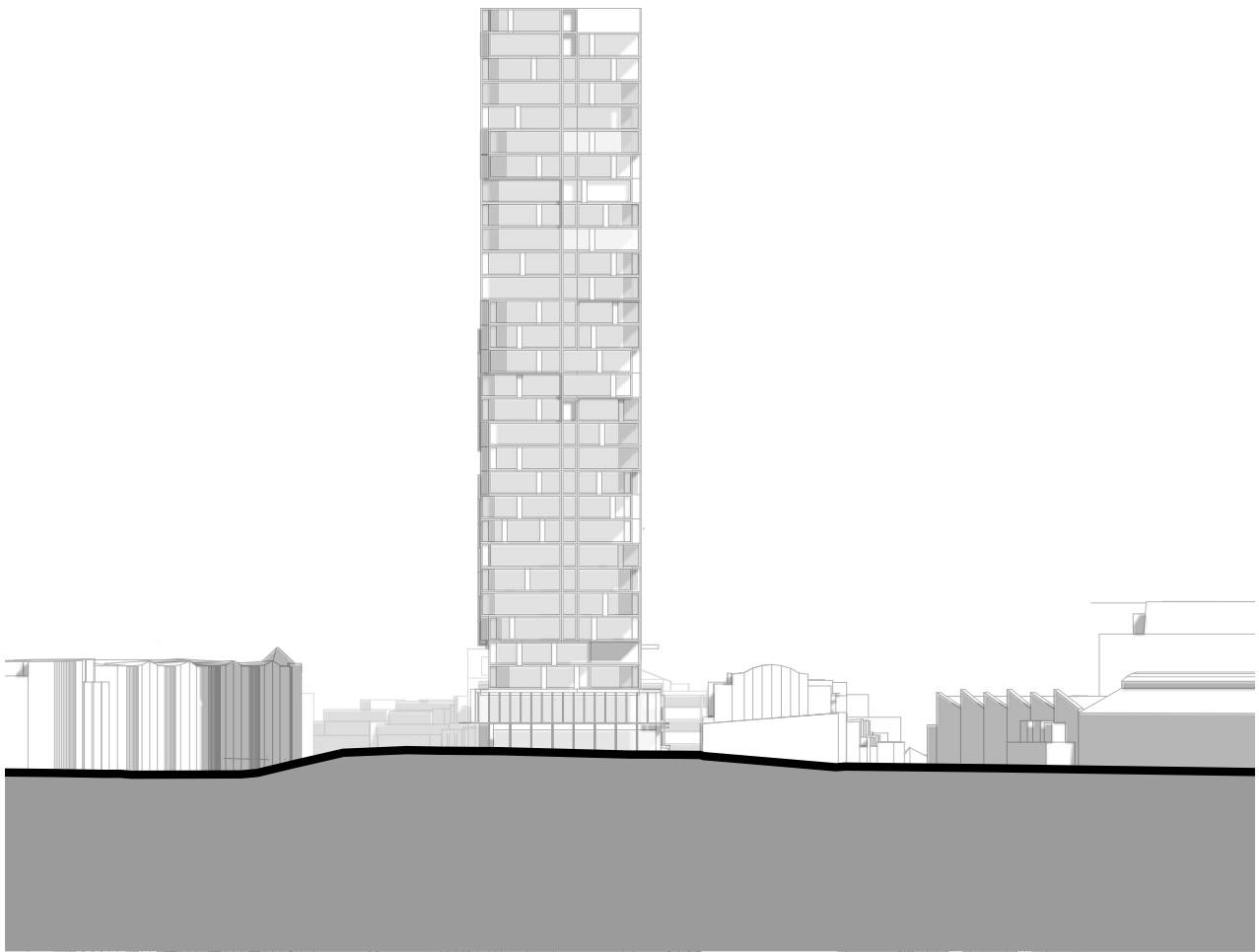
ILLUSTRATIVE ELEVATION - WEST



CORNWALLIS LANE ELEVATION

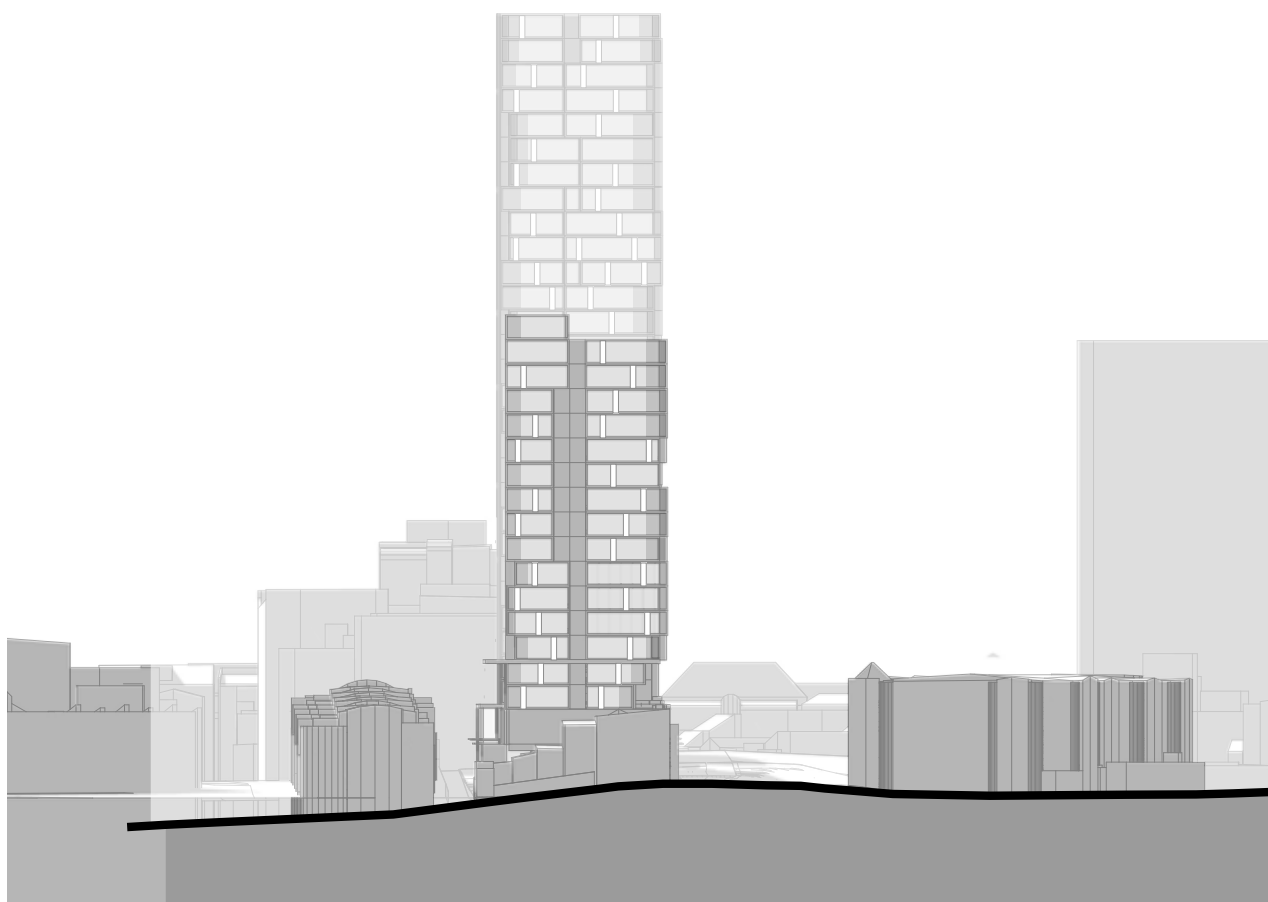
DESIGN STRATEGY

ILLUSTRATIVE ELEVATION - NORTH



MARGARET STREET ELEVATION

ILLUSTRATIVE ELEVATION - SOUTH



BOUNDARY STREET ELEVATION

GFA BY LEVEL

GFA CALCULATION



BUILDING 01 (tower 30 storeys)				
FLOOR AREA	GBA	Efficiency	GFA	Internal-NSA
Ground	1,071	85	910	865
1th	1,201	85	1,021	970
2th	873	76	663	584
3th	970	76	737	649
4th	1,008	76	766	674
5th	1,008	76	766	674
6th	1,008	76	766	674
7th	1,008	76	766	674
8th	878	76	667	587
9th	878	76	667	587
10th	878	76	667	587
11th	878	76	667	587
12th	878	76	667	587
13th	878	76	667	587
14th	878	76	667	587
15th	878	76	667	587
16th	878	76	667	587
17th	878	76	667	587
18th	878	76	667	587
19th	878	76	667	587
20th	878	76	667	587
21th	878	76	667	587
22th	878	76	667	587
23th	878	76	667	587
24th	878	76	667	587
25th	878	76	667	587
26th	878	76	667	587
27th	878	76	667	587
28th	716	76	544	479
29th	325	76	247	217
Total B01	26,748		20,533	18,204



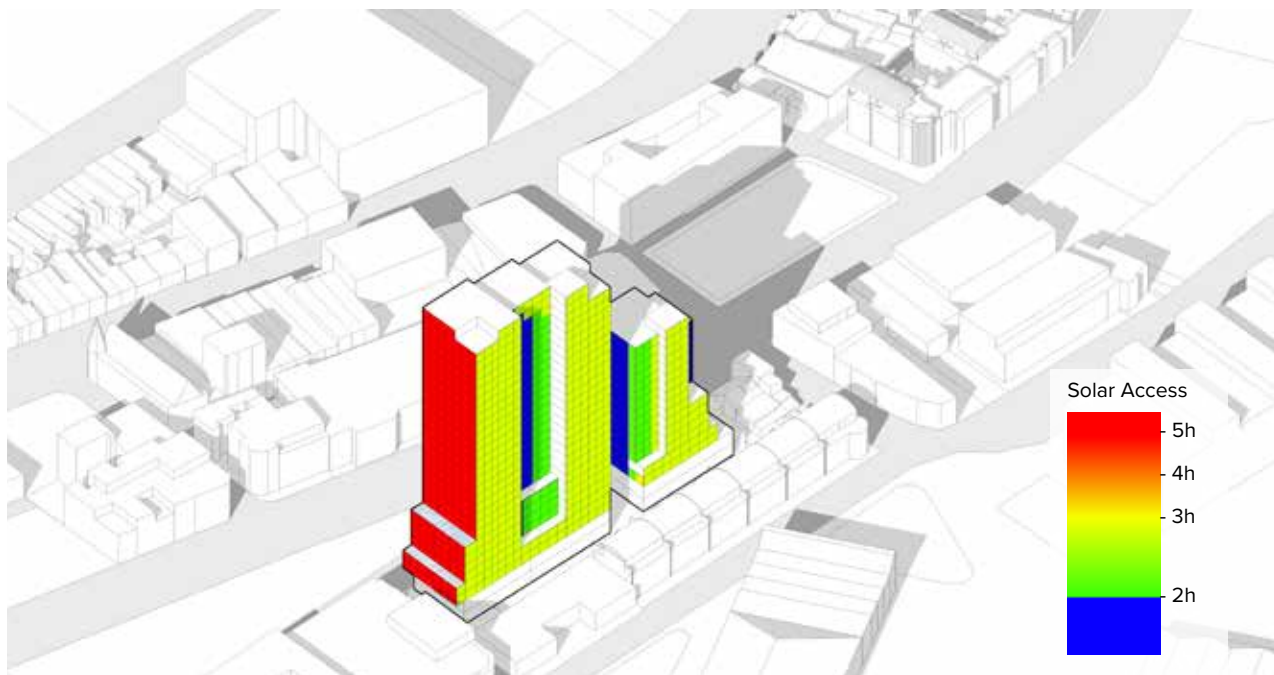
BUILDING 02 (tower 18 storeys)				
FLOOR AREA	GBA	Efficiency	GFA	Internal-NSA
Ground	304	85	258	245
1th	653	85	555	527
2th	419	76	318	280
3th	458	76	348	306
4th	490	76	372	328
5th	490	76	372	328
6th	490	76	372	328
7th	490	76	372	328
8th	422	76	321	282
9th	422	76	321	282
10th	422	76	321	282
11th	422	76	321	282
12th	422	76	321	282
13th	380	76	289	254
14th	380	76	289	254
15th	277	76	211	185
16th	277	76	211	185
17th	64	76	49	43
Total B02	7,282		5,620	5,003

GFA CALCULATION

	GBA	GFA	NSA
Total	34,030	26,153	23,207
FSR	10.28		

GIBBONS PLACE SOLAR AMENITY

Detailed solar amenity studies have been undertaken to ensure an appropriate level of sunlight is achieved for the proposed built form, the adjacent buildings and key public open spaces. The SunHours Plugin has been used to assist with the solar analysis of buildings and simplify measuring compliance with the ADG's and City's Policy. The City of Sydney requires apartments to comply with the Apartment Design Guidelines, where a minimum of 70% of apartments must receive more than 2 hours of direct sunlight per day and a maximum of 15% receiving no sunlight on winter solstice. Out of the 312 apartments proposed at Gibbons Place, 253 (81%) apartments receive more than 2 hours of sunlight, whilst 13 (4.3%) receive between 15min and 2 hours and 46 (14.7%) apartments do not receive direct sunlight between 9am-3pm. The calculations and diagrams below illustrate the Gibbons Place proposal is fully compliant with the ADG standards.



The western elevation receives approximately 2-3 hours of sunlight in the afternoon, whilst the northern elevation receives 5 hours sunlight during the day.

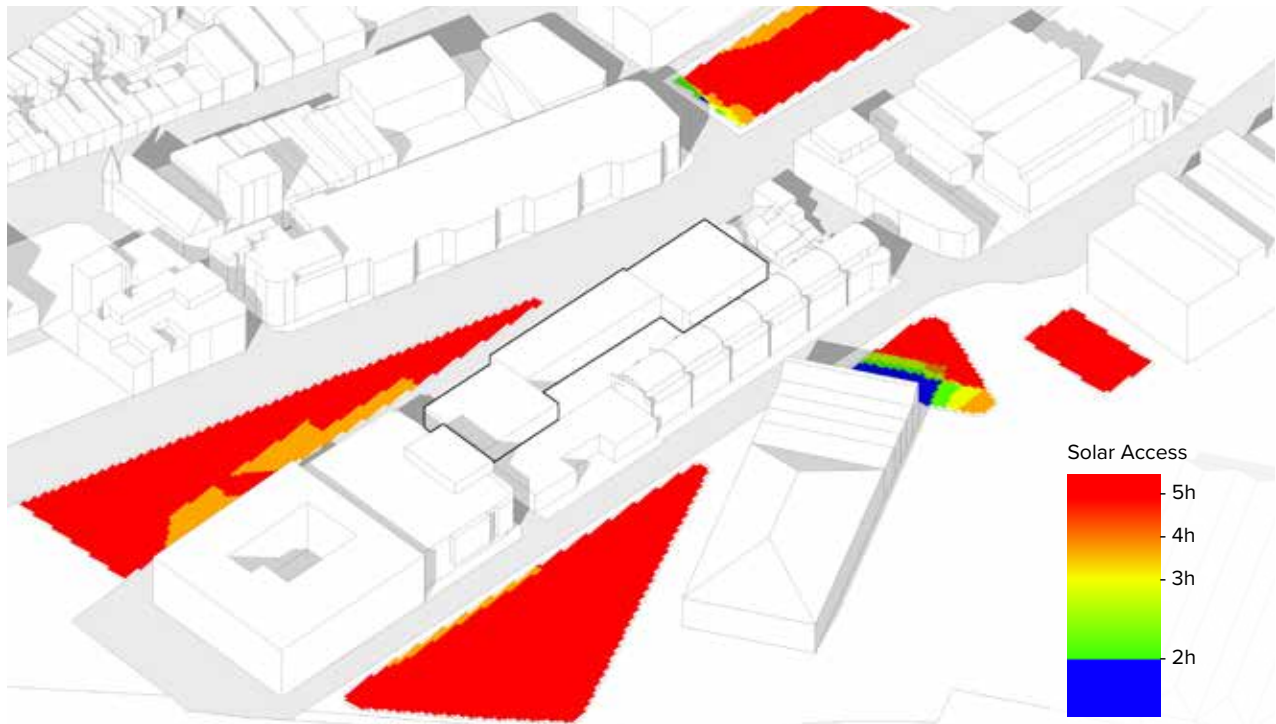


The eastern elevation receives approximately 2-3 hours of sunlight in the morning.

EXISTING CONDITION: SOLAR AMENITY ADJOINING BUILDINGS & POS

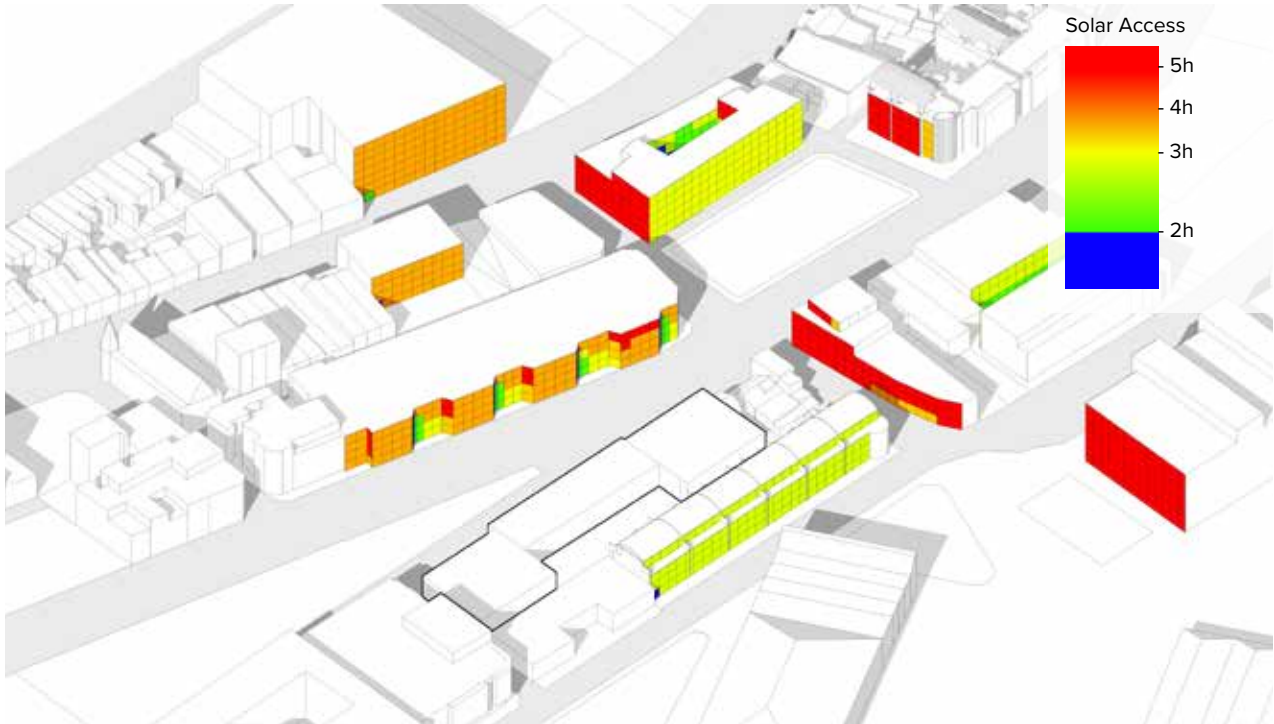
The City of Sydney requires adjoining buildings to have appropriate access to direct sunlight at winter solstice. In a separate policy, the City requires adjacent or affected public open spaces to receive more than 50% of the space to receive at least 4 hours sunlight. Based on this analysis, the existing built form condition is fully compliant with the City's policies.

OPEN SPACE SOLAR ACCESS

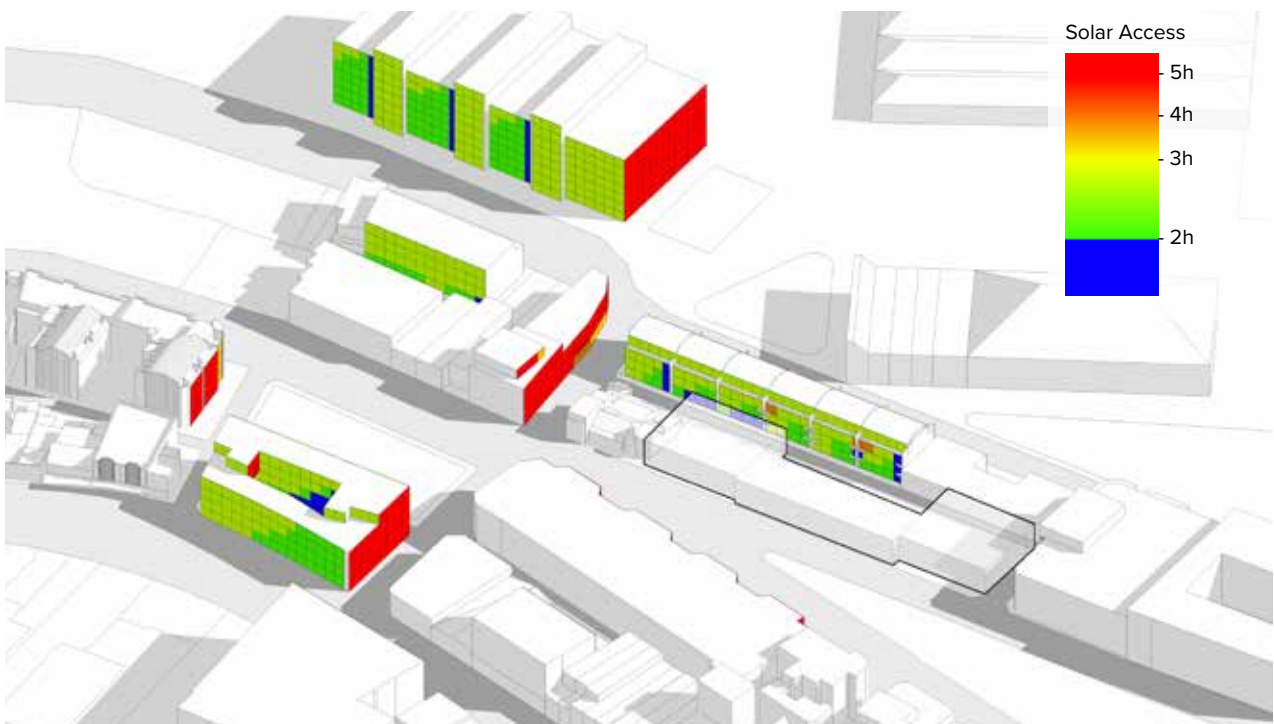


The above diagram details the existing solar access levels to public open spaces.

BUILT FORM SOLAR ACCESS



The above diagram details the existing solar access levels to adjacent/nearby built form looking east.

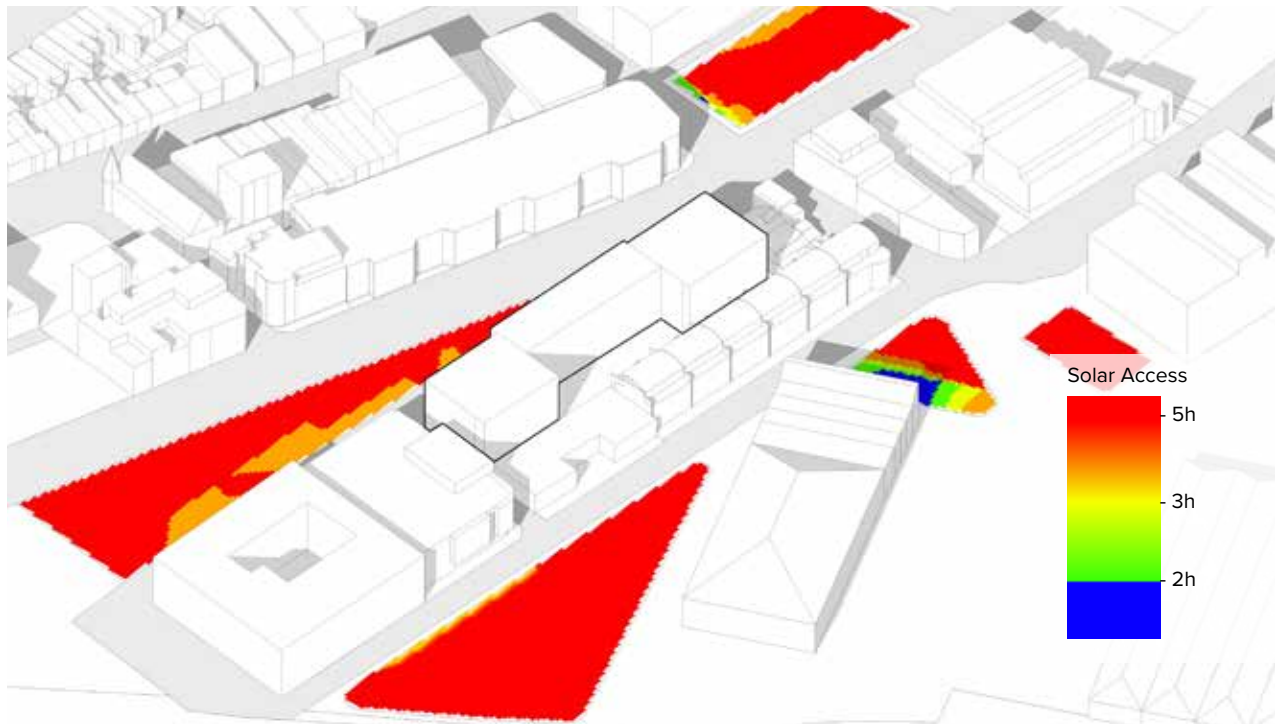


The above diagram details the existing solar access levels to adjacent/nearby built form looking west.

EXISTING CONTROLS SCENARIO: SOLAR AMENITY ADJOINING BUILDINGS & POS

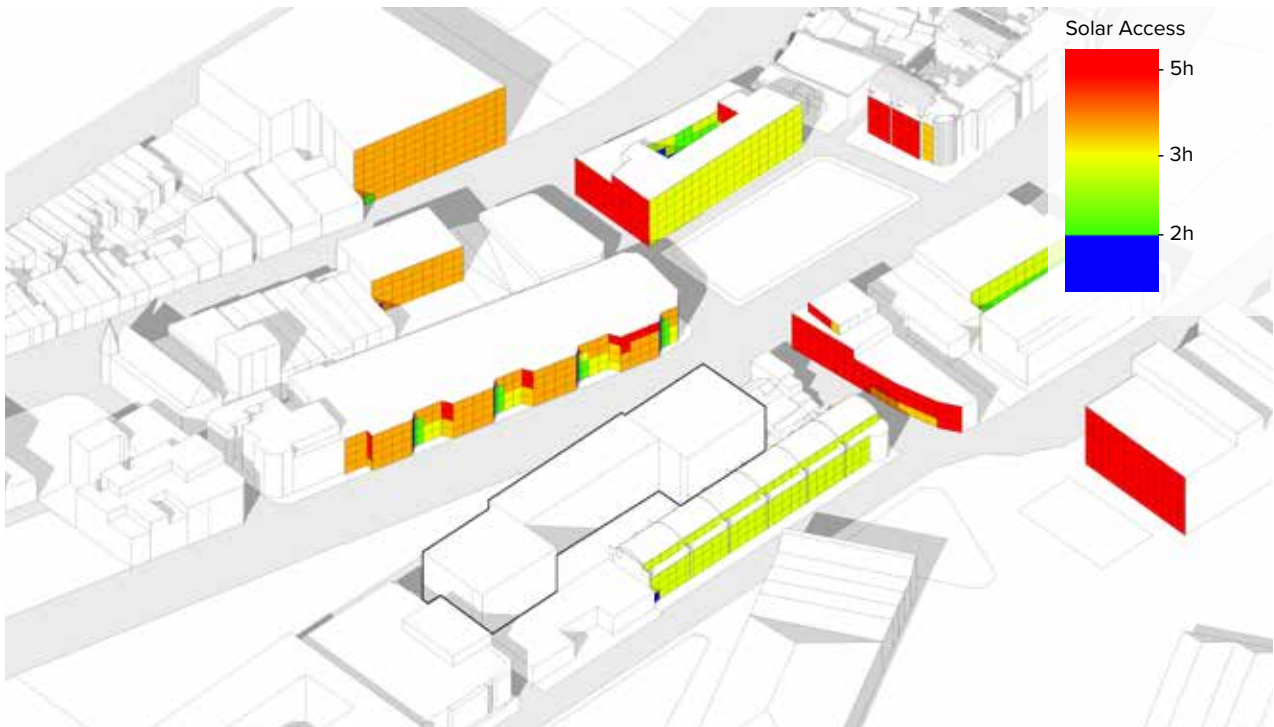
Developed to 5 storey fully compliant envelope, this built form scenario depicts some impact to the level of solar access to the eastern facade of the apartments on Cornwallis Street, highlighted in the diagrams below.

OPEN SPACE SOLAR ACCESS

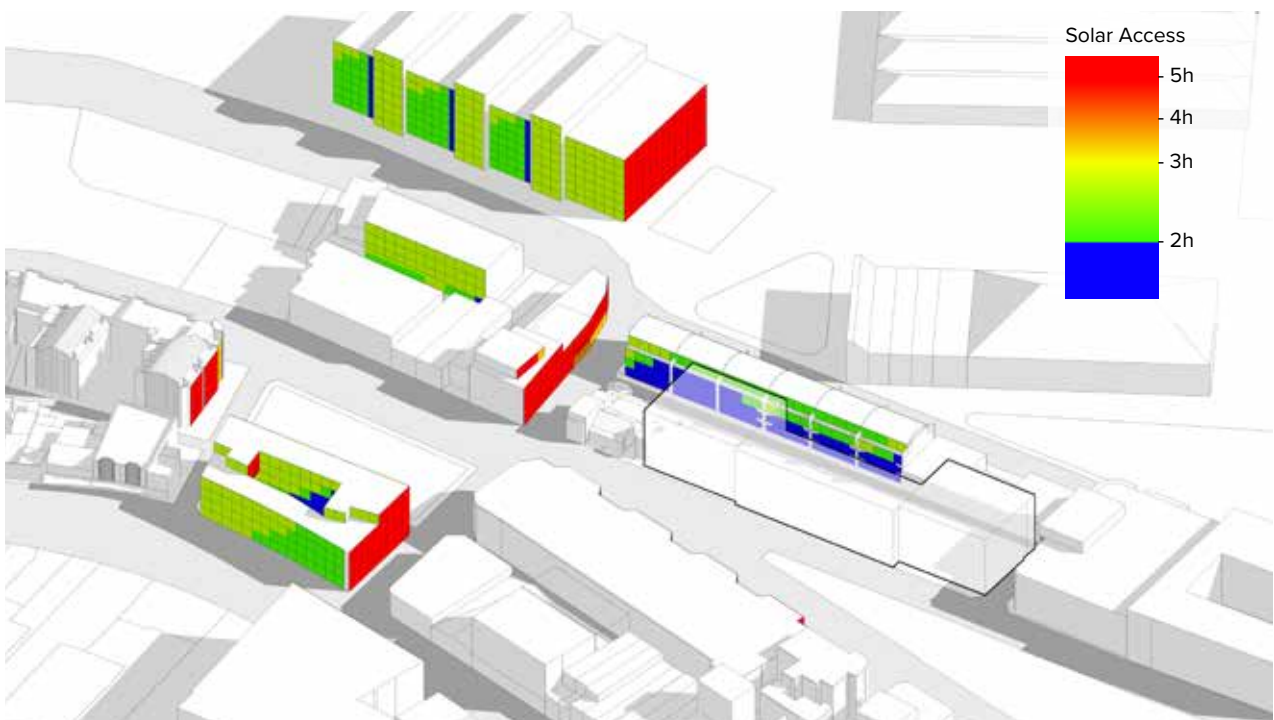


The above diagram details solar access levels for a fully compliant building envelope scenario to public open spaces.

BUILT FORM SOLAR ACCESS



The above diagram details solar access levels for a fully compliant building envelope scenario to nearby/adjacent built form looking east.

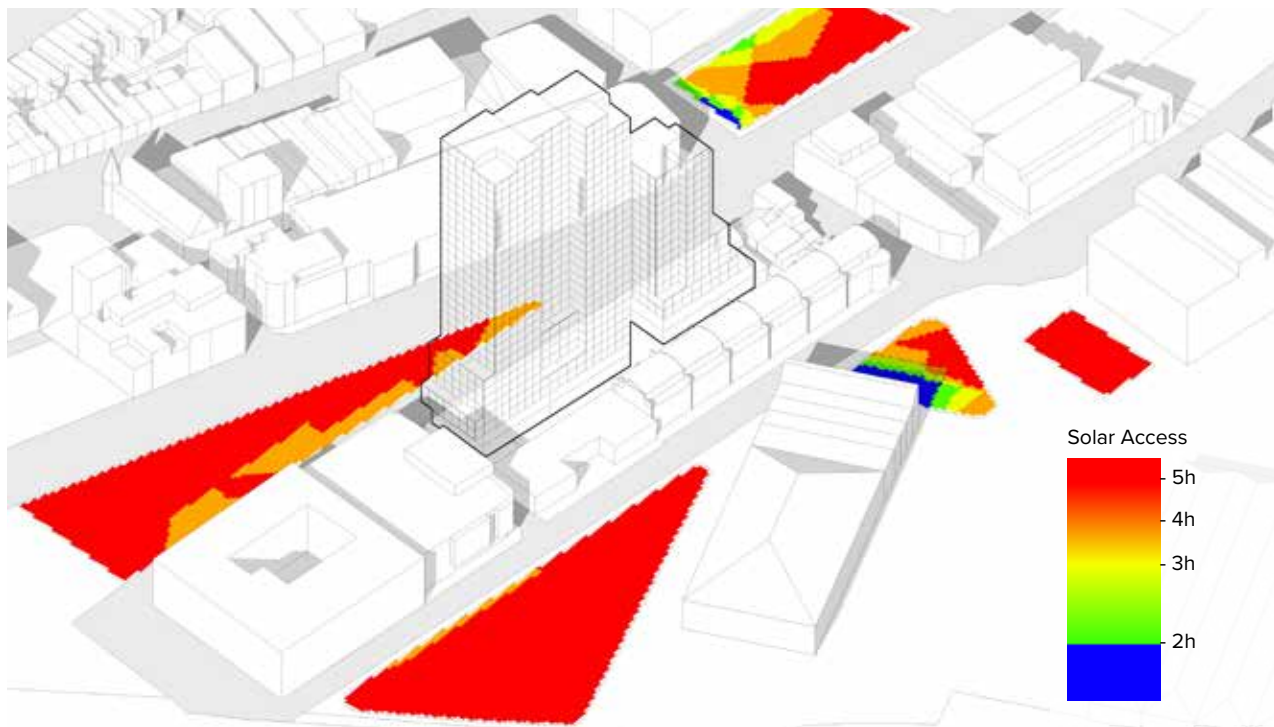


The above diagram details solar access levels for a fully compliant building envelope scenario to nearby/adjacent built form looking west.

PROPOSAL: SOLAR AMENITY ADJOINING BUILDINGS & POS

Based on the ADGs and the City of Sydney's policies, the following diagrams illustrate that the Gibbons Place proposal fully complies with the minimum requirements regarding solar access to 3 adjacent apartment buildings as well as public open spaces. The proposal impacts solar amenity as seen below, however maintains 4 hours sunlight to a minimum of 50% of space to Gibbons St Reserve, Daniel Dawson Reserve and ATP on Locomotive Street. Cornwallis Street (1), Botany Road (2) and Gibbons Street (3) apartments are assessed on pages 89-90.

OPEN SPACE SOLAR ACCESS

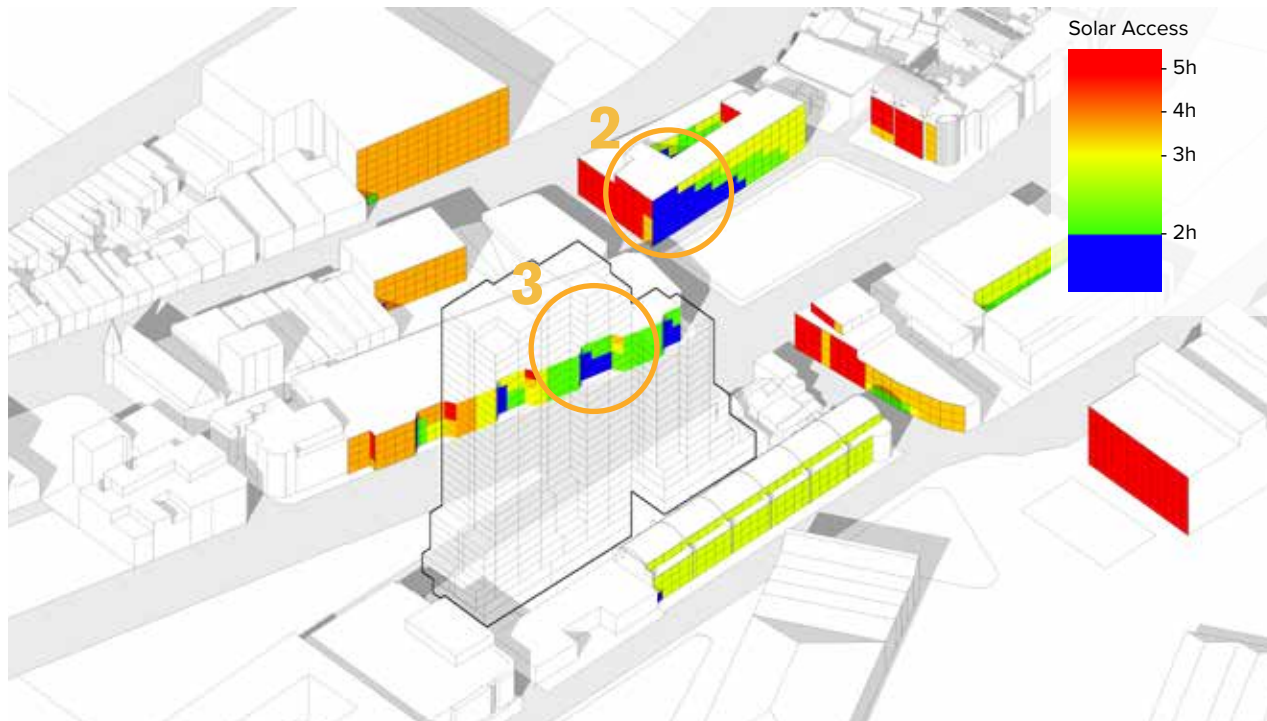


The above diagram details solar access levels for the Gibbons Place proposal to nearby/adjacent public open spaces.

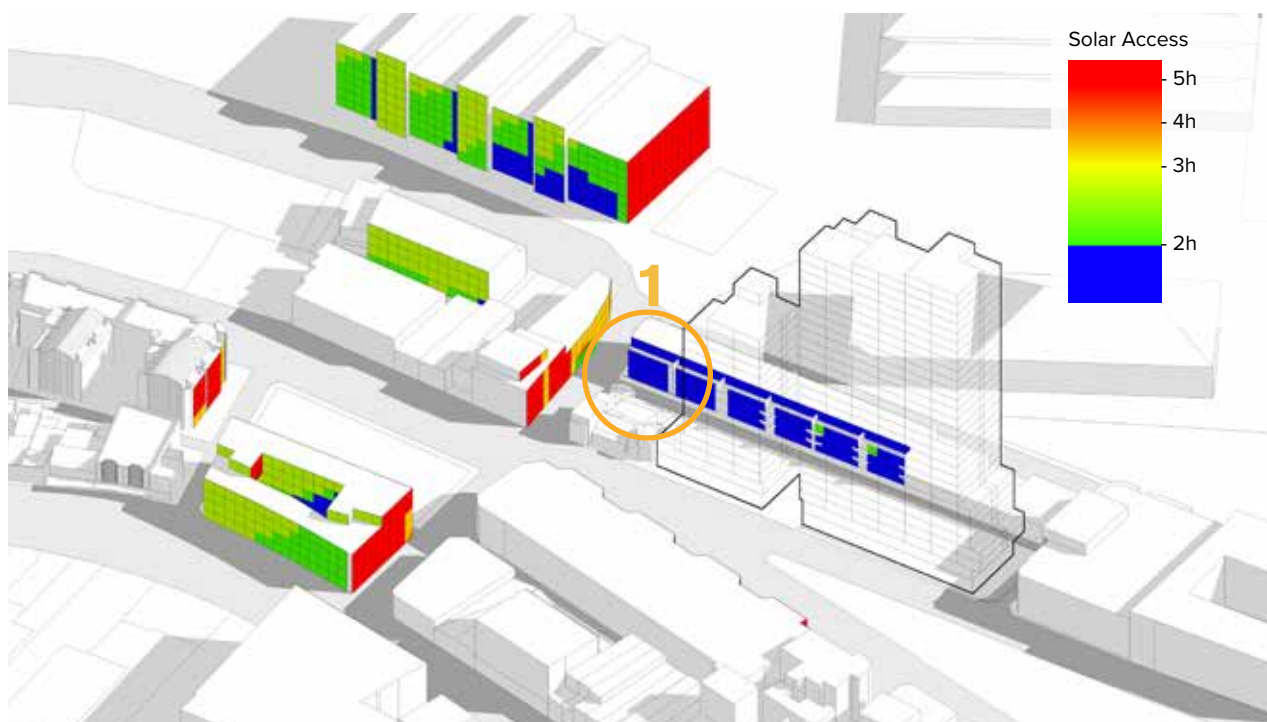
The proposal will result in each identified public open space still satisfying the City's sunlight standard, as detailed below:

- 100% of Gibbons Street Reserve receives at least 4hrs sunlight between 9am and 3pm. The proposal will have an 0% impact on sunlight today to the open space.
- 77% of Daniel Dawson Reserve receives at least 4hrs sunlight between 9am and 3pm. The proposal will have an 19% impact on sunlight today to the open space.
- 50% of ATP along Locomotive Street receives at least 4hrs sunlight between 9am and 3pm. The proposal will have an 6% impact on sunlight today to the open space.

BUILT FORM SOLAR ACCESS



The above diagram details solar access levels for the Gibbons Place proposal to adjacent apartments on Botany Road (2) and Gibbons Street (3), analysed on page 90.



The above diagram details solar access levels for the Gibbons Place proposal to adjacent apartments on Cornwallis Street (1), analysed on page 89.

SOLAR AMENITY: DETAILED ANALYSIS OF ADJACENT BUILDINGS

As seen in the adjacent diagrams there is some impact to neighbourhood public open spaces however solar amenity is maintained (3hrs+). Whilst there is some additional impacts to adjacent/nearby buildings, it is considered minimal due to building layout and floor plan design. The buildings affected by the Gibbons Place scenario are apartments on Gibbons Street, Spencer Place/Botany Road and apartments on Cornwallis Street (which back onto the Cornwallis Lane). A commercial building on Garden Street is also slightly affected.

Cornwallis Street Apartments

The single loaded apartments on Cornwallis Street orientate main habitable rooms and balconies towards Cornwallis Street (west - unaffected). Along the eastern elevation (affected), the facade is dominated by a blank wall with limited windows and balconies, orientating bathrooms, bedrooms and secondary courtyard spaces towards Cornwallis Lane and Gibbons Place. It is noted that the west elevation maintains solar access for over 2 hours. 100% of apartments maintain solar access.

Botany Road/Spencer Lane Apartments

After analysing built form and apartment layout, a total of 4 additional apartments (13%) out of 30 will be affected by the Gibbons Street proposal receiving less than 2 hours of sunlight. Currently, 3 apartments on the southern facade do not receive adequate sunlight, therefore 7 (23%) apartments in total will be affected. As 77% of apartments maintain more than two hours of sunlight, it is considered that the proposal is fully compliant with the ADGs in this instance.

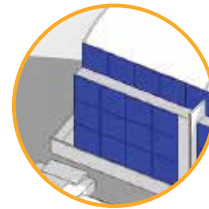
Gibbons Street Apartments

These apartments are single-loaded with living areas and main balcony spaces/sun rooms addressing Gibbons Street, orientated to the west. The proposal will not impact these apartments as 100% of the total apartments receive more than 2hrs sunlight in the afternoon.

KEY for adjacent floor plan analysis:

- 5+ hours sunlight
- 4 hours sunlight
- 3 hours sunlight
- 2-3 hours sunlight
- 15min - 2 hours sunlight

1. Cornwallis Street



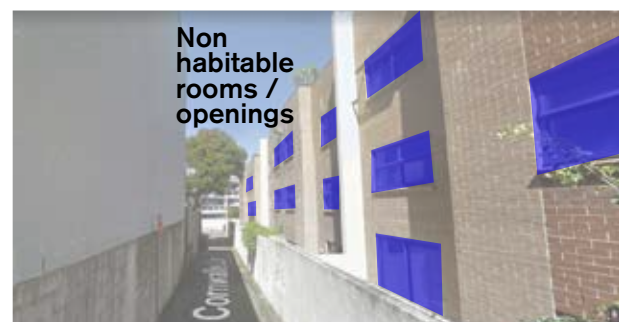
0/36

**APARTMENTS
OVERSHADOWED**

The impact of overshadowing to the eastern side of the building is slightly increased from the compliant scenario (pg 86). Certain portions of the single loaded apartments are affected by the Gibbons Place scenario (receiving 15min to 2 hours of sun per day). However as seen below, internal floor layouts show majority of non-habitable rooms, ancillary balconies and bedrooms orientate east (affected: blue), whilst key private open spaces (balconies) and habitable living spaces orientate west (unaffected: red). The example floor plan highlights the eastern side overshadowed (blue).



Apartment Floor Plan



View of Cornwallis Lane looking south

2. Botany Road

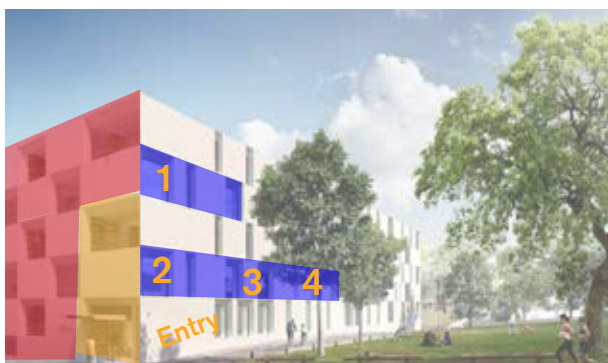


4/30
APARTMENTS
OVERSHADOWED

After analysing the facades of the complex, approximately 3-4 apartments will be affected by overshadowing receiving 50min to 2 hours of sunlight per day. Non habitable rooms, bedrooms and two balconies affected by the shadowing, solar access to the remainder of the facade is maintained.

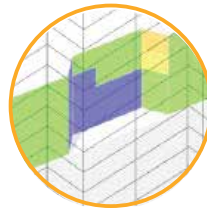


Upper Floor Plan



Spencer Lane Elevation

3. Gibbons Street



0/65
APARTMENTS
OVERSHADOWED

The level of overshadowing to the Gibbons St apartments slightly increases from the compliant scenario. For the affected apartments, solar access decreases on certain parts of the facade. Majority of apartments (single loaded) receive more than 2 hours of sun per day (green) through to the sunroom and living/dining area (seen in layout below). Only some balcony spaces and bedrooms for the same apartment receive between 15min to 2 hours per day (blue).



Apartment Floor Plan



GIBBONS STREET ELEVATION

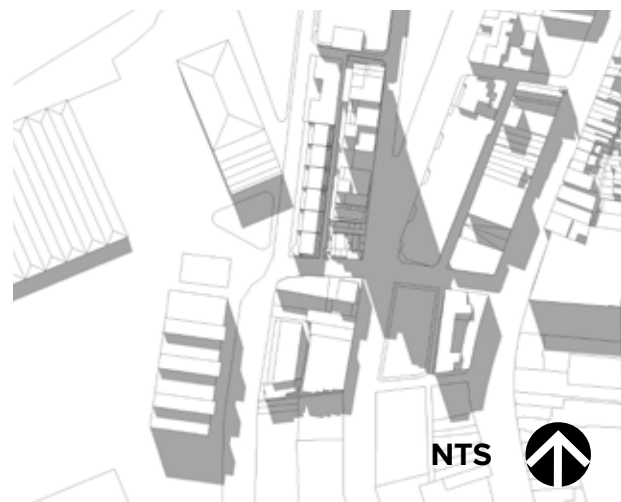
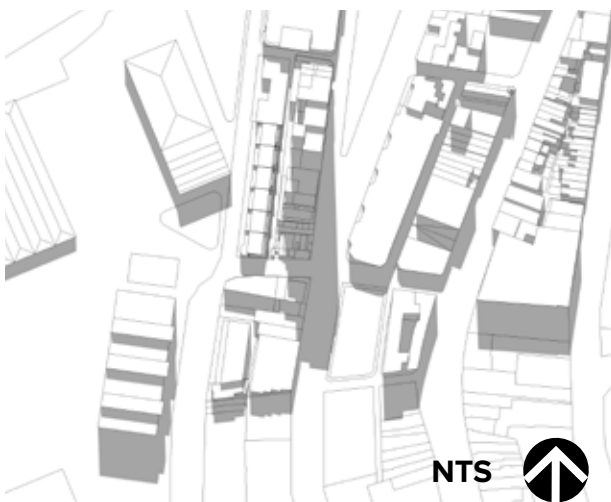
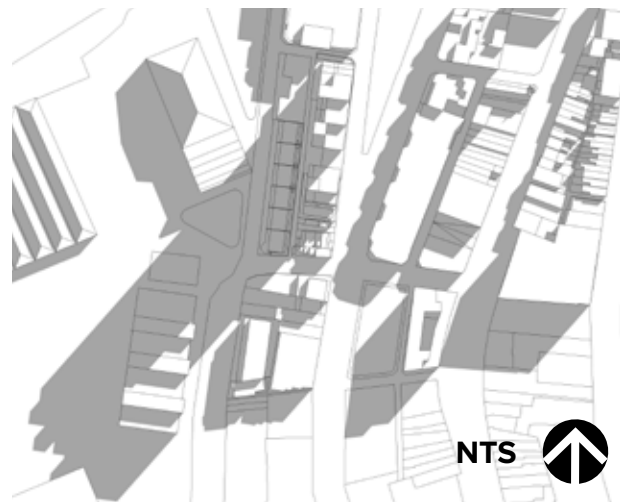
SOLAR AMENITY STUDY

WINTER SOLSTICE (21 JUNE)

Complementing the detailed solar analysis already discussed, the diagrams below illustrate an appropriate solar amenity for mid-winter.

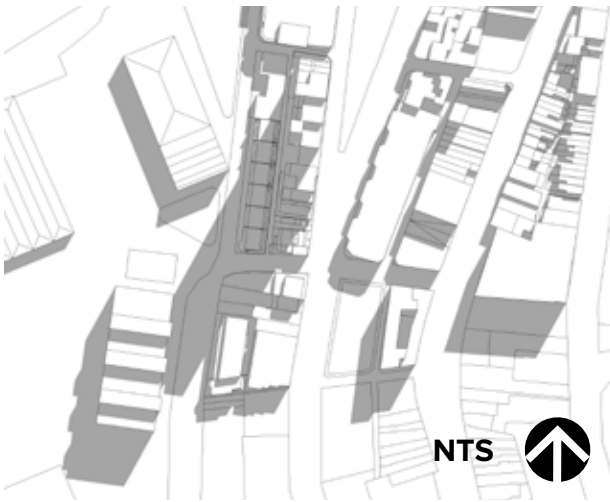
Between 9am - 3pm on 21 June, whilst there is some overshadowing to adjoining properties the overall solar standards of the City and ADG are satisfied by the proposal.

Where there is overshadowing, often the shadow is cast onto blank walls, garages, secondary balcony spaces, non-habitable rooms and bedroom windows (as opposed to the main habitable spaces: living/dining rooms, main balcony space). In these areas, shadow largely decreases around midday with apartments orientated west benefiting from afternoon sun.





10 AM



11 AM



2 PM



3 PM



WIND & ACOUSTIC SUMMARY

WIND REPORT SUMMARY

A Pedestrian Wind Environment Study has been undertaken for Gibbons Place by WindTech Consultants.

The Report (refer to attached), presents the results of a detailed investigation into the wind environment impact of the Green Garden Development located at 44-70 Rosehill, Redfern. Testing was performed using Windtech's boundary layer wind tunnel, which has a 3.0m wide working section and has a fetch length of 14m. Measurements were carried out using a 1:300 scale detailed model of the development. The effect of nearby buildings and land topography has been accounted for through the use of a proximity model, which represents a radius of approximately 375m from the development site.

Peak gust and mean wind speeds were measured at selected critical outdoor trafficable locations within and around the subject development. Wind velocity coefficients representing the local wind speeds are derived from the wind tunnel and are combined with a statistical model of the regional wind climate (which accounts for the directional strength and frequency of occurrence of the prevailing regional winds) to provide the equivalent full-scale wind speeds at the site. These wind speed measurements are compared with criteria for pedestrian comfort and safety, based on gust wind speeds and Gust-Equivalent Mean (GEM) wind speeds.

The model of the proposed development was tested in the wind tunnel without the effect of any forms of wind ameliorating devices such as screens, balustrades, etc. that are not already shown in the architectural drawings. Any proposed vegetation was also excluded from testing. If the results of the study indicate that any area was exposed to strong winds, in-principle treatments have been recommended. These treatments could be in the form of vegetation that is already proposed for the site, and/or additional trees, shrubs, screens, awnings, etc. The existing wind conditions for the pedestrian footpaths around the site have also been tested to determine the impact of the proposed development.

The results of the study indicate that with the inclusion of certain treatments to the final design, it is expected that wind conditions for all outdoor trafficable areas within and around the proposed development will be suitable for their intended uses. Refer to the attached report for more in depth methodology and findings.

ACOUSTIC REPORT SUMMARY

An acoustic report as been prepared by Acoustic Logic to accompany the Planning Proposal Report and other supporting documentation and submission elements required by the City of Sydney.

Please refer to the attached Acoustic Report for a detailed analysis and summary of findings.

TECHNICAL ANALYSIS OVERVIEW

In preparing the Planning Proposal for Gibbons Place, the City of Sydney identified a number of matters to be considered, including:

1. Solar access to existing residential development, including apartments on Gibbons Street.

Solar access to existing adjacent residential development is regulated by the key ADG requirement for a minimum of 70% apartments within a project to receive at least 2 hours of direct sunlight between the hours of 9am to 3pm (winter solstice). The proposal ensures all existing residential development adjoining the site satisfies this solar standard. Specifically:

Gibbons Street Apartments

These apartments are single-loaded with living areas and main balcony spaces/sun rooms addressing Gibbons Street, orientated to the west. The proposal will not impact these apartments as 100% of the total apartments receive more than 2hrs sunlight in the afternoon.

Cornwallis Street Apartments

The single loaded apartments on Cornwallis Street orientate main habitable rooms and balconies towards Cornwallis Street (west - unaffected). Along the eastern elevation (affected), the facade is dominated by a blank wall with limited windows and balconies, orientating bathrooms, bedrooms and secondary courtyard spaces towards Cornwallis Lane and Gibbons Place. It is noted that the west elevation maintains solar access for over 2 hours. 100% of apartments maintain solar access.

Botany Road/Spencer Lane Apartments

After analysing built form and apartment layout, a total of 4 additional apartments (13%) out of 30 will be affected by the Gibbons Street proposal receiving less than 2 hours of sunlight. Currently, 3 apartments on the southern facade do not receive adequate sunlight, therefore 7 (23%) apartments in total will be affected. As 77% of apartments maintain more than two hours of sunlight, it is considered that the proposal maintains compliance with the ADGs in this instance. Further, given the age and scale of this apartments it is highly it will be redeveloped over the medium term resulting in improved overall solar amenity.

2. Overshadowing of public open space, such as Gibbons St Reserve, Daniel Dawson Reserve and ATP Reserve (Locomotive Street).

The City of Sydney policy for sunlight to Public Open Space ensures that a minimum of 50% of the space receives at least 4 hours of direct sunlight between 9am and 3pm (winter solstice). The proposal will result in each identified public open space still satisfying the City's sunlight standard, as detailed below:

- 100% of Gibbons Street Reserve receives at least 4hrs sunlight between 9am and 3pm.
- 77% of Daniel Dawson Reserve receives at least 4hrs sunlight between 9am and 3pm.
- 50% of ATP along Locomotive Street receives at least 4hrs sunlight between 9am and 3pm.

3. Building separations consistent with the ADGs

The ADG identifies building separation requirements based on building height, adjoining boundaries and visual privacy. The Gibbons Place proposal is fully compliant as per the ADG requirements for appropriate building separation distances, as detailed below:

Building Separation

1-2 Storey Commercial: 2.5m to 3m
3-4 Storey Habitable Residential: 6m
3-8 Storey Non Habitable Residential: 6m
5-8 Storey Habitable Residential: 9m
9 Storey + Habitable Residential: 12m

The proposed building envelope has been considered to maintain development equity potential for the adjacent building envelope, if developed in the future, maximising visual privacy through a stepped built form approach. The balance of the technical analysis provides further information on the above, as well other technical matters to be considered as part of the Planning Proposal.

ADG COMPLIANCE

At this early stage of the process a preliminary assessment of the design has been undertaken against SEPP 65 to demonstrate compliance along with the Apartment Design Guide 'Rule of Thumb' Assessment.

	Criteria	Requirement	Response
<i>Developing the Controls</i>			
2A	Primary Controls	Demonstrate context responsiveness	Compliant – Proposal demonstrates context responsive design process responding to local context and solar amenity to generate building envelopes.
2B	Building Envelopes	Carefully test primary controls	Compliant – The submitted concept optimises the contribution to the local context, public and commercial feasibility
2C	Building Height	Site specific building envelopes	Compliant – Two vertical towers have been proposed synthesising solar amenity, solar envelope, adjoining street-scape character and built form, and desire to create a quality pedestrian experience and human scale.
2D	Floor Space Ratio	Floor space ratio aligns with desired density and provides opportunity for articulation	Compliant – The proposed FSR is a by-product of a context responsive design process providing the desired density and significant opportunity for building articulation.
2E	Building Depth	10 – 18m for adequate daylight and natural ventilation. Greater building depths with increased building articulation, perimeter wall depth and where higher ceilings provided (e.g. building reuse).	Compliant – Proposed buildings have apartment building depths ranging between 10m to 18m.
2G	Street Setbacks	Determine street setback controls relevant to desired streetscape character, including increased setbacks where street or footpath widening is desired.	Compliant – The proposed design provide 1 m setback to the west of the site and 6.5 m on the north of the site. The entire space is dedicated for public realm.
2H	Side and rear setbacks	NA	The rear setback is a range between 1m to 4.5 m. The new widened of the Cornwallis lane create a better pedestrian experience..

	Criteria	Requirement	Response
<i>Sitting the Development</i>			
3A	Site analysis	Site analysis demonstrates decisions have been based on local opportunities and surrounding context	Compliant – The design sequence diagrams in the Planning Proposal demonstrate decisions have been based on local opportunities unique to this site.
3B	Orientation	Buildings respond to streetscape and solar amenity.	Compliant – Buildings envelopes address the street as a corner building statement while still ensure existing solar amenity of surrounding properties is not adversely impacted. This is explained further in the Solar Analysis.
3C	Public Domain Interface	Transition between private and public domain is achieved without compromising safety and security.	Compliant – The proposal significantly improves the transition between the private and public realm. The widened of Cornwallis Lane is the focus of the project to create a better place for people.
3D	Communal Open Space	Communal open space has a minimum area of 25% of the site area achieving a minimum of 50% sunlight for 2hrs between 9am and 3pm on 21 June.	Compliant – With a developable land area (those sites with residential uses only) of 2,544m ² the proposal requires 636 m ² of communal open space. The proposal provides a total of 1,080m ² of communal open space on the rooftop and podium. 801 m ² are dedicated for public realm. The communal open space receives adequate sunlight.
3F	Visual Privacy	Minimum separation between windows and balconies is 1-4 storeys: 3m – 6m 5-8 storeys: 4.5m to 9m 9 storeys plus: 6m to 12m	Compliant – The proposal provides minimum separation for apartment buildings to facilitate compliance during detail design.
3G	Pedestrian Entries	Building entries connect to the public realm, are easy to find and large sites provides key pedestrian links.	Compliant – The proposal provides for direct building entries from the adjoining public realm.
3H	Vehicle Access	Vehicle access points are safe and minimise conflict.	Compliant – Vehicle access and waste management area are provide on the south of the site with access from rosehill St.

DEVELOPMENT SUMMARY

ASSUMPTIONS

GROSS FLOOR AREA:

Floor area of each floor of a building measured from the external walls of the building measured at a height of 1.4 metres above the floor, excluding:

- Any area for common vertical circulation, such as lifts and stairs;
- Any basement, plant rooms, lift towers;
- Car parking to meet any requirements of the consent authority (including access to that car parking);
- Any space used for the loading or unloading of goods (including access to it),
- Terraces and balconies with outer walls less than 1.4 metres high, and;
- Voids above a floor at the level of a storey or storey above.
- ASSUME 76% EFFICIENCY - IN LINE WITH ADG
- YIELD CALCULATIONS UTILISE INTERNAL NSA (APPROX. 88% of GFA)

FLOOR SPACE RATIO:

The ratio of overall Gross Floor Area to the whole development site area.

YIELDS

FSR 10.28 (ASKING FOR 10.40)

RESIDENTIAL GFA: 23,409 SQM

COMMERCIAL/RETAIL GFA: 2,745 SQM

Residential Apartment Mix	Units	%
1 Bed	94	30
2 Bed	187	60
3 Bed	31	10
Total Apartments	312	100

PARKING PROVISION (AS PER ADG COMPLIANCE):

Residential Flat Building, Multi dwelling housing:

- 0.4 space per 1 bedroom unit
- 0.8 spaces per 2 bedroom unit
- 1.1 spaces per 3 bedroom unit
- 0.05 spaces per dwelling for visitors

Office and business premises (where the building has an FSR greater than 2.5:1):

- Apply the following formula: $M = (G \times A) / (50 \times T)$
M is the maximum number of parking spaces
G is the GFA of all office and business premises in the building in m2
A is the site area in m2
T is the total GFA of all buildings on the site in m2

Retail premises (where the building has not more than 2,000m2 GFA used for retail purposes):

- o 1 space/60m2 retail GFA

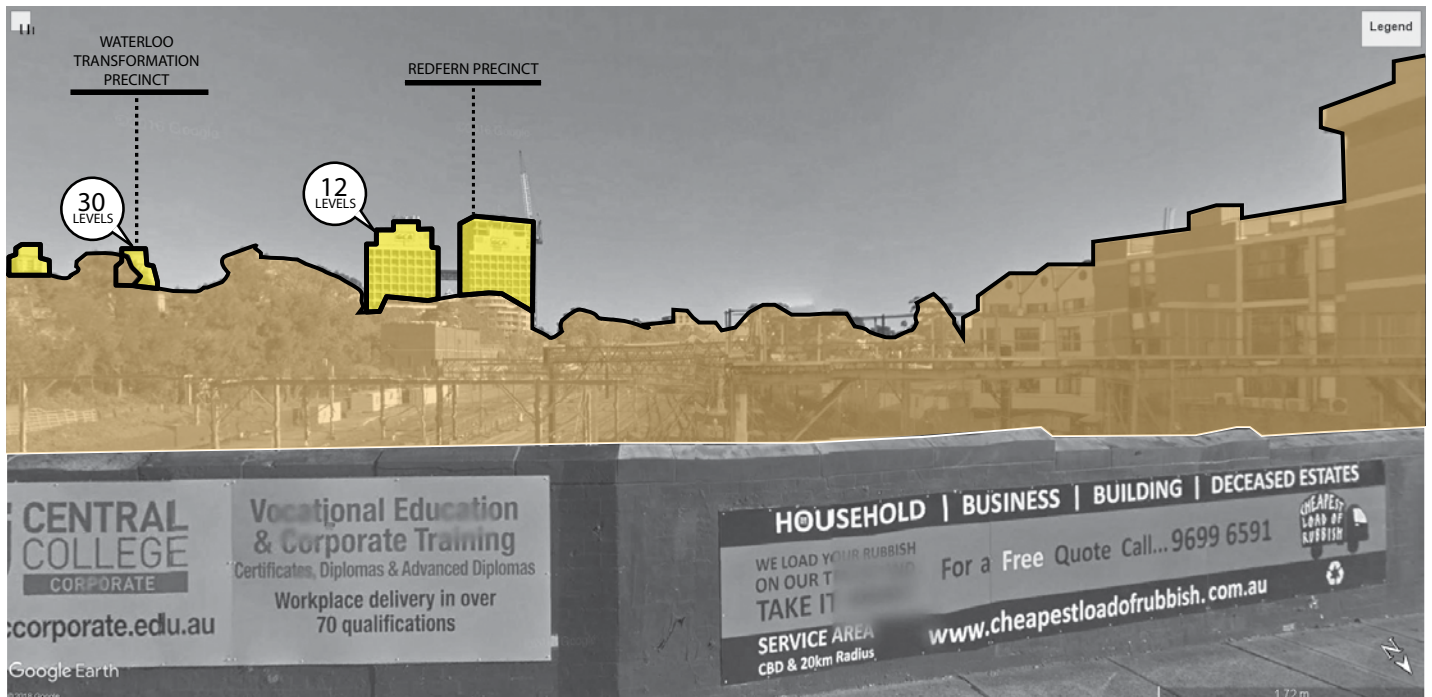
Maximum Parking rates	Units	%
Retail /Commercial Parking	5	2
Residential Parking	237	98
Total Car Parking	243	100
Parking Provided	Units	
Total Car Parking	243	100
Total Bike Parking	-	100

VISUAL ANALYSIS

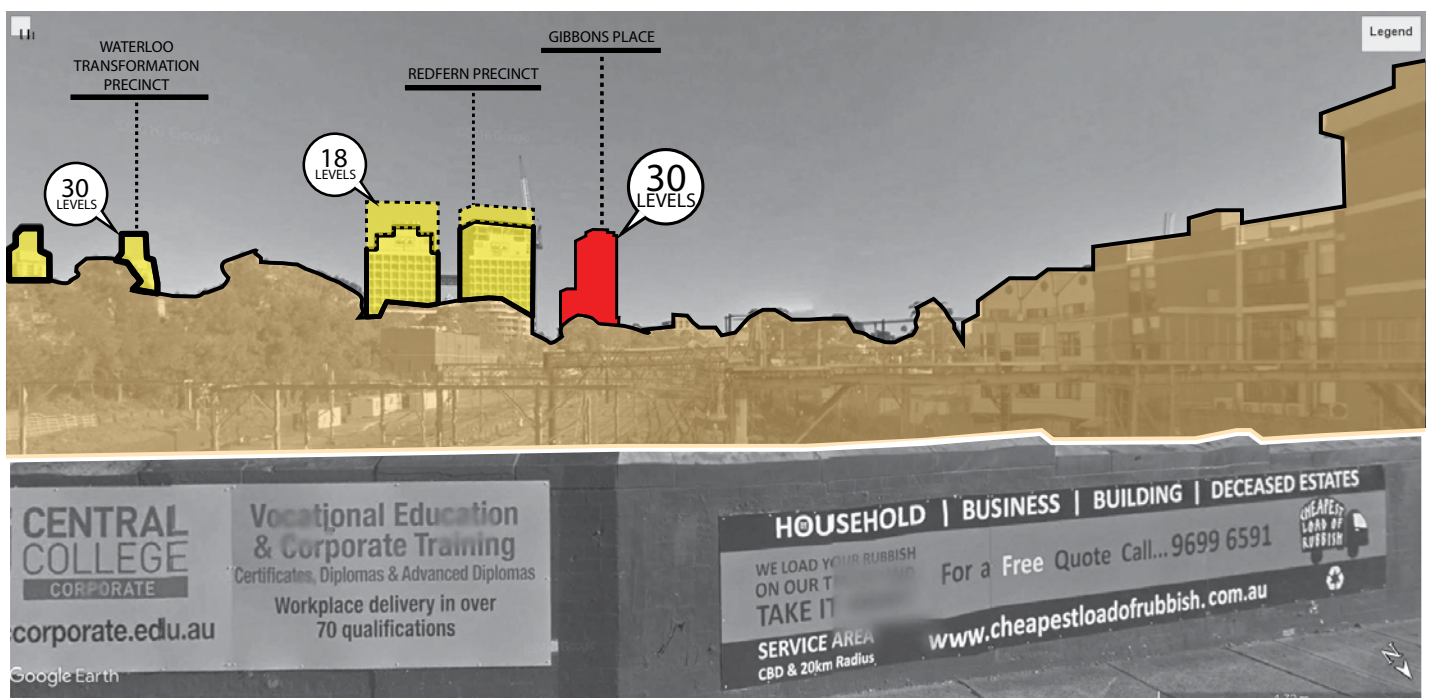
A preliminary visual analysis has been undertaken for Gibbons Place from key view corridors. This analysis has been carried out in order to understand the proposed building envelope and its relationship to nearby towers, built form and contribution to skyline. It demonstrates Gibbons Place will create a slender landmark on the skyline. In some of the examples shown within this assessment (1 & 3), the team used Google Streetview 3D Buildings Tool to understand peoples perspective of built form relationship at street level whilst quantifying existing built form with the Gibbons Place scenario. The 3D tool allowed the design team to position the Gibbons Place Scenario within the chosen perspective view.

VISUAL ANALYSIS

view from Cleveland Street



BEFORE



AFTER