

20 BERRY ST NORTH SYDNEY

URBAN DESIGN REPORT

April 2021

TURNER

HOLDMARK

CONTENTS

- 01** Introduction
- 02** Strategic Context
- 03** Site Analysis
- 04** Special Areas
- 05** Massing Resolution
- 06** Design Principles
- 07** Shadowing Analysis
- 08** Indicative Scheme
- 09** Proposed LEP Plans

INTRODUCTION 01

OVERVIEW

The subject site is located at 20 Berry St North Sydney. It sits within the North Sydney Centre. It is located on a prominent corner at the junction of the Pacific Highway and Berry St. Our client Holdmark seeks to redevelop the existing 14-storey office building on the site into a premium-grade commercial office building. This is in line with Clause 6.3.1(e) of the NSLEP:

(e) to encourage the consolidation of sites for the provision of high grade commercial space.

The site allows for a maximum rl of 145m. This equates to a building height of 75m. The LEP building height may be exceeded if the extent of shadowing outside of the North Sydney Centre complies with Clause 6.3.2 of NSLEP. In addition to the height constraints, any development must comply with the shadowing constraints to “Special Areas” set out in Clause 6.3.2 of the LEP and indicated on Map Sheet CL1_002A, which require there to be no net increase in overshadowing between 12 pm and 2pm from the March equinox to the September equinox.

The proposal has been developed to satisfy the provisions of Clause 6.3 by providing additional ‘special areas’ and greater solar access throughout the specified critical areas.

This report provides the following:

Site and context analysis

An evaluation of planning controls and a study of each the Special Areas within North Sydney.

An indicative design showing a design that delivers a potential high quality design outcome in terms of built form, quality commercial office space, place-making and net solar amenity.

Detailed shadowing analysis is included demonstrating the extent of the proposal’s shadowing .

Sun-hours analysis that quantifies the affect of the proposal in terms of sun-hours to the Berry St Special Area.



Image: Nearmap

VISION

RESPONSIVE TO CONTEXT

The 20 Berry St site is located on a prominent Landmark corner in North Sydney. The proposal is highly visible and responds to the context and site constraints with a unique building form.

A PLACE FOR PEOPLE

The proposal is designed to have a varied, permeable and highly activated ground plane. The main entry foyer is prominently located addressing the main street corner. In addition to the foyer the ground floor is configured to support a number of retail tenancies, /food concession areas that connect directly to a proposed outdoor Plaza at the corner of Berry St and Angelo St.

A HIGH QUALITY COMMERCIAL OFFICE BUILDING

20 Berry St will provide a high quality workspace. The floorplates are open-plan, generous in size and have an extensive glazed perimeter. Future occupants will enjoy excellent views and have the convenient amenity of food and beverage offering and access to an outdoor public space at ground floor.

A LANDMARK BUILDING

20 Berry Street is a landmark building. Sited at the corner of The Pacific Highway and Berry St, the building will be highly visible from the public domain. The form of the building is divided into a base and tower with a core anchoring the northern aspect.

The building terminates the southern end of 'street wall' of buildings to the North consisting of Skye and Lucent apartments with a distinctive sculptural form.

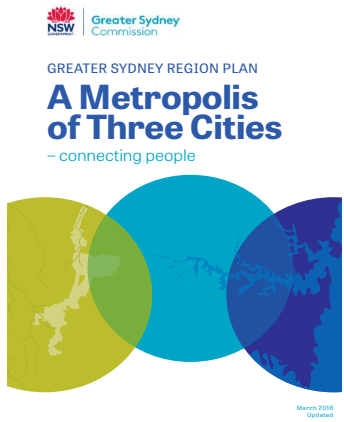


STRATEGIC CONTEXT 02

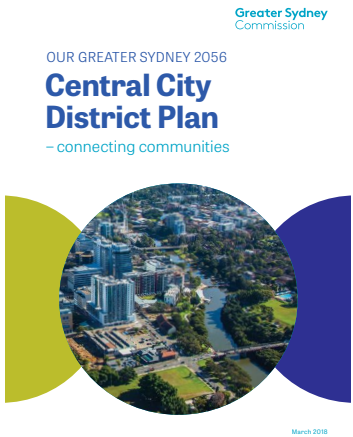
The strategic context reviews the planning context of the site, specifically the relationship between the site and the changing urban context.

STRATEGIC ALIGNMENT

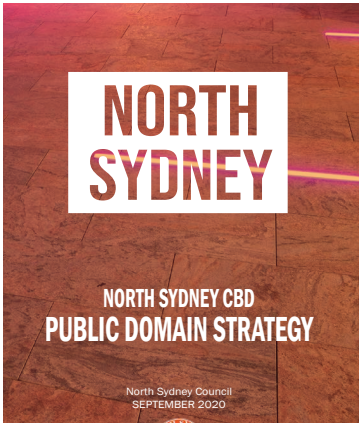
The vision and objectives for the site align with the strategies and goals set out across State and Local Policies.



CONNECTED TO THE 30 MINUTE CITY



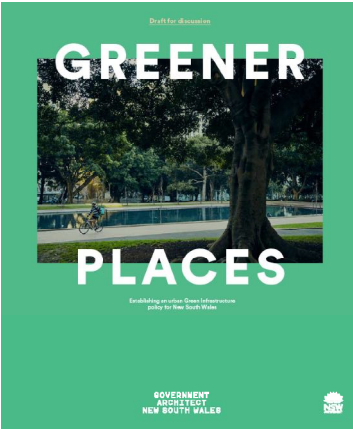
PART OF THE FUTURE OF THE NORTH DISTRICT



NORTH SYDNEY PUBLIC DOMAIN STRATEGY 2020



INCORPORATING THE SEVEN DESIGN OBJECTIVES

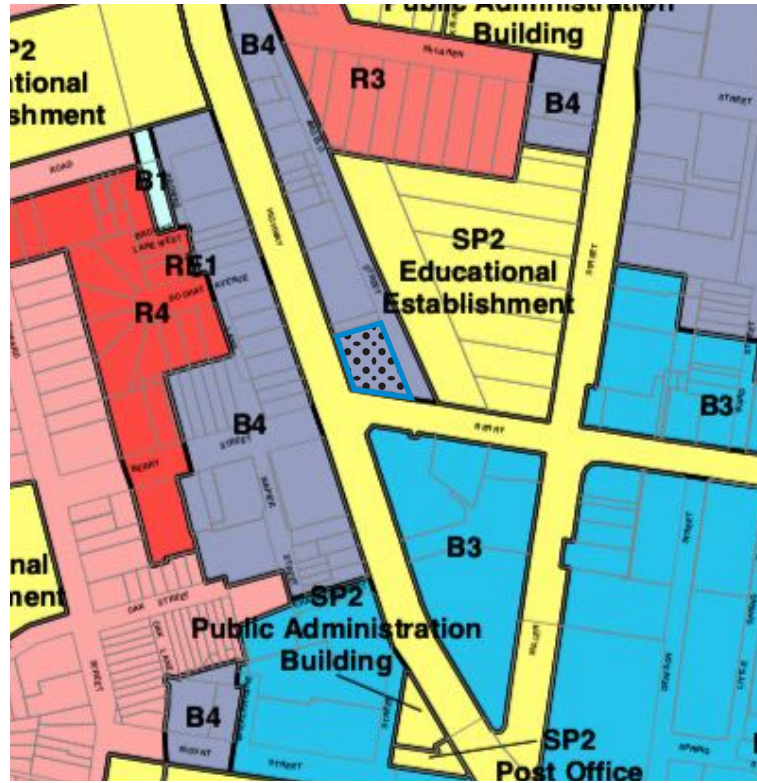


SUPPORTING HEALTHIER, LIVEABLE AND SUSTAINABLE ENVIRONMENTS



NORTH SYDNEY DCP AND LEP 2013

LEP Planning Controls



ZONING

The site is zoned B4 Mixed Use.

- Provide a mixture of compatible land uses
- Integrate suitable business, office, residential, retail and other
- Development in accessible locations so as to maximise public transport patronage and encourage walking and cycling.
- To ensure uses support the viability of centres.



FLOOR SPACE RATIO

There is no limit to the overall floor space ratio on the site. There is a constraint indicated on the 'Non-Residential Floor Space Ratio Map' regarding the minimum non-residential FSR at a rate of 3:1. The proposal exceeds this amount. In addition the proposal seeks to change the zoning to B3



HEIGHT CONTROLS

The LEP height limit of the site is RL 145.

This height may be exceeded if the proposal meets the parameters of Clause 6.3 of NSLEP

The proposal does exceed the height limit and seeks to amend the LEP in regard to the height limit.

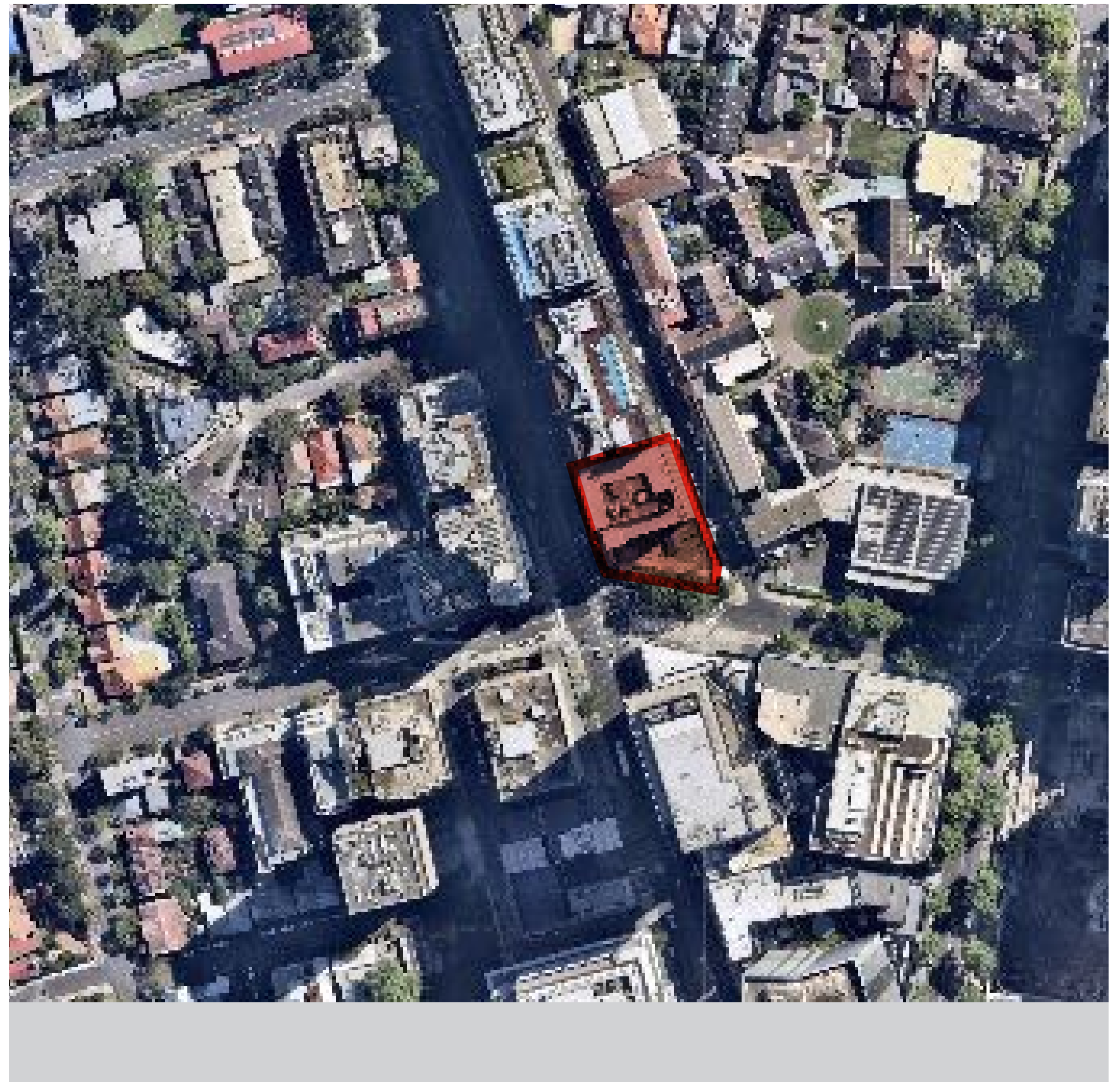
SITE ANALYSIS 03

The site analysis provides an initial synthesis, conducted by the Design Team, of the wide range of technical studies that has been undertaken to date.

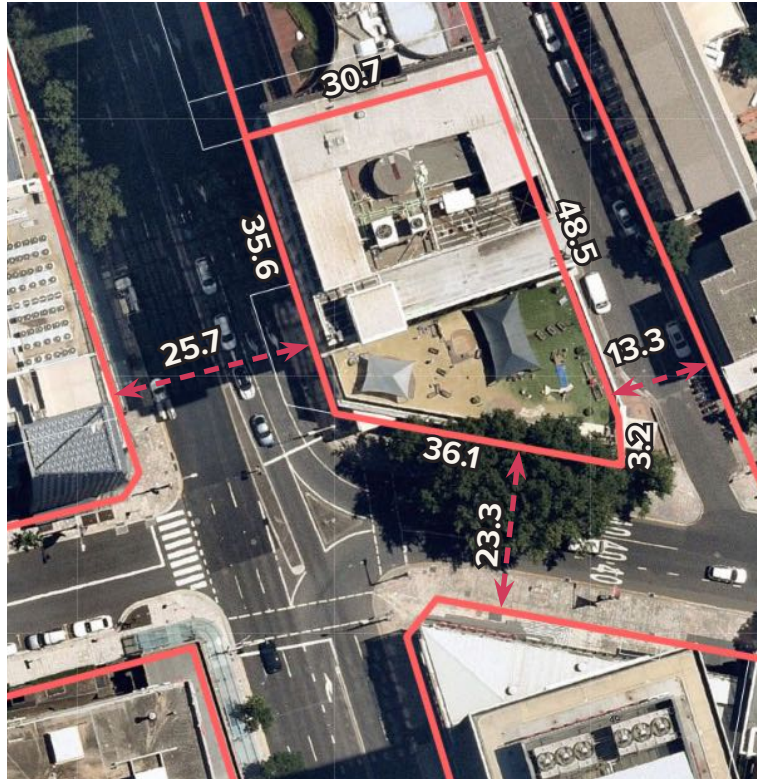
SITE DESCRIPTION

The site is located at the northern edge of the North Sydney CBD. The site has a prominent position on the corner of two major thoroughfares within North Sydney - the Pacific Highway and Berry St. Berry St is a 3-4 lane one-way road that provides access to the Harbour Bridge / Cahill Expressway. The Pacific Highway is a six-lane dual carriageway and is a major arterial road within Sydney

It is a peninsula site with roads on three sides. The site forms the southern end of a continuous bar of buildings running from of Building between McClaren and Berry St.



Site Conditions



SITE DIMENSIONS

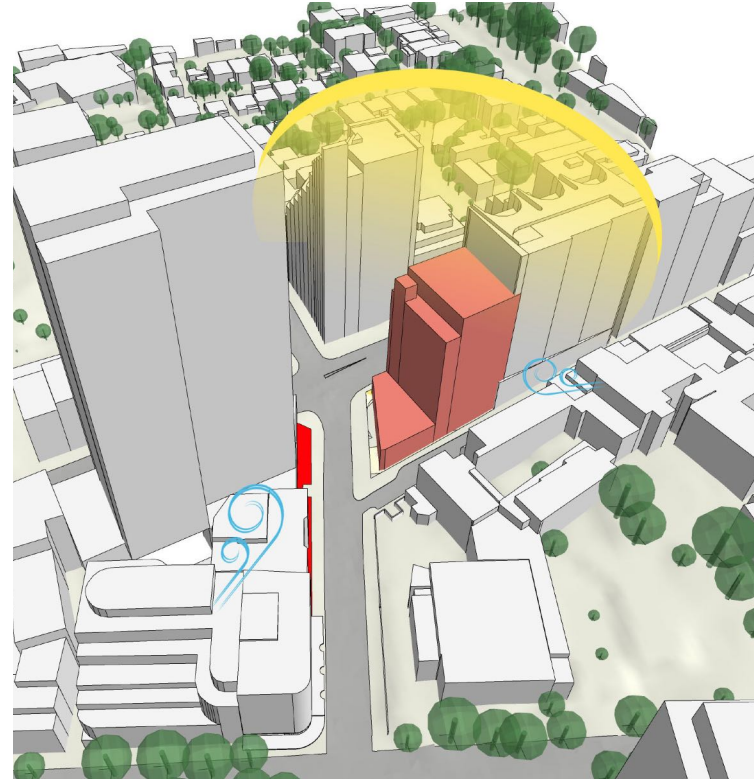
The site is relatively compact in form. It measures roughly an average of 31m between Angelo St and The Pacific Highway.

The longest side is on Angelo St resulting from the angled intersection of Berry St and the Pacific Highway.

The Pacific Highway is 25.7m wide ensuring ADG building separation is achieved to the Polaris building (no. 150)

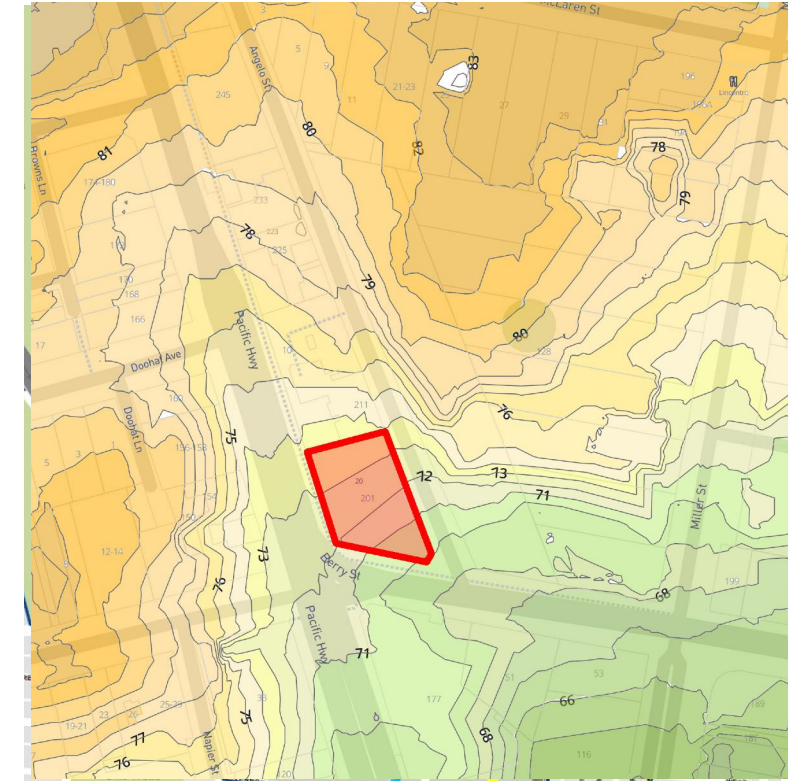
To the south Berry St is 23.3 m wide. The main tower of 177 Pacific Highway is set back at an angle providing ample building separation.

To the east Angelo St has a narrower laneway character.



CLIMATE

The prevailing wind directions are from the north-east and south-east quadrants. Westerly winds are more common in winter. North Sydney is known to be exceptionally windy, therefore it is considered that from a massing perspective, any tower in this location is expected to affect the local wind conditions.



TOPOGRAPHY

Similar to the surrounding topography the site slopes from North to South. The high point is on the site is on the north west corner and the low point is on the south-East corner with a maximum difference in height of 3.5 metres

TRANSPORT NETWORK

The site's central location gives it good connectivity to all forms of transport.

Car: The site is easily accessible by car being located on the junction of two of the main roads within North Sydney - the Pacific Highway and Berry St. However on-street parking is very limited other than on Angelo St.

Bicycle: North Sydney CBD is a challenging environment for cyclists. North Sydney Council is working to improve the cycle network

Rail: The site is located 400m from North Sydney Station - the fifth busiest station on the Sydney Trains network.

Bus: Several bus routes service the North Sydney Centre, with Blue Street, Miller Street and Pacific Highway forming the basis of that network. Services link the Centre with the North Shore, Northern Beaches and Sydney CBD.

Metro. The sites connectivity will be greatly improved with new Victoria Cross Metro station which is scheduled for completion in 2024. The station is located approximately 150m from the site on Miller St. This location will have a major impact on the activation of the Northern areas of the CBD





VIEW A



VIEW B



VIEW C



VIEW D



VIEW E



VIEW LOCATIONS



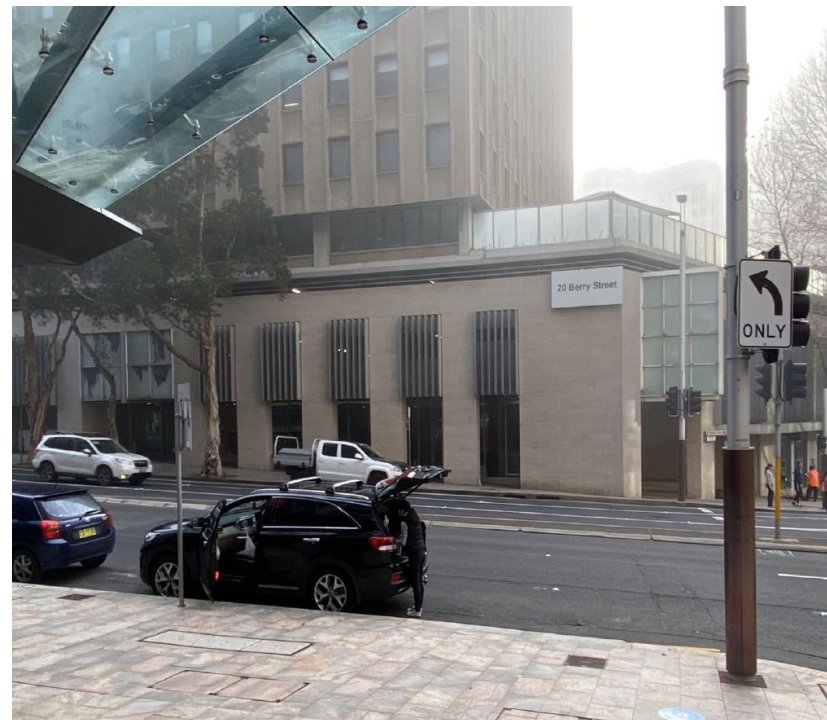
View from southwest - Corner to Pacific Highway

20 BERRY ST - EXISTING BUILDING

Landmark location on Pacific Highway Existing, 16-storey precast concrete brutalist-style office building dating from the late seventies with a more recent podium refurbishment. The building consists of 12 levels of commercial office above three levels of above-ground parking with a ground floor containing the lobby and retail units. The building has an enclosed appearance with limited activation at street level.



View from south east - looking up Angelo St



View from West - Pacific Highway

URBAN GRAIN

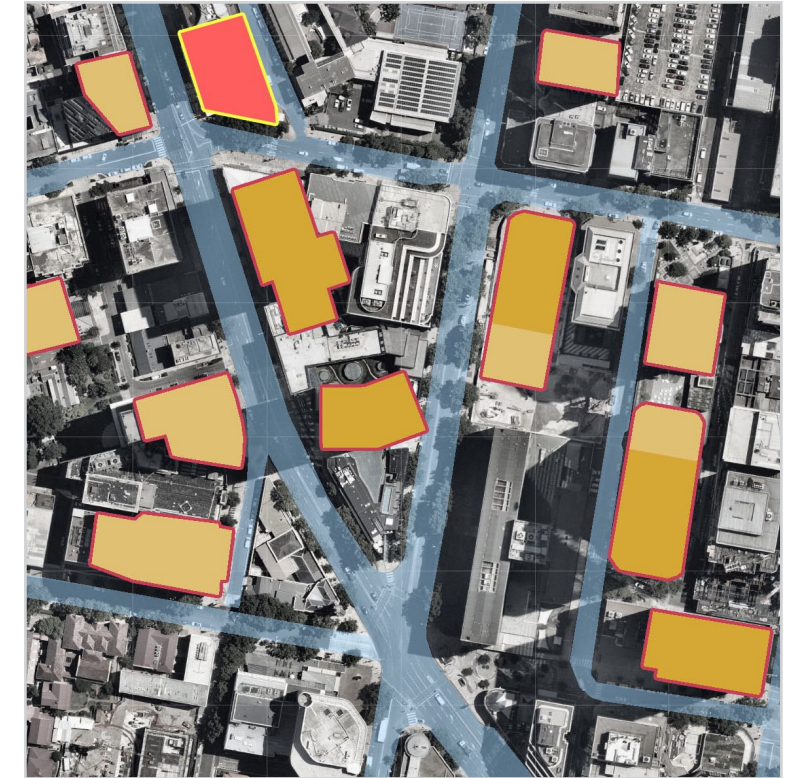
The site sits at a point of transition at the north west corner of the North Sydney CBD



URBAN GRAIN

The site is located at a point of transition in scale. To the South and the East are tall buildings of the CBD. To the west beyond the Pacific Highway the scale changes to 2/3 storey apartment blocks and 1/2 detached and semi-detached houses.


With the exception of Monte Sant' Angelo Mercy College to the East, the buildings in the immediate vicinity consists of tall buildings defining the street edges of the Pacific Highway and Berry St



TALL BUILDINGS

The site is located at the northern perimeter of the North Sydney CBD. North Sydney has a diverse collections of tall buildings that vary both in age and appearance. Many of the more recent developments have a more sculptural form, often as a response to solar/shadowing constraints

NORTH SYDNEY SPECIAL AREAS 04



**North Sydney Local
Environmental
Plan 2013**

Foreshore Building Line Map
North Sydney Centre Map
Exceptions to Development
Standards Map
- Sheet CL1_002A

Foreshore Building Line

Foreshore Area

Foreshore Building Line

North Sydney Centre

Miller Street Setback

SA

Special Area

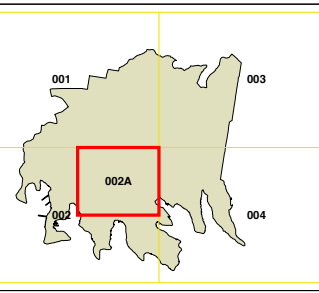
North Sydney Centre

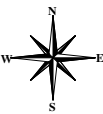
Exceptions to Development Standards

Land in St Leonards

Cadastre

Cadastre 06/02/18 © North Sydney Council



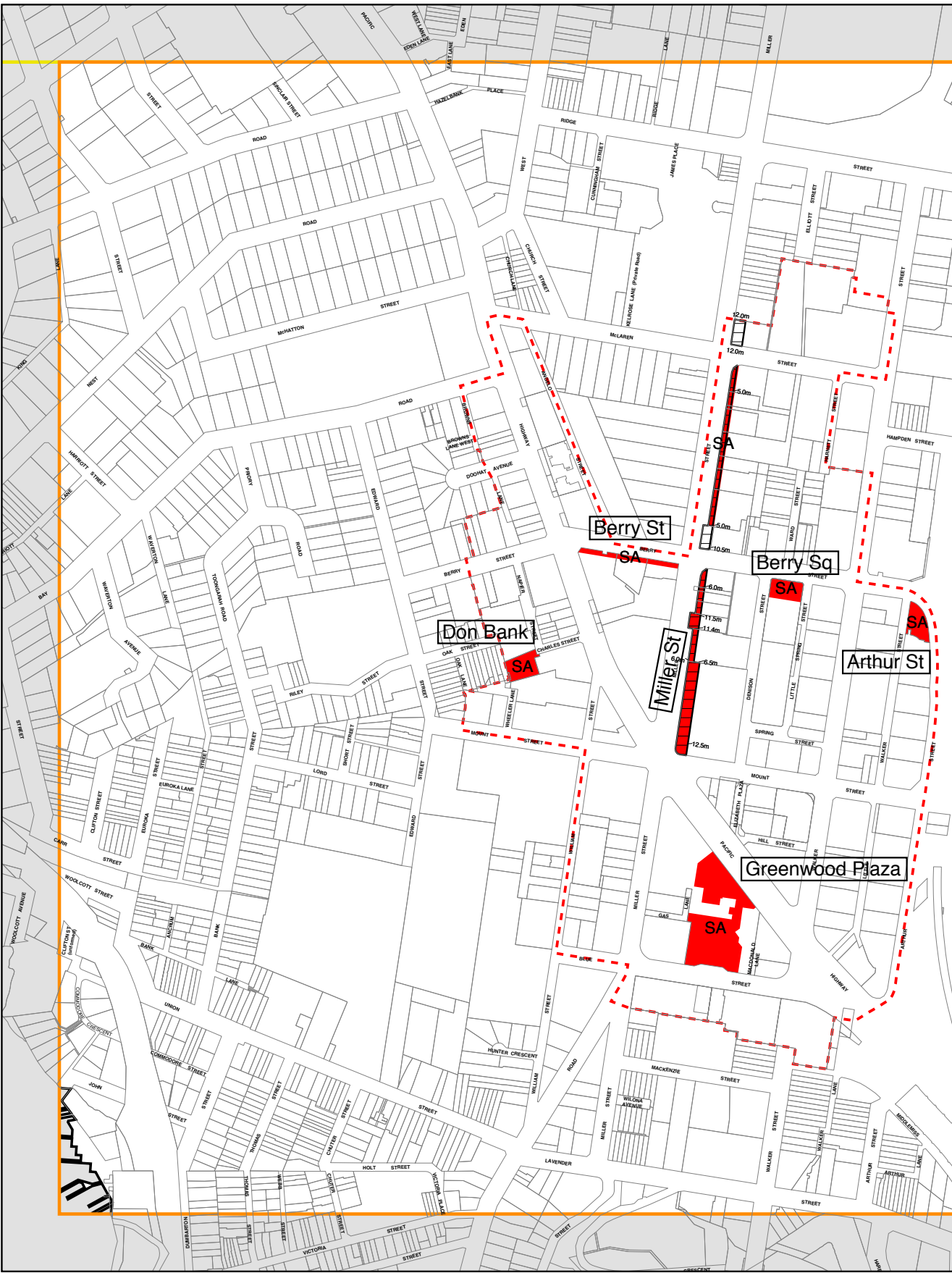


0 250
metres

Scale: 1:5000 @ A3

Projection GDA 1994
MGA Zone 56

Map identification number:
5950_COM_CL1_002A_005_20180206



NORTH SYDNEY SPECIAL AREAS

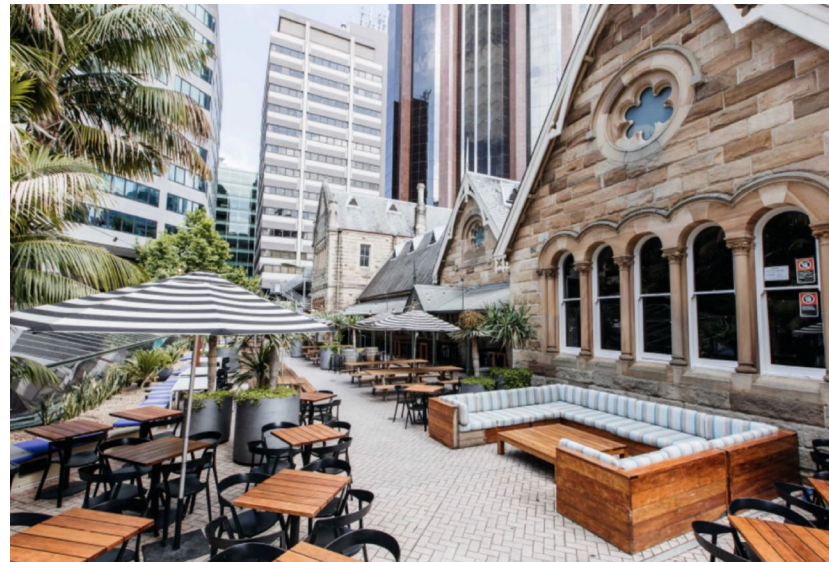
The following pages document a photographic study of the special areas listed in Clause 6.3 of the LEP and a brief description of their physical appearance and character. The Special Areas comprise a diverse collection of spaces.

Clause 6.3.2 pf the LEP states

- (2) Development consent must not be granted for the erection of a building on land to which this Division applies if—
- (a) The development would result in a net increase in overshadowing between 12 pm and 2 pm from the March equinox to the September equinox (inclusive) on land to which this Division applies that is within Zone RE1 Public Recreation or that is identified as “Special Area” on the North Sydney Centre Map, or

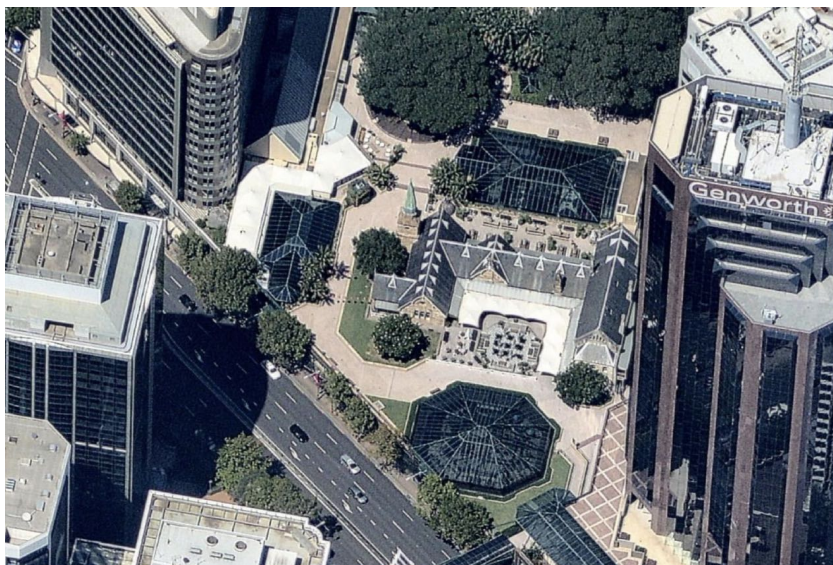
(b) The development would result in a net increase in overshadowing between 10 am and 2 pm from the March equinox to the September equinox (inclusive) of the Don Bank Museum, or

(c) The site area of the development is less than 1,000 square metres and any building resulting from the development would have a building height greater than 45 metres.



GREENWOOD PLAZA

Located between Pacific Highway and Blue St. The Special Area consists of Heritage school buildings retained above a retail centre, with outdoor landscaped areas and seating for recreation, food and beverage amenities.

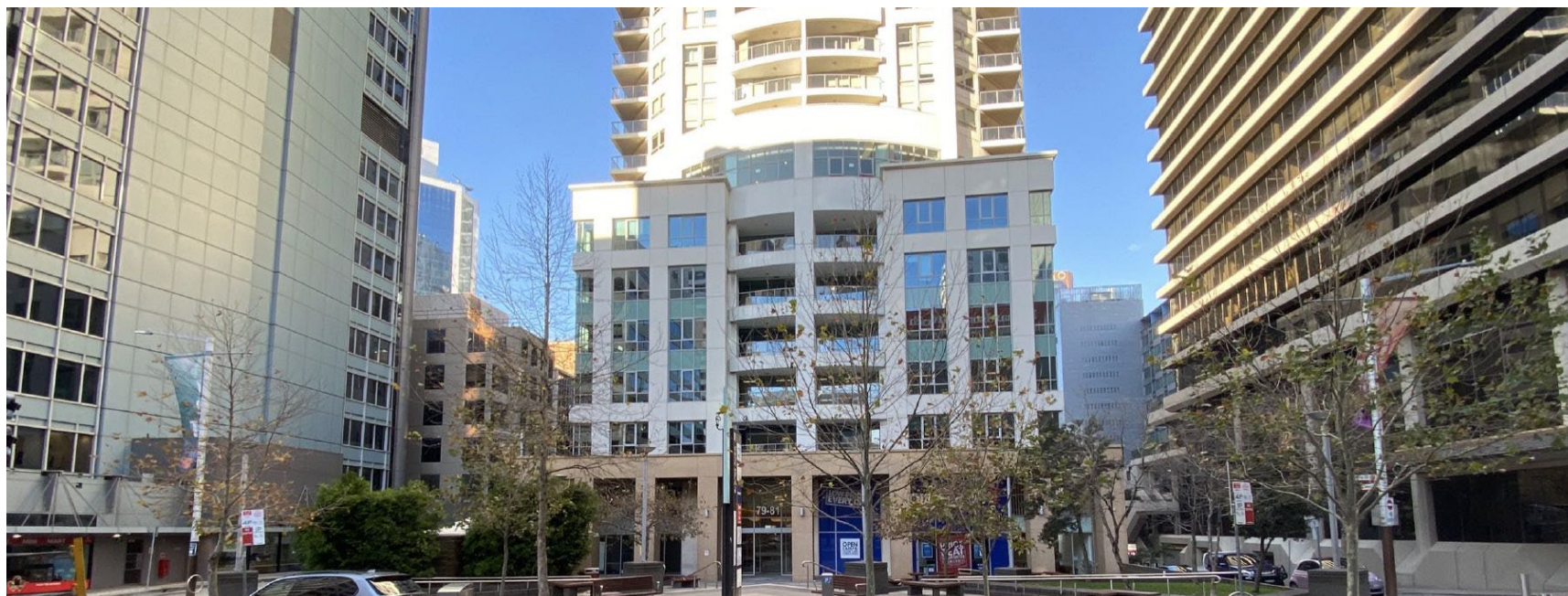




DON BANK SPECIAL AREA

- Pocket Park to south of Don Bank museum
- Lush mature planting
- A quiet secluded urban park

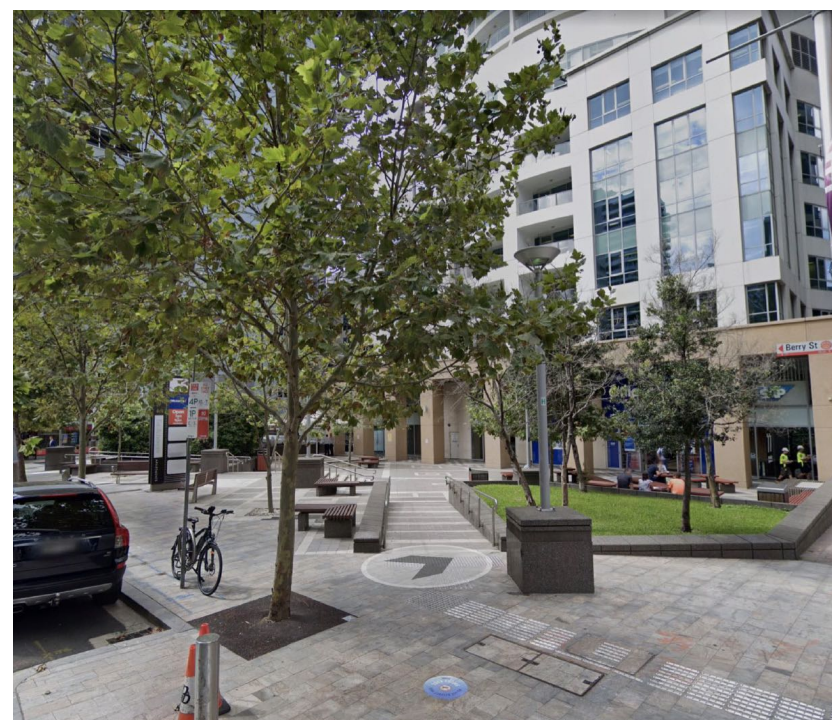
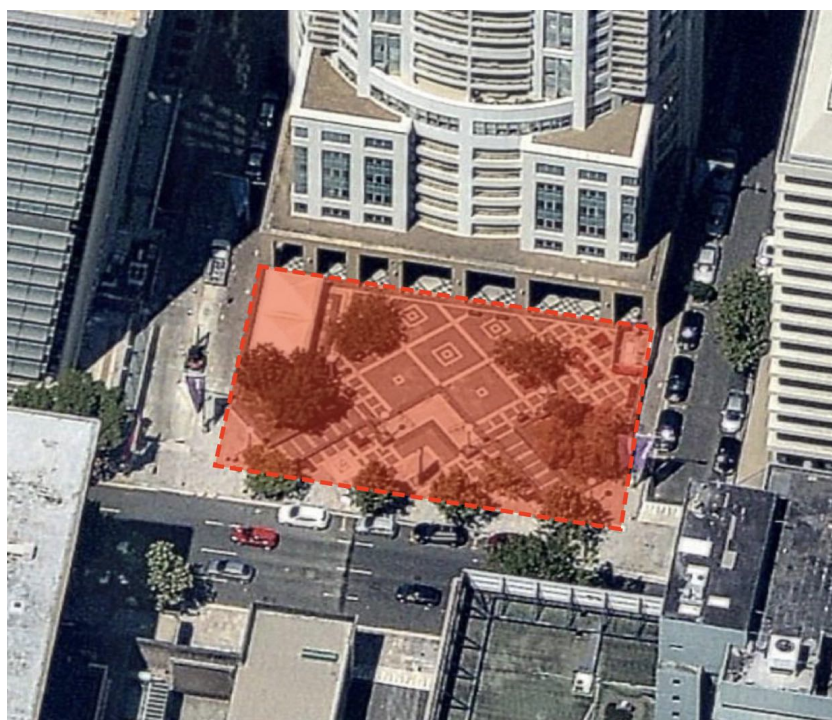


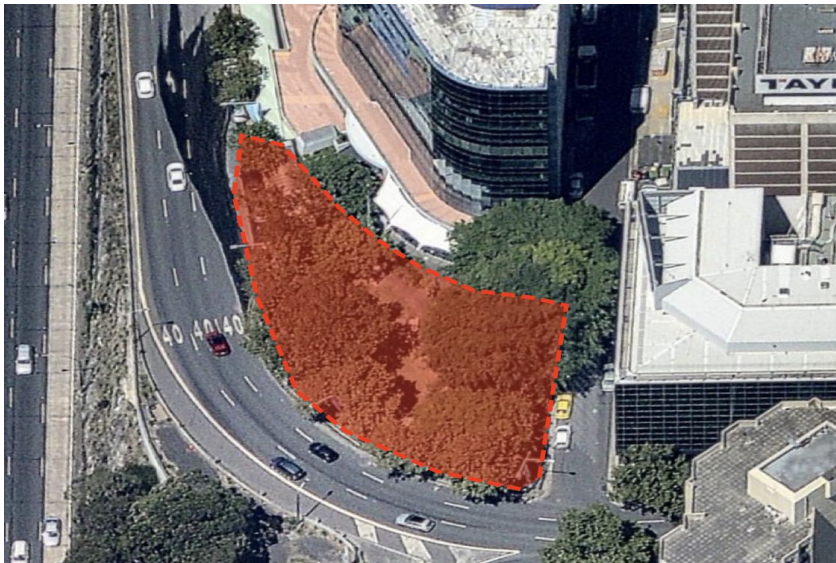


BERRY SQUARE

Public Square on South side of Berry St between Denison and Little Spring St.

- Predominantly hard paved public square with trees and areas of lawn.
- Extensive street furniture/seating walls.

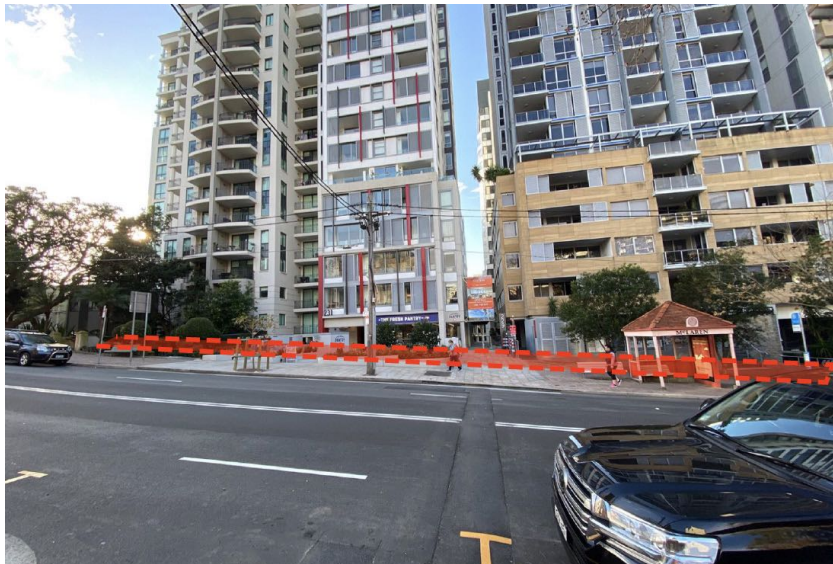




ARTHUR ST SPECIAL AREA

Located between Little Walker St and Arthur St - a feeder road to the Bradfield Highway / Harbour bridge. A small pocket-park with a central sloping lawn with mature trees to the perimeter, enjoys Harbour views.

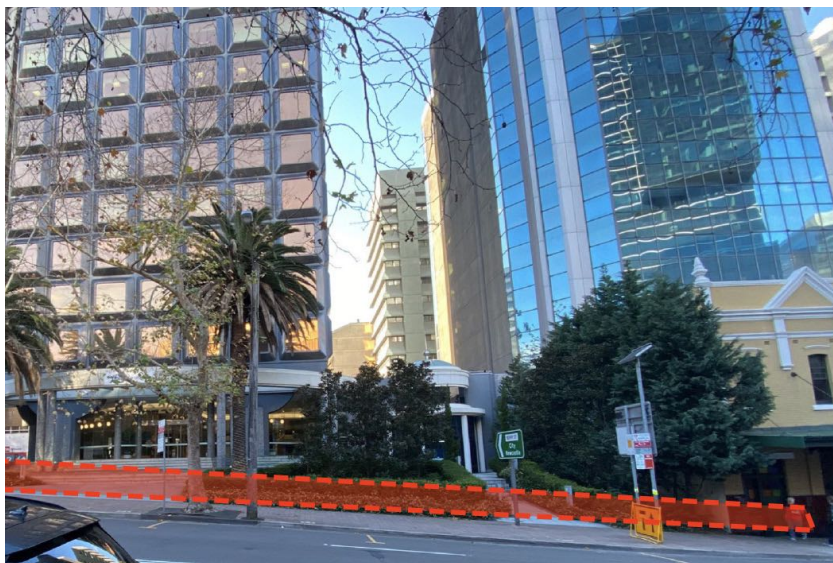
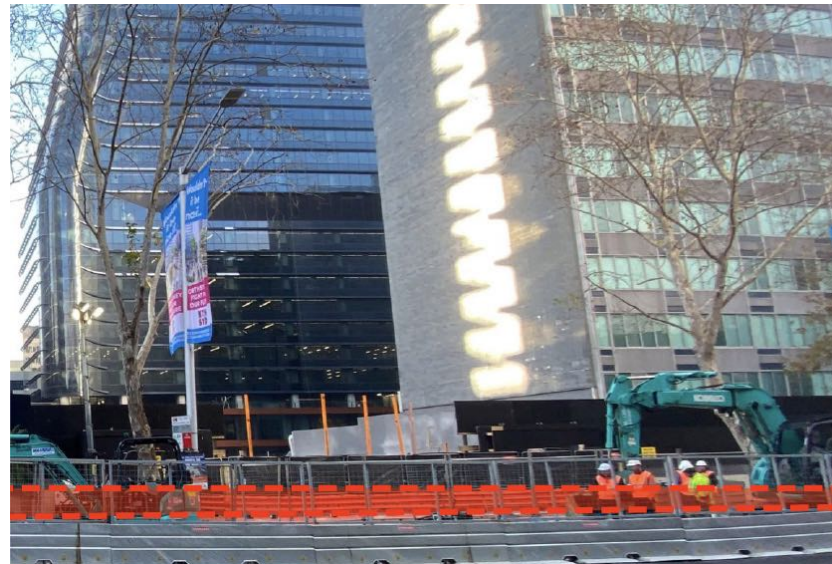




MILLER ST SPECIAL AREA

Setback located on eastern side of Miller st between McLaren and Mount St.

The northern portion is mainly landscaped forecourts to office/ apartment buildings. The southern portion has a substantial setback with food and beverage to the southern end.



53 Berry St

51 Berry St

177 Pacific Highway



BERRY ST SPECIAL AREA

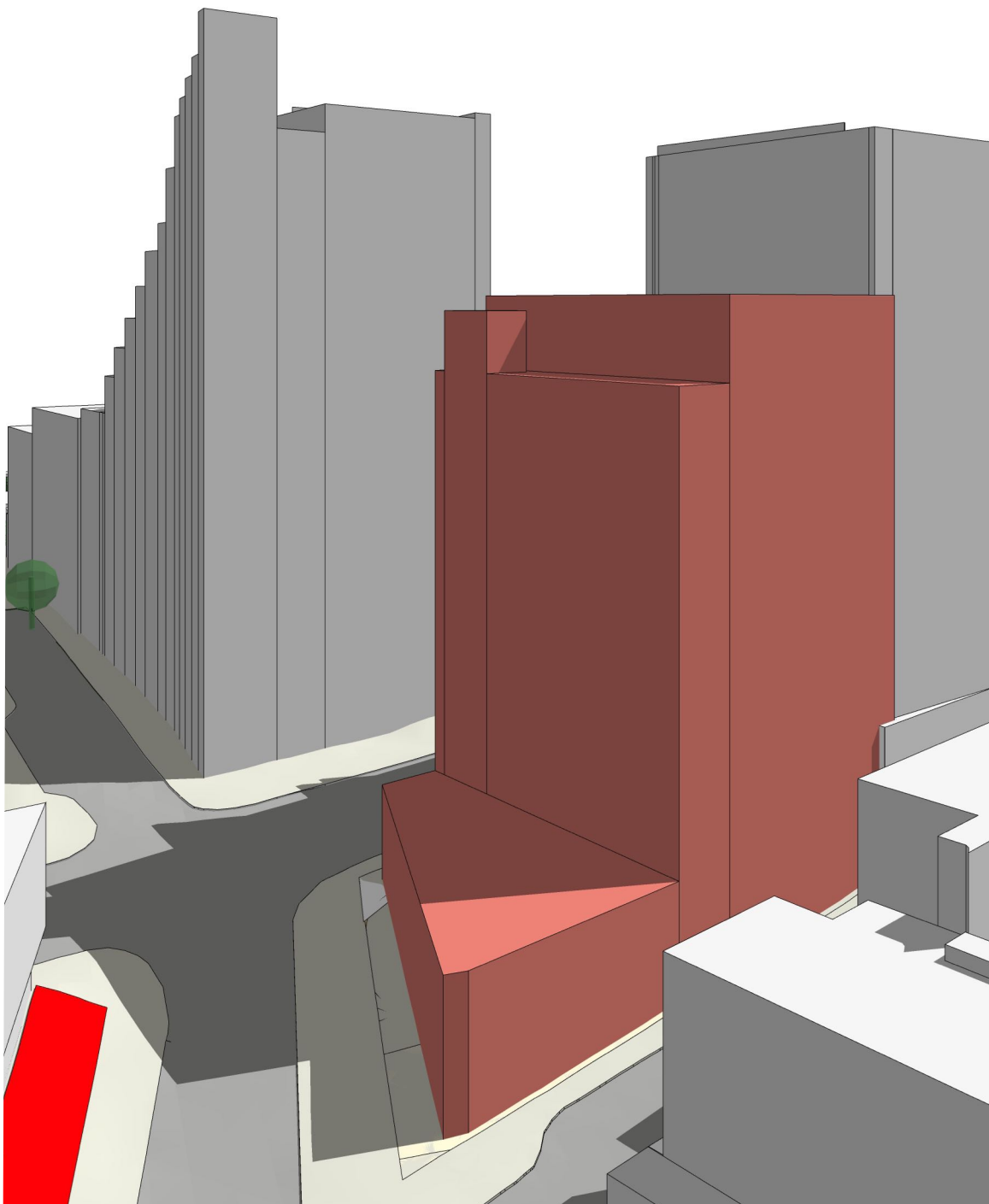
Located on Southern side of Berry St between Pacific Highway and Miller St - 5m deep setback located on a busy road. Limited activation at street level. No street furniture or landscaping. Note Berry St Special Area partially sits within the interior of the buildings at 51 Berry St and 53 Berry St

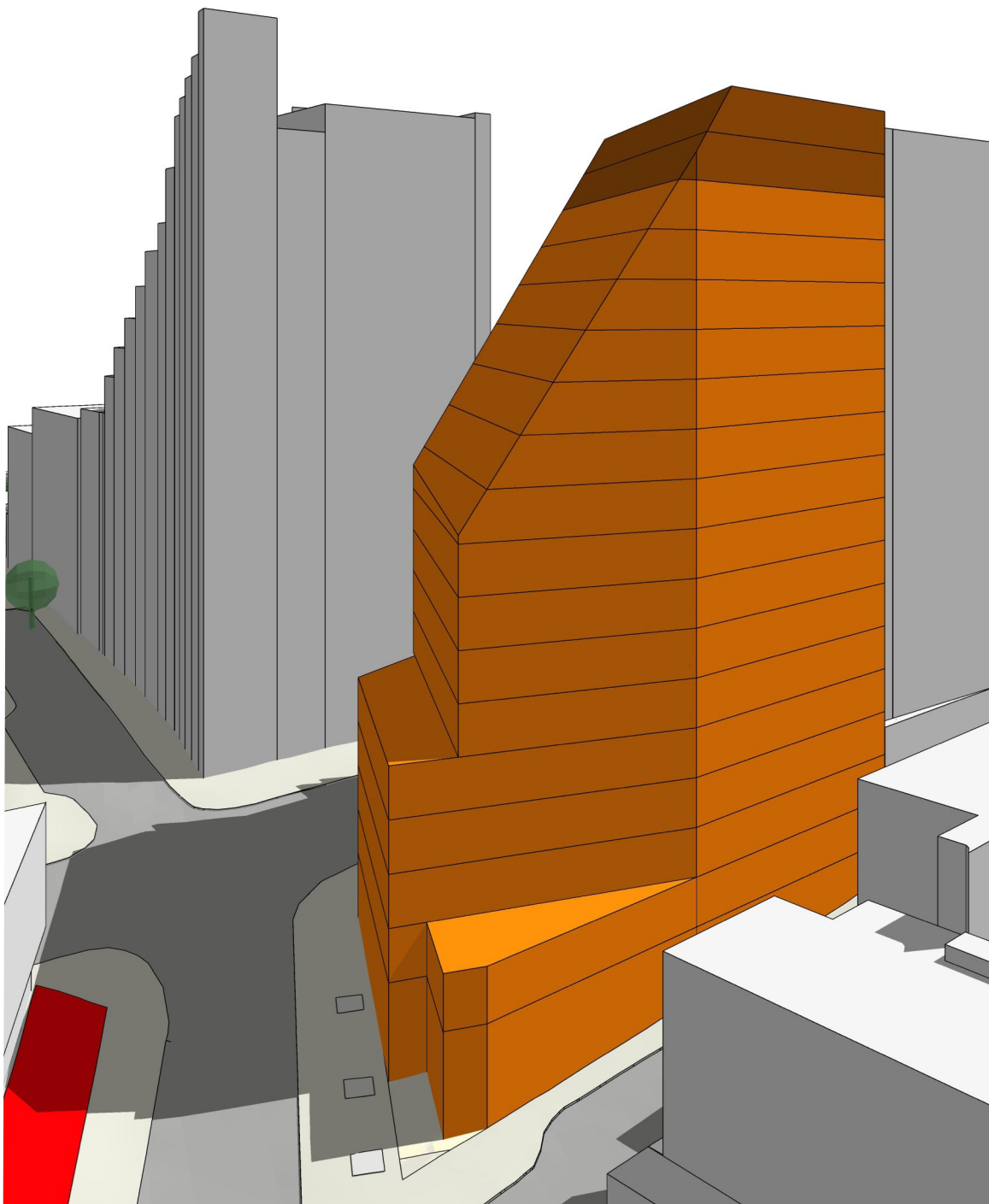


BUILT FORM STRATEGY 05

EXISTING BUILDING FORM

The existing building is a squat 12 storey tower on a 3-4 storey podium. The main tower form does not follow the Berry St alignment and is set back from Berry St 7-24 metres. Its height has been exceeded by recent adjacent developments. It does cast substantial shadows on the Berry St Special Area throughout the March equinox to September Equinox time period.

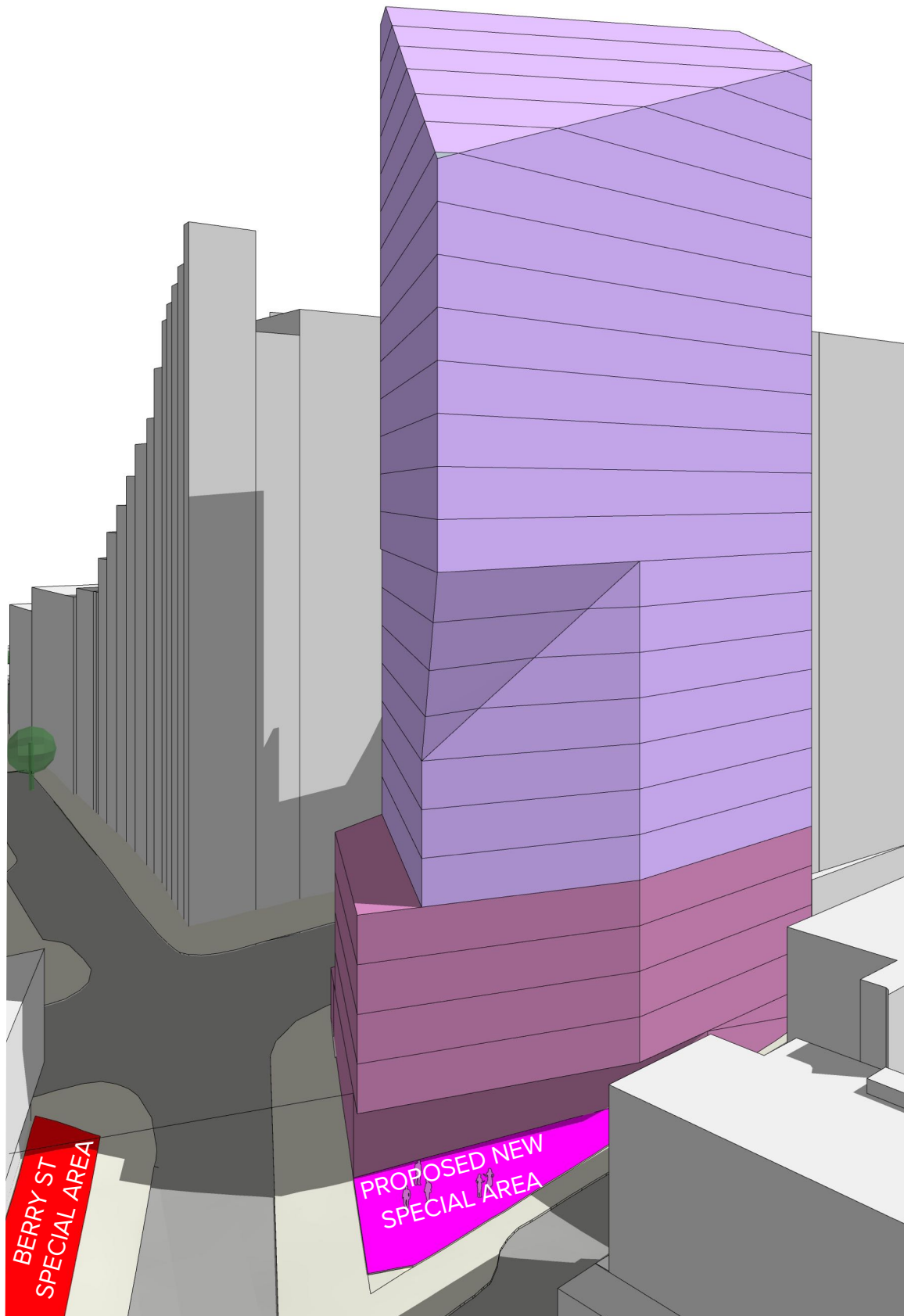




COMPLIANT ENVELOPE

The cumulative effect of the various shadowing restrictions results in a steeply tapering and irregular building envelope. This form is impractical in shape and does not achieve much more yield than the existing building. The estimated yield of this option is 13,260sqm (existing building GFA = 9,026sqm)

These factors demonstrate that the site is unfeasible for redevelopment within the current planning constraints.



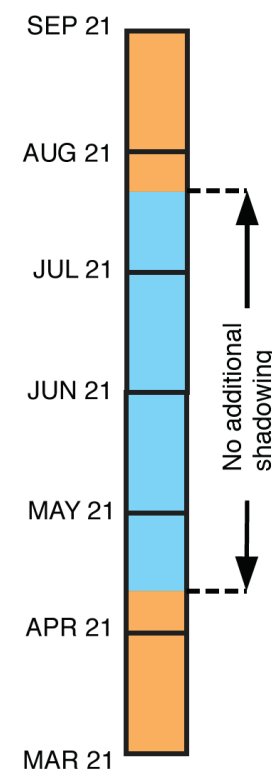
PROPOSED ENVELOPE FORM

The envelope form of the proposal has been shaped to comply with the solar controls set out in NSLEP Clause 6.3 with the exception of Special Area opposite the site on the south side of Berry St.

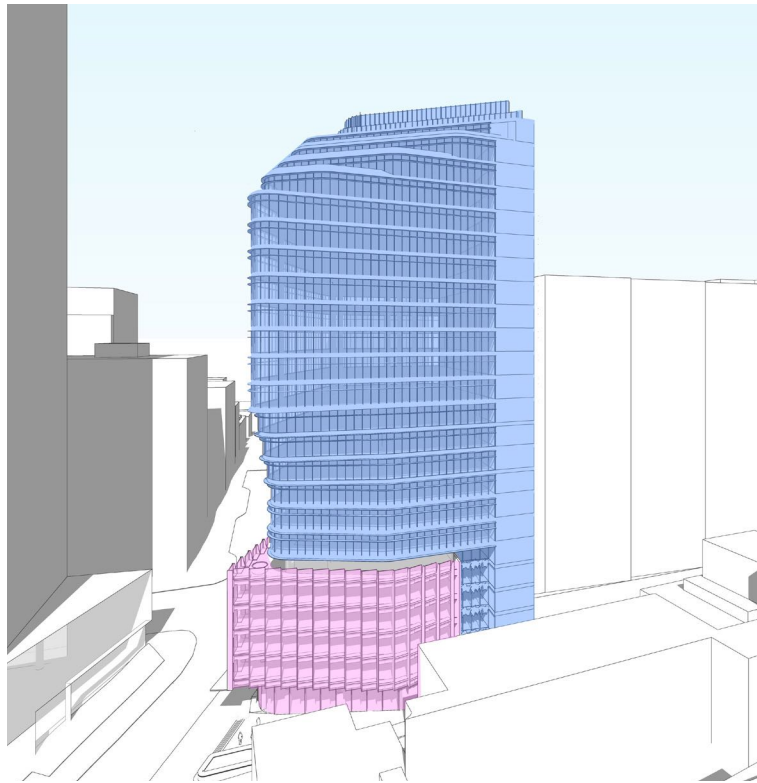
The design minimises its impact to the Berry St Special Area, however it does cause a net increase in shadowing to the Berry Special Area approaching the equinoxes.

The proposed envelope includes a proposed new special area of approximately 200sqm on the south-eastern corner of the site. This proposed Special Area provides usable, open space with good levels of solar access. Sun-hour analysis included within this report demonstrates that the sun-hours to the proposed new Special Area exceeds the reduction of sun-hours to the existing Special Area on Berry Street caused by the proposed development. The proposal results in a net increase of sun-hours between 21 March and 21 September.

The proposal is 24 storeys and 102m in height with an approximate GFA of 22,750sqm GFA



MASSING

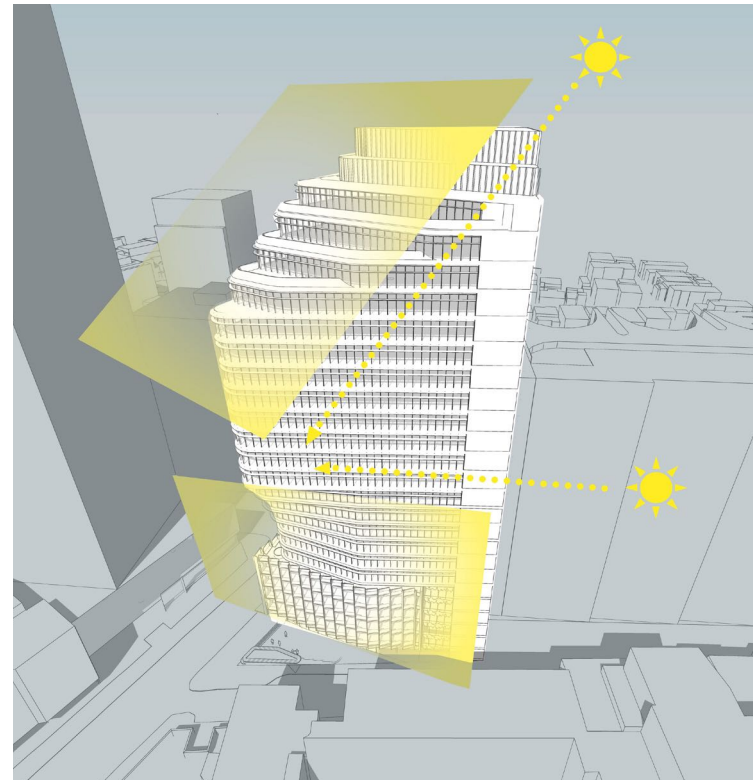


TOWER AND PODIUM

In line with the DCP. The proposed massing consists a tower on a podium.

The podium provides a human scale and mitigates wind impact

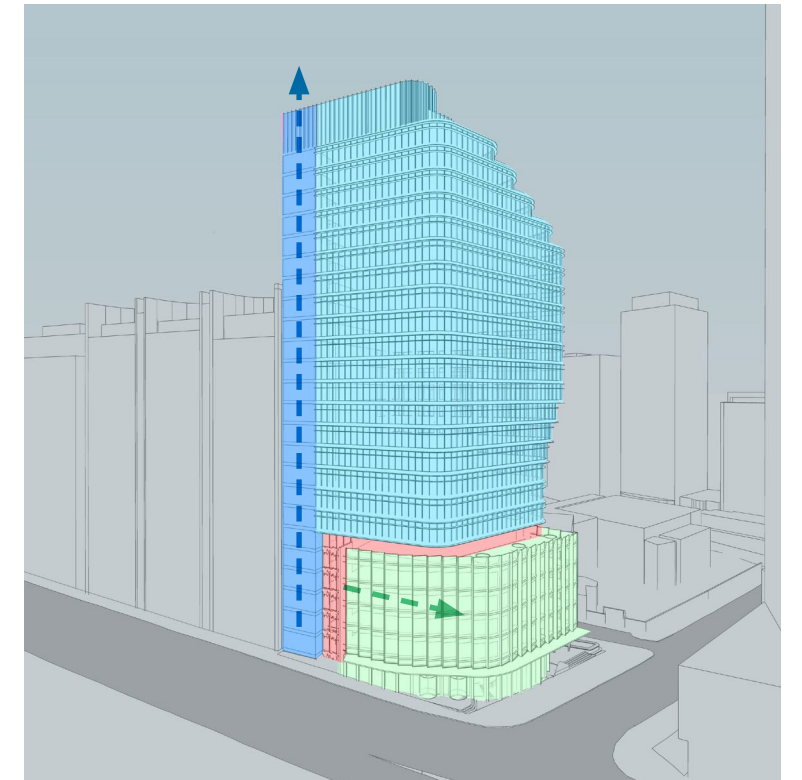
The podium is pulled away/shifted from the main tower from.



SOLAR PLANE

In a similar fashion to numerous other proposals in North Sydney the proposed tower is sculpted to minimise the shadowing impact. The design avoids addition shadowing impact to Special Areas, with the exception of the Berry St Special Area. It avoids any overshadowing of The Don Bank and Miller st Special Areas - which may have been affected by a tower in this location.

Please refer to Chapter 7 : Shadowing Analysis for a detailed explanation of the shadowing impacts of the proposal

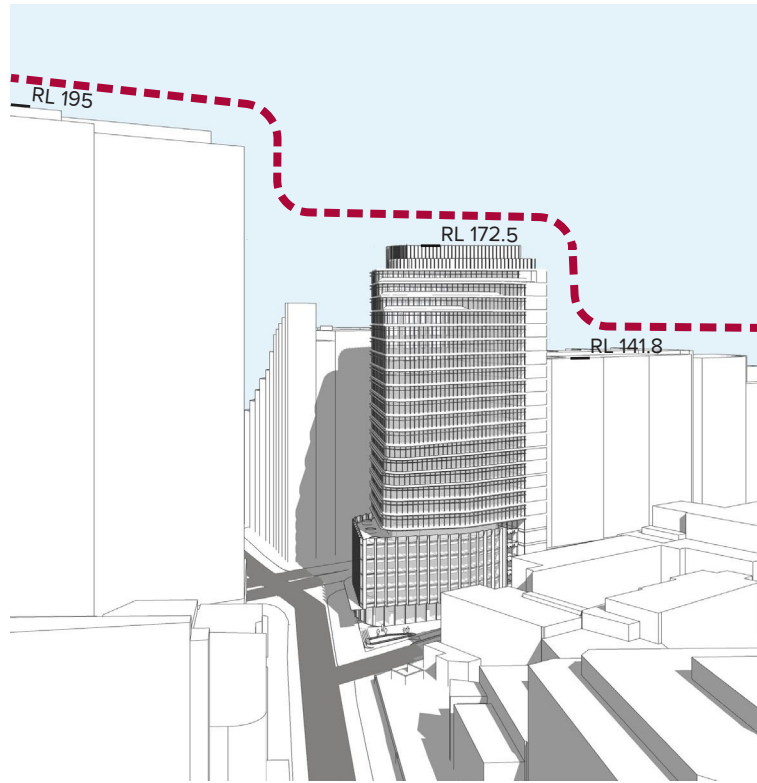


ARTICULATION

The tower's form is modulated by a number of devices to help reduce apparent bulk and provide a sense of scale.

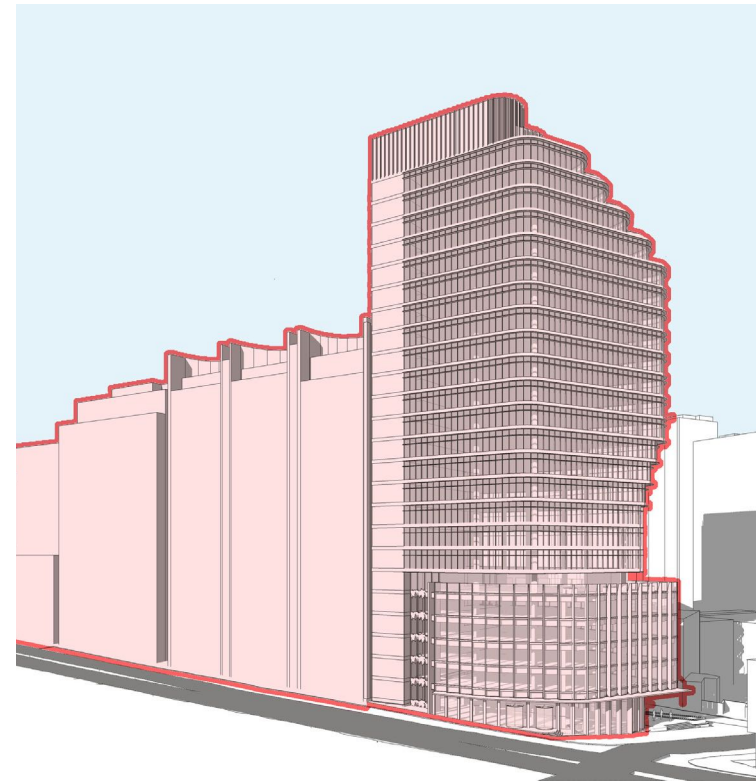
- The podium has a serrated treatment emphasizing the turning of the corners
- Curved corners soften the main upper tower form
- The junction of the podium an the tower is articulated by an undercut recess and a vertical slot
- The tower form is anchored to the North by the solid expression of the stair/lift core

BULK AND SCALE IN CONTEXT



RELATIVE SCALE

The scale of the tower mediates between the scale of 177 Pacific Highway (Top RL 195m) and the scale of the Skye apartments RL.(141.80) to the North. The stepping form relates to 150 Pacific Highway (Polaris) building to the west



CITY BLOCK

The proposed tower terminates the southern end of the 'street wall' block of buildings that extends to the North along the Pacific Highway. The Pacific Highway and Angelo St facades align with this block



BUILDING FORM

The proposal's sculptural form mitigates the impact of its scale. The planes of the facades transition smoothly around curved corners. Stepped transitions and indents further reduce the scale of the facade elements. The building presents a "front facade" to all sides without blank side walls.

Built Form - Setbacks

Section 2.1.3 of the North Sydney DCP requires the following setbacks:

Maximum 5 storey Podium

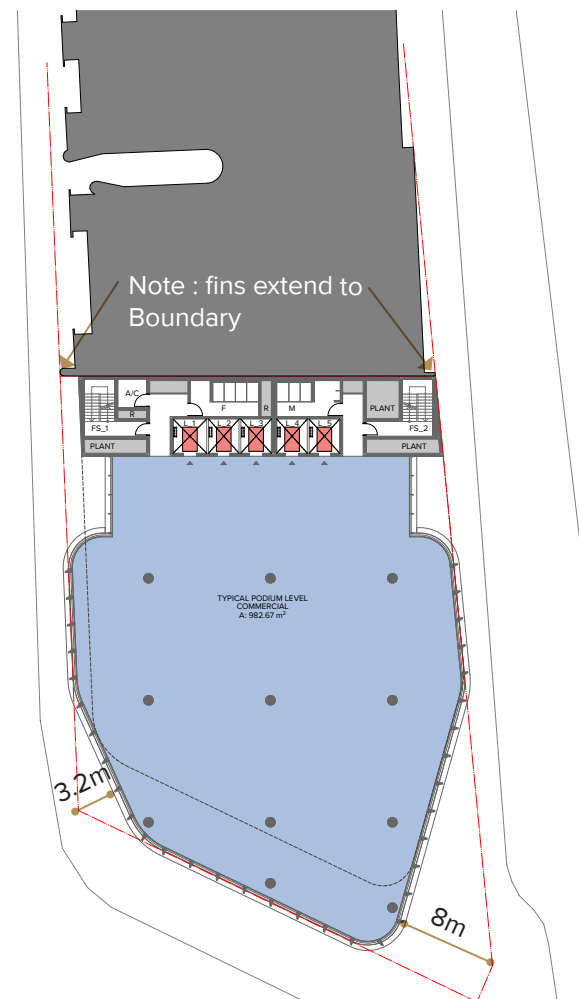
2-3 Storey Podium to Angelo St

0m setback to podium

5m Setback above podium

The existing Tower has 0m setbacks to the podium. The existing tower has 0m setbacks to the Pacific Highway and Angelo St. The existing tower is setback between 6 and 22m from Berry St.

177 Pacific Highway to the south has a 0m setback to the Pacific Highway

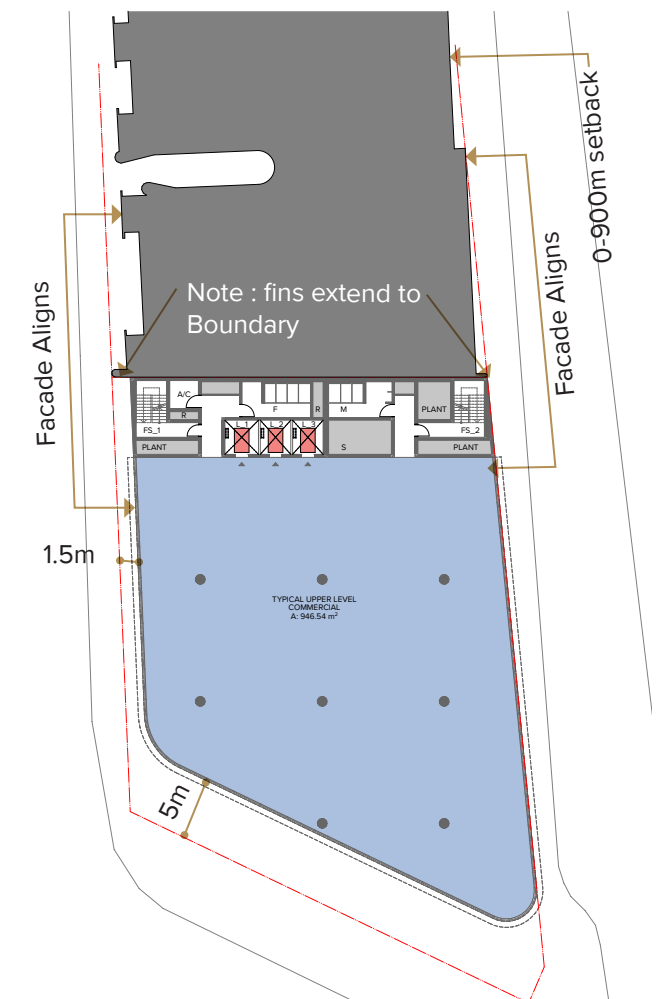


PODIUM

The proposal has a 5 storey podium which complies with the DCP for Berry St and the Pacific Highway. The podium maintained at 5m to Angelo St for visual consistency.

The podium generally has a 0m setback with a number of insets and chamfers for improved light and amenity. Both of the southern corners have been chamfered, which minimises shadowing to the existing Berry St Special Area and contributes space and natural light at ground level to the main building entry and Plaza,

A indent to the facade to the south of the core articulates the podium from the stair/lift core.



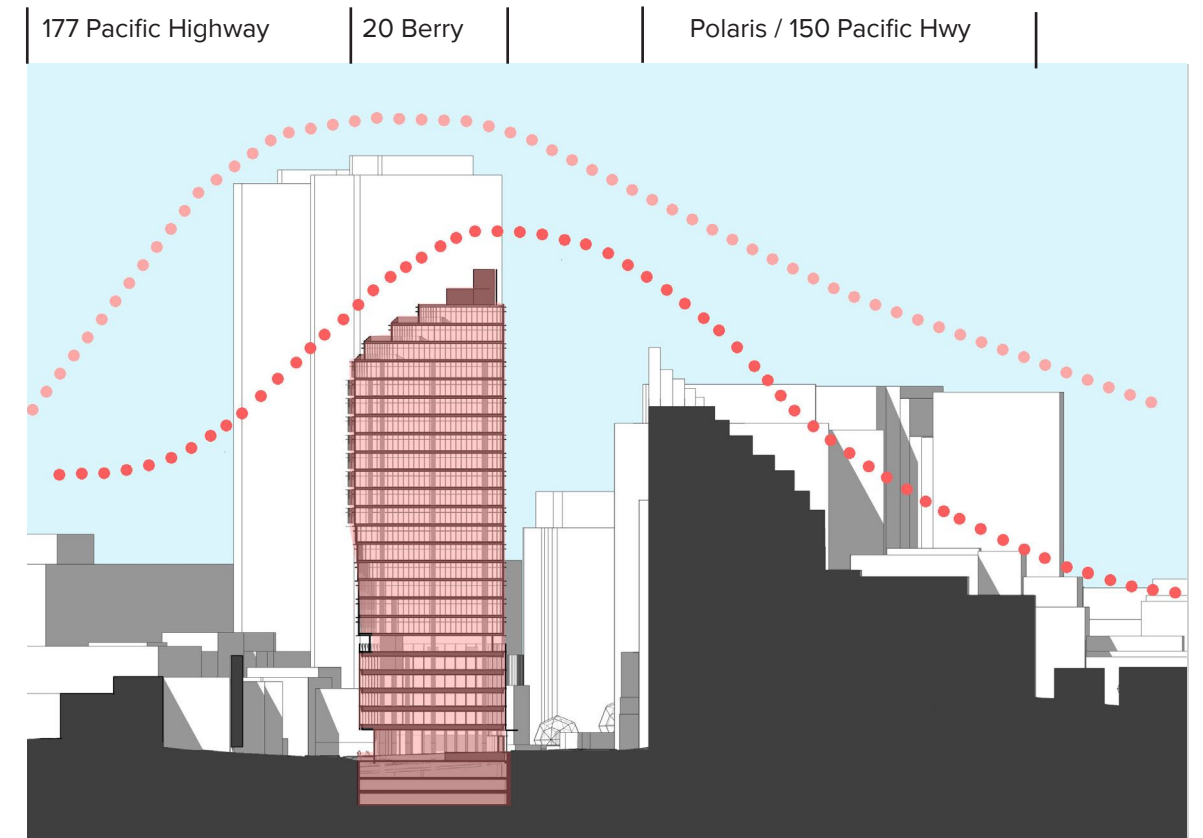
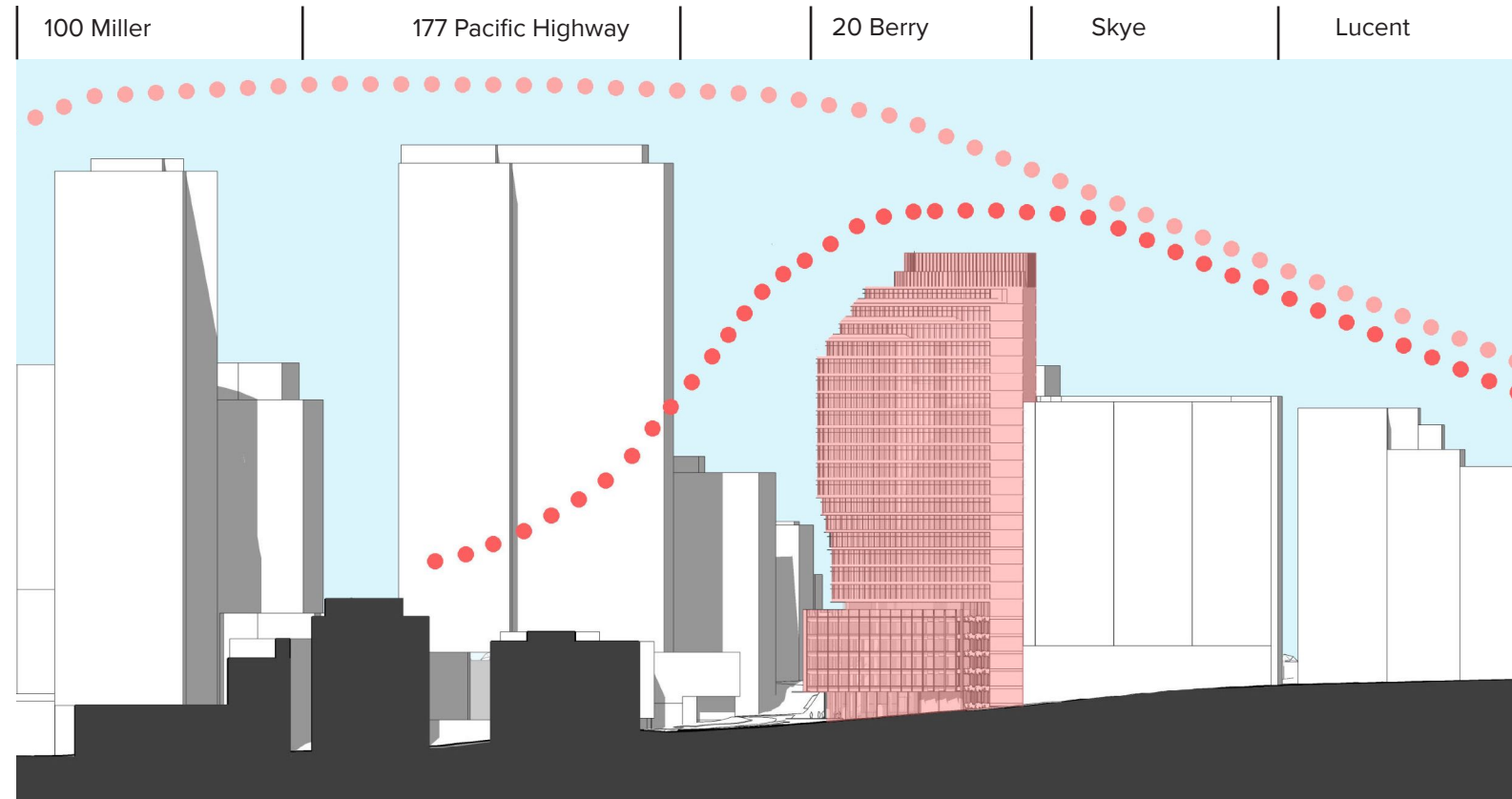
TYPICAL UPPER LEVEL

The 5m DCP tower setback is observed to Berry St.

The east and west facades take their alignment from their northern neighbour - Skye apartments. The Angelo Street side of Skye has an indented form that could be considered a 0m setback. The proposed building has a 0m setback to Angelo St. The Pacific Highway side of Skye has an indented facade with the main outer facade being 1.5 m from the western boundary which the proposal aligns with.

Also notable are the 'fin' facade elements on the southern wall of Skye that extend to the boundary on both eastern and western sides.

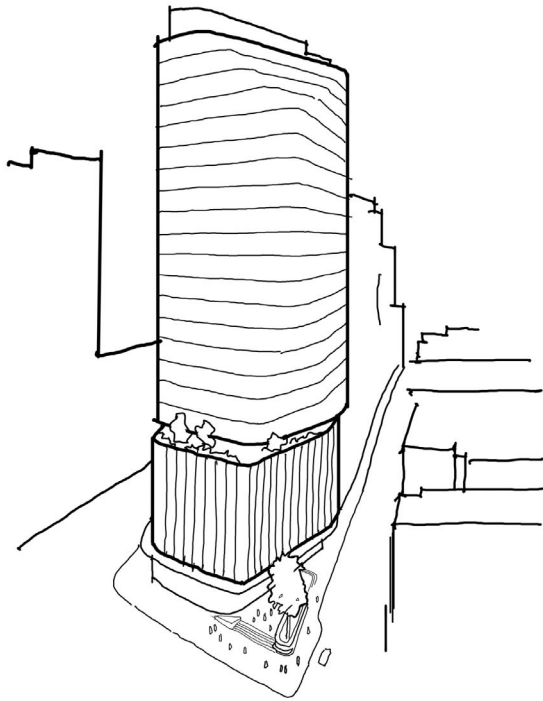
HEIGHT AND SCALE



HEIGHT AND SCALE

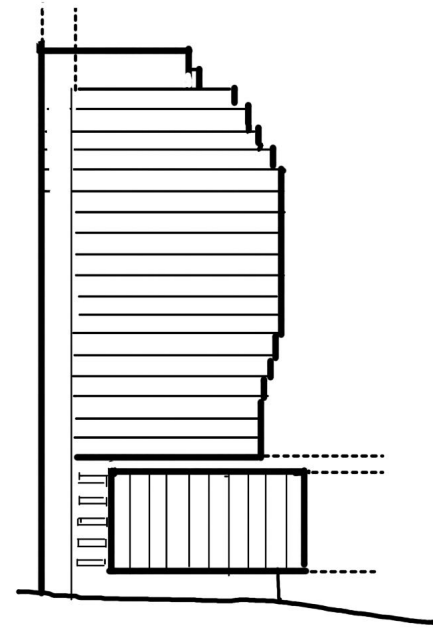
The proposal sits at the northern edge of the tall building cluster of the North Sydney CBD and immediately to the south of two of the tallest towers - 177 Pacific Highway and 100 Miller St. The tower's relative bulk and scale is a transition between the taller towers to the south and the residential /mixed use towers to the north and west.

DESIGN PRINCIPLES 06



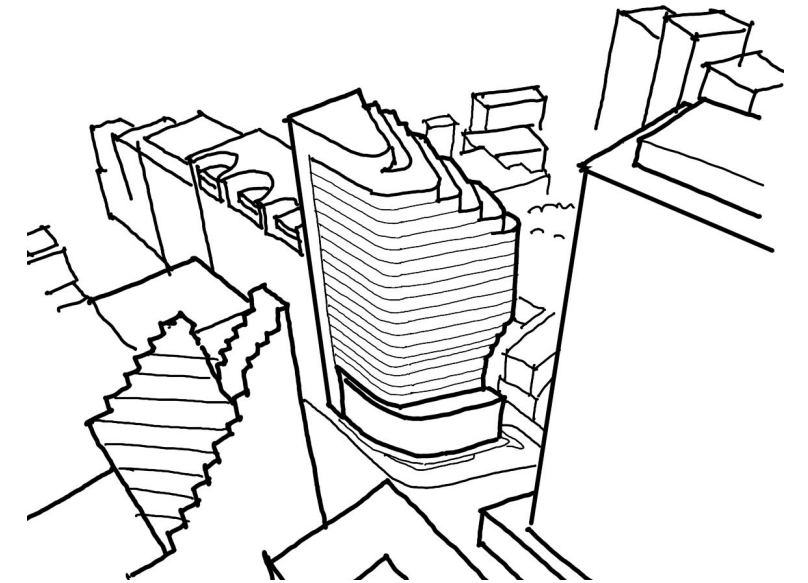
LANDMARK ARCHITECTURE

A distinctive architectural response with quality materials and a defined silhouette.



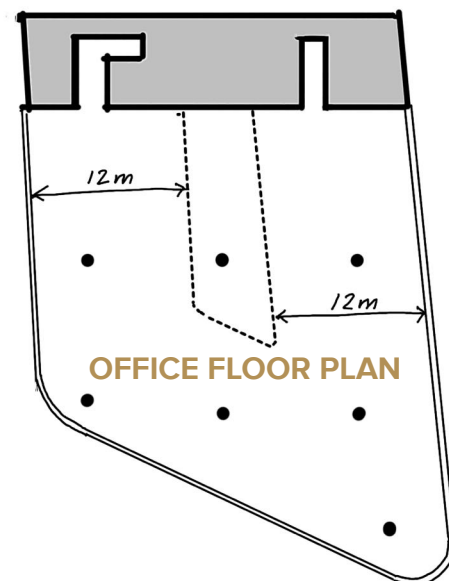
SCALE

A design that mediates its bulk and scale through a series of setbacks and form articulation.



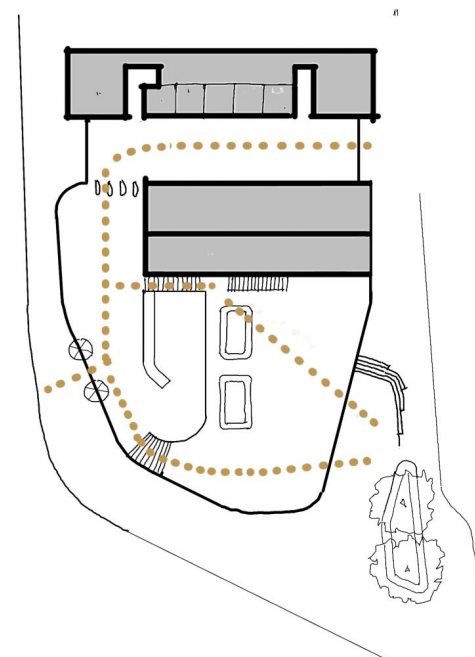
ENVIRONMENT

The design considers its impact in terms of solar access, reflection and wind environment.



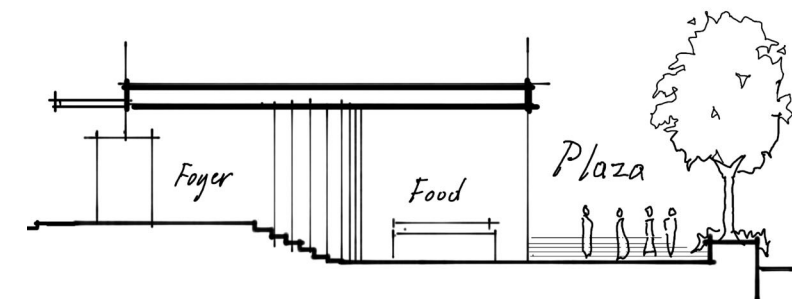
A HIGH QUALITY WORKPLACE

The proposal provide large regular floorplates with an extensive glazed perimeter providing natural light and access to views.



A POROUS GROUND PLANE

A ground plane that is permeable and creates new connections to adjoining streets and potentially to adjacent developments.

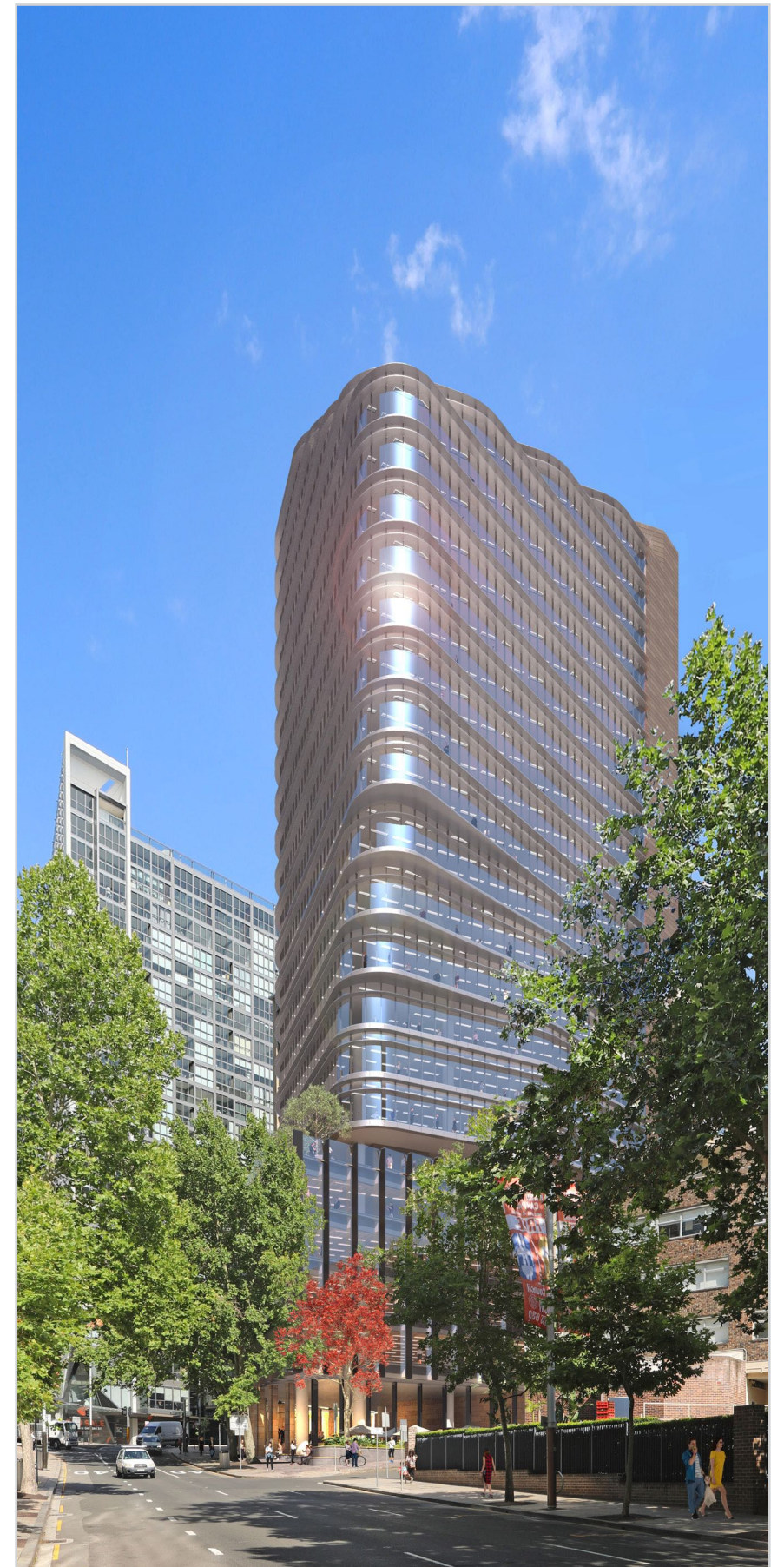


SITE TOPOGRAPHY

The ground plane needs to mediate the sloping topography to maintain an active and well resolved street interface.

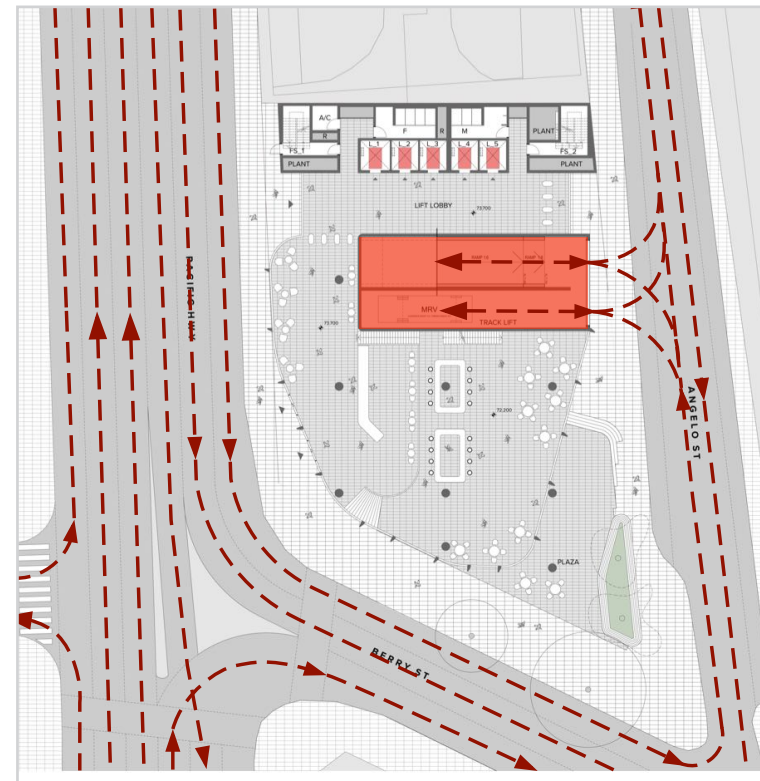
A LANDMARK BUILDING

The proposal has a singular consistent expression, giving it a unique identity within the tall buildings of North Sydney. The facade to the Pacific Highway is a taut plane maintaining the Pacific Highway facade alignment. The expression to Berry St changes as the building steps in both above and below to reduce solar impact to the Berry St Special Area. This practical requirement has been sublimated and developed into a distinctive sculptural form. Soft curves further unify the facade and soften the transitions of its form.



ACCESS

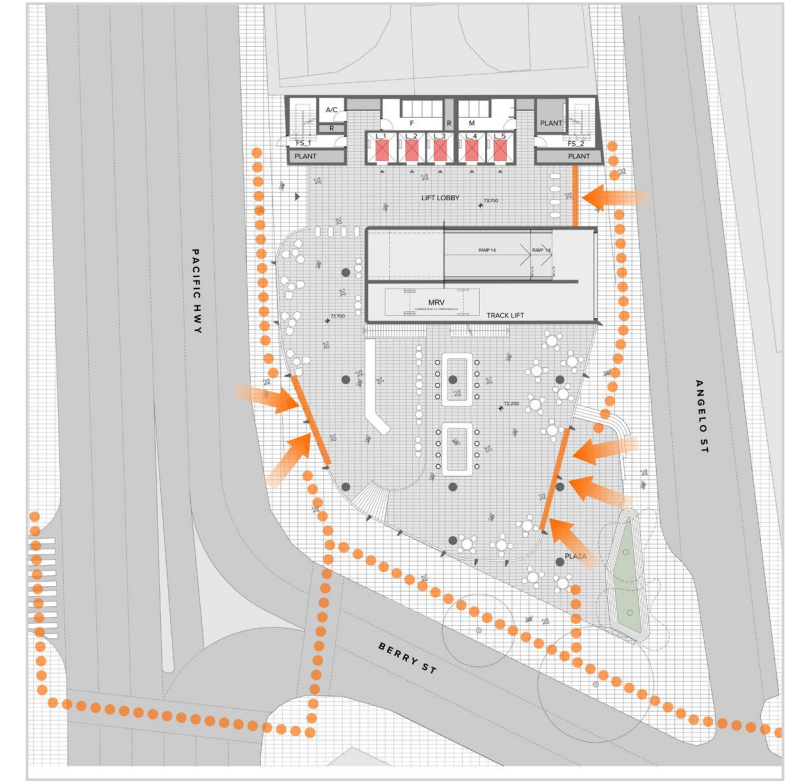
The proposal had considered how the building is accessed with a focus on pedestrian convenience and legibility. Vehicle access is discretely but practically located.



VEHICLE ACCESS AND LOADING

The proposal locates access and loading off Angelo Street - in the same location as the existing building. Car parking is located below ground with access via a ramp. For trucks and service vehicles there is a lift (sized for an MRV) with a turntable and loading dock at basement level.

Refer to traffic report by Colin Henson//SMEC for further information.

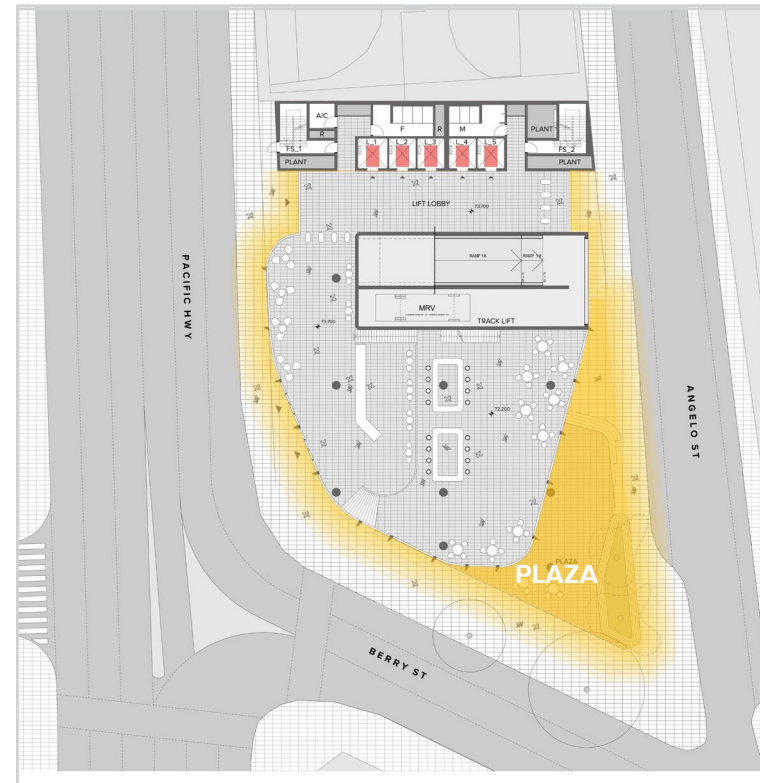


PEDESTRIAN ACCESS

The main building access point is positioned on the Berry St / Pacific Highway junction, close to the pedestrian crossing. The facade is chamfered back to give some additional room to the pavement. The food and beverage offering are located to open out onto the proposed Plaza to the south-east of the site.

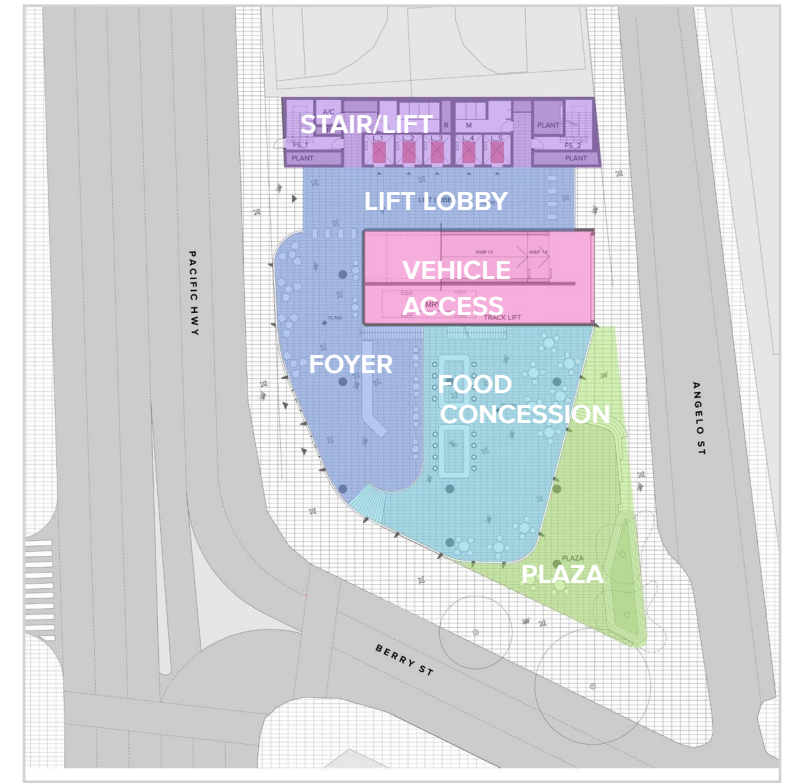
GROUND PLANE ACTIVATION

The proposal provides activation to all street frontages.



STREET ACTIVATION

The proposal arranges an active program to its street frontages. The combination of retail and lobby will provide active usage throughout the course of the day. The Plaza invites the broader public to engage with the building.



GROUND FLOOR USES

The ground floor has been arranged to optimize activation and visibility from outside to inside. The service components, stair/ lift core and parking ramp are located to the north of the site, permitting an open layout to the (more visible) south of the site. This configuration permits clear view lines between the foyer, concession area and plaza. The ground floor plan is split/level. The Main building Entry accesses the upper portion and is located on the corner of Pacific Highway and Berry St. The lower section is set at the level of the Plaza.

PUBLIC OPEN SPACE

As noted in the North Sydney CBD Public Domain strategy, North Sydney has a dearth of public spaces. The proposal makes available 200sqm of the site for a publicly accessible Plaza. It is proposed that the LEP is amended to add this 200sqm is added to the North Sydney Special Area Sheet CL1_002A



PLAZA DIMENSIONS

200sqm of the site is to be made available as a public open space. The location of this plaza is adjacent to wide area of paving at the junction of Berry and Angelo St. When one includes the area of adjacent footpaths the effective area of the plaza is approximately 450sqm - a considerable small public space. The Plaza enjoys direct sun in the mid to late morning for most of the year. The usability of the space is further extended when one considers the 400sqm food concession area in the base of the tower.



VIBRANT PUBLIC SPACE

The proposed plaza is relatively sheltered from road traffic with much of it well set back from Berry St. The Plaza is intended to be an out-go space for the food and beverage offerings located immediately inside. It enjoys mid to late morning sun throughout the year. It mediates the changes in level of the adjacent footpaths to be fully accessible for all users. It will provide a welcome addition to the public spaces of the North Sydney CBD.

PROPOSED SPECIAL AREA



AERIAL VIEW OF PLAZA



VIEW OF PLAZA FROM SOUTH

NORTH SYDNEY PUBLIC DOMAIN STRATEGY

The North Sydney CBD Public Domain Strategy recognises a need to provide amenity for the 20,000 additional workers that will work in North Sydney CBD by 2036. In particular it notes that the new Victoria Cross Station (150m from the site) will be one of the main arrival points of these workers. The document identifies a need for more public space within the CBD.

The specific section on Berry Street notes:
“Berry St has strong potential to become a pleasant, green and sunlit boulevard with upgraded footpaths, awnings, outdoor dining, new squares and new architecture with the redevelopment of the Ward Street Precinct and the opening of the new Metro Station.”

The proposed Special Area/plaza will increase the amenity of Berry St by providing an outdoor space with good amenity in line with the goals of the North Sydney Public Domain Strategy. It is noted that the immediate area near the Pacific Highway is particularly lacking in public outdoor spaces.



PLACEMAKING VISION - NORTH SYDNEY PUBLIC DOMAIN STRATEGY

YIELD SUMMARY

Total GFA	22,7500 sqm
Site Area	1,391 sqm
Floor Space Ratio	16.35:1
Maximum Height	102 m
Office parking	57 spaces
Bicycle parking	151



SHADOWING ANALYSIS 07

SHADOWING

BERRY ST SPECIAL AREA

The following section examines the affect of the proposal on the North Sydney Special Areas. The proposal only affects the Berry St Special Area and avoids shadowing the Miller St and Don Bank Special areas. The proposal has been developed to minimise shadowing to the Berry St Special Area, with little or no difference to the shadowing in the mid-winter months of May - July. The proposal's main affect to the Berry St Special Area is in the months close to the equinoxes.

The sun-eye diagrams show the additional shadowing to the foyer of 177 Pacific Highway. These diagrams show that there is little difference to the overshadowing of this space in the mid winter months May-July.

PROPOSED SPECIAL AREA

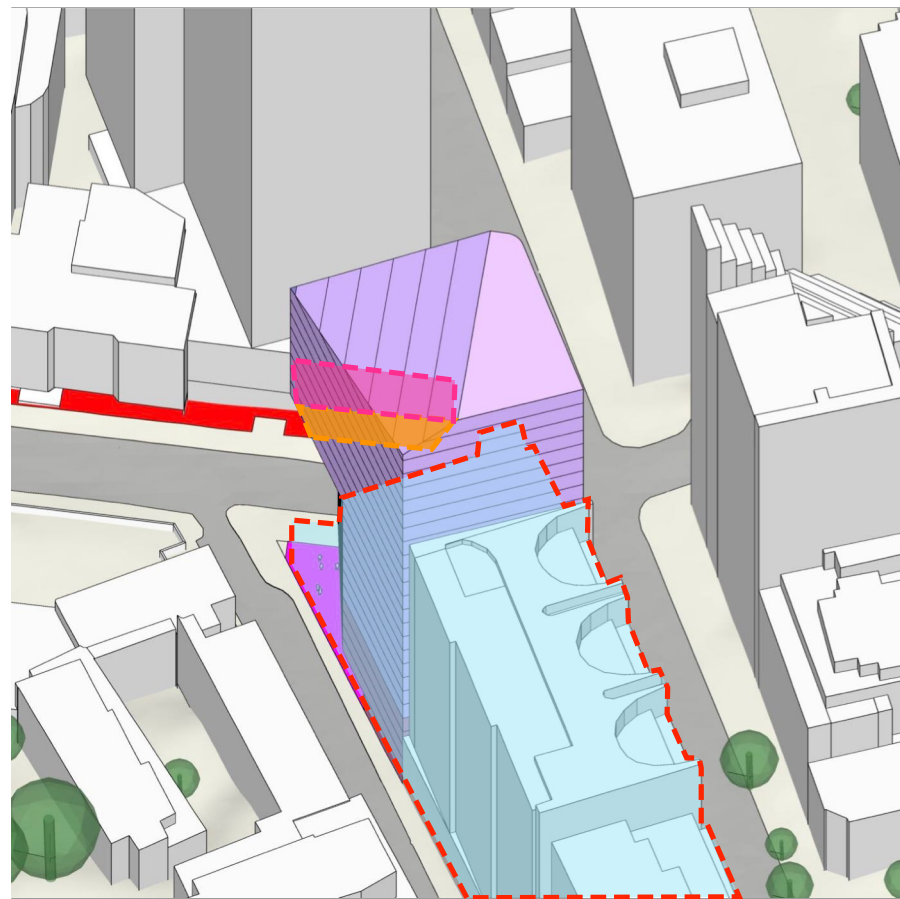
This application proposes to add the proposed plaza to the North Sydney Special area. Our calculations demonstrate that including the plaza as part of the North Sydney Special Areas would lead to a considerable net increase in solar hours equating to an increase in 14% more sun-hours overall.

The Shadow Diagrams demonstrate that the proposed Special Area receives a substantial amount of morning to lunchtime sun throughout the period between the March and September equinoxes. When one also considers the adjacent footpath - which will form part of the overall public space - it is clear that the proposed special area will have a good level of solar amenity.

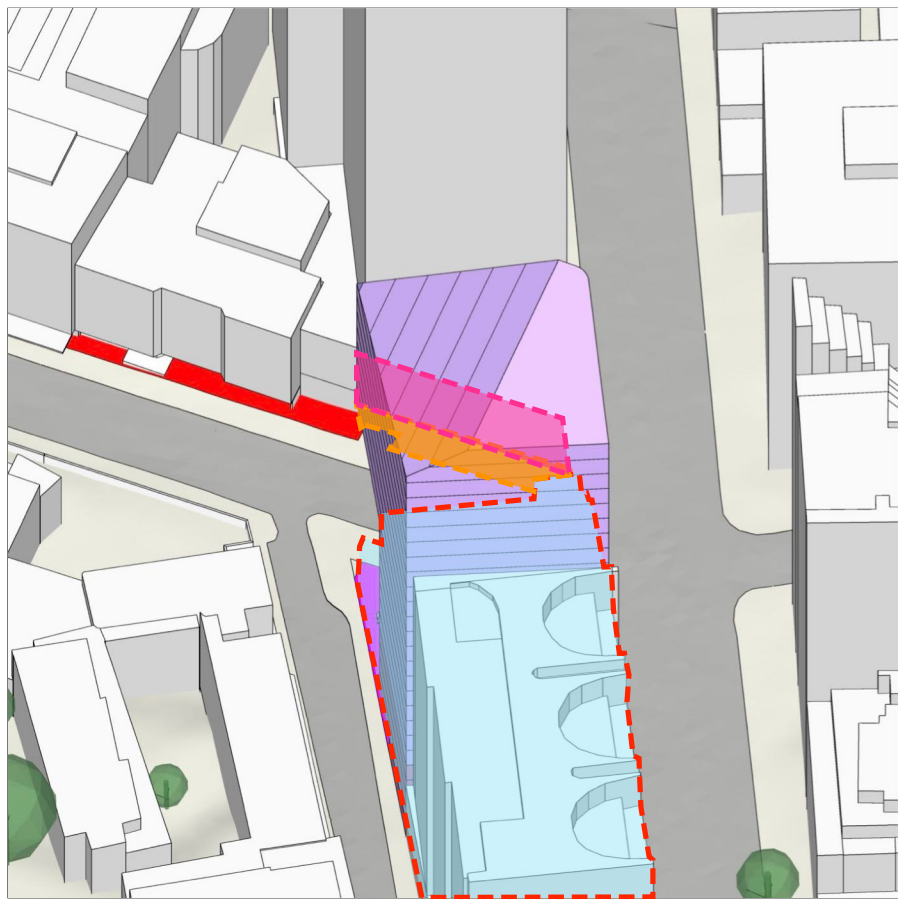
MONT SANT'ANGELO MERCY COLLEGE

Mont Sant'Angelo Mercy College has an LEP Height limit of 16m. The shadowing analysis of the proposed Special Area shows the shadowing effect of the 16m height plane. The analysis demonstrates that a 16m building located anywhere on the Mont Sant'Angelo site would not overshadow the proposed Special Area from 12pm-2pm between the March and September equinoxes. Any future development on the Mont Sant'Angelo would only have a minor shadowing impact earlier in the morning during some months.

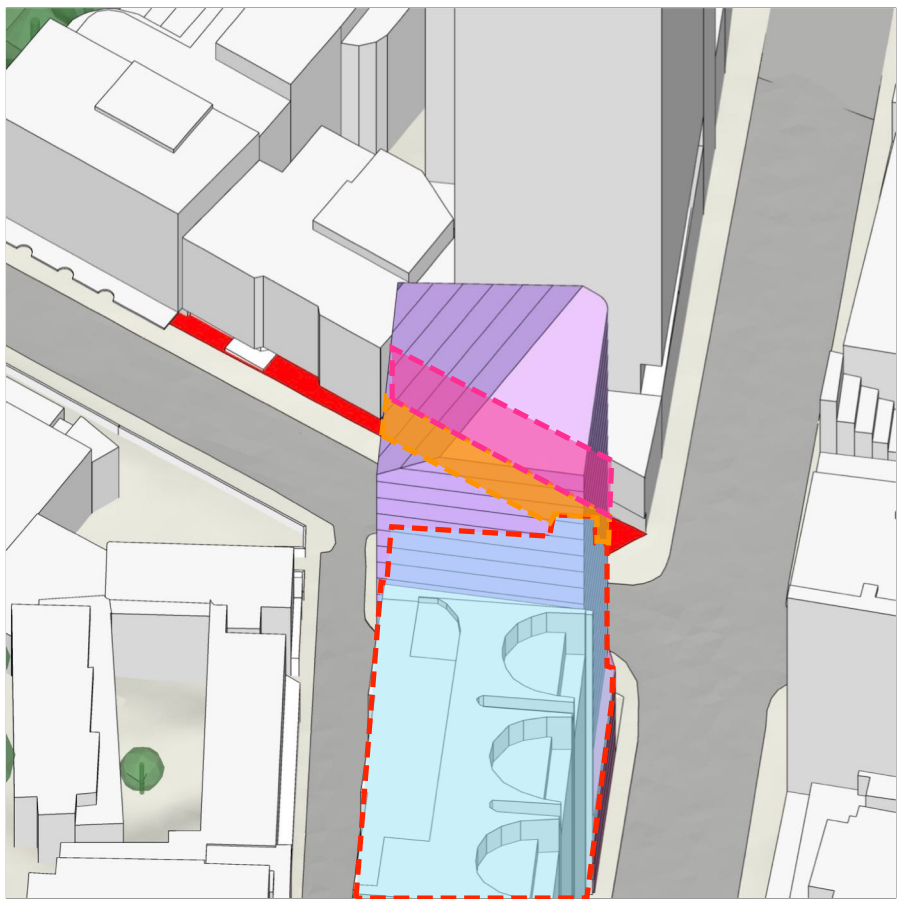
The proposed Special Area will not compromise the development of the Mont Sant'Angelo Mercy College under the current LEP controls



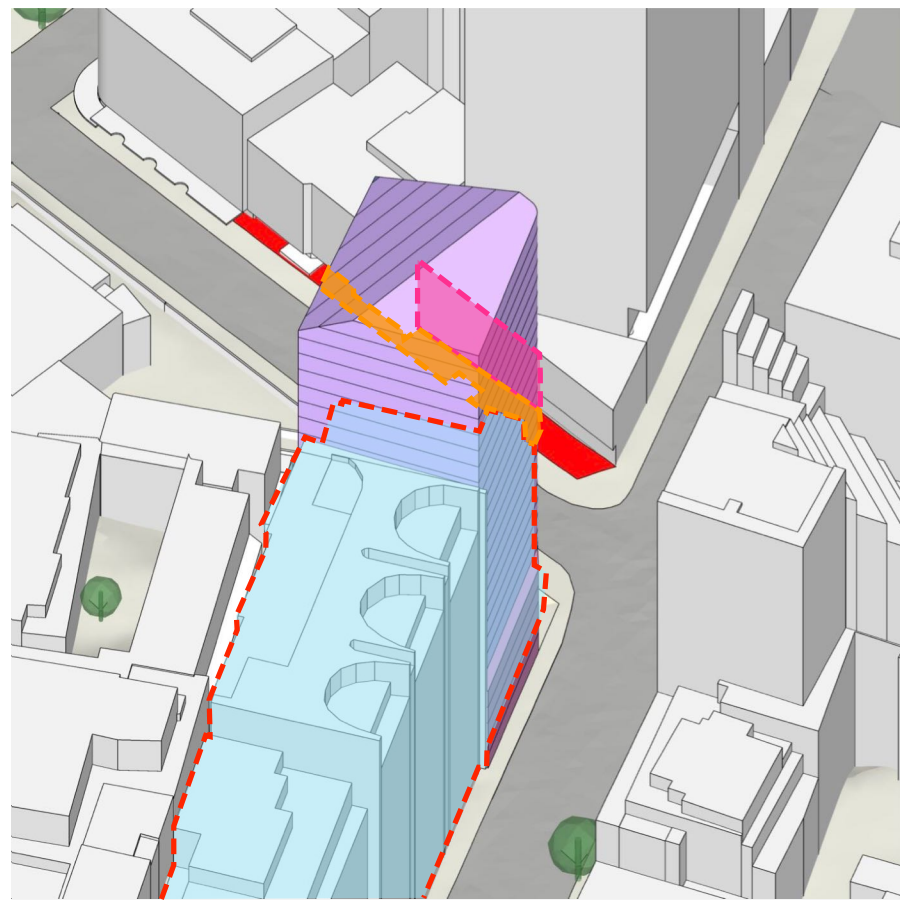
12.00pm



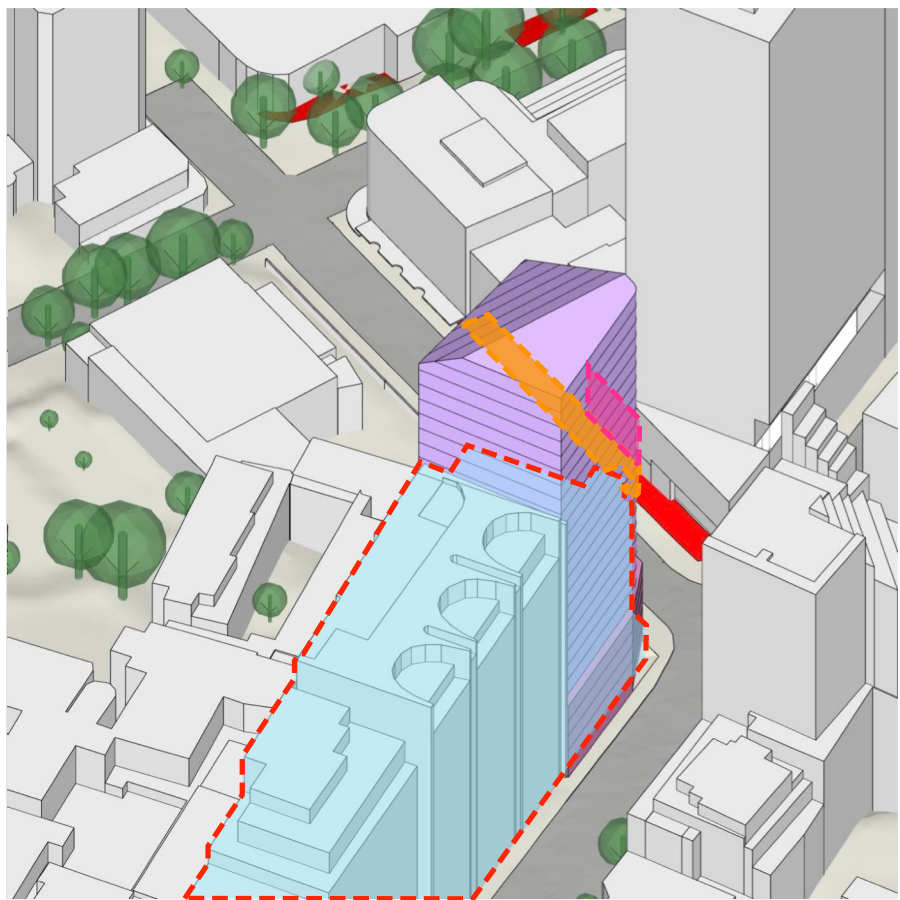
12.30pm






1.00pm



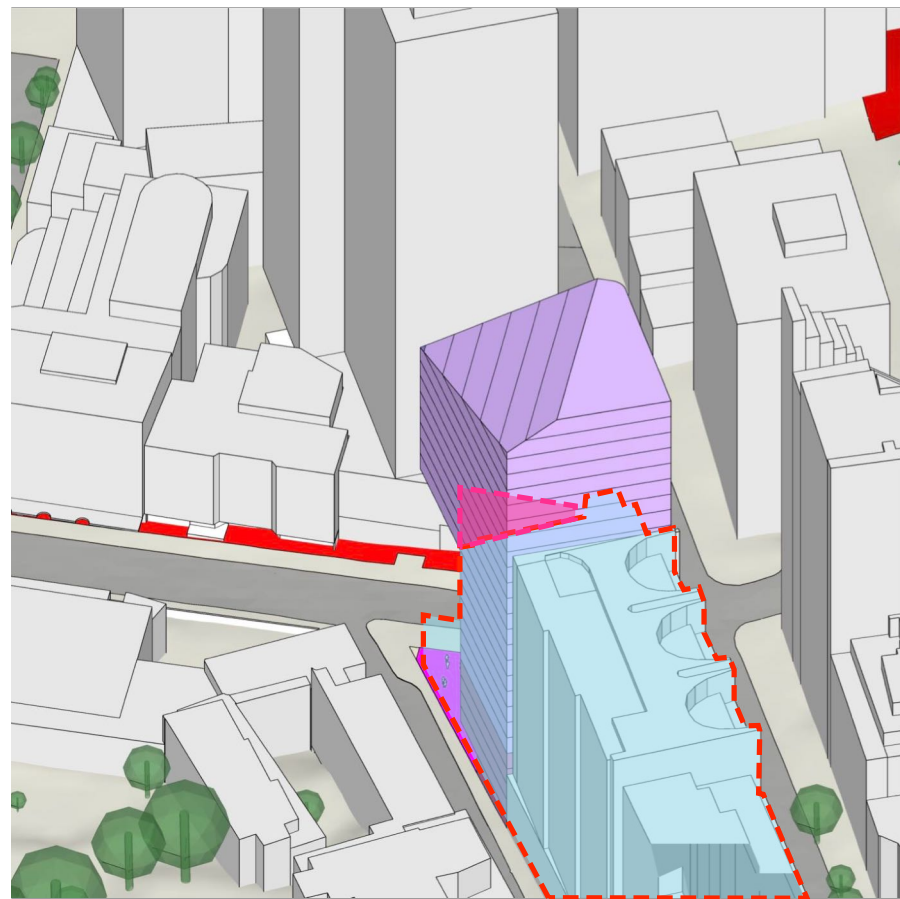
1.30pm



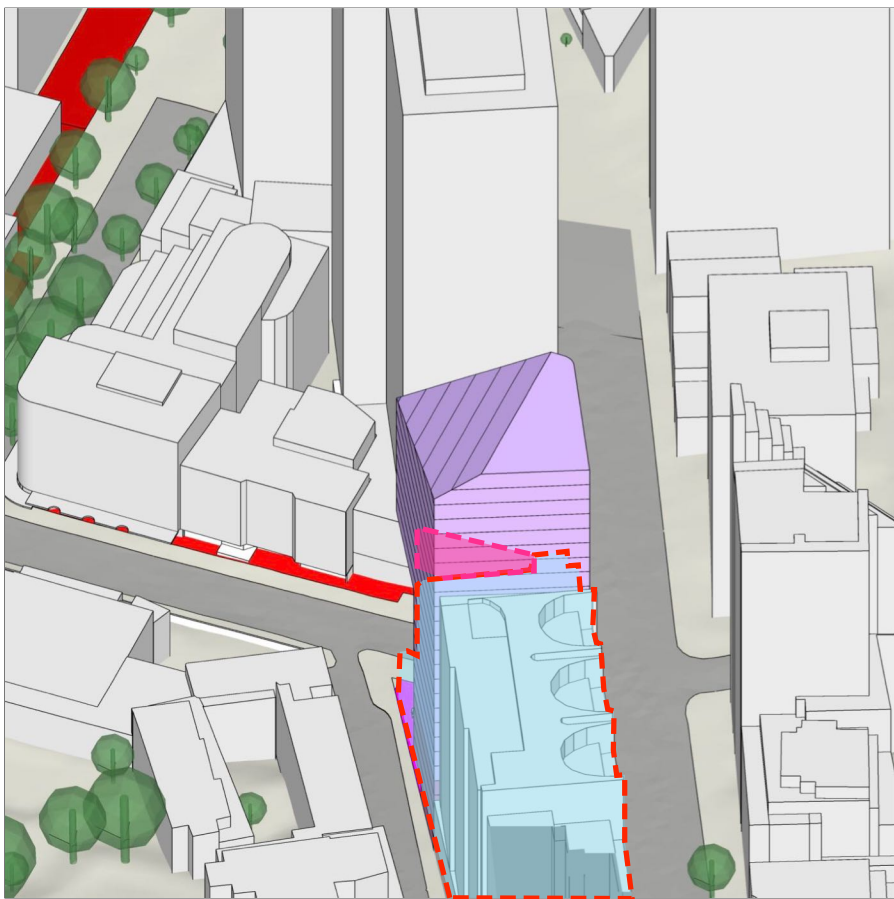
2.00pm

-  Indicates area of additional shadowing to foyer 177 Pacific Hwy
-  Indicates area of additional shadowing to Berry St Special Area Mar21-Sep21
-  Indicates outline of existing buildings

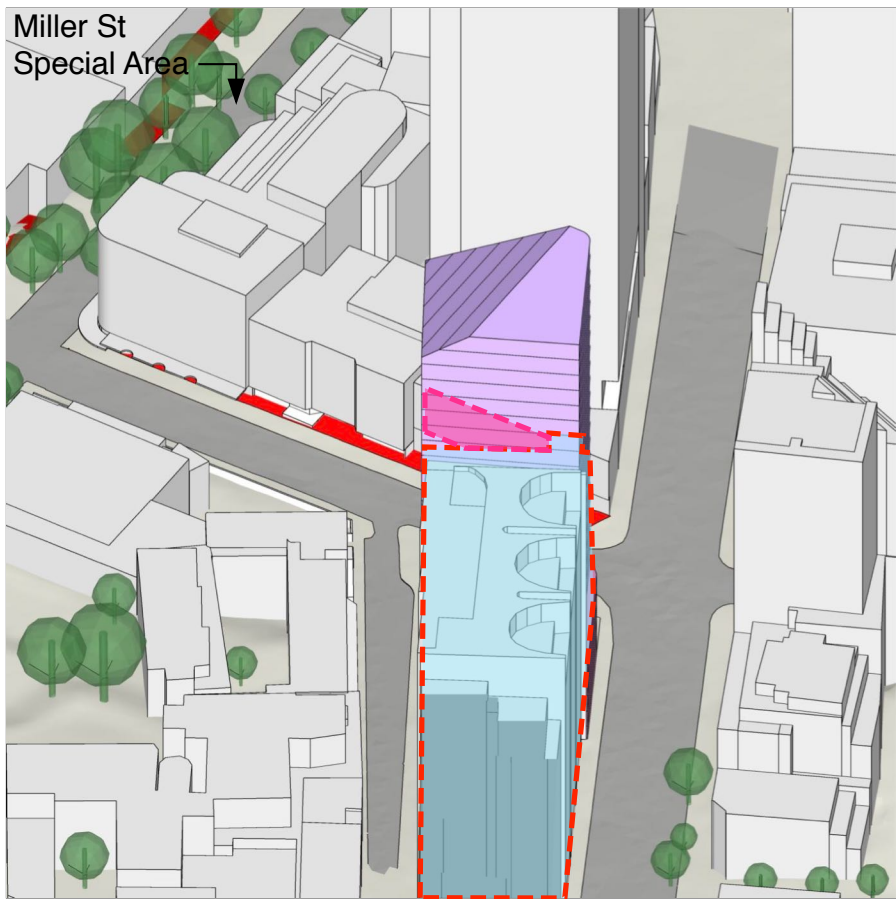
MARCH 21st



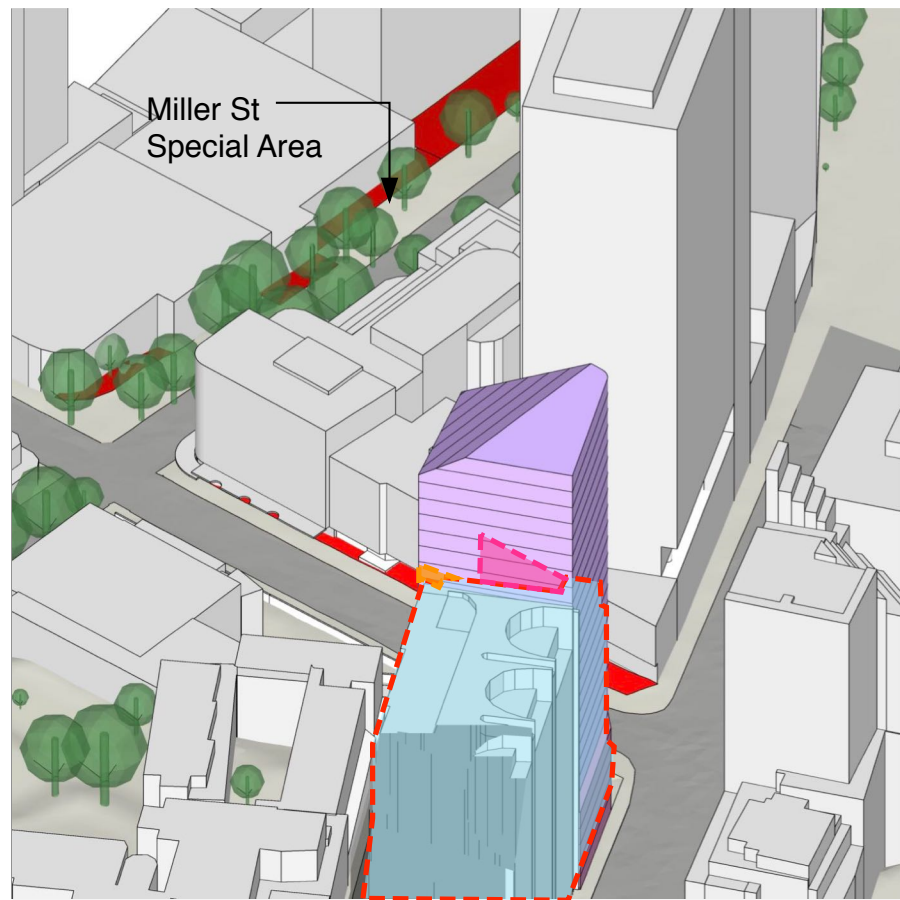
12.00pm



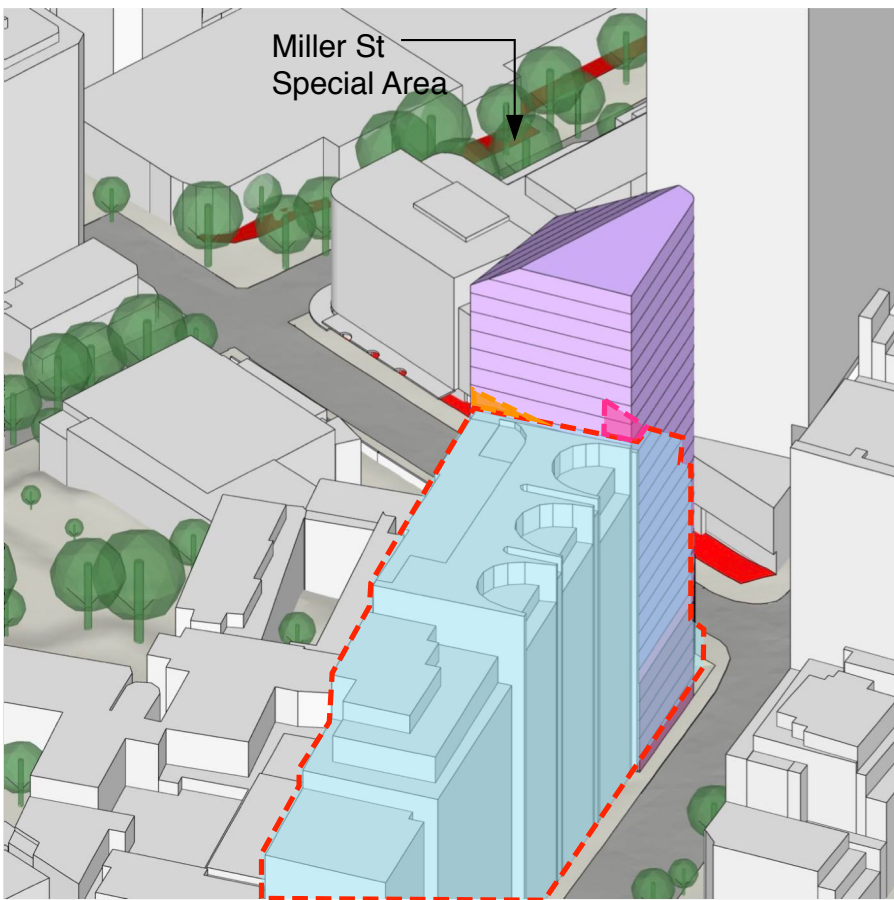
12.30pm






1.00pm



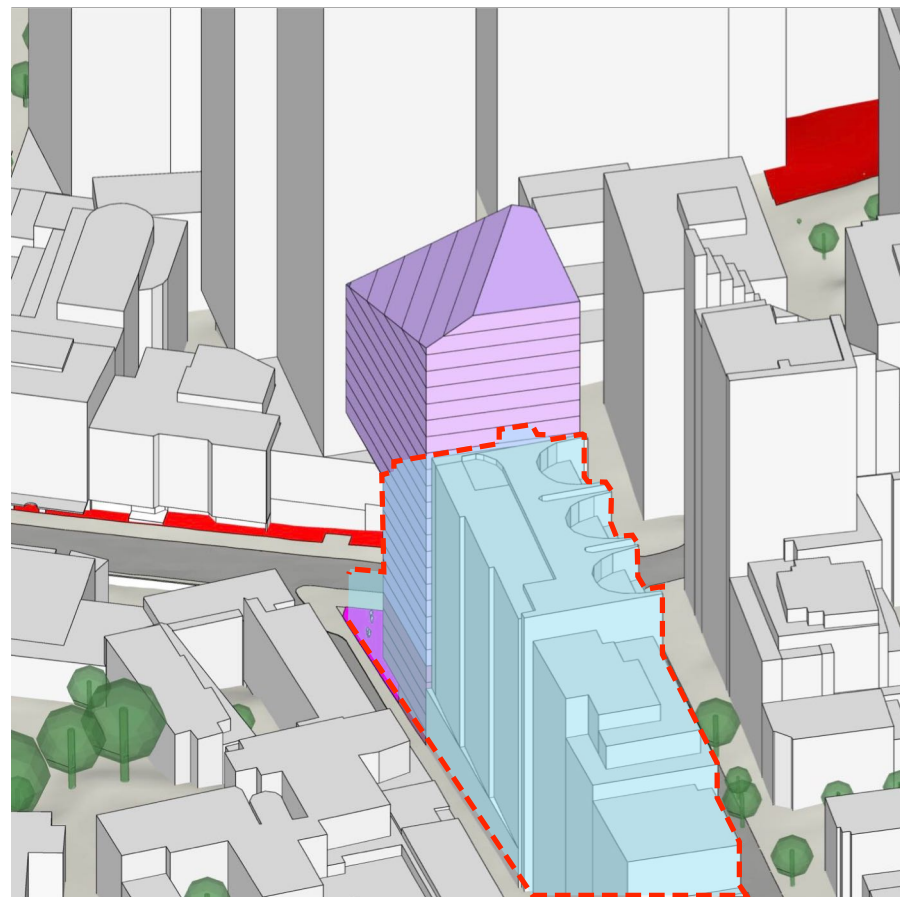
1.30pm



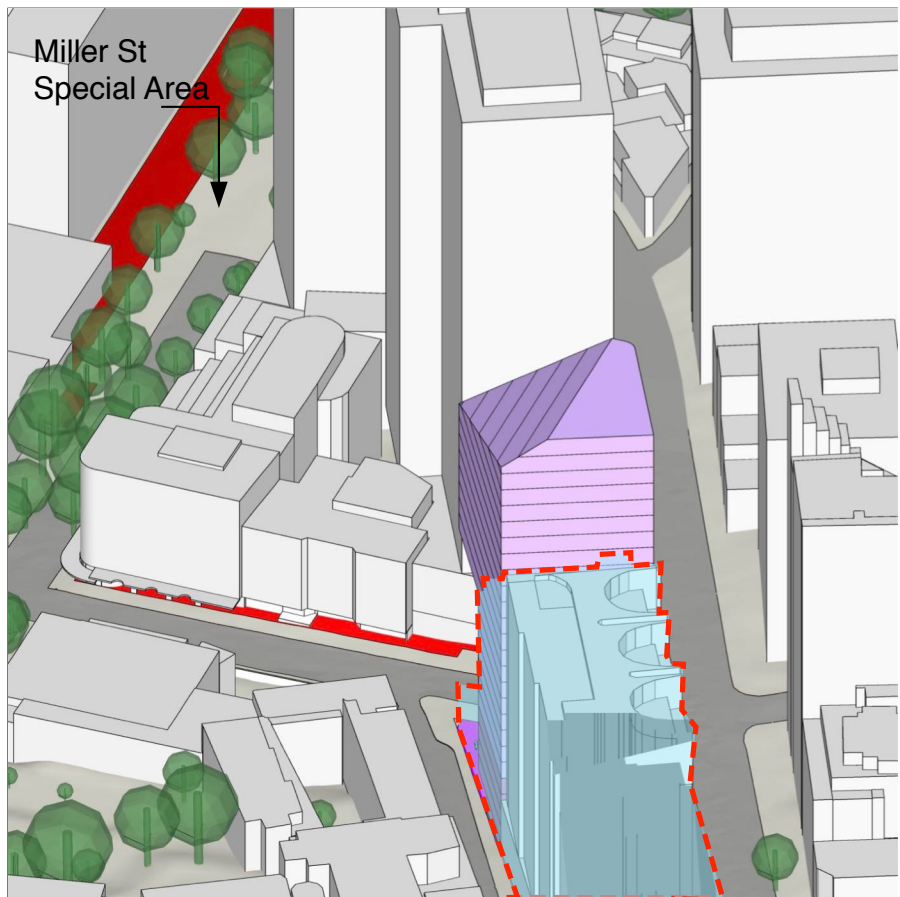
2.00pm

-  Indicates area of additional shadowing to foyer 177 Pacific Hwy
-  Indicates area of additional shadowing to Berry St Special Area Mar21-Sep21
-  Indicates outline of existing buildings

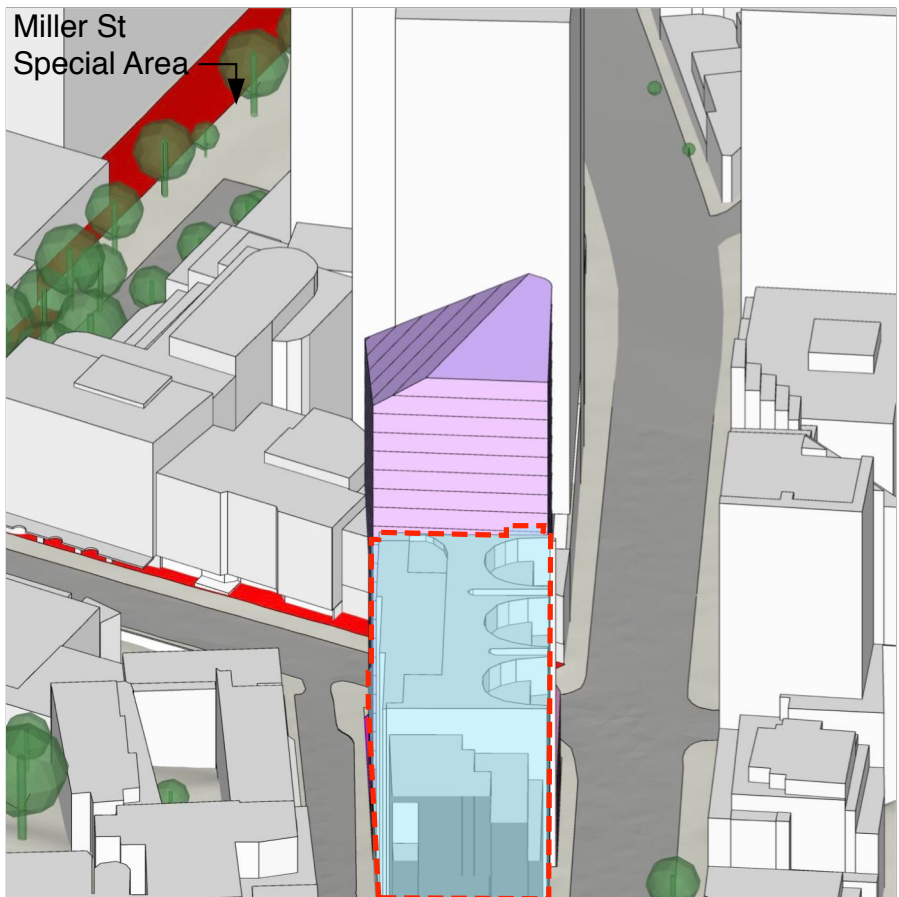
APRIL 21st



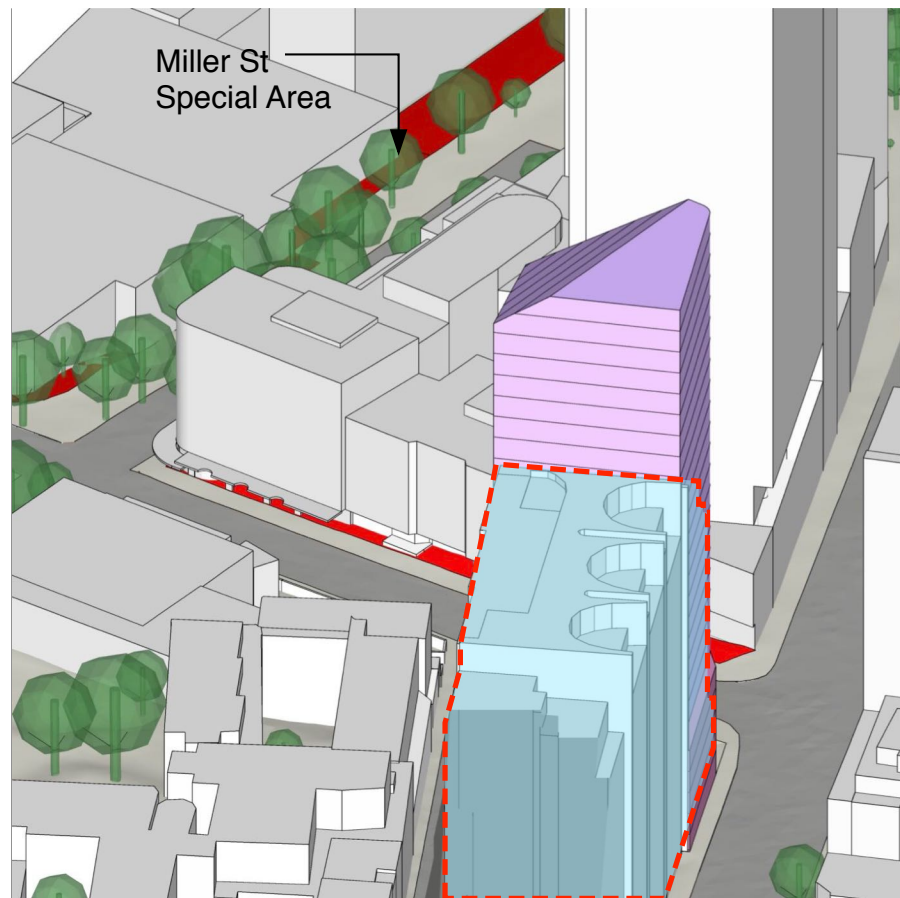
12.00pm



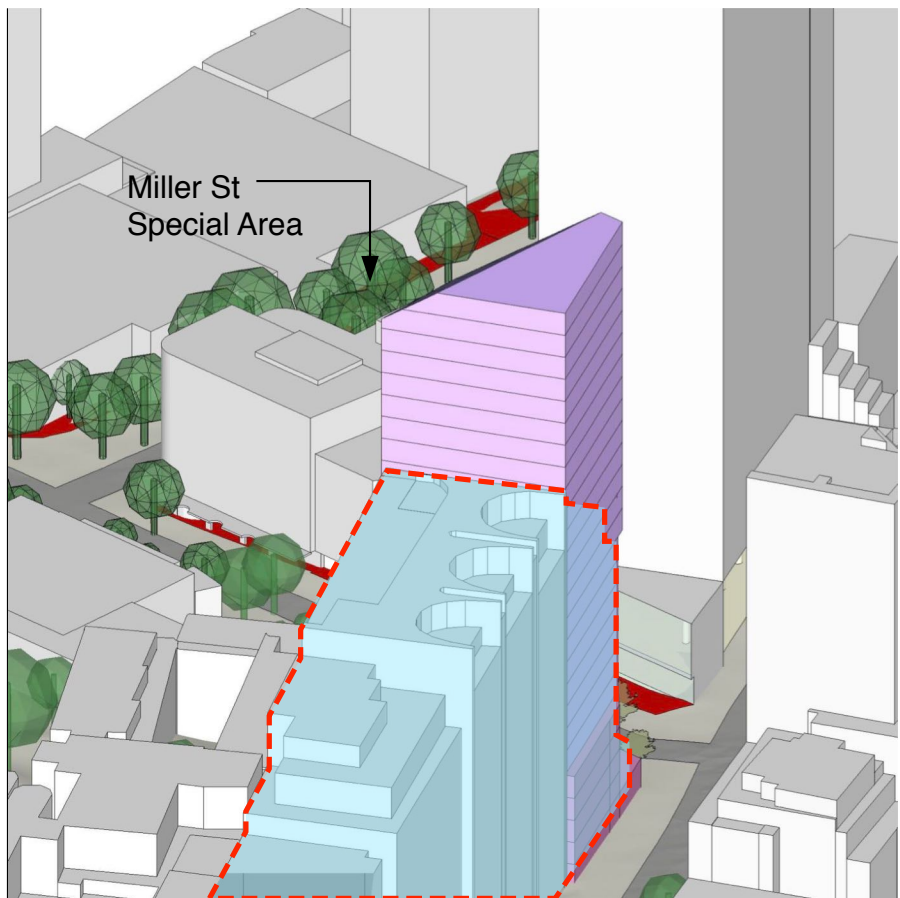
12.30pm






1.00pm



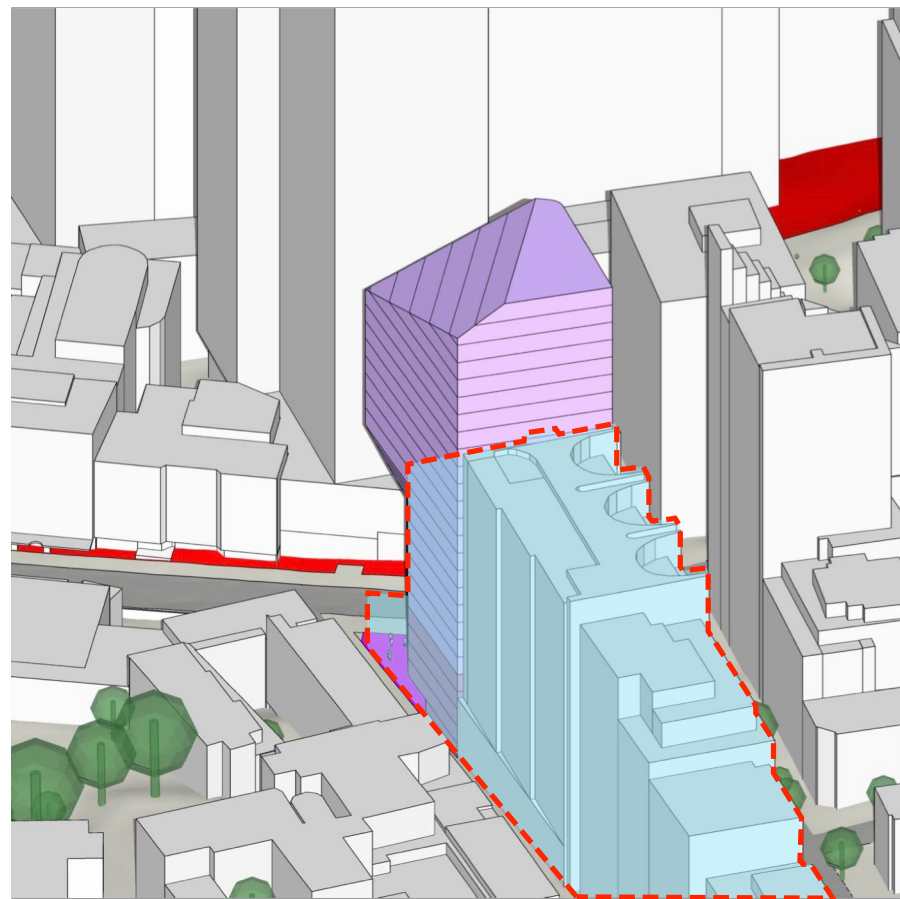
1.30pm



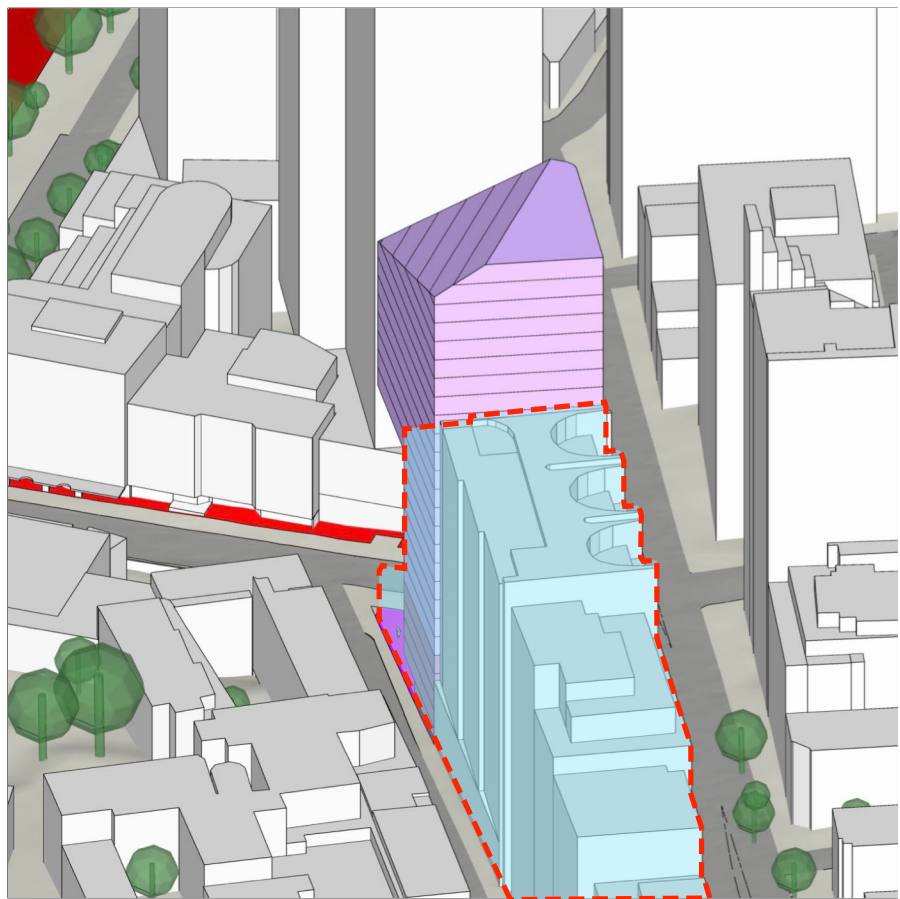
2.00pm

-  Indicates area of additional shadowing to foyer 177 Pacific Hwy
-  Indicates area of additional shadowing to Berry St Special Area Mar21-Sep21
-  Indicates outline of existing buildings

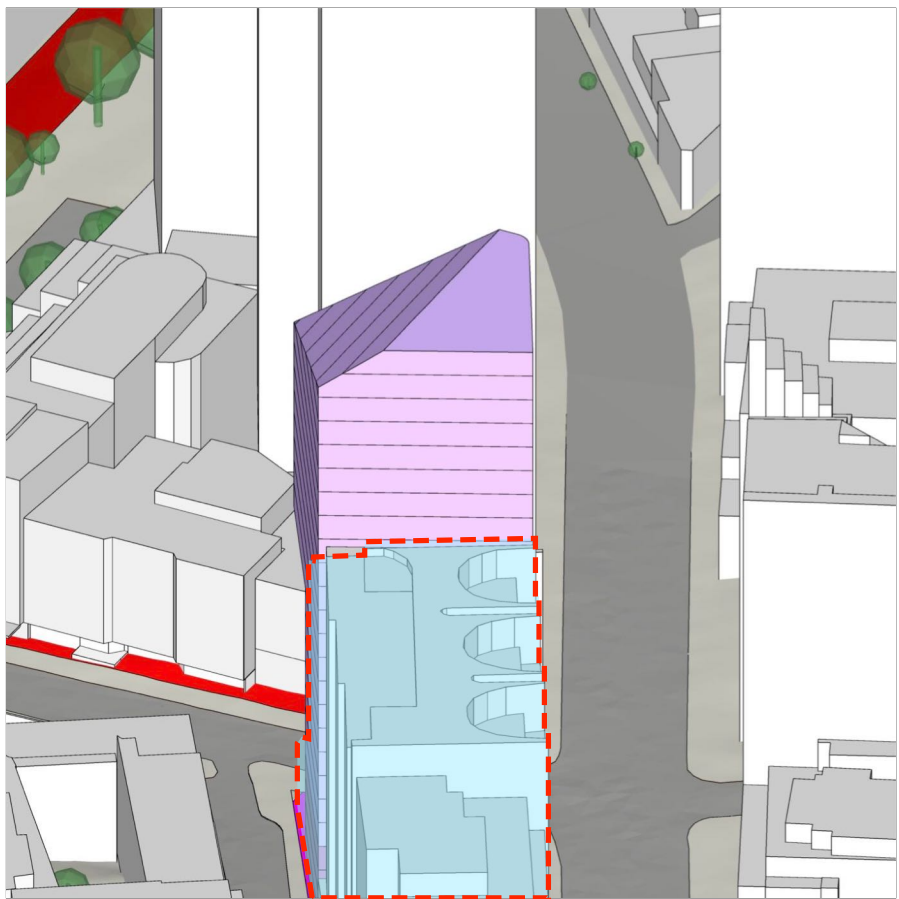
MAY 21st



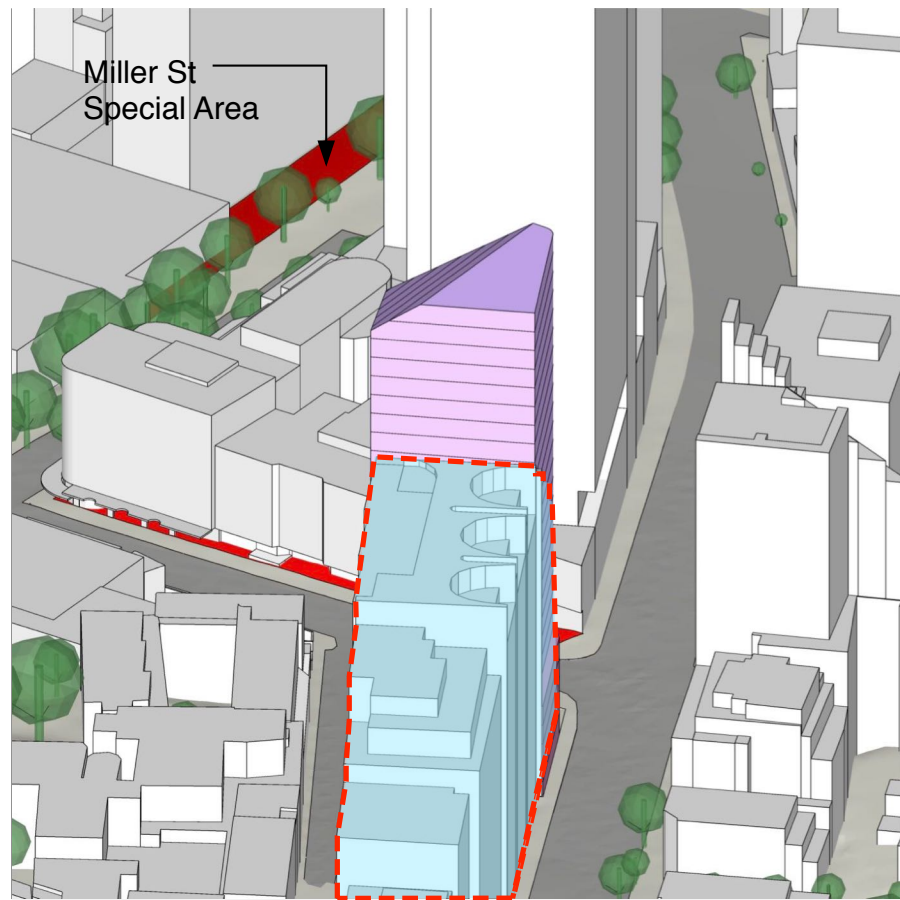
12.00pm



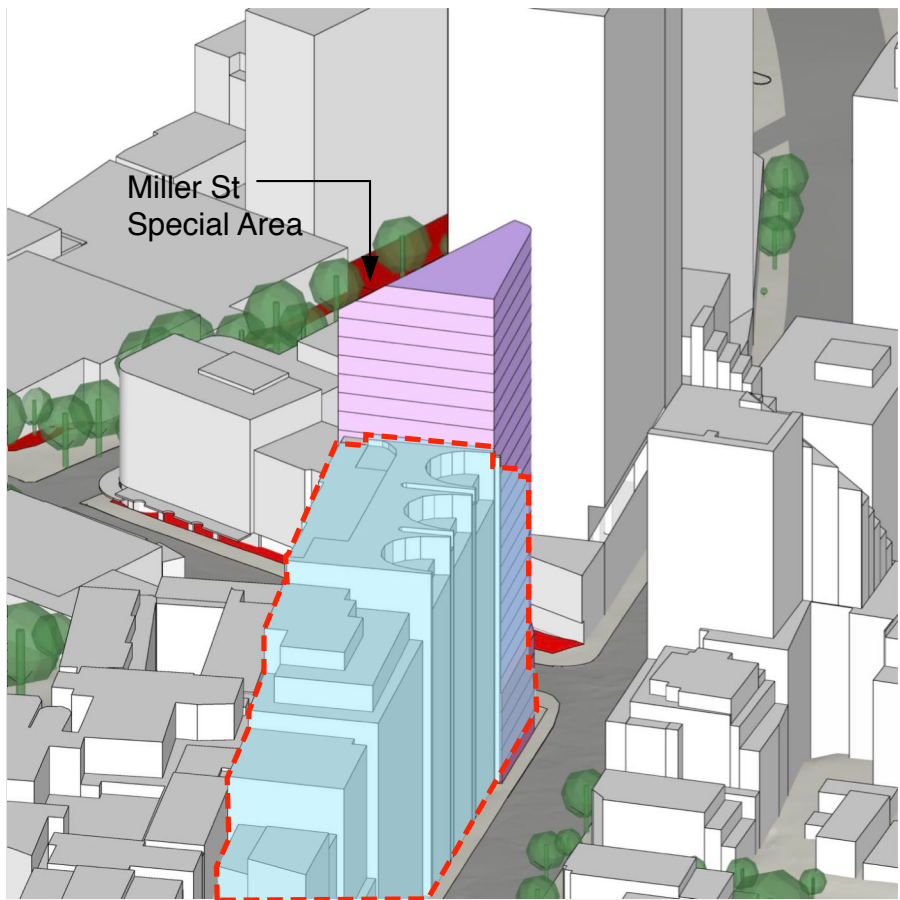
12.30pm






1.00pm



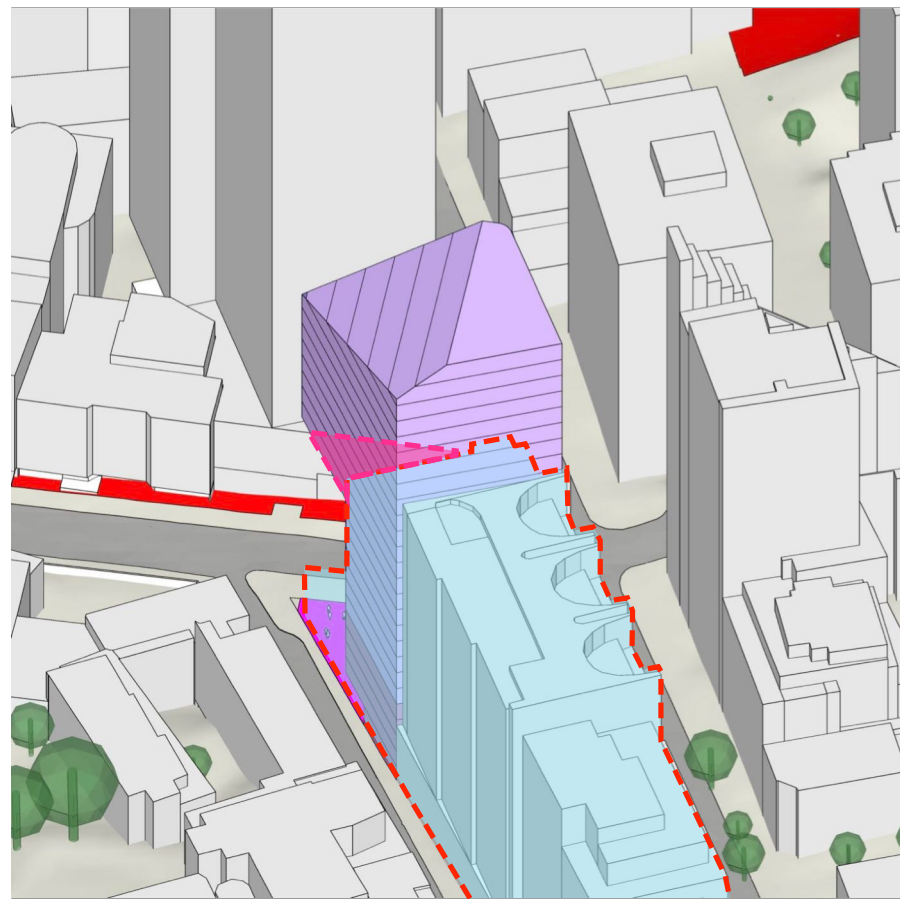
1.30pm



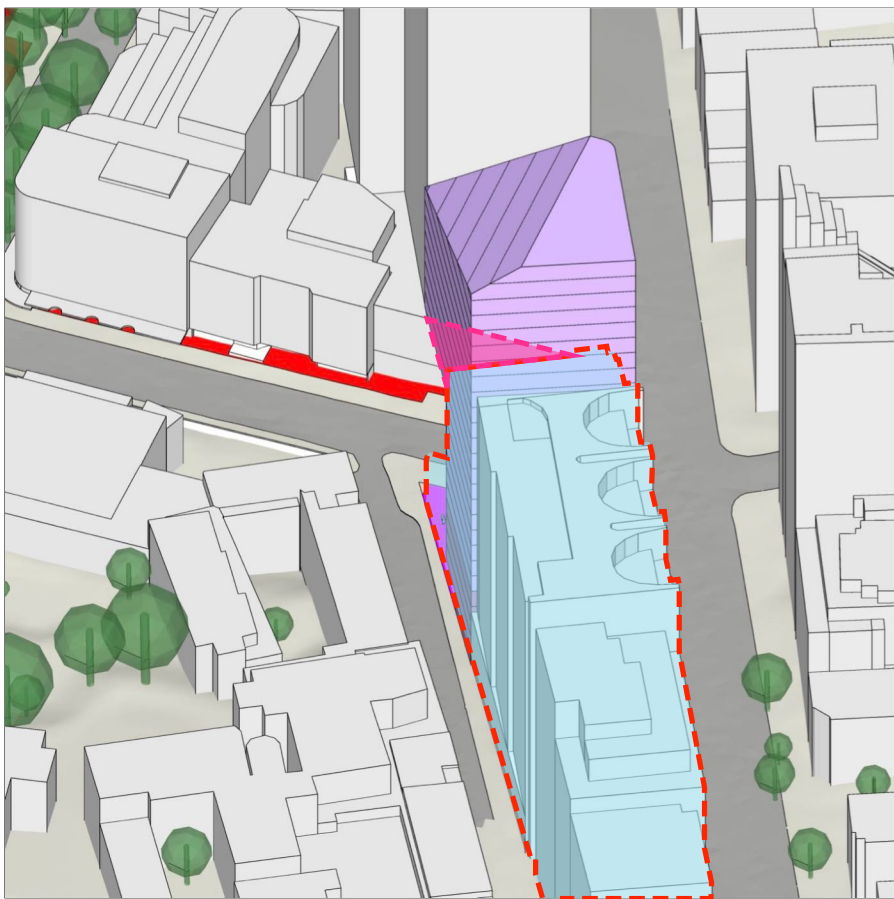
2.00pm

-  Indicates area of additional shadowing to foyer 177 Pacific Hwy
-  Indicates area of additional shadowing to Berry St Special Area Mar21-Sep21
-  Indicates outline of existing buildings

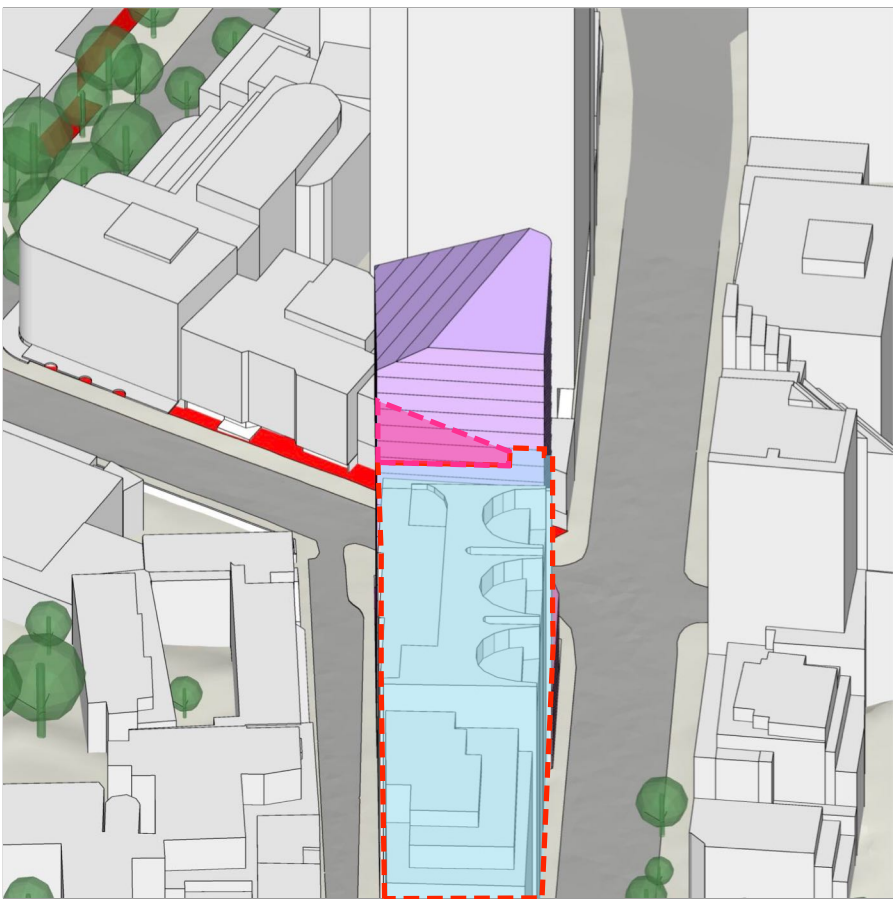
JUNE 21st



12.00pm



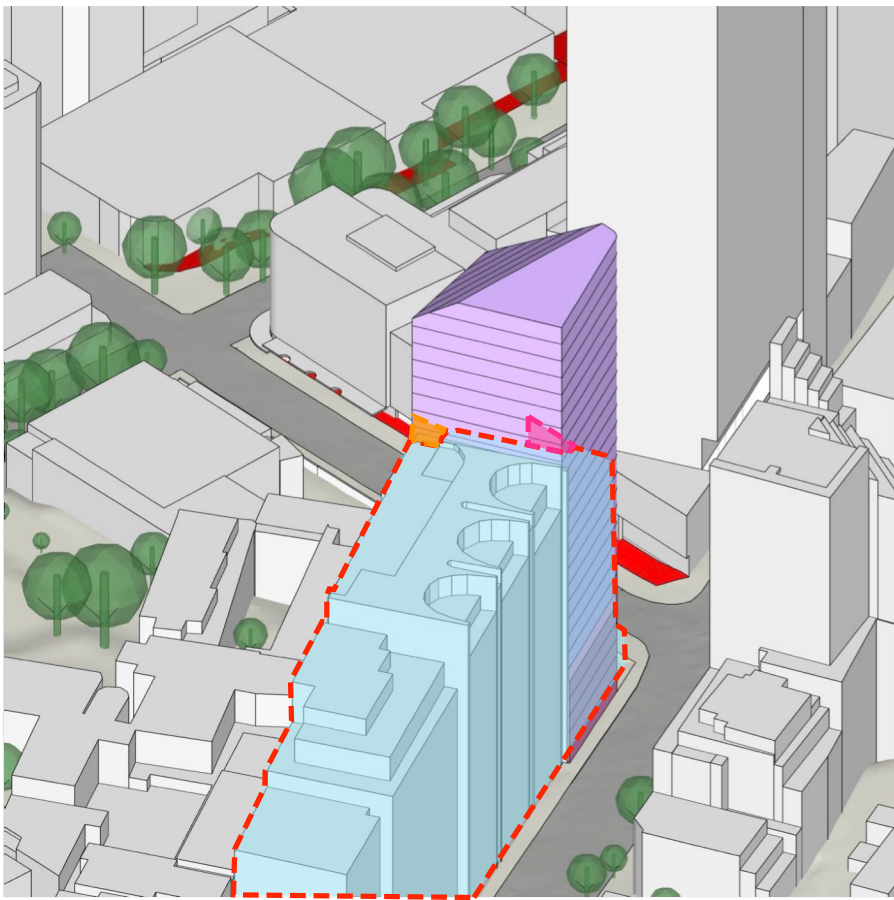
12.30pm






1.00pm



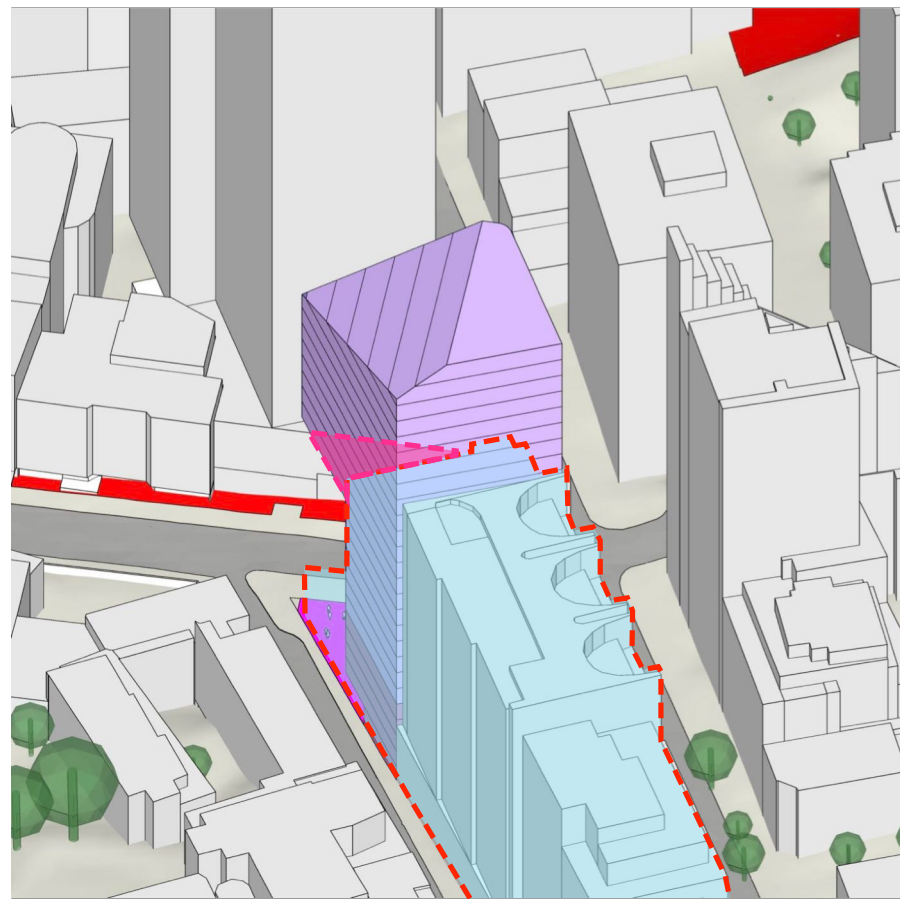
1.30pm



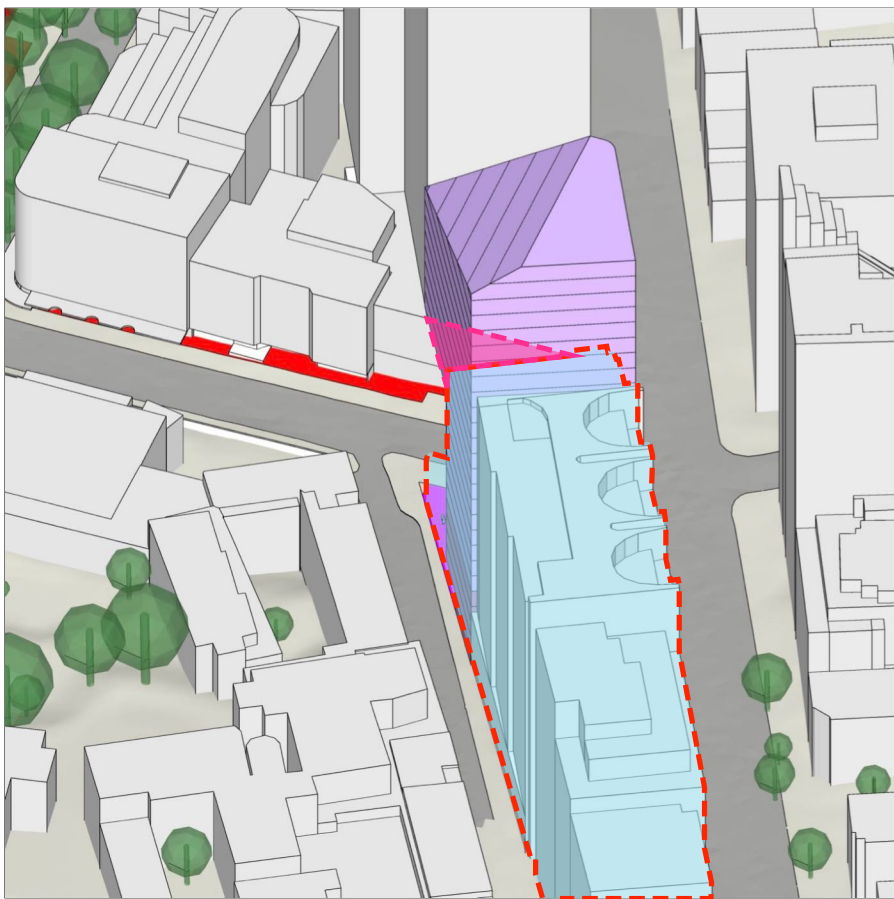
2.00pm

-  Indicates area of additional shadowing to foyer 177 Pacific Hwy
-  Indicates area of additional shadowing to Berry St Special Area Mar21-Sep21
-  Indicates outline of existing buildings

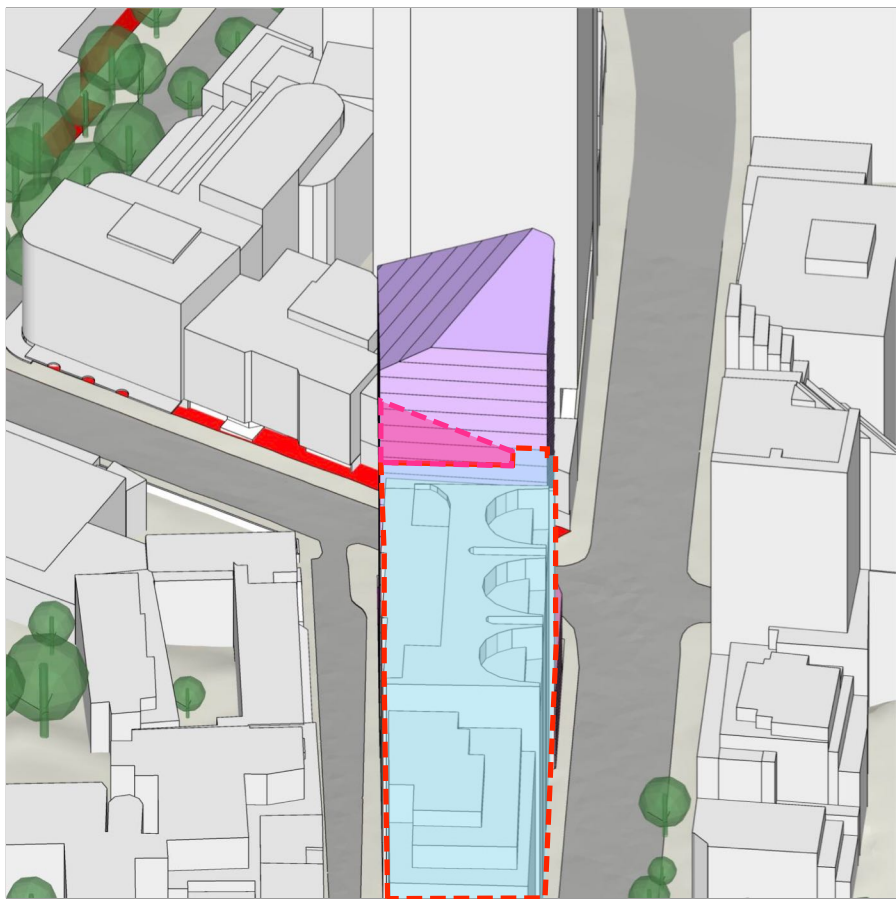
JULY 21st



12.00pm



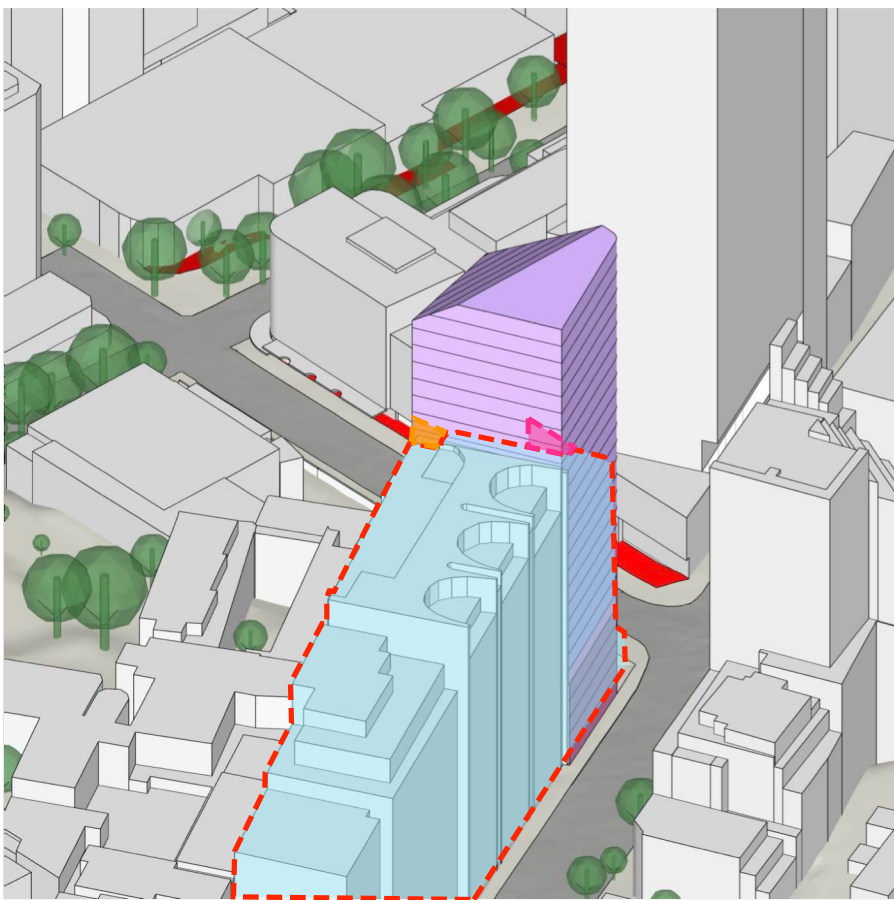
12.30pm






1.00pm



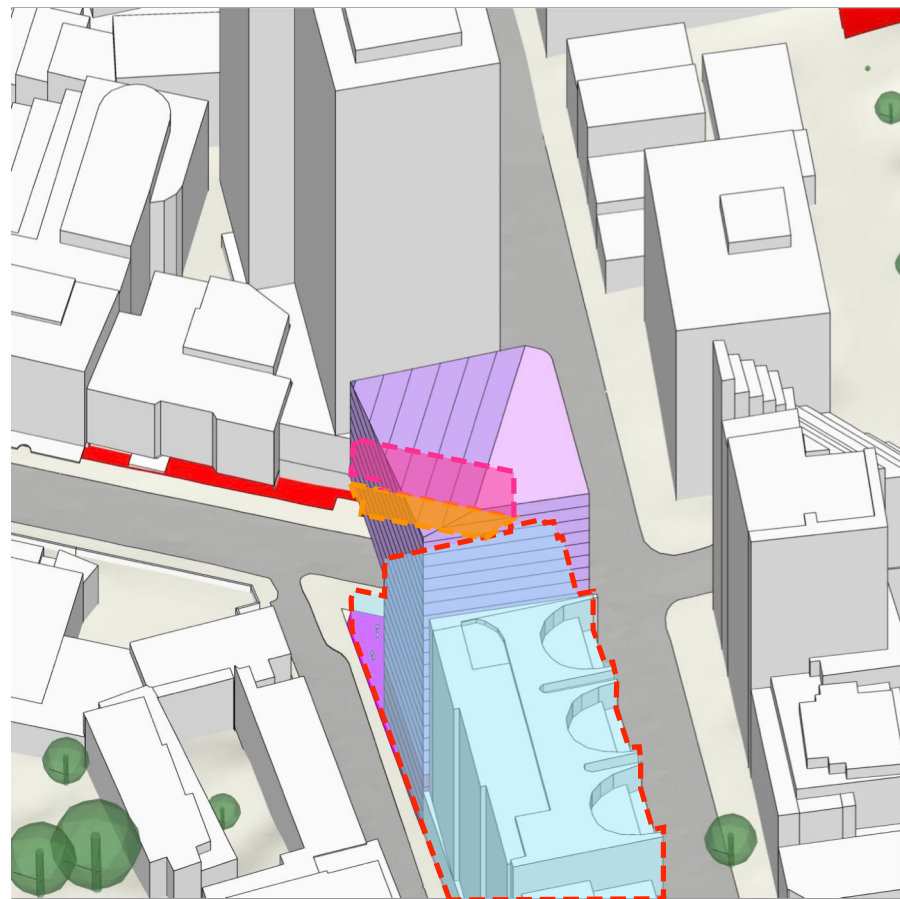
1.30pm



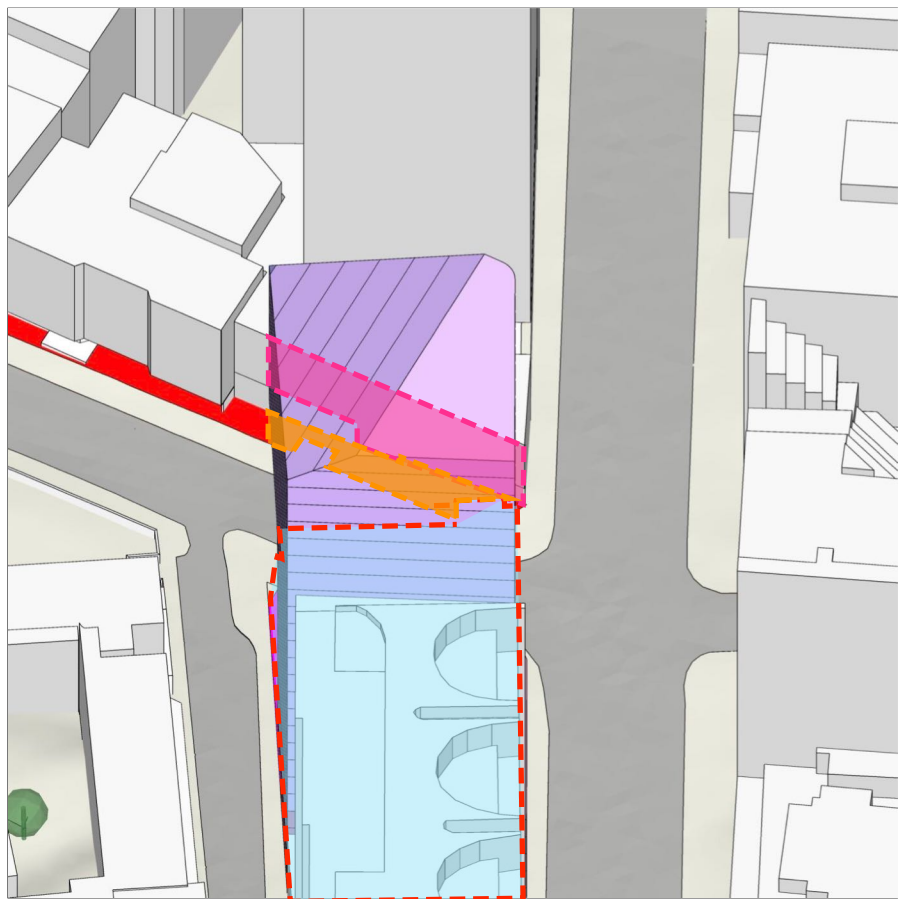
2.00pm

-  Indicates area of additional shadowing to foyer 177 Pacific Hwy
-  Indicates area of additional shadowing to Berry St Special Area Mar21-Sep21
-  Indicates outline of existing buildings

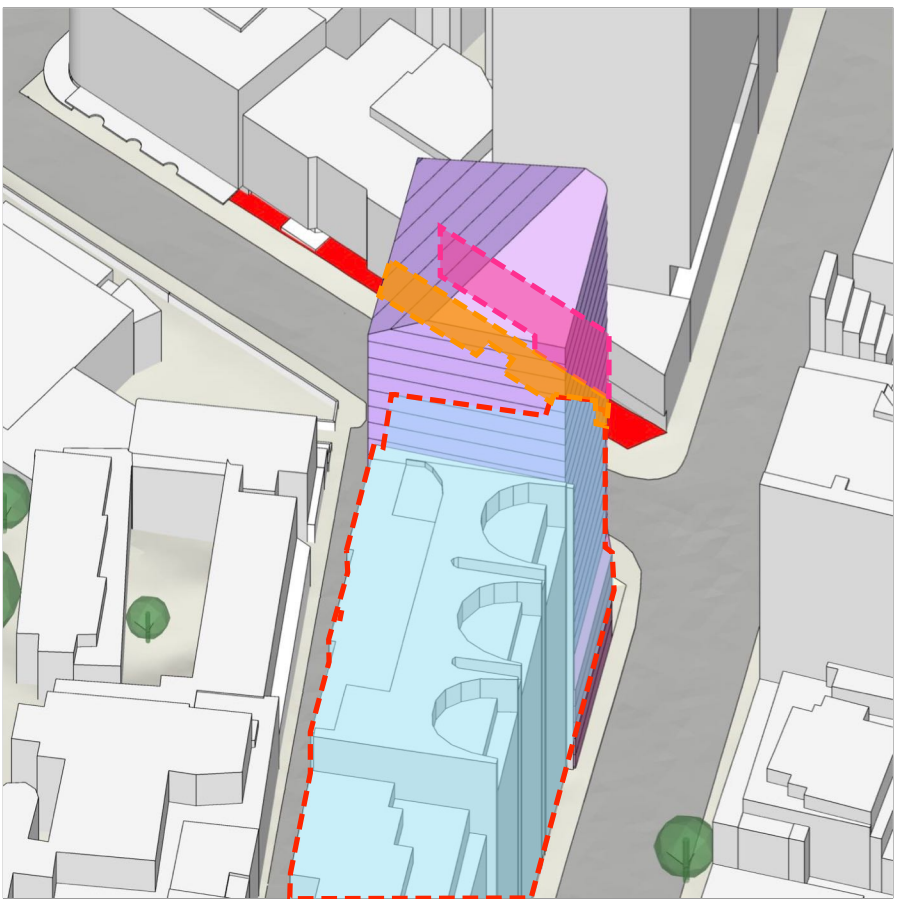
AUGUST 21st



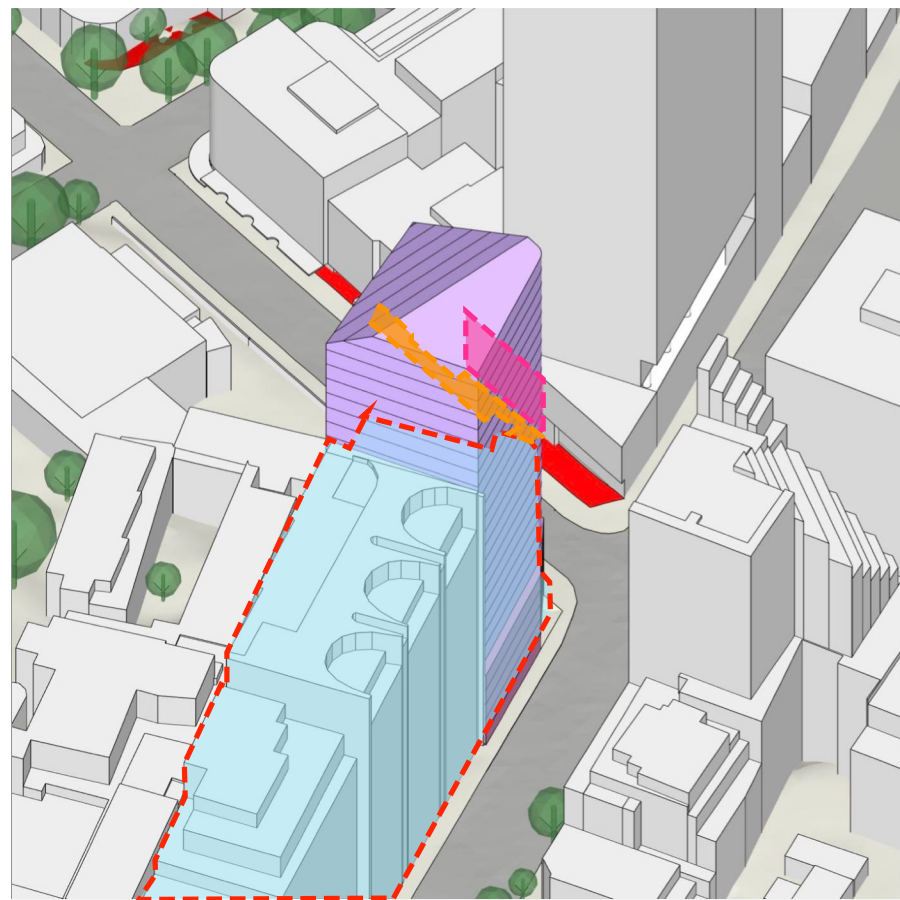
12.00pm



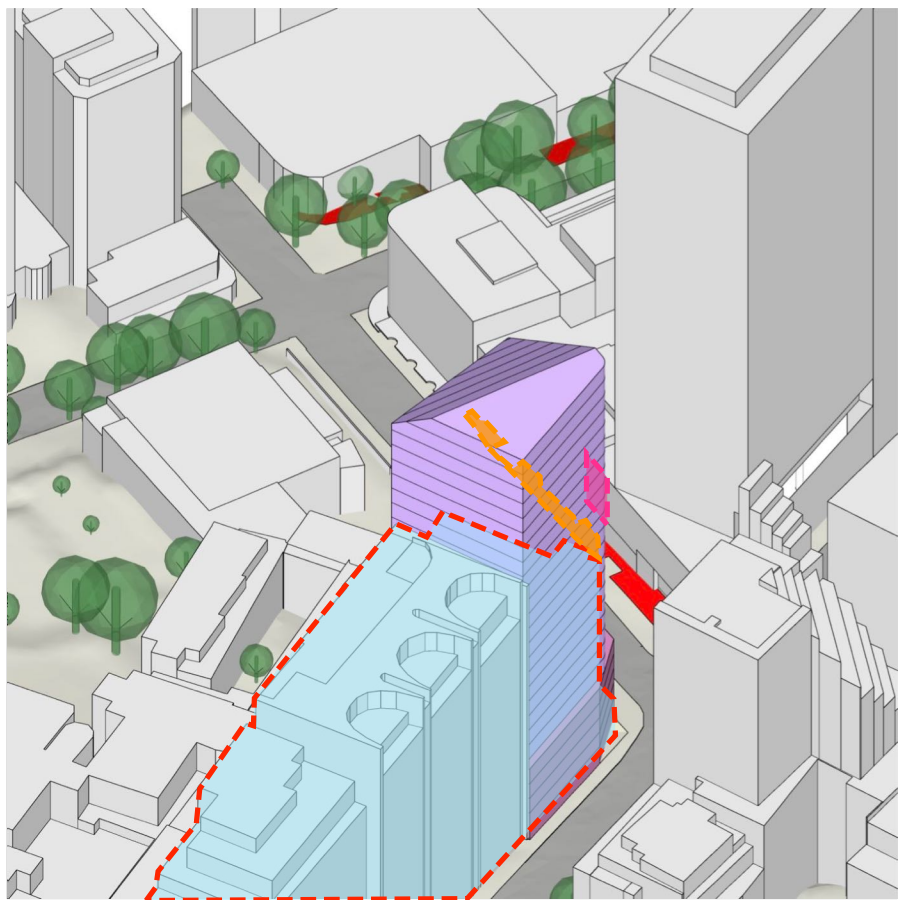
12.30pm






1.00pm



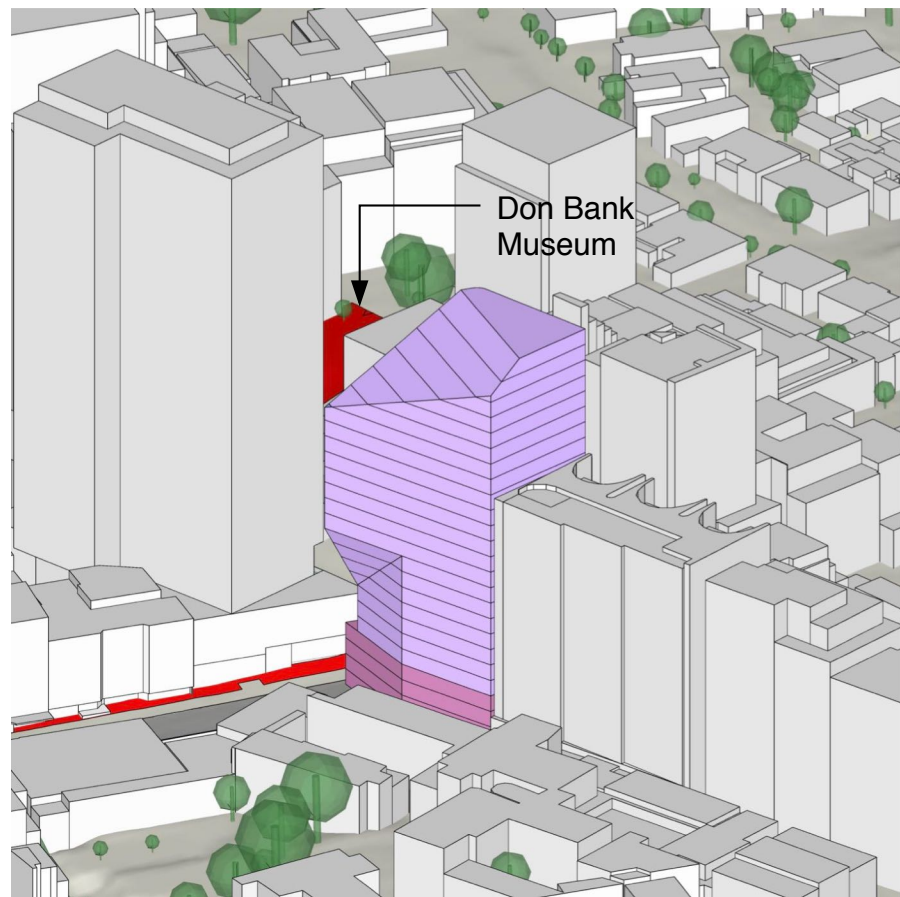
1.30pm



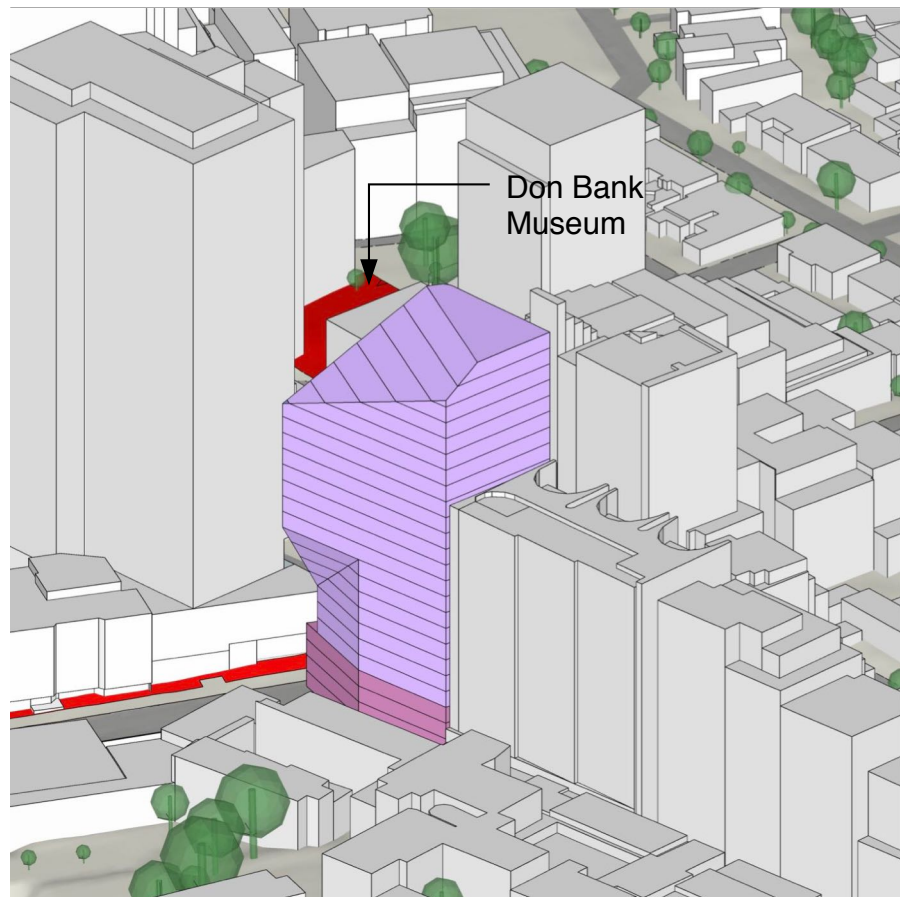
2.00pm

-  Indicates area of additional shadowing to foyer 177 Pacific Hwy
-  Indicates area of additional shadowing to Berry St Special Area Mar21-Sep21
-  Indicates outline of existing buildings

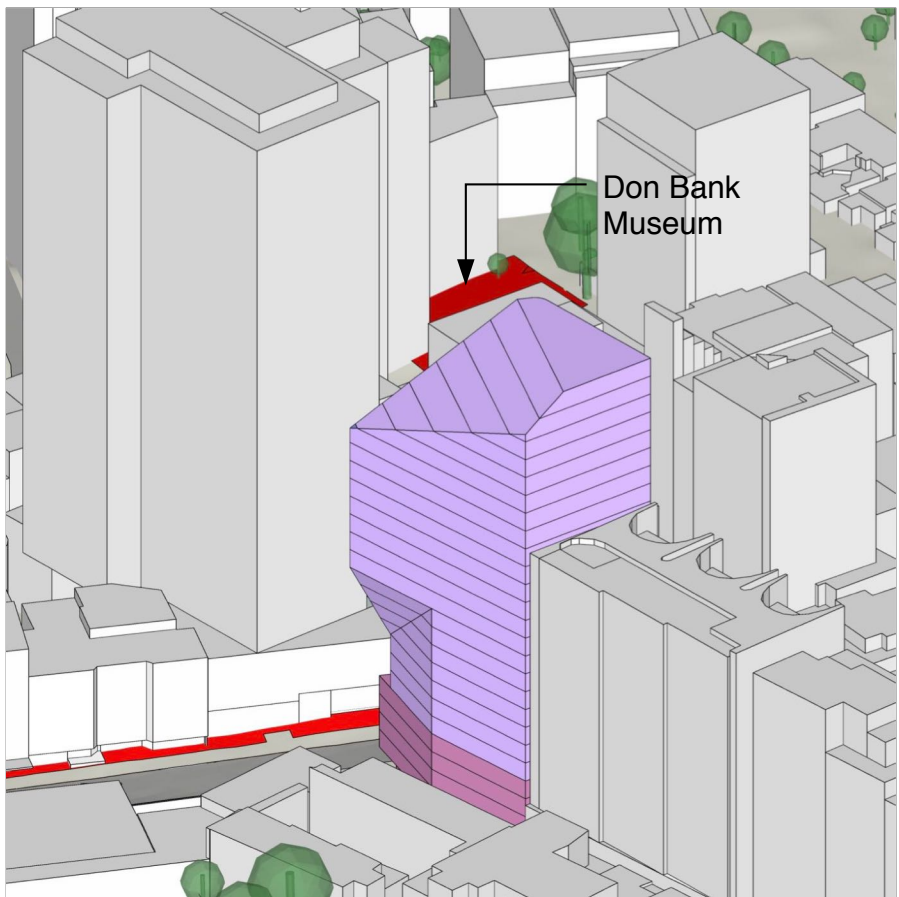
SEPTEMBER 21st



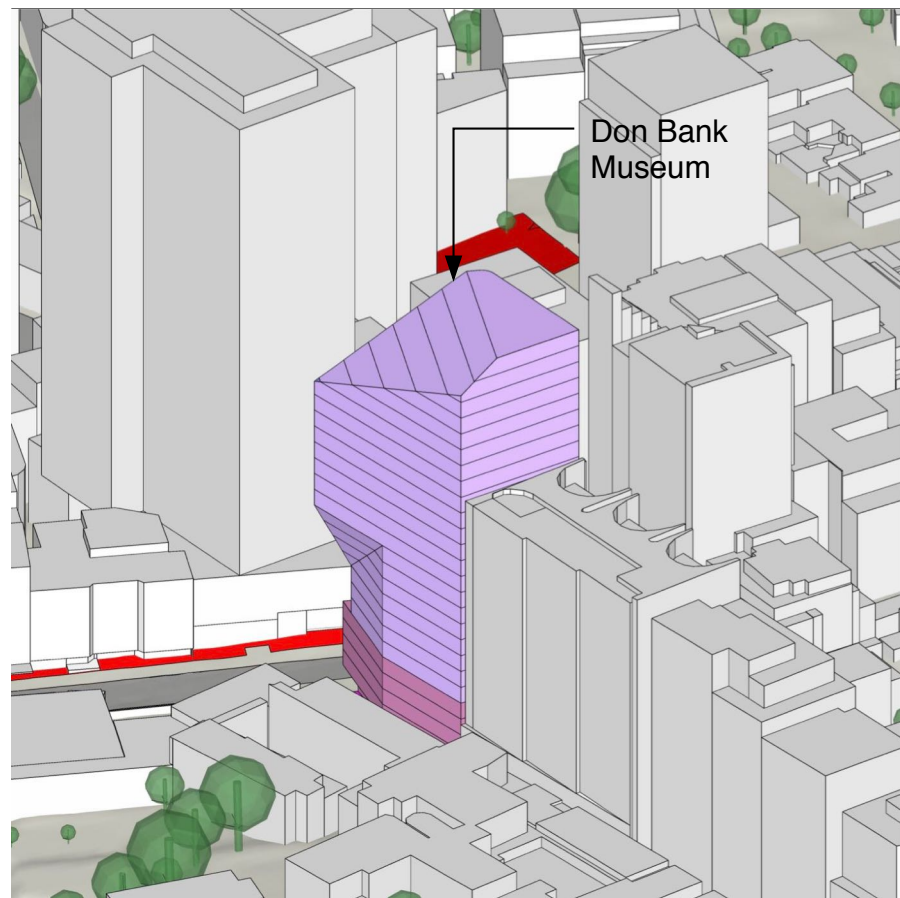
10.00am



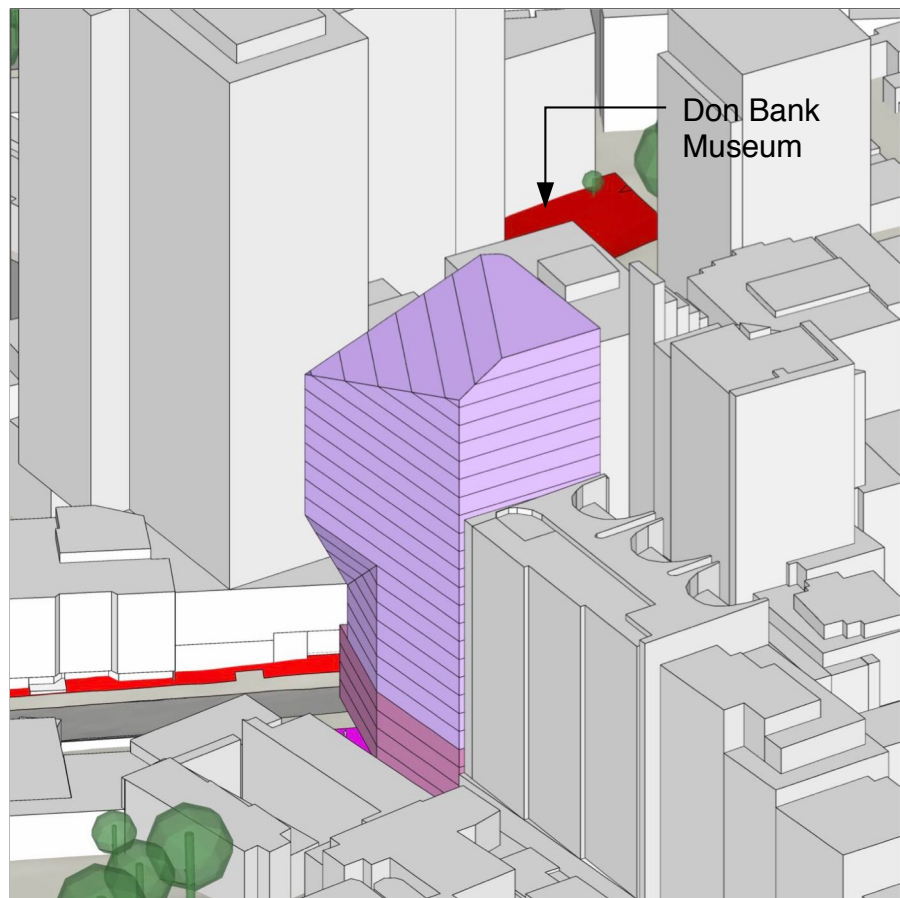
10.15am



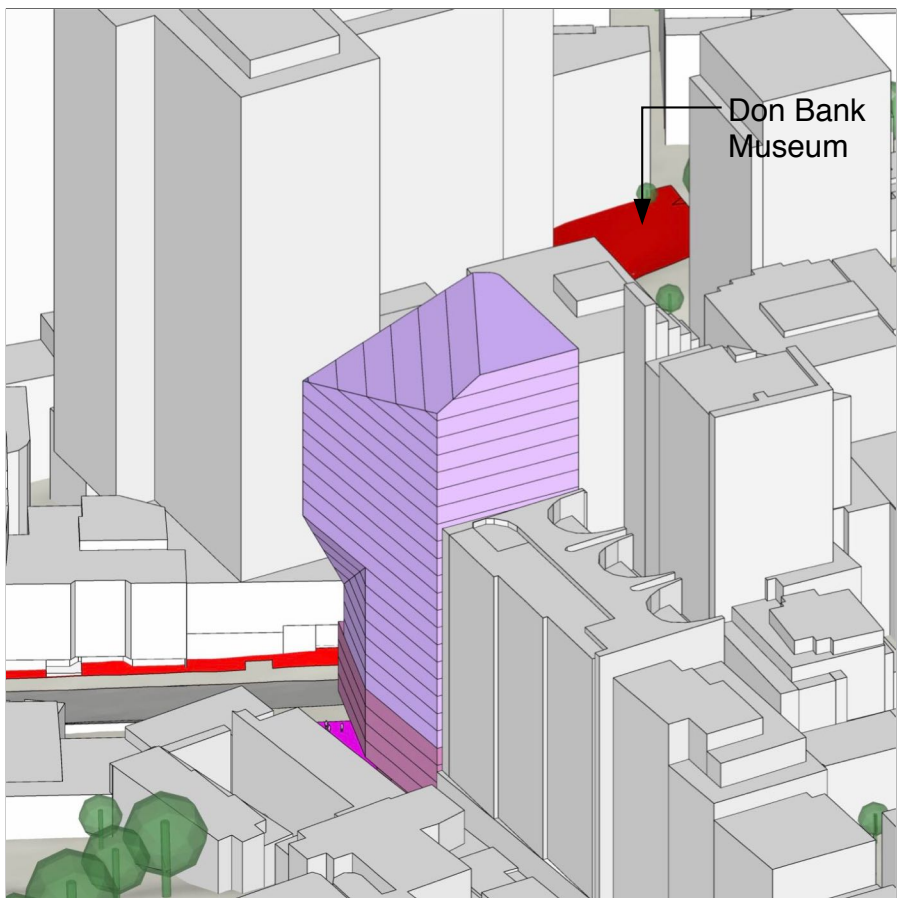
10.30am



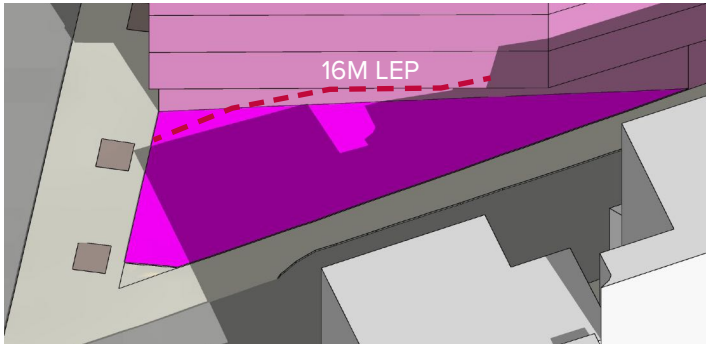
10.45am



11.00am



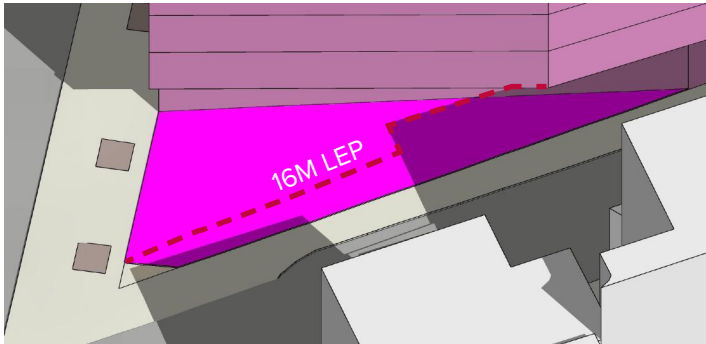
11.15am



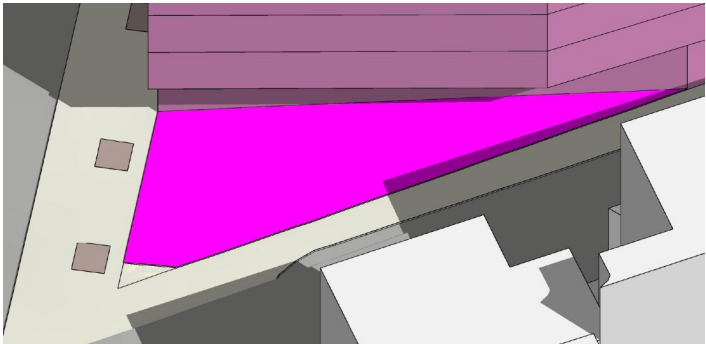
March 21st 09.00am



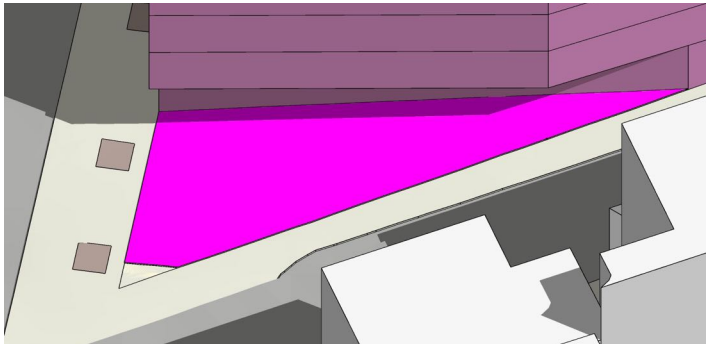
March 21st 09.30am



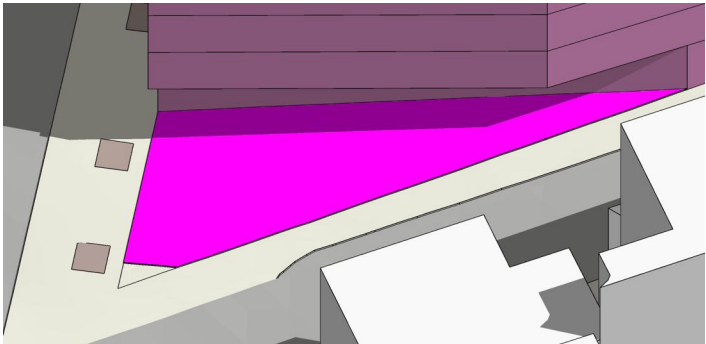
March 21st 10.00am



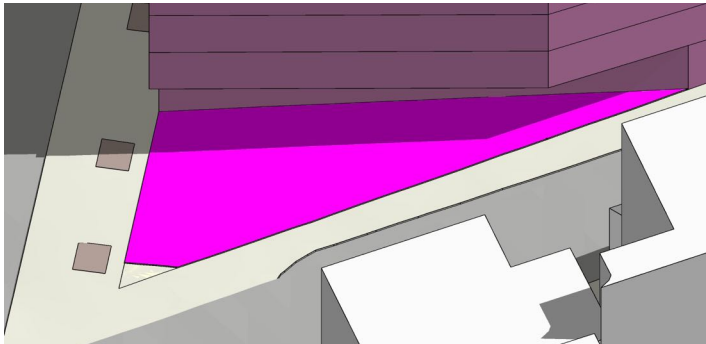
March 21st 10.30am



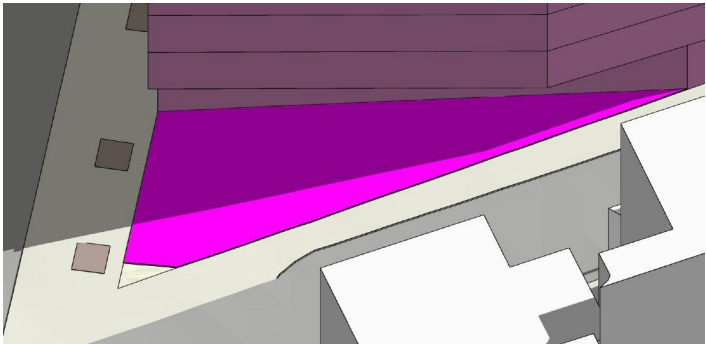
March 21st 11.00am



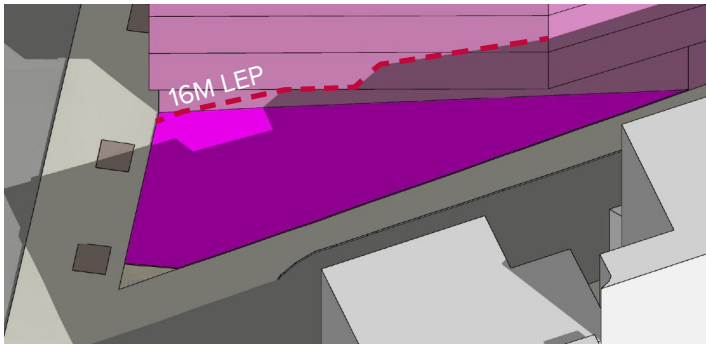
March 21st 11.30am



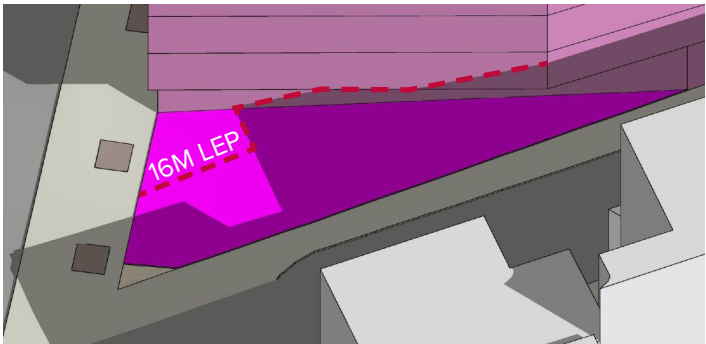
March 21st 12.00pm



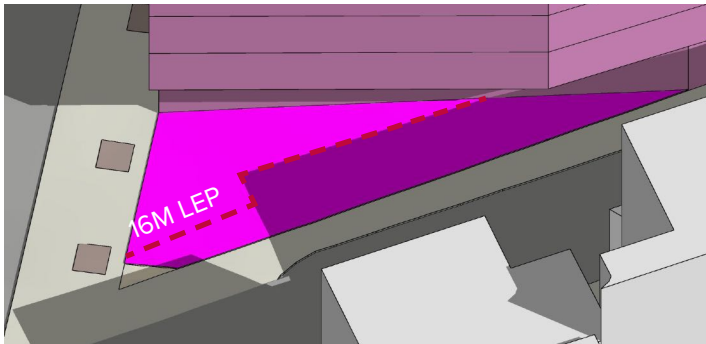
March 21st 12.30pm



April 21st 09.30am



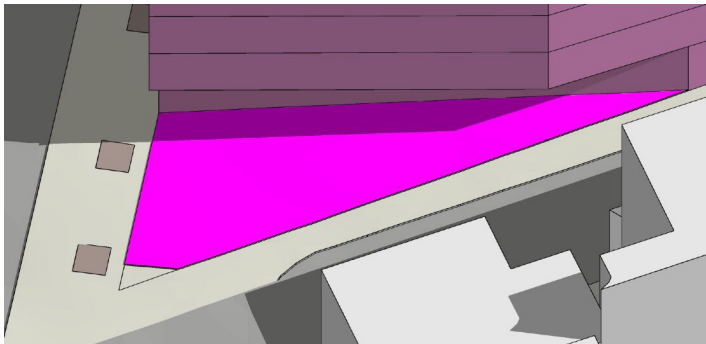
April 21st 10.00am



April 21st 10.30am



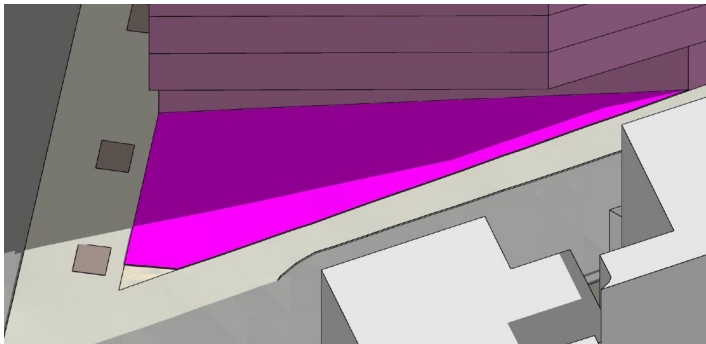
April 21st 11.00am



April 21st 11.30am



April 21st 12.00pm

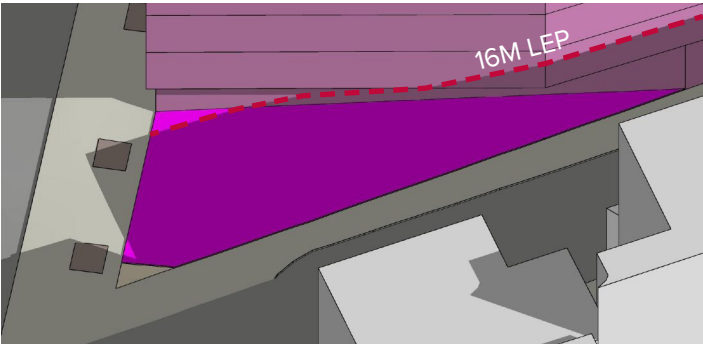


April 21st 12.30pm

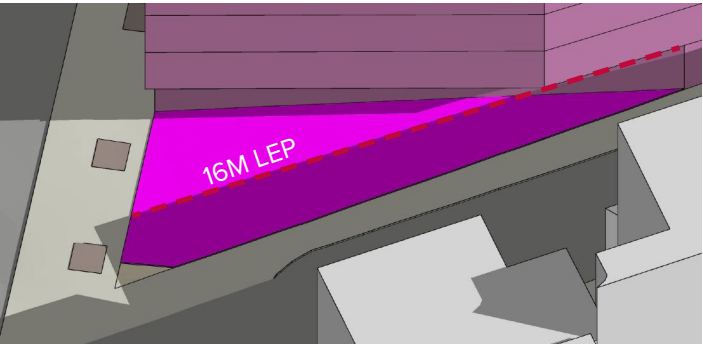
LEGEND

----- This line indicates the shadowing cast by a 16M height plane above the site of the Mont Sant'Angelo Mercy College

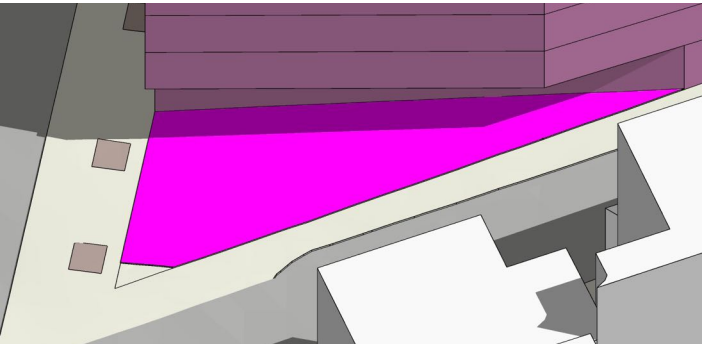
PROPOSED SPECIAL AREA - SHADOW DIAGRAMS



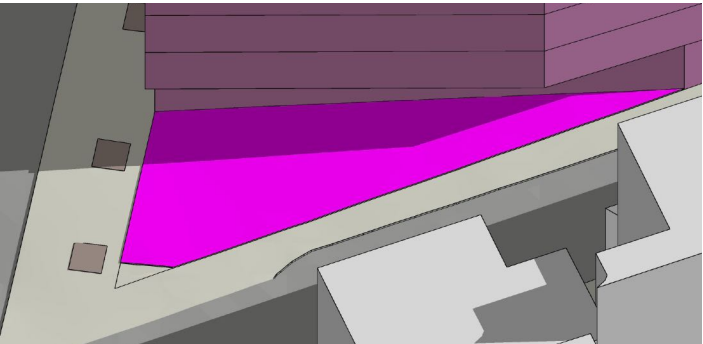
May 21st 10.30am



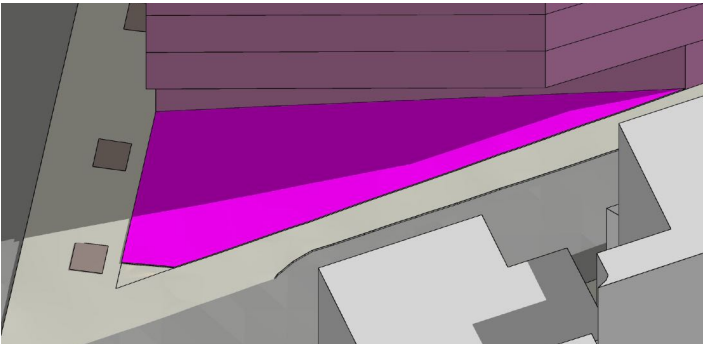
May 21st 11.00am



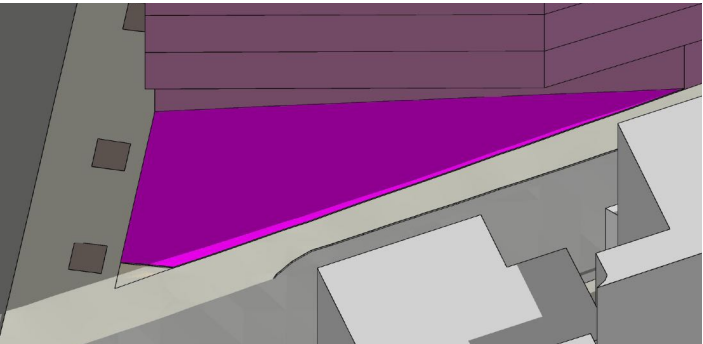
May 21st 11.30am



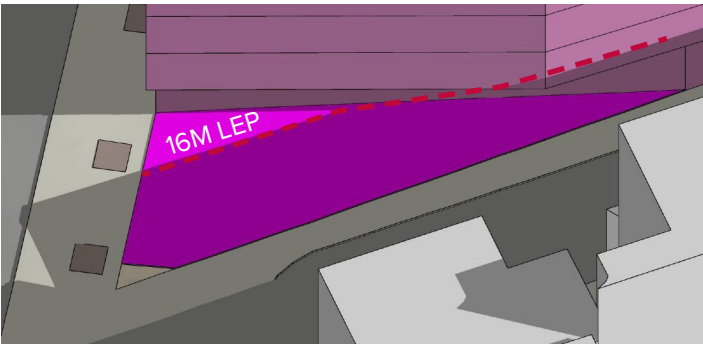
May 21st 12.00pm



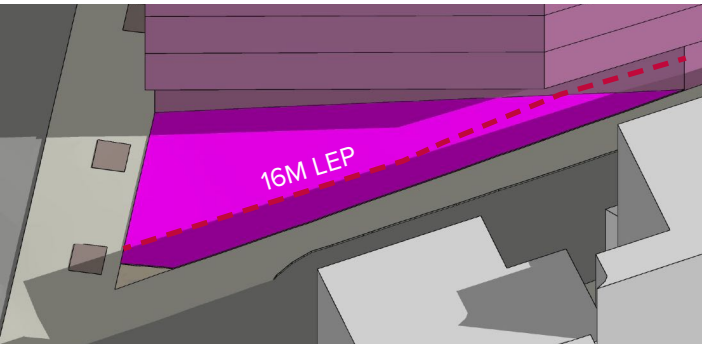
May 21st 12.30pm



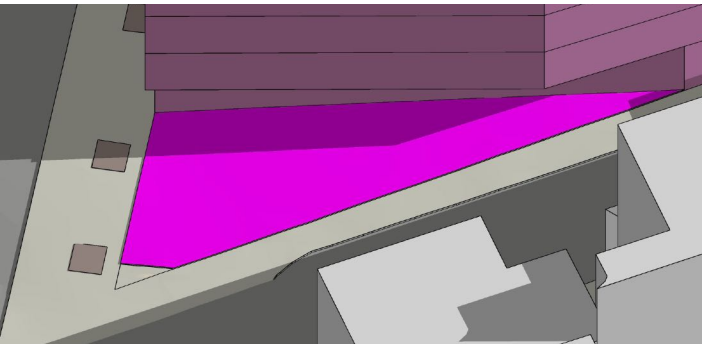
May 21st 12.30pm



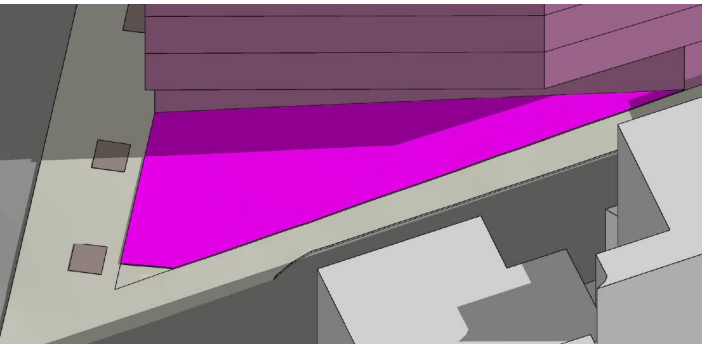
June 21st 11.00am



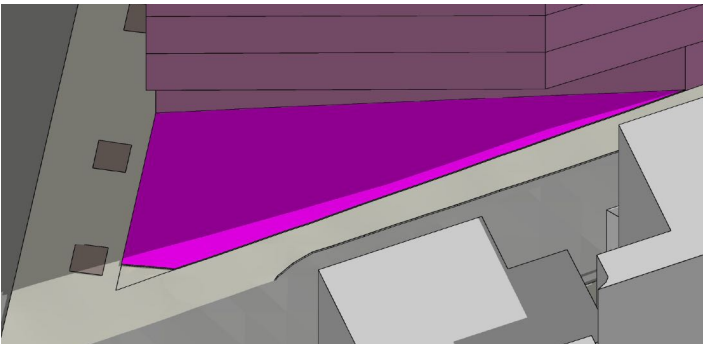
June 21st 11.30am



June 21st 12.00am



June 21st 12.30am

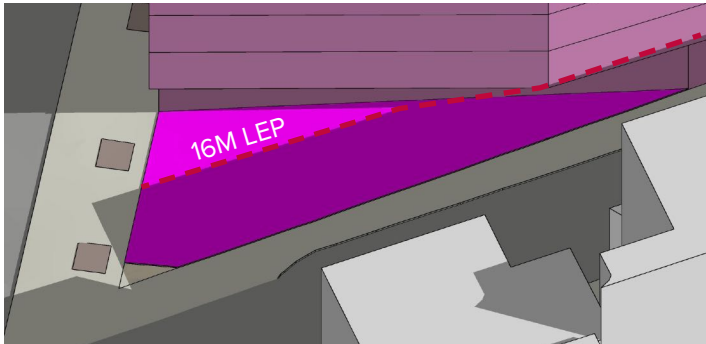


June 21st 01.00pm

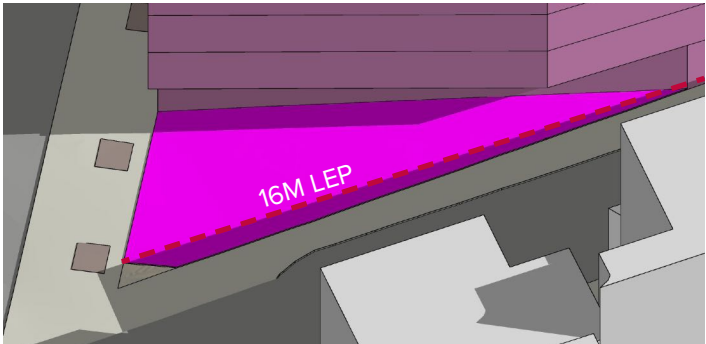
LEGEND

----- This line indicates the shadowing cast by a 16M height plane above the site of the Mont Sant'Angelo Mercy College

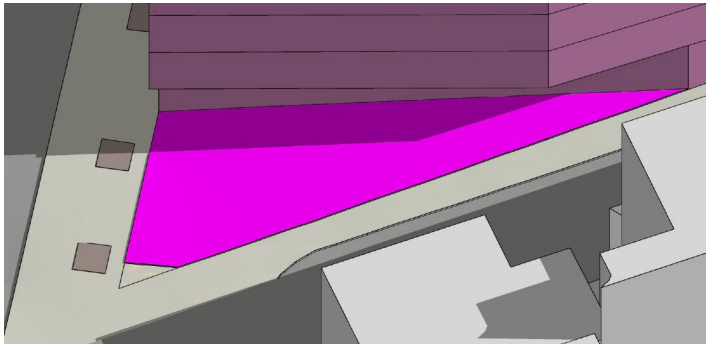
PROPOSED SPECIAL AREA - SHADOW DIAGRAMS



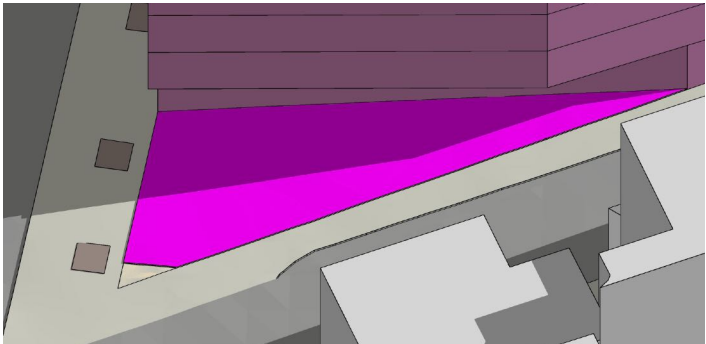
July 21st 11.00am



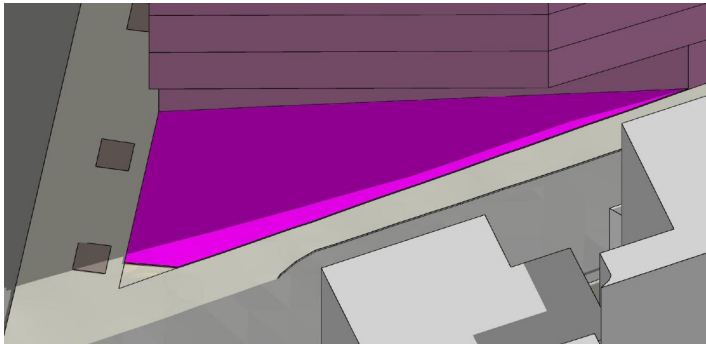
July 21st 11.30am



July 21st 12.00am



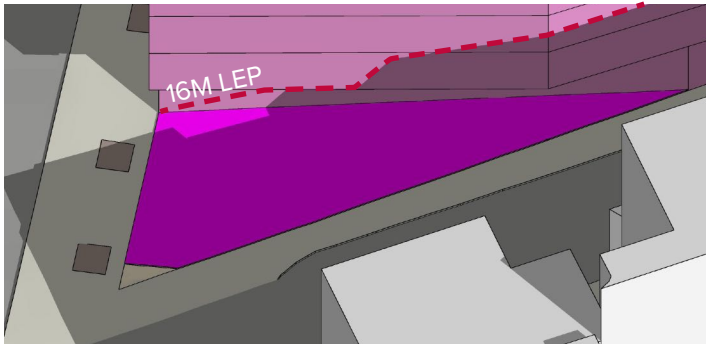
July 21st 12.30am



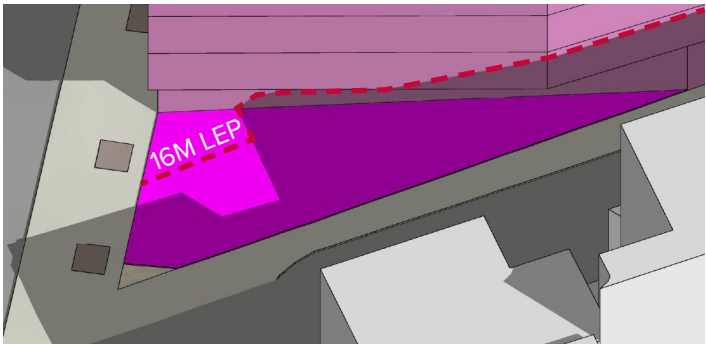
July 21st 01.00pm

LEGEND

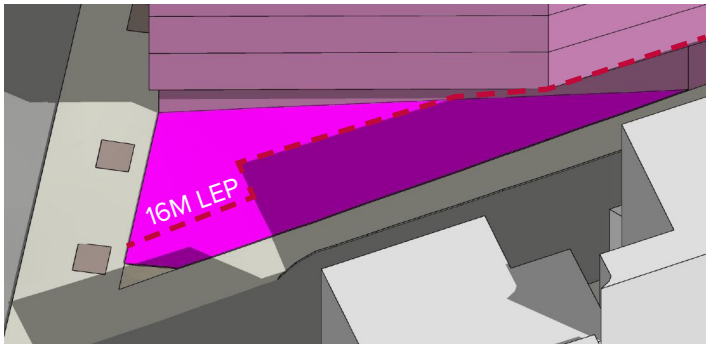
----- This line indicates the shadowing cast by a 16M height plane above the site of the Mont Sant'Angelo Mercy College



August 21st 09.30am



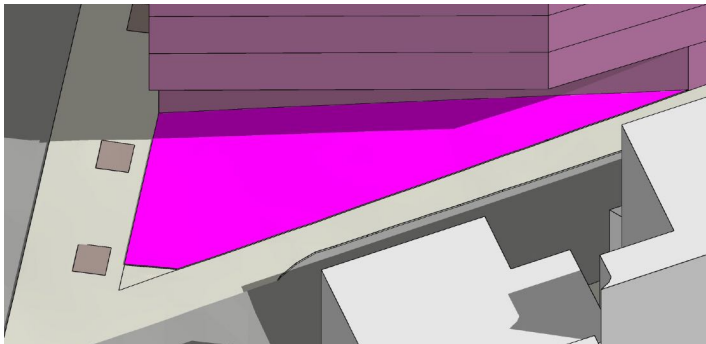
August 21st 10.00am



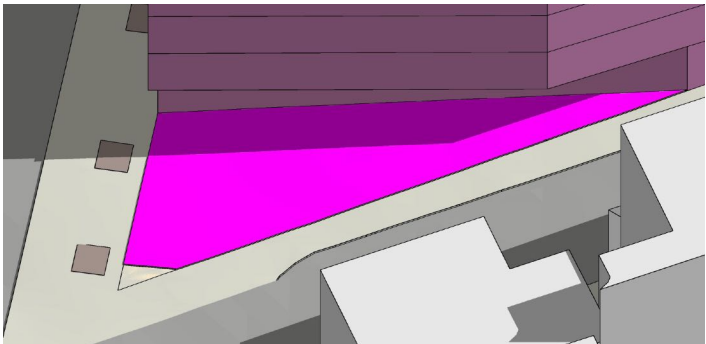
August 21st 10.30am



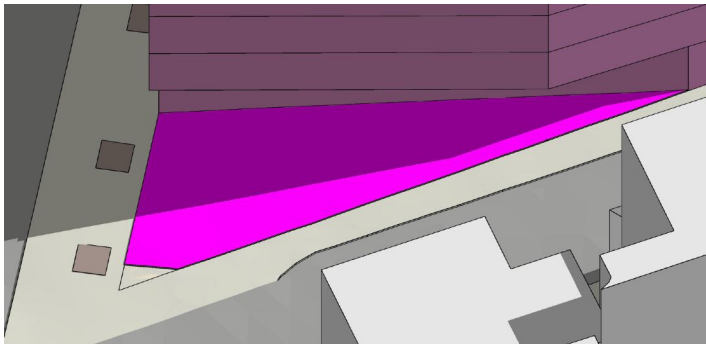
August 21st 11.00am



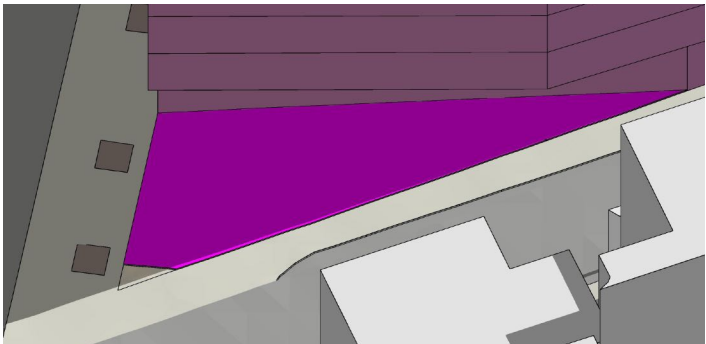
August 21st 11.30am



August 21st 12.00pm

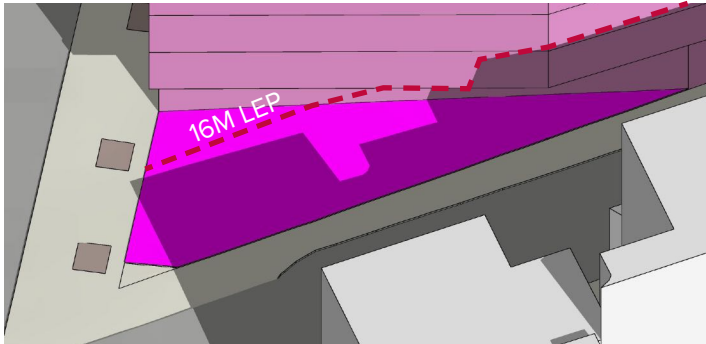


August 21st 12.30pm

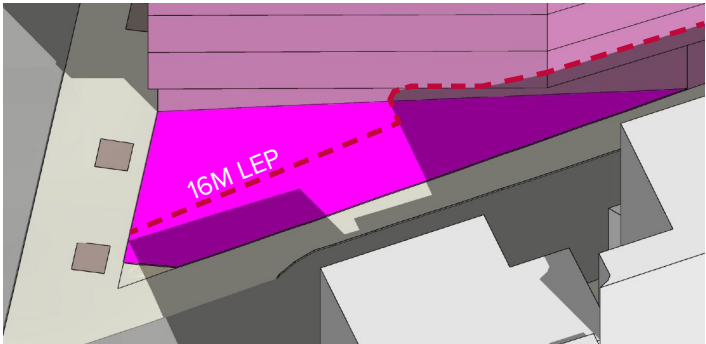


August 21st 01.00pm

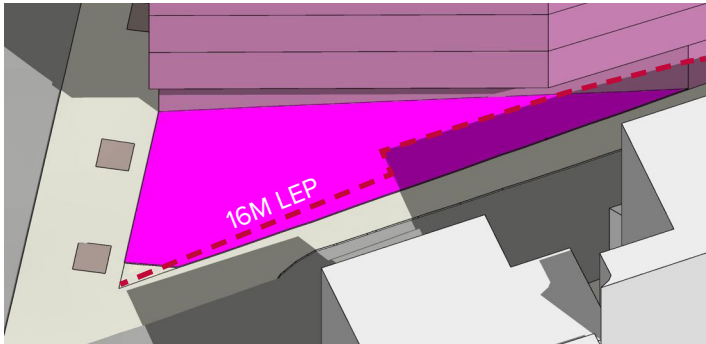
PROPOSED SPECIAL AREA - SHADOW DIAGRAMS



September 21st 09.00am



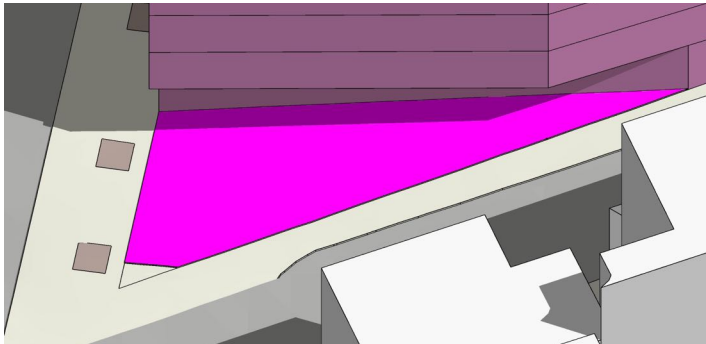
September 21st 09.30am



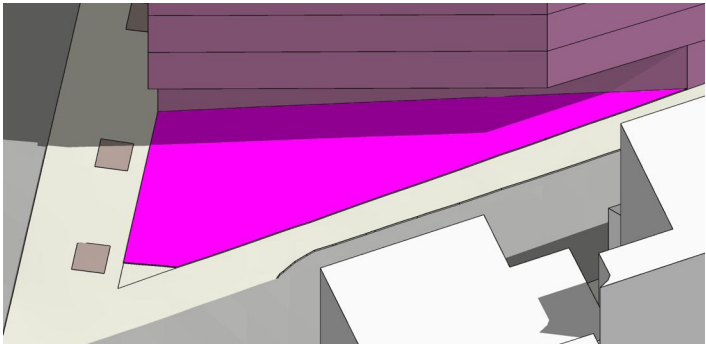
September 21st 10.00am



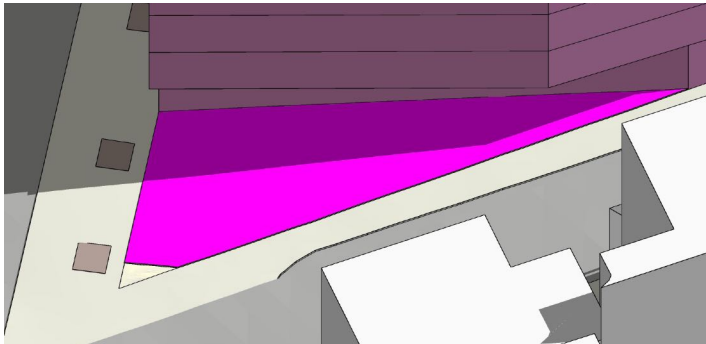
September 21st 10.30am



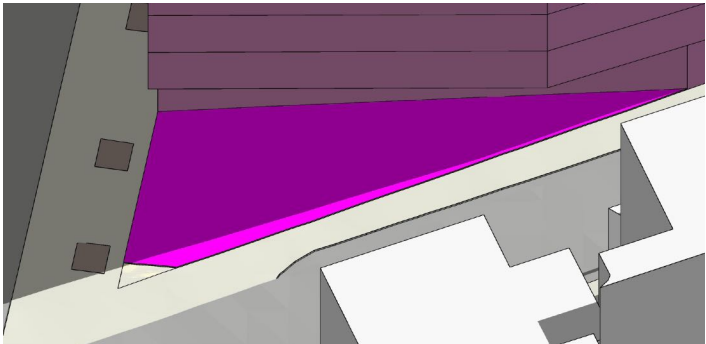
September 21st 11.00am



September 21st 11.30am



September 21st 12.00pm

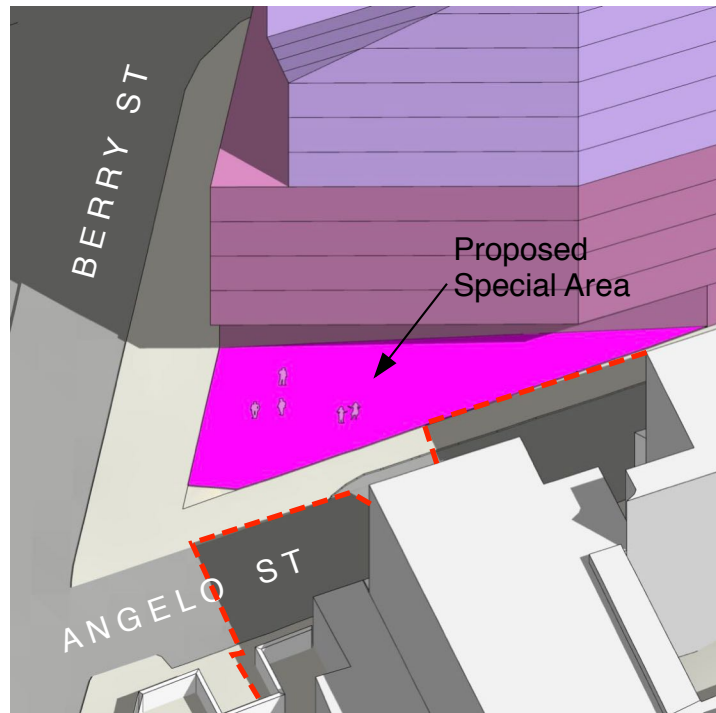


September 21st 12.30pm

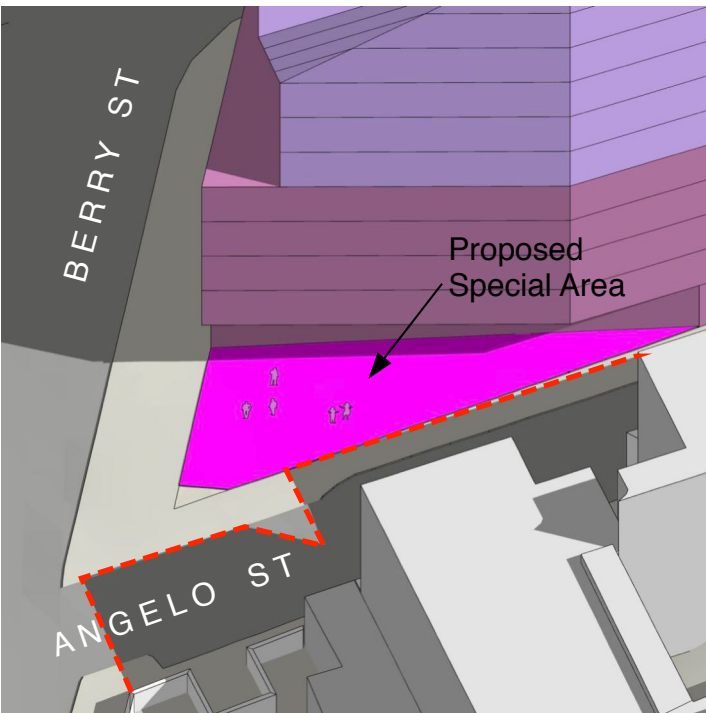
LEGEND

----- This line indicates the shadowing cast by a 16M height plane above the site of the Mont Sant'Angelo Mercy College

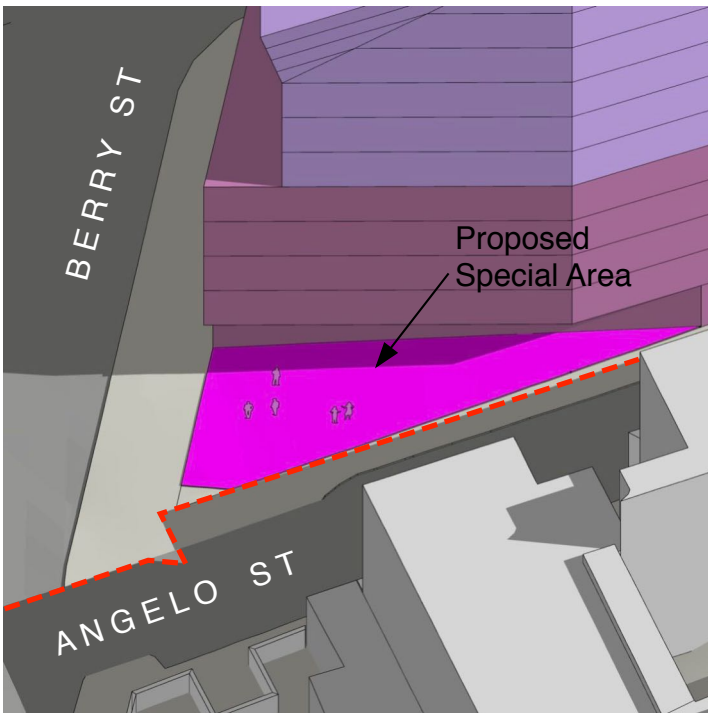
PROPOSED SPECIAL AREA - SHADOW DIAGRAMS



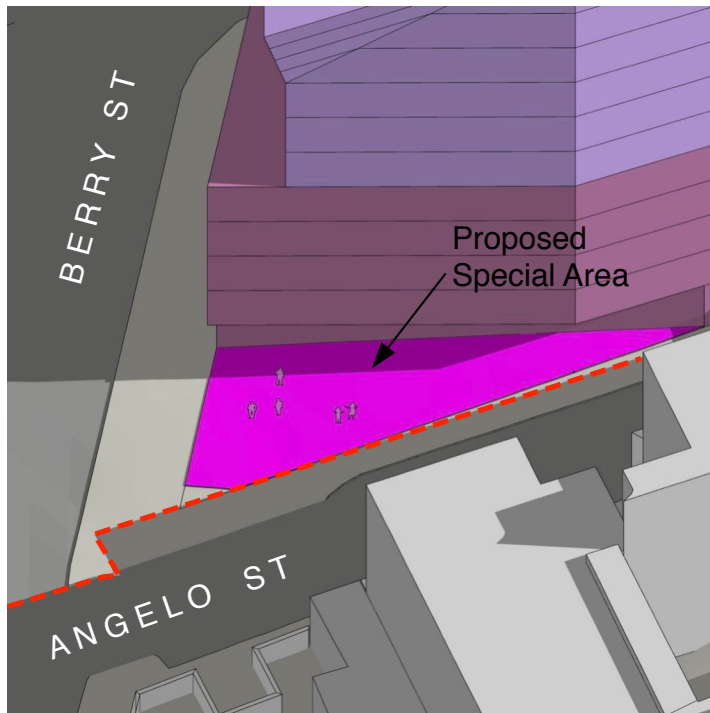
March 21_10.38am



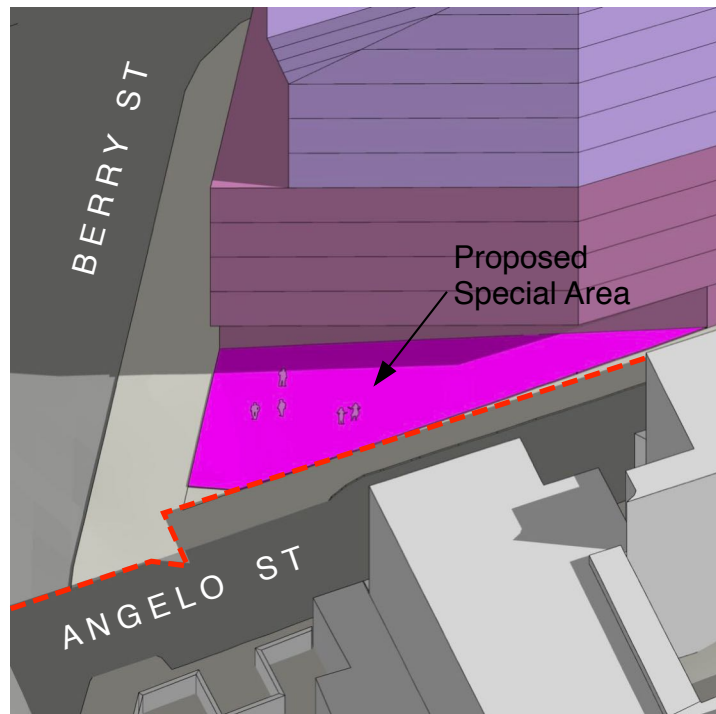
April 21_11.05am



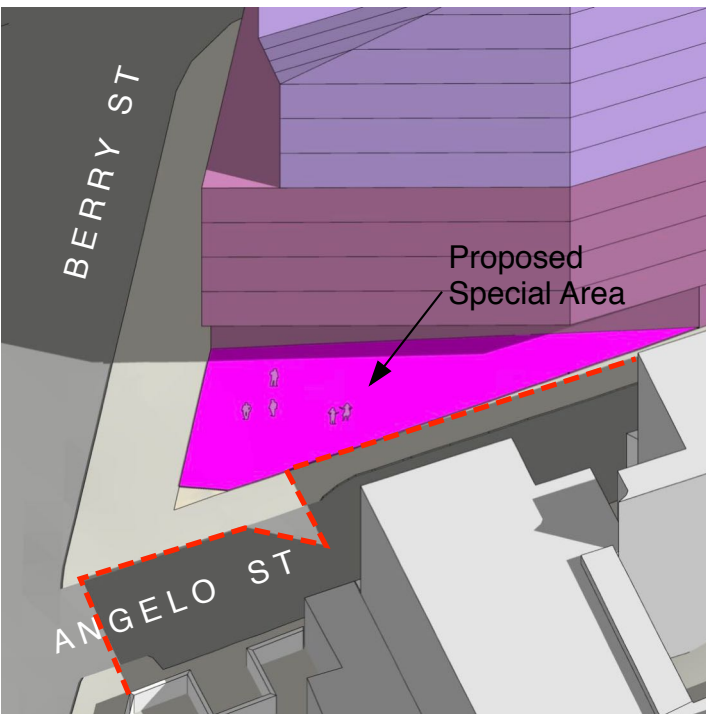
May 21 11.30am



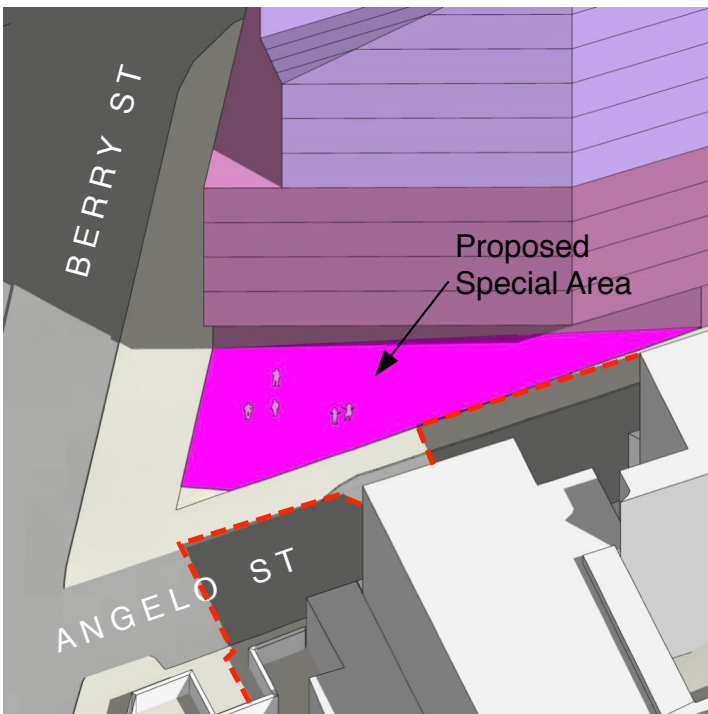
June 21_11.45am



July 21_11.39am



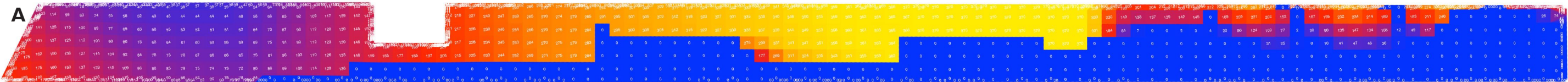
August 21_11.08am



September 21_ 10.24am

Diagrams indicate earliest time at which entirety of the “Proposed Special Area” is not in shadow of neighbouring buildings

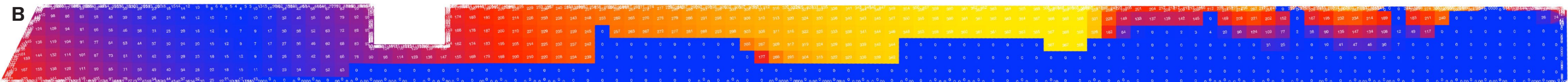
PROPOSED SPECIAL AREA



20 Berry St Special Area - Current Solar Hours

Total Test Area = 580sqm

Total Sun Hours received = 195,803 hours/sqm



20 Berry St Special Area - Proposed Solar Hours

Total Test Area = 580sqm

Total Sun Hours received = 167,516 hours/sqm

Proposed Special Area (Plaza)

Total Test Area = 200sqm

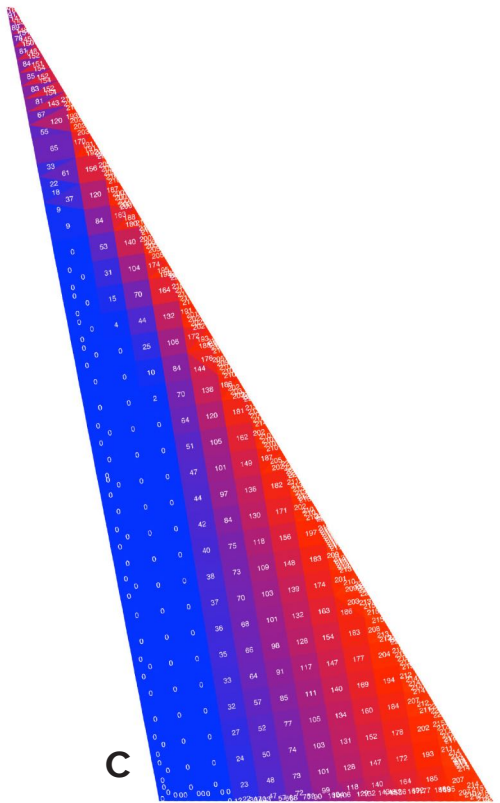
Total Sun Hours received = 57,146 hours/sqm

SUMMARY

This analysis compares the solar hours currently received by the Berry St Special (A) to the solar hours that would be received with the Planning Proposal scheme (B) + (C)

The net result (B+C/A) is an increase in hours of 28,859/sqm, which equates to an increase in solar hours of 14.7%

Legend



BERRY ST SPECIAL AREA - SOLAR HOURS ANALYSIS

PROPOSED LEP PLANS 08

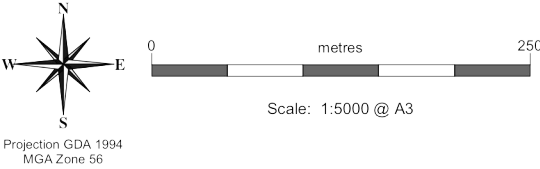
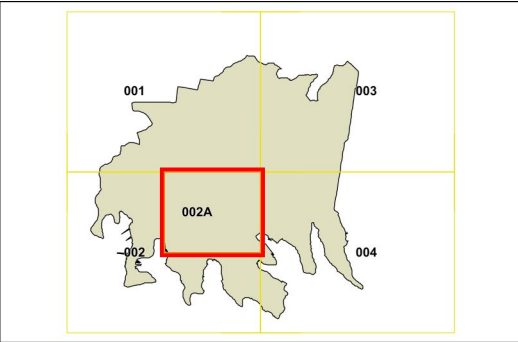


North Sydney Local
Environmental
Plan 2013

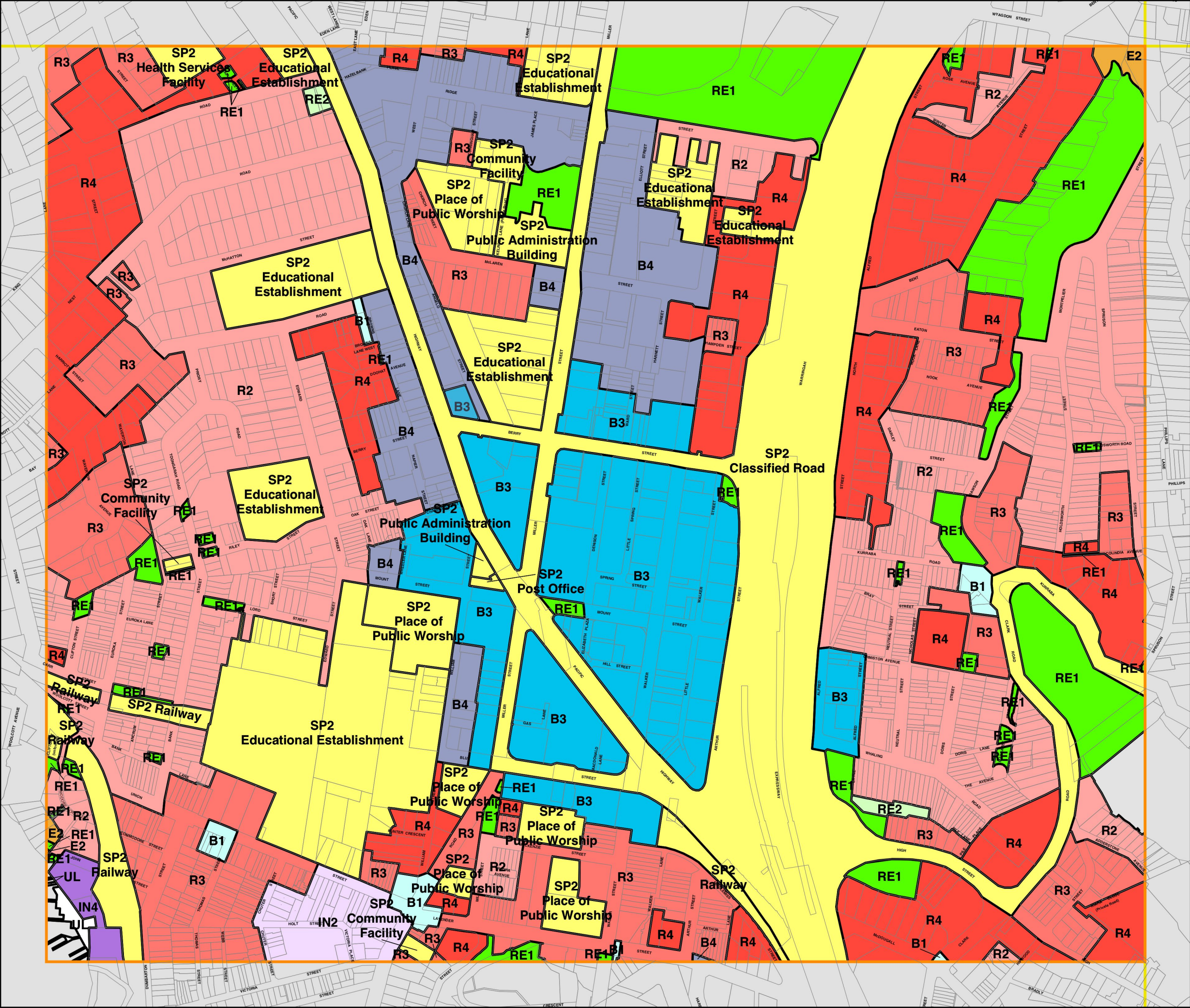
Land Zoning Map
- Sheet LZN_002A

- Zone
- B1 Neighbourhood Centre
 - B3 Commercial Core
 - B4 Mixed Use
 - E2 Environmental Conservation
 - E4 Environmental Living
 - IN2 Light Industrial
 - IN4 Working Waterfront
 - R2 Low Density Residential
 - R3 Medium Density Residential
 - R4 High Density Residential
 - RE1 Public Recreation
 - RE2 Private Recreation
 - SP1 Special Activities
 - SP2 Infrastructure
 - UL Unzoned Land

Cadastre
Cadastre 07/06/13 © North Sydney Council



Map identification number:
5950_COM_LZN_002A_005_20130607





Foreshore Building Line

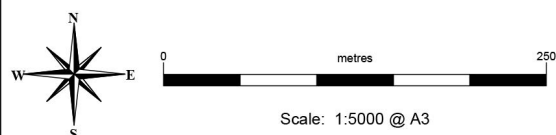
- ### North Sydney Centre

- ### Exceptions to Development Standards

- Land in St Leonards

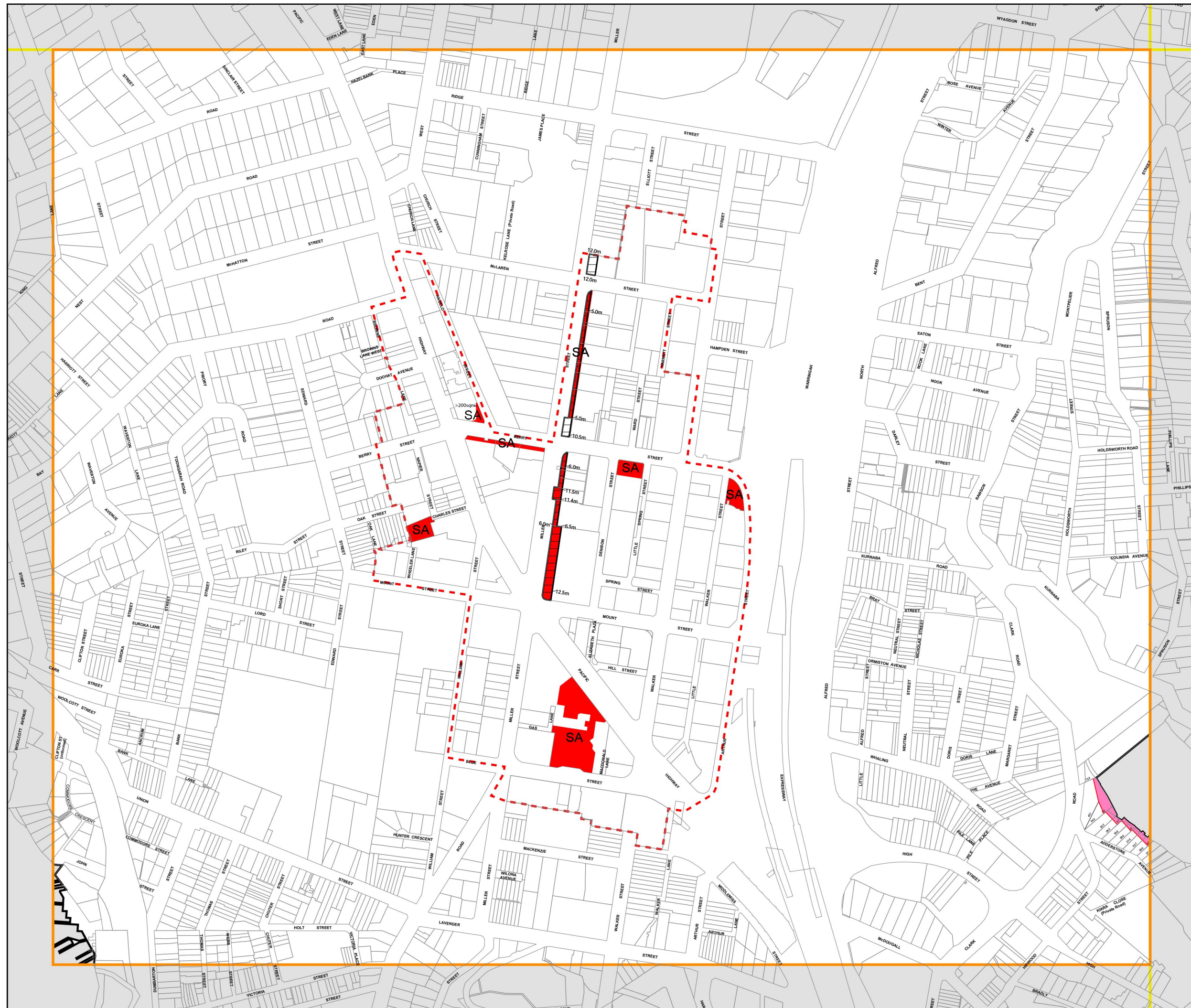
Cadastre

- ☐ Cadastre 06/02/18 © North Sydney Council



Projection GDA 1994
MGA Zone 56

Map identification number:
5950_COM_CL1_002A_005_20180206





North Sydney Local Environmental Plan 2013

Height of Buildings Map - Sheet HOB_002A

Maximum Building Height (m)

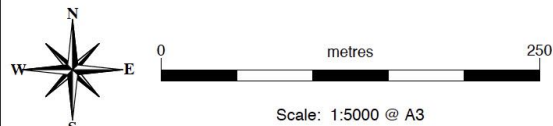
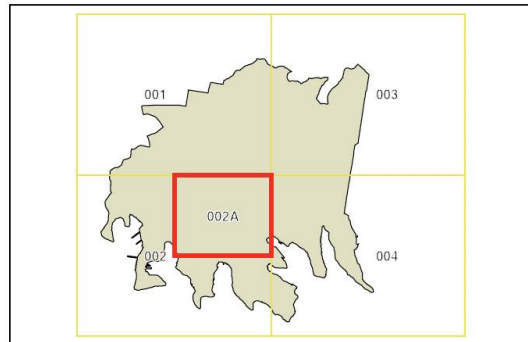
A	1	S	24
I	8.5	T1	25
K	10	T2	26
L	11	U1	30
M	12	U2	33
N	13	W1	40
O1	15	W2	42
O2	16	X	49
Q1	19.15	Y	50
Q2	20	AF	180

Maximum Building Height (RL m)

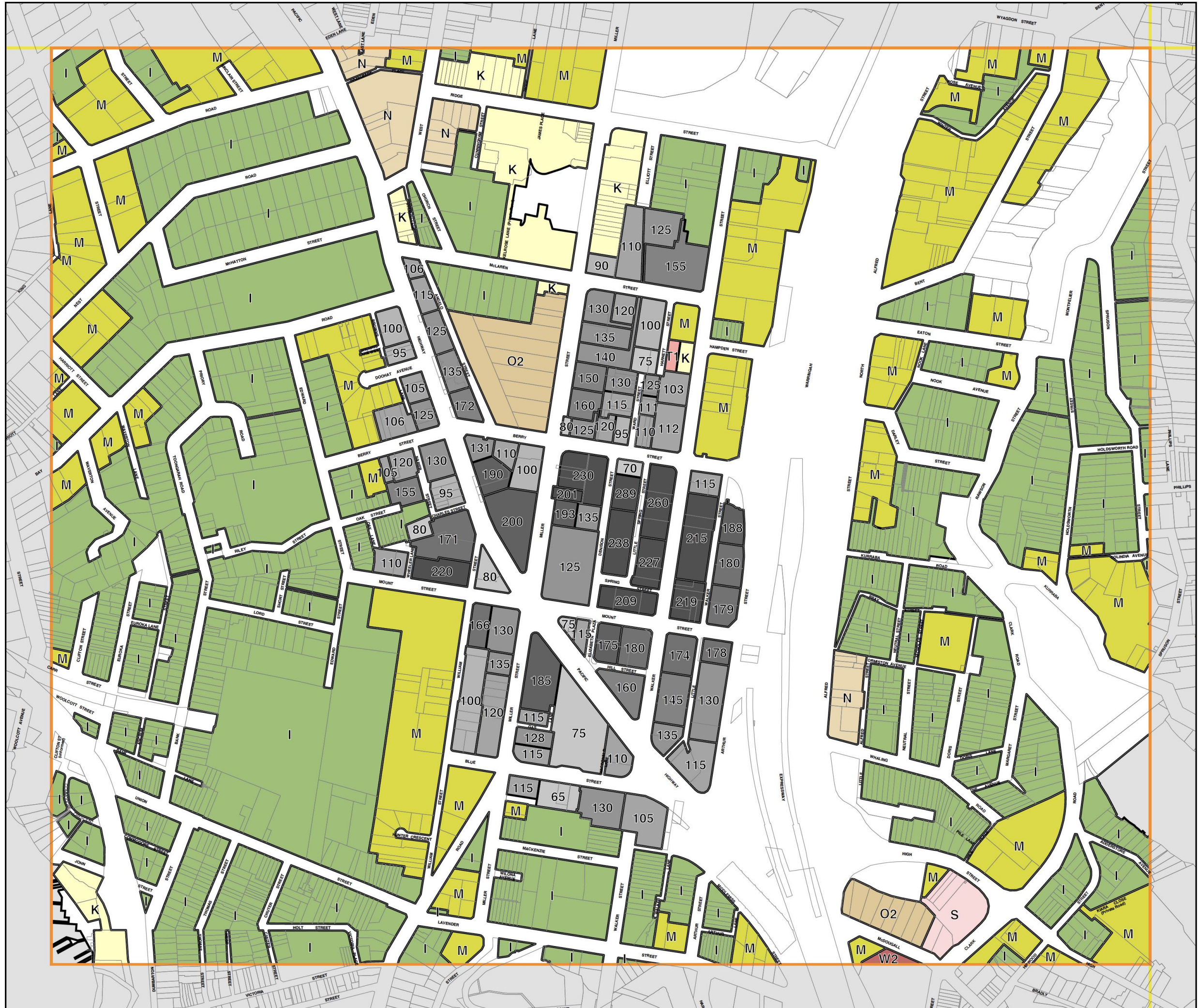
	0 - 20
	21 - 40
	41 - 60
	61 - 80
	81 - 100
	101 - 120
	121 - 140
	141 - 160
	161 - 180
	181 - 200
	200 +

Cadastre

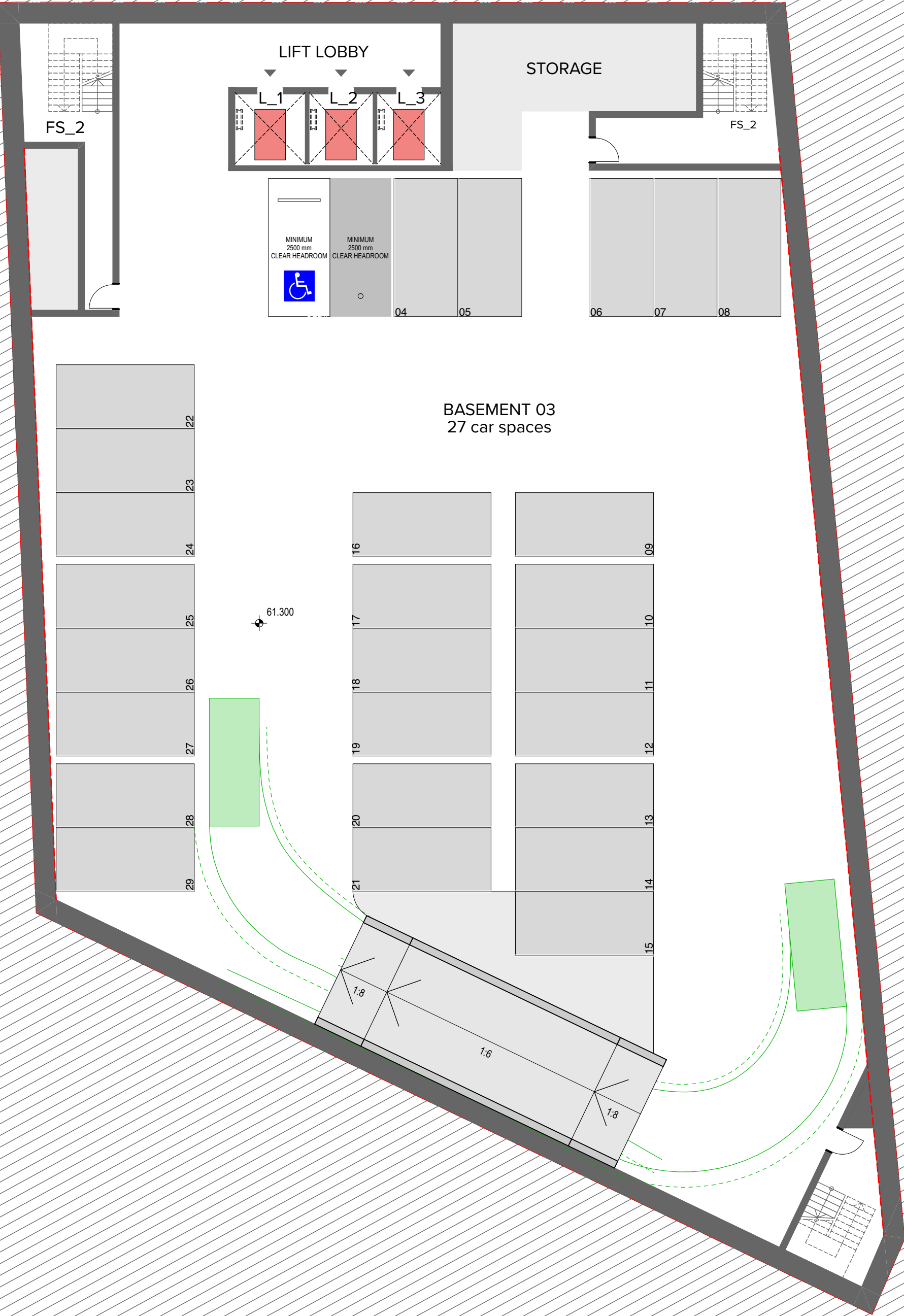
Cadastre 11/04/18 © North Sydney Council



Map identification number:
5950_COM_HOB_002A_005_20180411



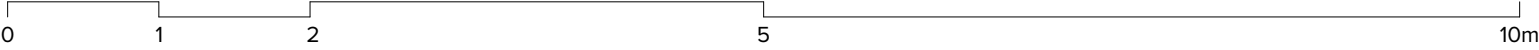
INDICATIVE SCHEME 09



Basement 03
Feasibility Study

20 Berry Street_North Sydney
SK-110-005

NOTES
THIS DRAWING IS THE COPYRIGHT © OF TURNER. NO REPRODUCTION WITHOUT PERMISSION, UNLESS NOTED OTHERWISE.

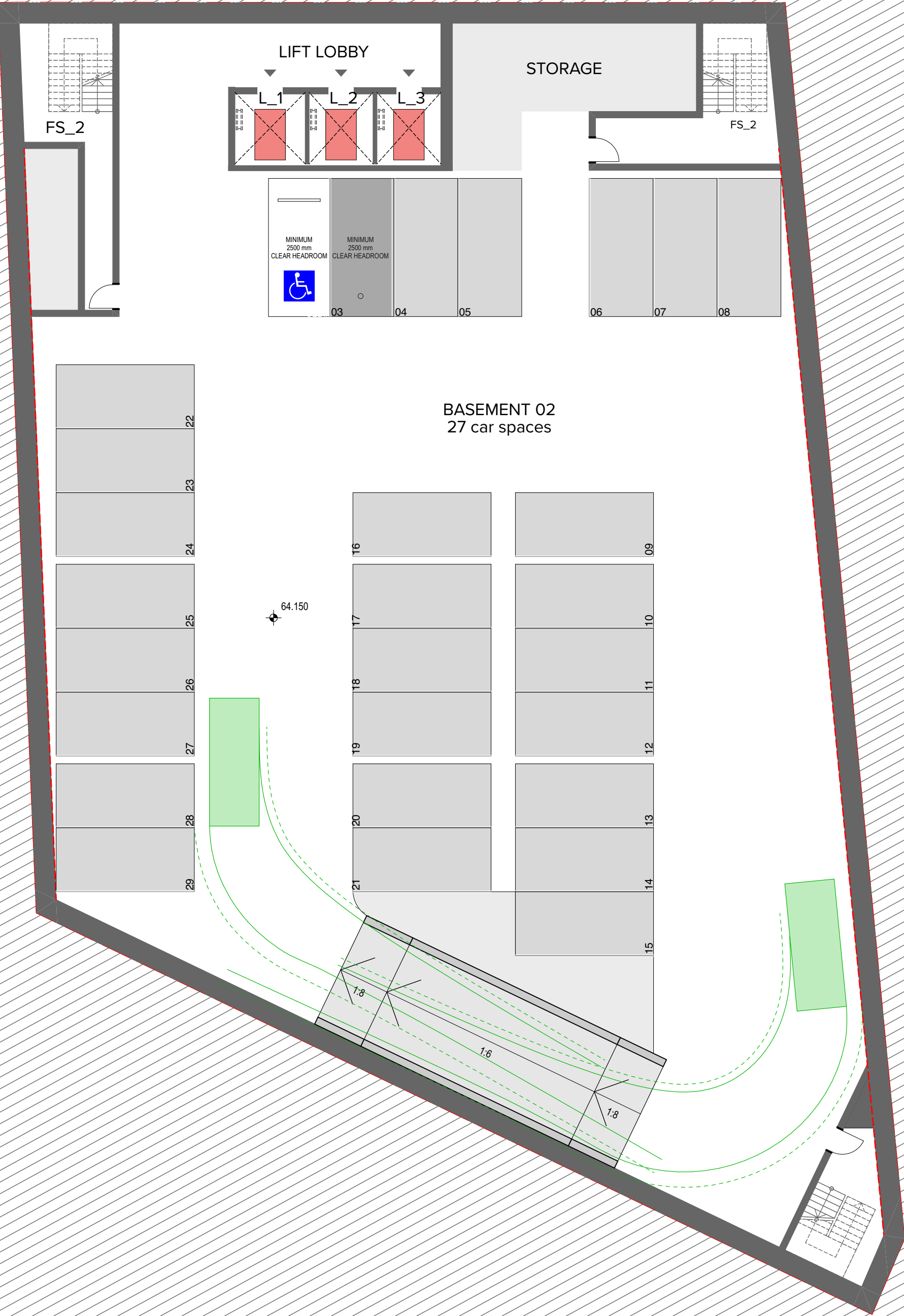


Project No. 20008 Rev.
1:150 @A1, 50%@A3



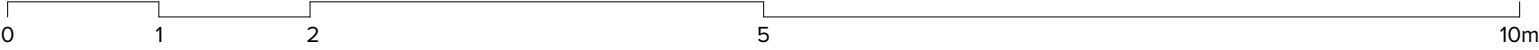
nominated architect: Nicholas Turner 6695 ABN 86 064 084 911

TURNER



Basement 02
Feasibility Study

20 Berry Street_North Sydney
NOTES
THIS DRAWING IS THE COPYRIGHT © OF TURNER. NO REPRODUCTION WITHOUT PERMISSION, UNLESS NOTED OTHERWISE.
SK-110-006

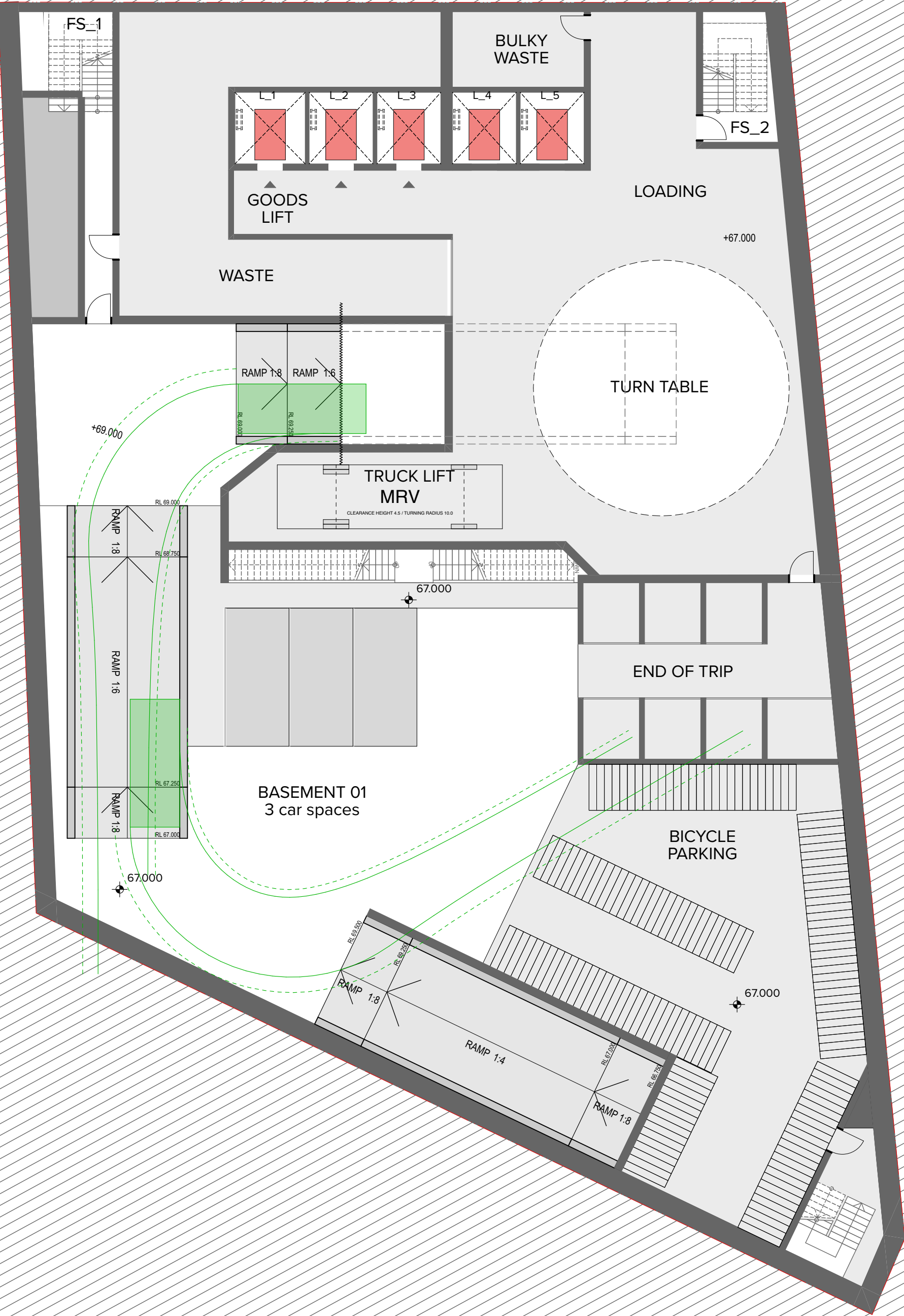


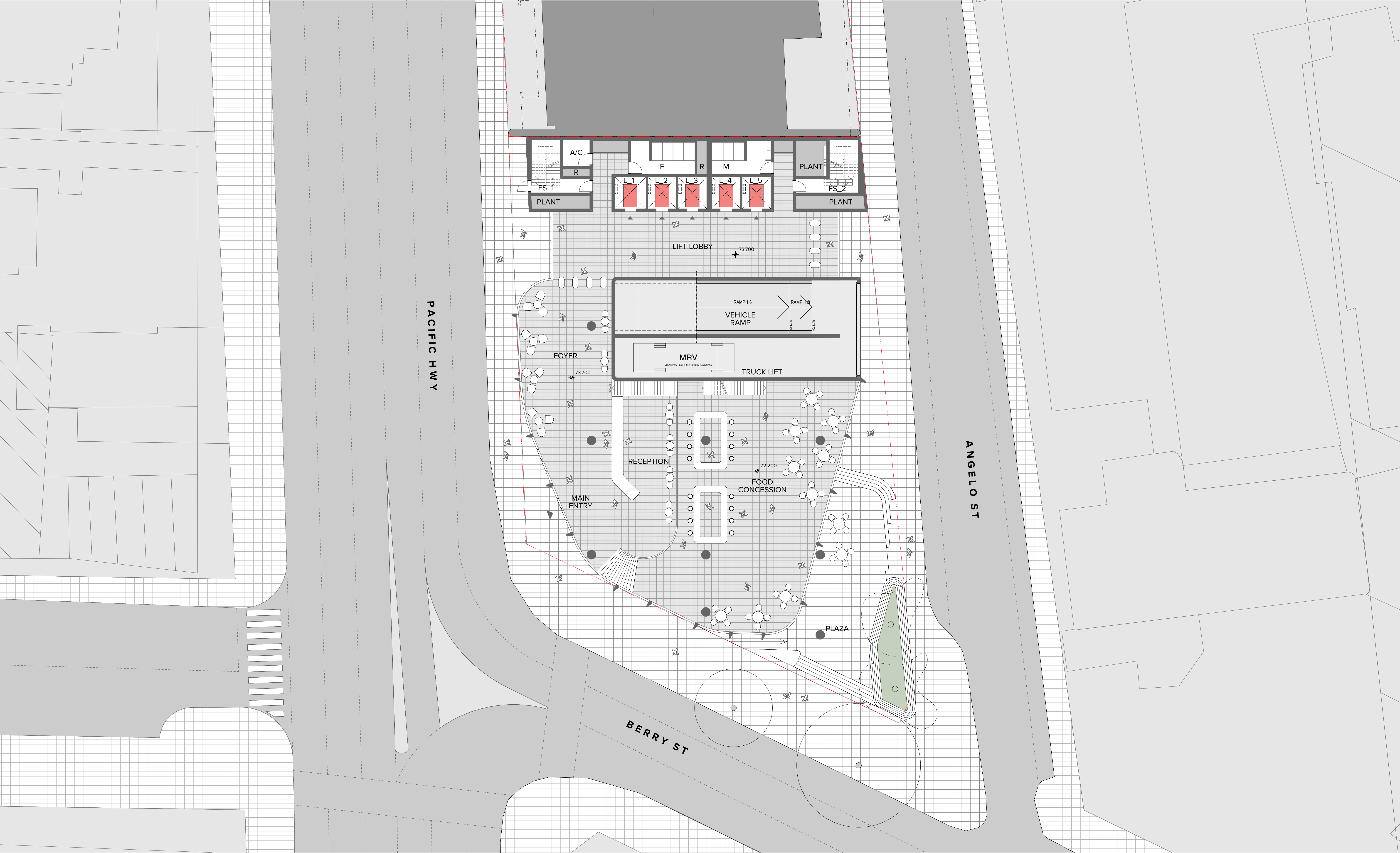
Project No. 20008 Rev.
1:150 @A1, 50%@A3



nominated architect: Nicholas Turner 6695 ABN 86 064 084 911

TURNER



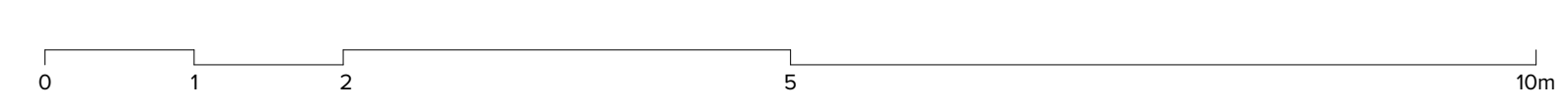
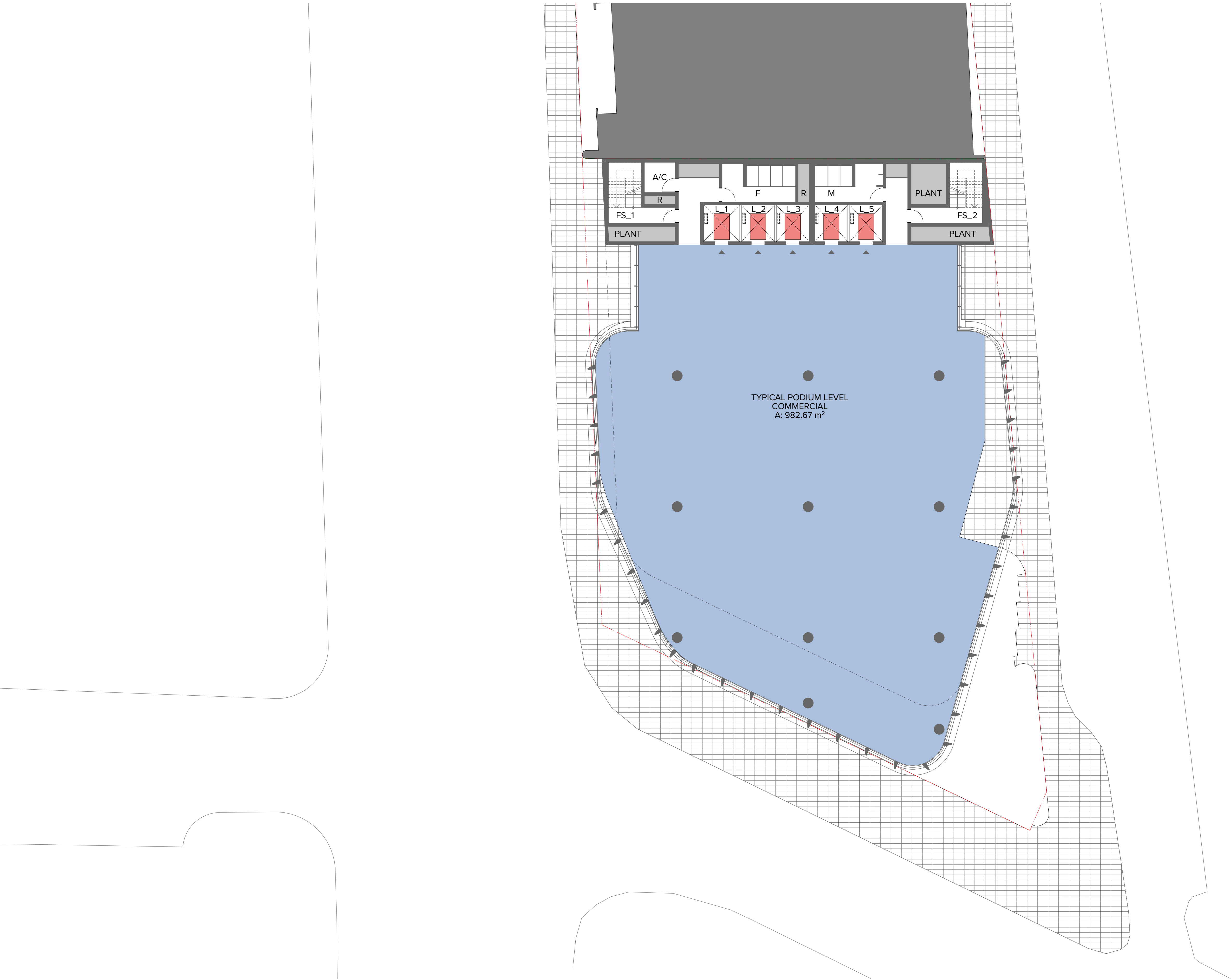


Ground Level
Feasibility Study

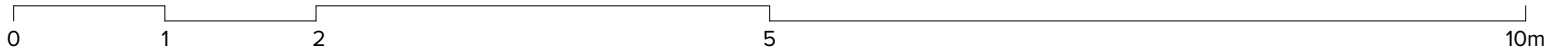
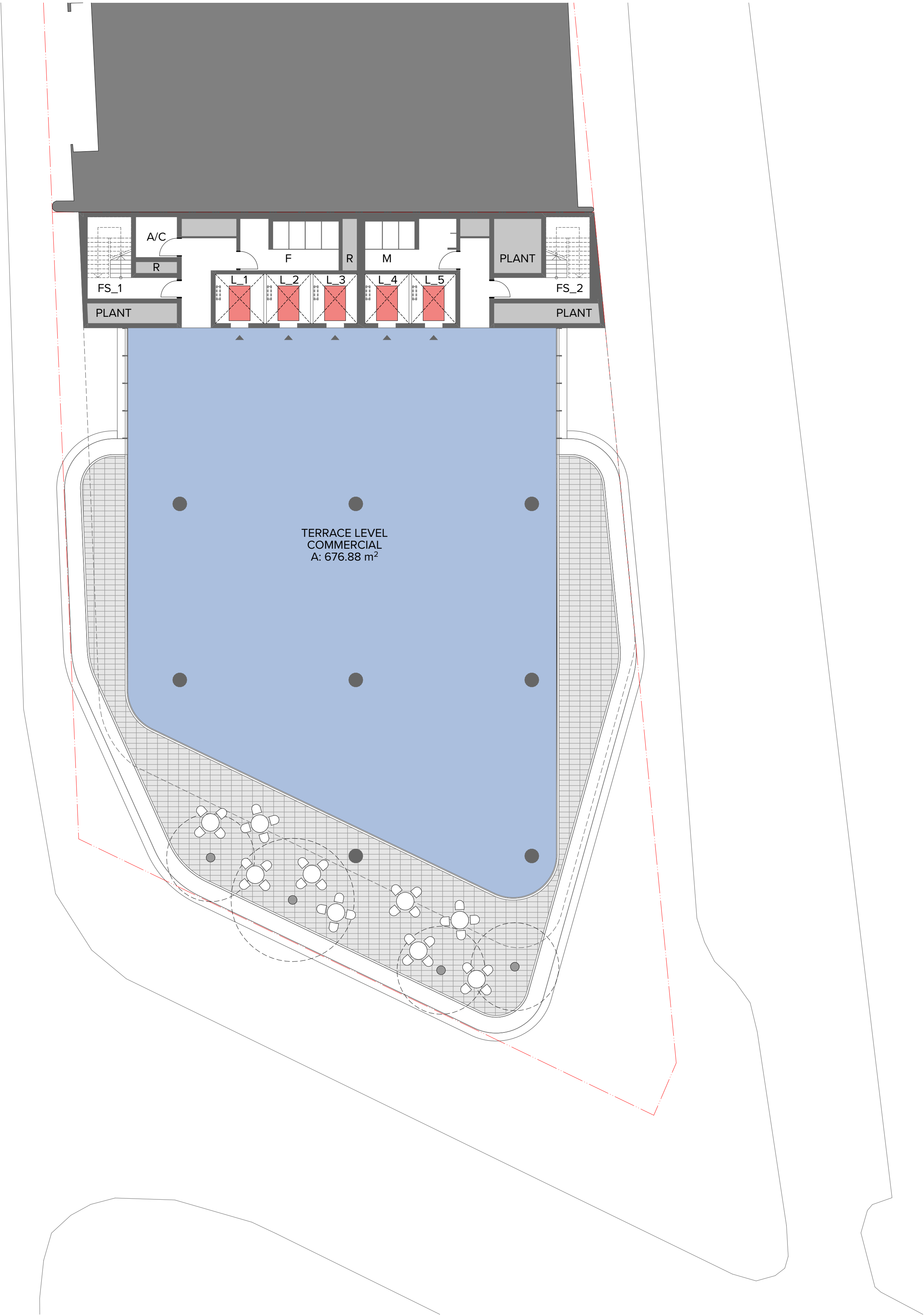
20 Berry Street_North Sydney
SK-110-008

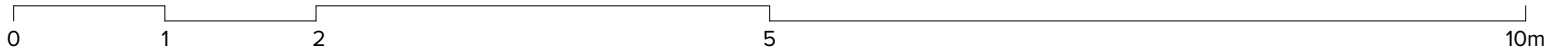
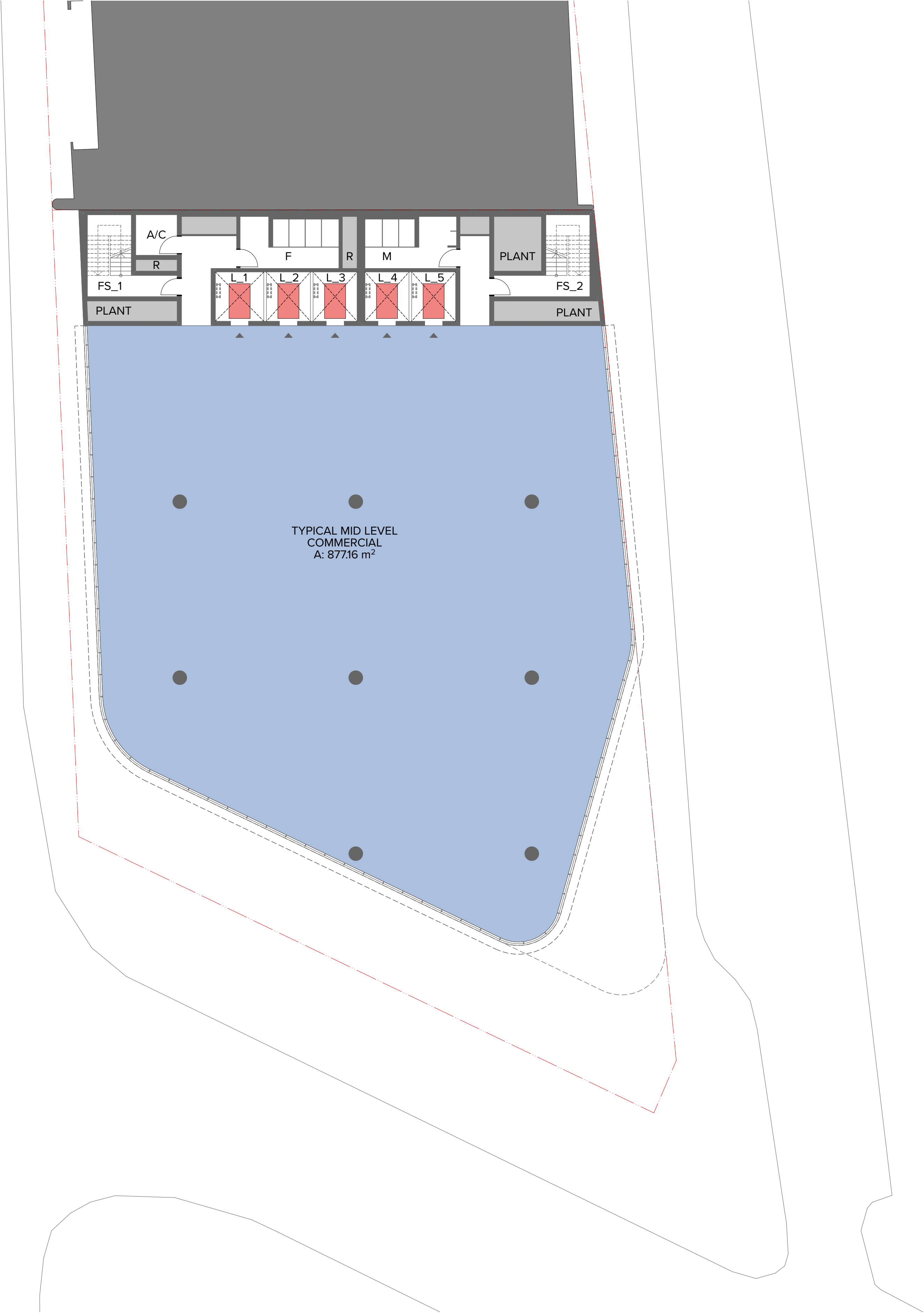
Project No. 20008 Rev.01 - WIP
1:150 @A1, 50%@A3
TURNER

nominated architect: Nicholas Turner 6695 ABN 86 064 084 911



Typical Podium Level
Feasibility Study





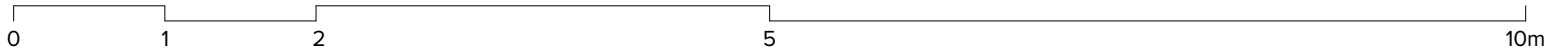
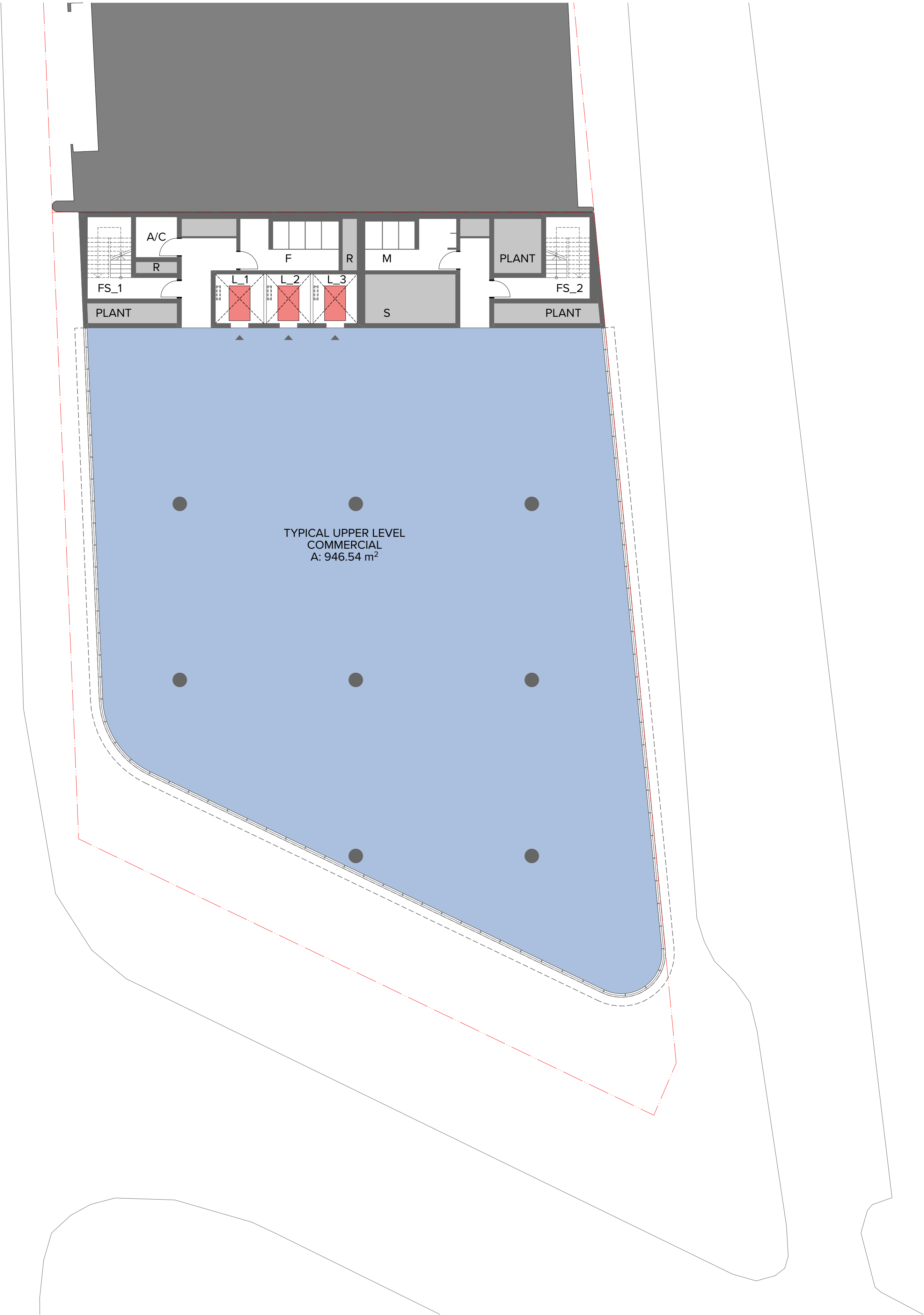
Typical Mid Level

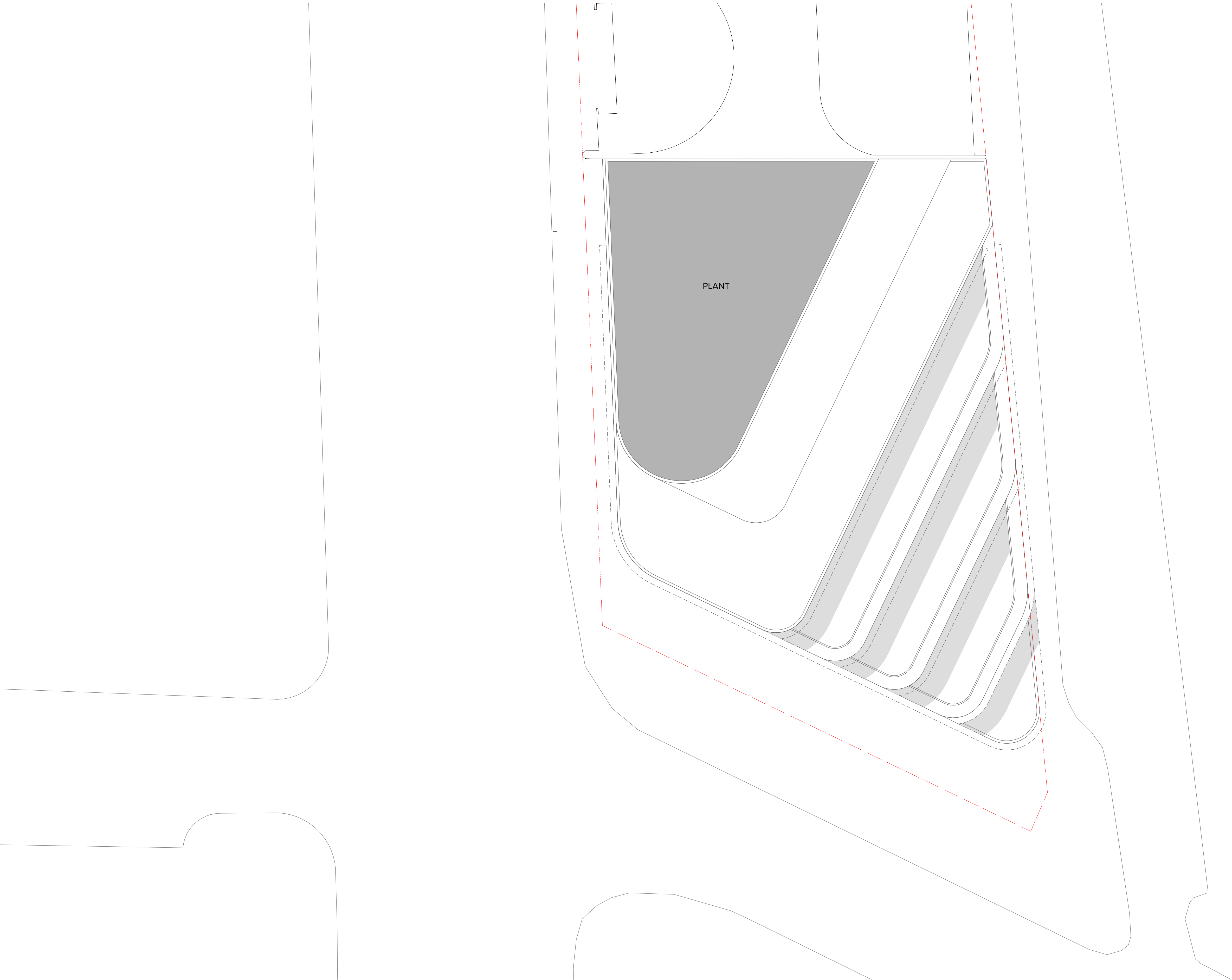
Feasibility Study

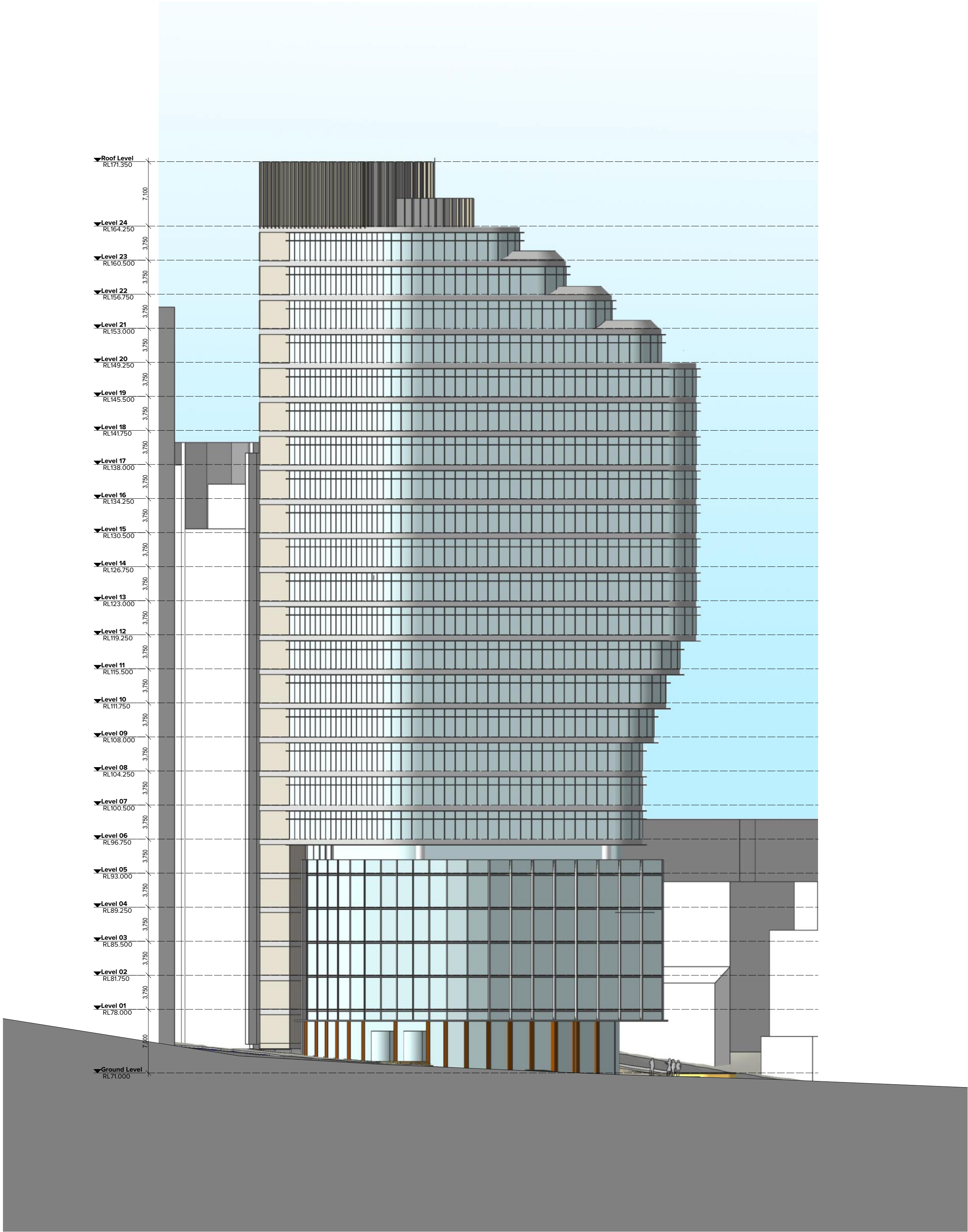
Project No. 20008 Rev.01 - WIP

1:150 @A1, 50%@A3

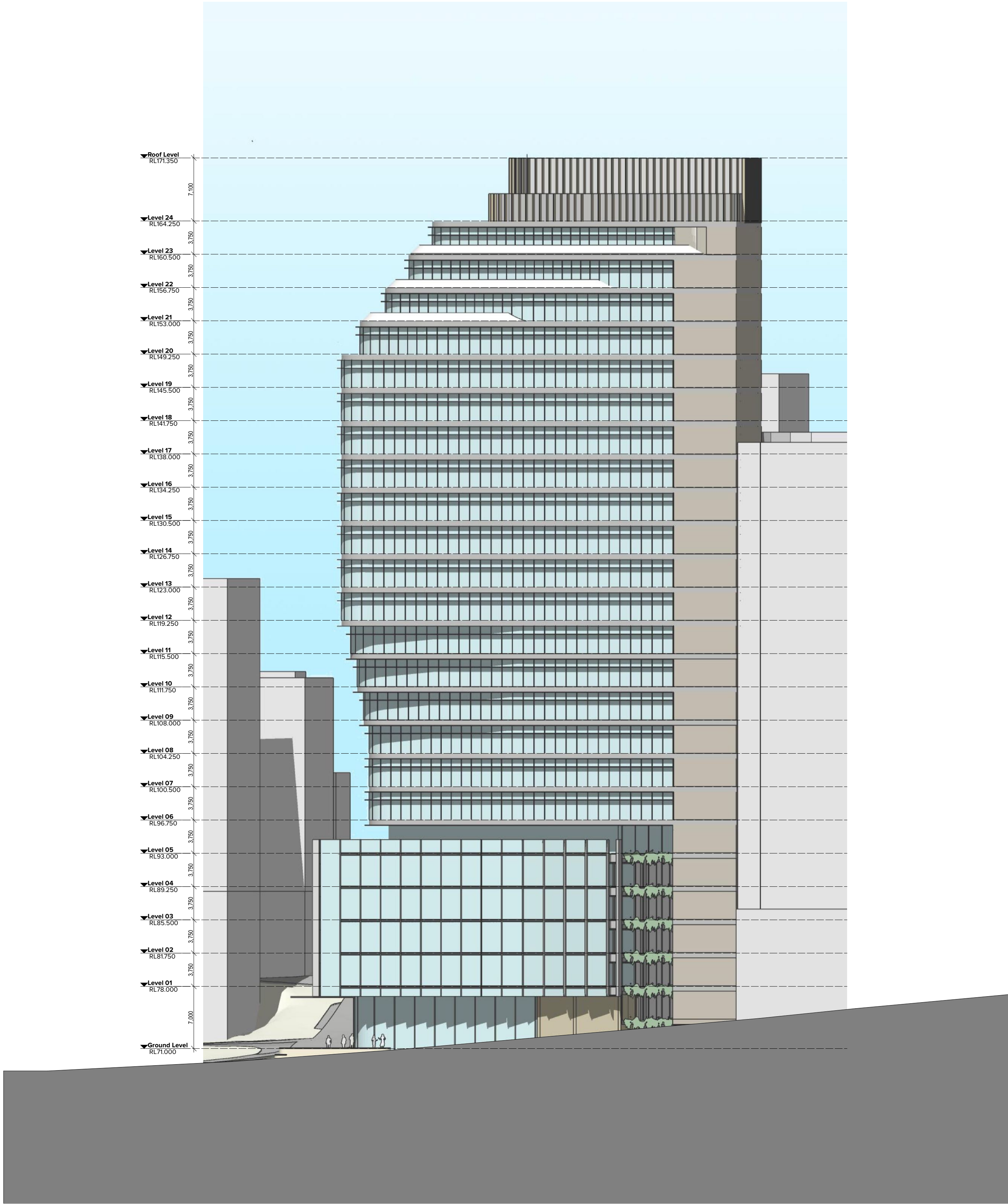
nominated architect: Nicholas Turner 6695 ABN 86 064 084 911







1 North Elevation



2 East Elevation

NOTES
THIS DRAWING IS COPYRIGHT © OF TURNER. NO REPRODUCTION WITHOUT PERMISSION. UNLESS NOTED OTHERWISE, THIS DRAWING IS NOT FOR CONSTRUCTION. ALL DIMENSIONS AND LEVELS ARE TO BE CHECKED ON SITE PRIOR TO THE COMMENCEMENT OF WORK. REPORT TURNER OF ANY DISCREPANCIES FOR CLARIFICATION BEFORE PROCEEDING WITH WORK. DRAWINGS ARE NOT TO BE SCALED. USE ONLY FIGURED DIMENSIONS. REFER TO CONSULTANT DOCUMENTATION FOR FURTHER INFORMATION. DWG, PC AND BIM FILES ARE UNCONTROLLED DOCUMENTS AND ARE ISSUED FOR INFORMATION ONLY.

DLCS Quality Endorsed Company ISO 9001:2015, Registration Number 20476
Turner and Anshu Nicholas Turner 6885, APR 98 984 084 811

CLIENT
Client Name
Client Address City State Postcode Country

Rev	Date	Approved by	Revision Notes
-----	------	-------------	----------------

Project Title
20 Berry Street North Sydney
Project Street Address Suburb State Postcode Country

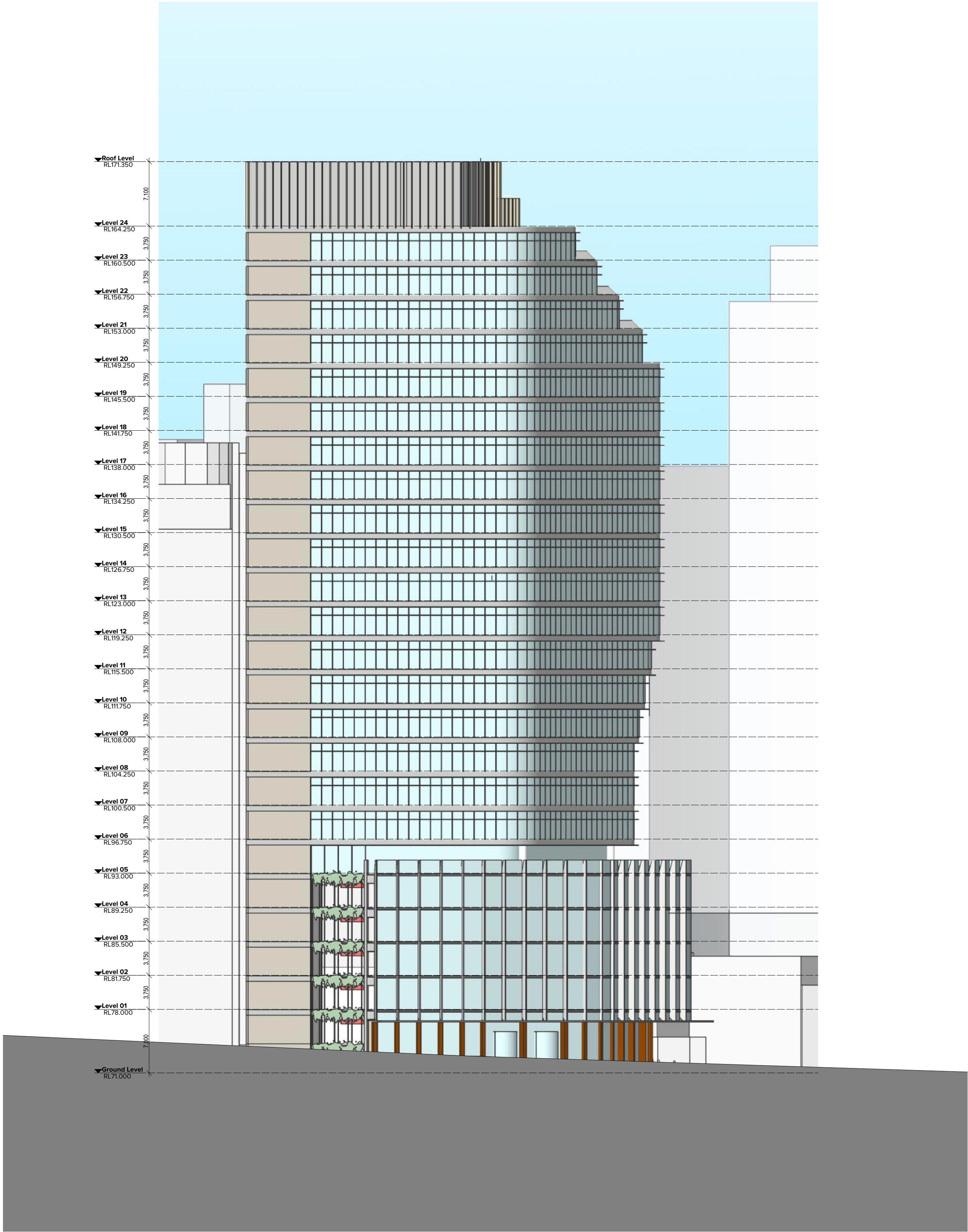
Drawing Title
**GA Elevations
Elevation**

Scale	Project No.	Drawn by	North
1:300 @A1, 50% @A3	00000	TURNER	
Status	Dwg No.	Rev	
For Information	SK-210-101	00	

TURNER

Level 7 ONE Oxford Street
Darlinghurst NSW 2010
AUSTRALIA

T +61 2 8668 0000
F +61 2 8668 0088
turner@tdc.com.au



1 West Elevation

NOTES
THIS DRAWING IS COPYRIGHT © OF TURNER. NO REPRODUCTION WITHOUT PERMISSION. UNLESS NOTED OTHERWISE, THIS DRAWING IS NOT FOR CONSTRUCTION. ALL DIMENSIONS AND LEVELS ARE TO BE CHECKED ON SITE PRIOR TO THE COMMENCEMENT OF WORK. INFORM TURNER OF ANY DISCREPANCIES FOR CLARIFICATION BEFORE PROCEEDING WITH WORK. DRAWINGS ARE NOT TO BE SCALED. USE ONLY FIGURED DIMENSIONS. REFER TO CONSULTANT DOCUMENTATION FOR FURTHER INFORMATION. DWG, PC AND BIM FILES ARE UNCONTROLLED DOCUMENTS AND ARE ISSUED FOR INFORMATION ONLY.

DLCS Quality Endorsed Company ISO 9001:2015, Registration Number 20476
Notwithstanding And/Incl Turner 6885, ABN 99 594 094 811

CLIENT
Client Name
Client Address City State Postcode Country

Rev	Date	Approved by	Revision Notes
-----	------	-------------	----------------

Project Title
20 Berry Street North Sydney
Project Street Address Suburb State Postcode Country

Drawing Title
**GA Elevations
Elevation**

Scale	Project No.	Drawn by	North
1:300 @A1, 50% @A3	00000	TURNER	
Status	Dwg No.	Rev	
For Information	SK-210-102	00	

TURNER

Level 7 ONE Oxford Street
Darlinghurst NSW 2010
AUSTRALIA

T +61 2 8668 0000
F +61 2 8668 0088
turner@tdo.com.au



TURNER

 **HOLDMARK**