Foster + Partners

Over Station Development - Pitt St North
SSDA - Response to Submissions Design Report
November 2020

CONSULTANTS

Foster+Partners acknowledges the development and consultant team who were integral to the preparation of this design concept:

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Main Contractor: CPB
Local Collaborating Architect: COX Architecture
City Planning Consultant: URBIS
Heritage: GBA Heritage
Structure: Aurecon
ESD: Cundall Johnston & Partners
BCA: Philip Chun
Wet Fire Service: CJ Arms
Fire Safety Engineering: Warrington Fire
Hydraulic Services: CJ Arms
Mechanical Services: LCI Consultants
Electrical and Comms: LCI Consultants
Vertical Transportation: Aurecon
Wind Assessment: CPP
Waste consultancy: TTM Group
DDA: Philip Chun
Landscape: Sue Barnsley Design
Dry Fire Services: LCI Consultants
Traffic Engineering: Aurecon

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ANZ
Stockland

Introduction

Purpose of this Report

This Response to Submissions Design Report has been prepared by Foster+Partners on behalf of the Pitt Street Developer North Pty Ltd to address the matters raised by government agencies, the public and community organisation groups during public exhibition of the proposed Sydney Metro Pitt Street North Over Station Development (OSD) State Significant Development **(SSD).**

The Department of Planning, Industry and Environment (**DPIE**) issued a letter to the applicant on the 26 August 2020, requesting a response to the comments raised during the public exhibition period for both the Concept SSD DA Modification application (**SSD-8875-Mod-1**) and the Detailed SSD DA (**SSD-10375**).

This RtS provides a response to the comments raised in the submissions as they relate to both SSD-8875-Mod-1 and SSD-10375. For the most part, the submissions received are relevant to both applications as they are interrelated (i.e. the detailed design is contained within the modified building envelope), in addition to submissions relating to works approved under the Sydney Metro Critical State Significant Infrastructure Approval (**CSSI Approval**).

Where applicable, this Response to Submission (RtS) provides consolidated responses to the submissions received which are relevant to both applications. Conversely, separate responses are provided for each application where the submissions received are only relevant to one application.

This Design Report is to be read in conjunction with the RtS Report produced by Urbis on behalf of the Pitt Street Developer North Pty Ltd.

Left: East Facade of Pitt Street North as viewed from Hyde Park

“To many, cities are defined by their skylines. To those who live there, it’s what happens at street level that matters. Vibrant places that are easy to get around. Jobs made simple to commute to. Homes people look forward to returning to. And communities that create a sense of belonging. Great cities spark a connection. Through pride of place, and a sense of wonder, they bring people closer. Reducing the distances between people. And bridging cultural divides to create harmonious communities that thrive. We’re a group united in the pursuit of something special. At Pitt Street, we want to create more than a vibrant place, we want to build closer connections on every level.”

Shadow Analysis

1.1 Shadow Analysis

Solar Access to Hyde Park

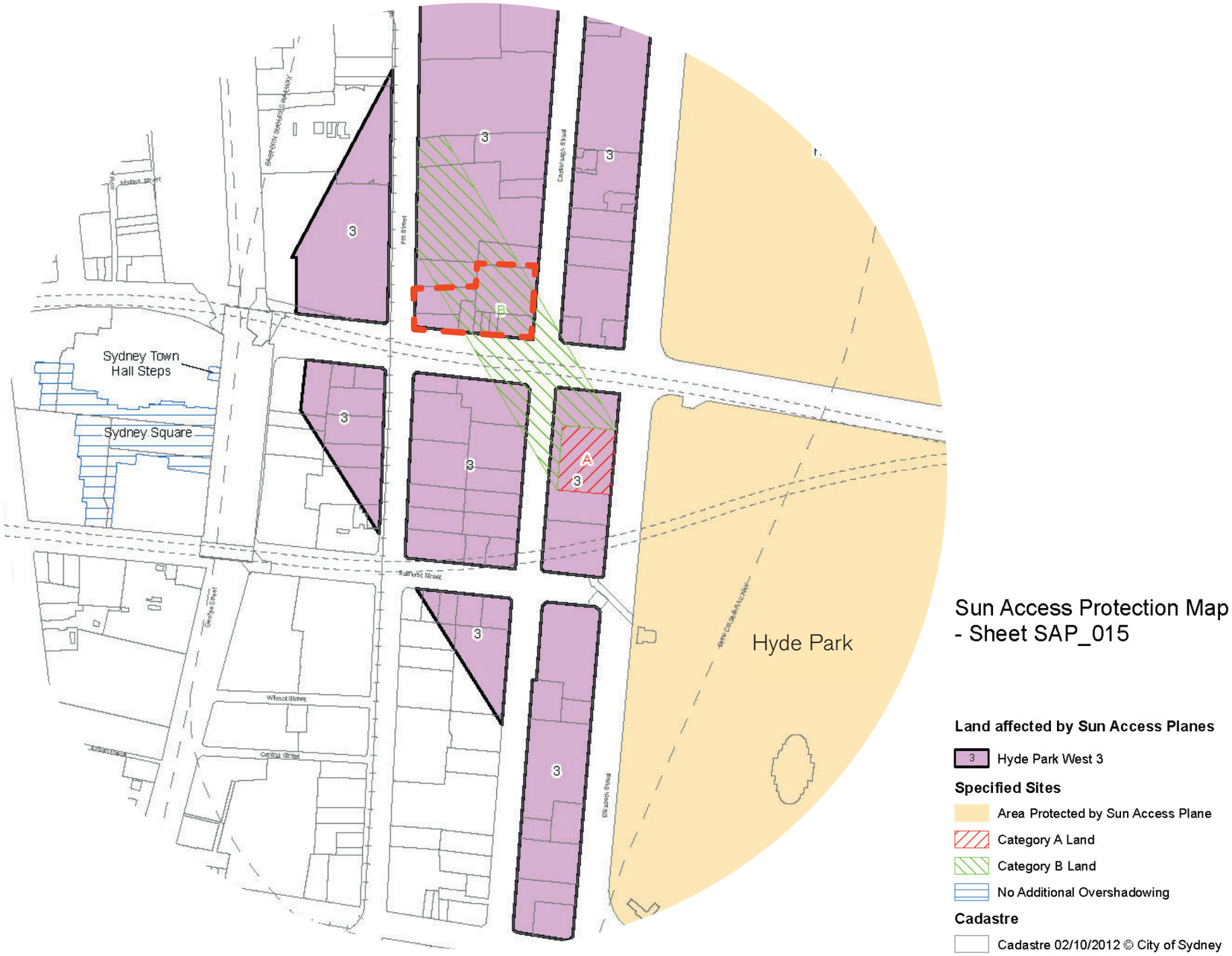
Review the distribution of floor space to minimise external impacts and satisfy the following Design Guidelines requirements:

(6.b) Maximise solar access to the public domain, through responding to the reduced shadow cast by the redevelopment of 201 Elizabeth Street on Hyde Park on June 21st, between 12pm and 2pm -Sydney Metro preliminary design work propose an angled offset of the north eastern corner of 4.1m to achieve this outcome.

SEARs Overshadowing Requirements

The proposed Pitt Street North development and Envelope modification is consistent with the critical setting-out principles submitted to the Department of Planning and environment for SEARs regarding lots DP 229365 (1), DP 900055 (2), DP 74952(3), DP 509677 (2), DP 982663 (1), DP 61187 (3), DP 74367 (1), DP 596474 (1) and DP 1095869 (17) on 01 November 2017 by Transport for New South Wales.
The proposed development sits above the approved Pitt Street North Metro Station CSSI, with a tower form limited to RL188.63, equivalent to 46 storeys.

As outlined in the Sydney LEP Sun Access Protection Map15, the Pitt Street project site is governed by the Hyde Park West 3 sun access plane (refer to extract on the right).
In addition to this, maximum building heights at the site are governed by the Sun Access Plane control within Clause 6.17 of the LEP, ensuring no additional overshadowing to Hyde Park, resulting in the original SEARs envelope for the site.



Sun Access Protection Map - Sheet SAP_015

Land affected by Sun Access Planes

3 Hyde Park West 3

Specified Sites

Area Protected by Sun Access Plane

Category A Land

Category B Land

No Additional Overshadowing

Cadastre

Cadastre 02/10/2012 © City of Sydney

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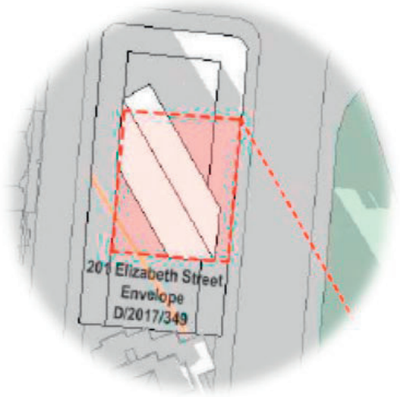
New 201 Elizabeth Street Stage 1 DA Envelope

During the Stage 1 approval process, Sydney Metro conducted a detailed solar analysis surrounding the overshadowing requirements for the Pitt Street North site & and its envelope relative to the existing building massing of 201 Elizabeth Street & the then newly approved Stage 1 Envelope for set development (D/2017/349).

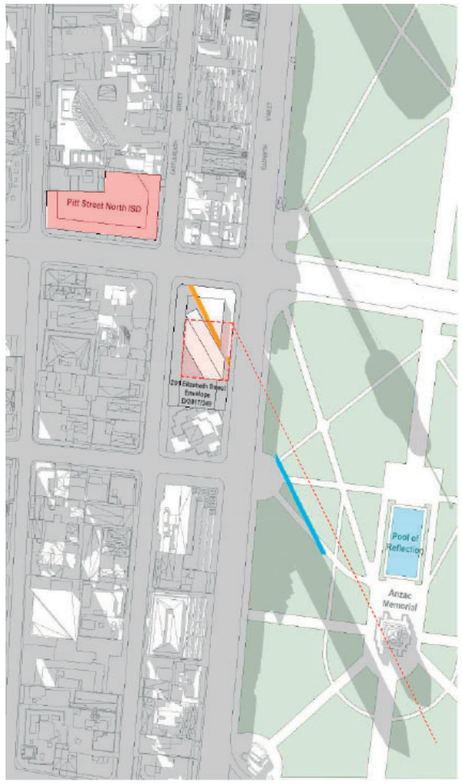
This study resulted in an additional shadow cast by the Pitt Street North original envelope on Hyde Park on June 21, between the hours of 1.30PM and 2PM, when compared to the reduced shadow cast by the newly approved 201 Elizabeth Street Stage 1 massing (refer to diagrams below).



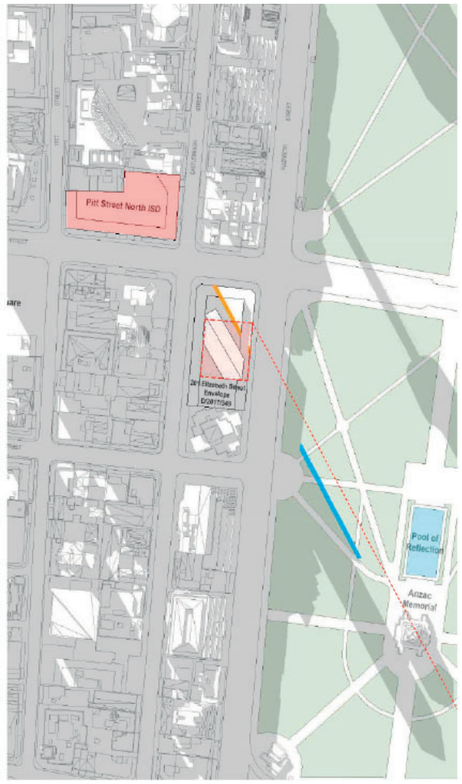
Outline and Shadow cast by existing 201 Elizabeth Street Development

Additional overshadowing from Pitt Street OSD original SEARs envelope onto its surroundings

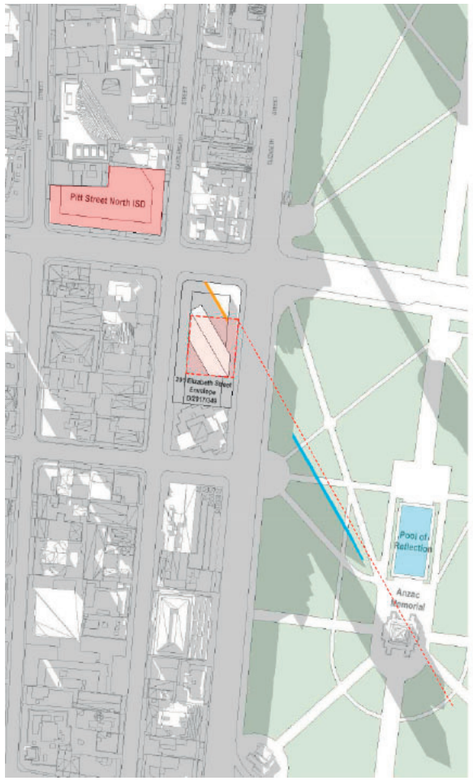
Additional overshadowing impact from Pitt Street OSD original SEARs envelope to Hyde Park



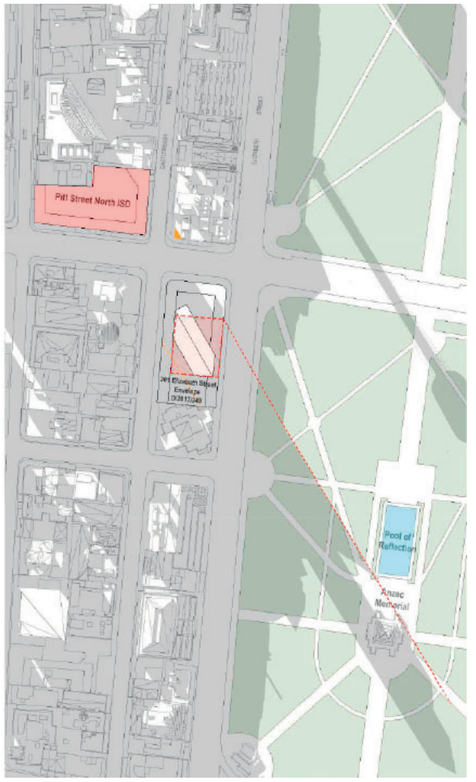
June 21 / 1.38 PM



June 21 / 1.45 PM



June 21 / 1.52 PM



June 21 / 2.00 PM

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Solar Access to Hyde Park

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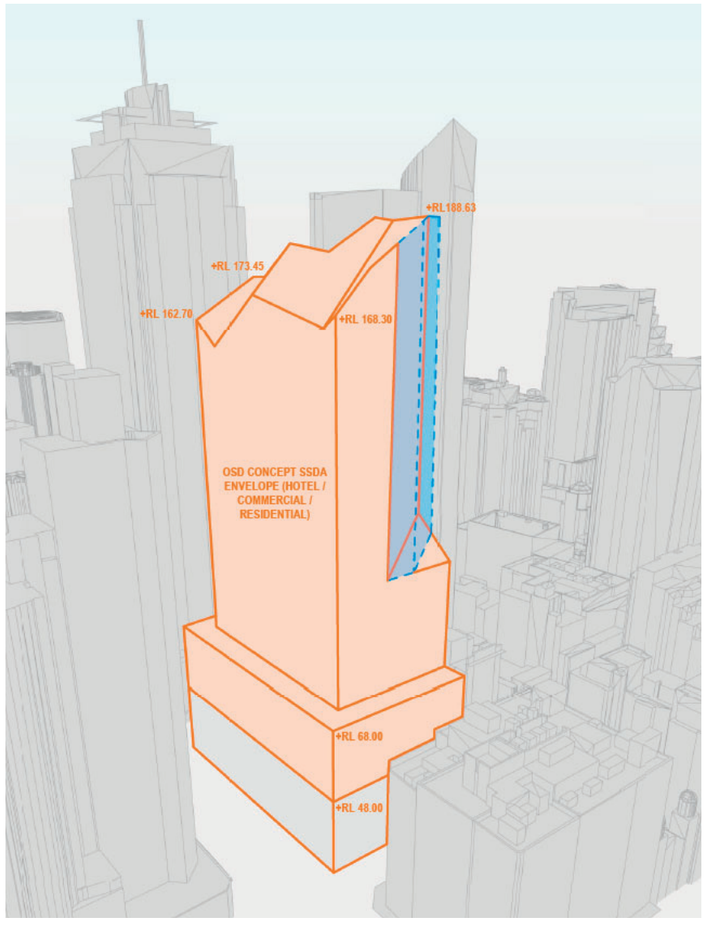
Approved Stage 1 SSDA Envelope

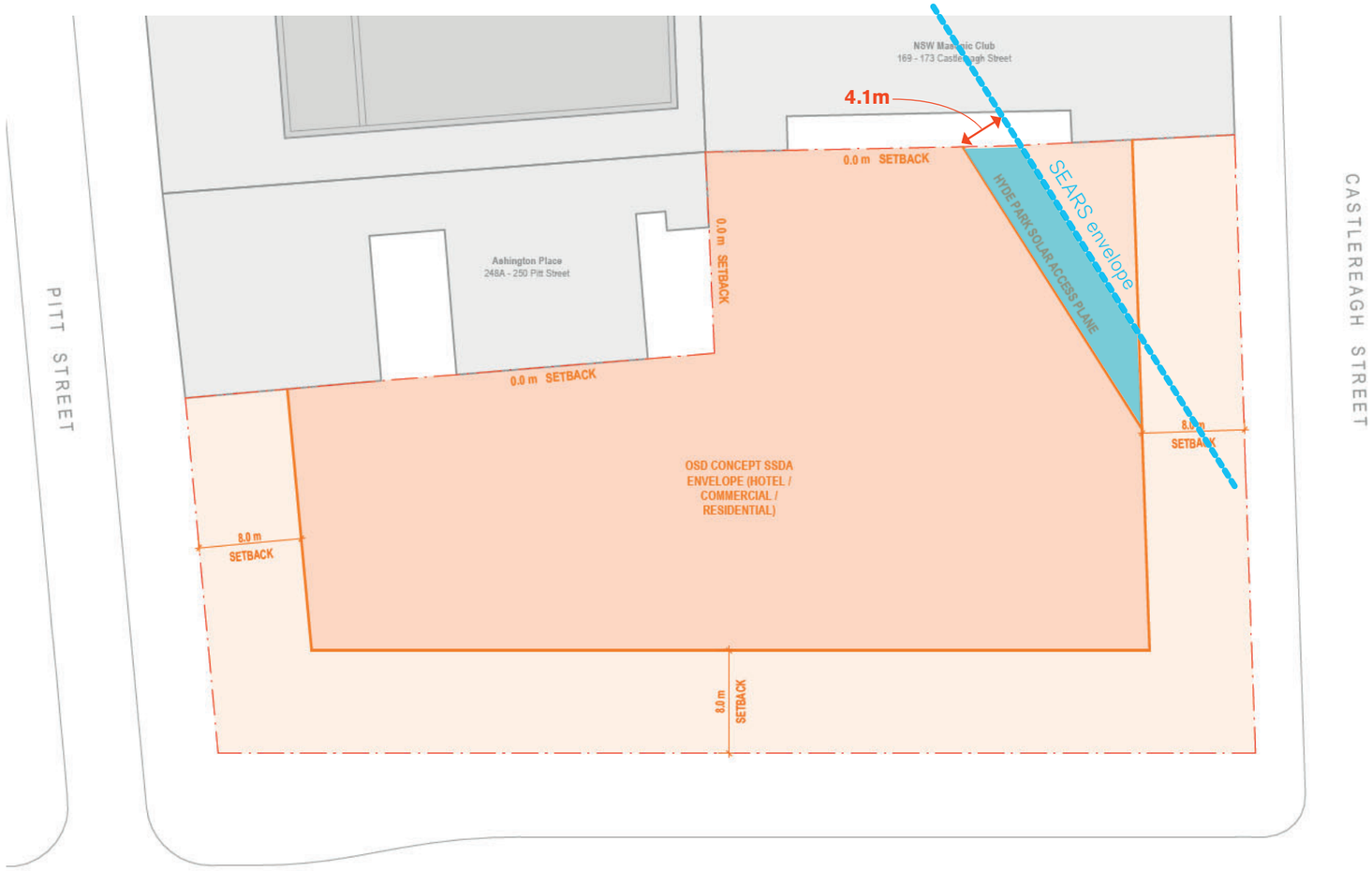
The result impacted the north-eastern corner of the Pitt Street North Envelope, requiring the angled corner to the North-East to be offset 4.1m, removing 87 sqm from the typical tower level envelope.

Revised Envelope as submitted for Stage 1 approval for Pitt Street North

Envelope Comparison to original SEARs Envelope for Pitt Street North



3D Perspective View Stage 1 Envelope



Plan View Stage 1 Envelope

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Solar Access to Hyde Park

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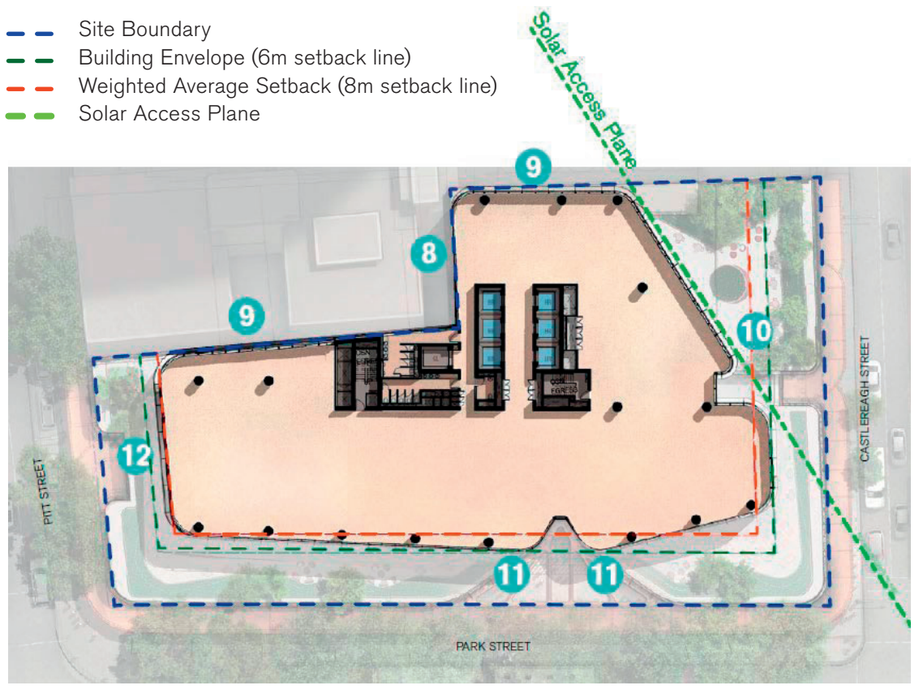
North-Eastern Facade treatment

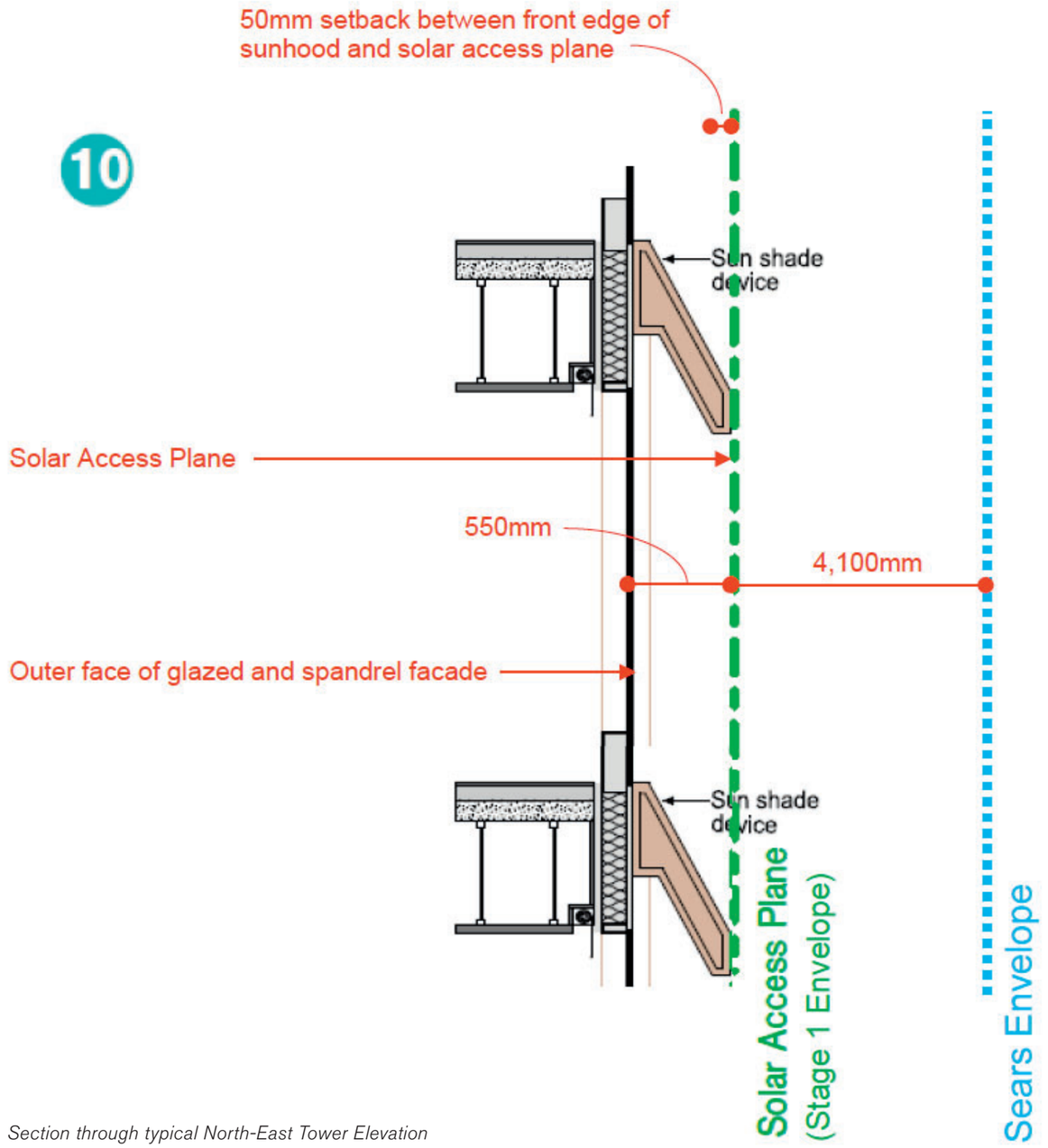
With the Solar Access Plane established as an offset of 4.1m from the original SEARs envelope, the facade outline to this North-Eastern corner of the development has been further set back an additional 550mm from the Solar Access Plane.
The front edge of the expressed horizontal sunhoods is set off 50mm from this same Solar Access Plane as indicated on the sectional diagram on this page.

The following pages show compliance with the requirement of no additional overshadowing to Hyde Park on June 21st between the hours of 12pm to 2pm when shown in light of the approved Concept Envelope on 201 Elizabeth Street.

Key

- Site Boundary
- Building Envelope (6m setback line)
- Weighted Average Setback (8m setback line)
- Solar Access Plane





Section through typical North-East Tower Elevation

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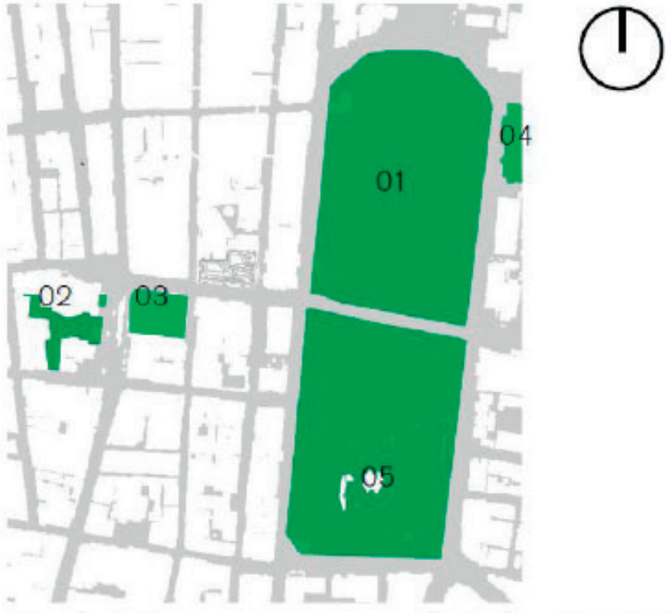
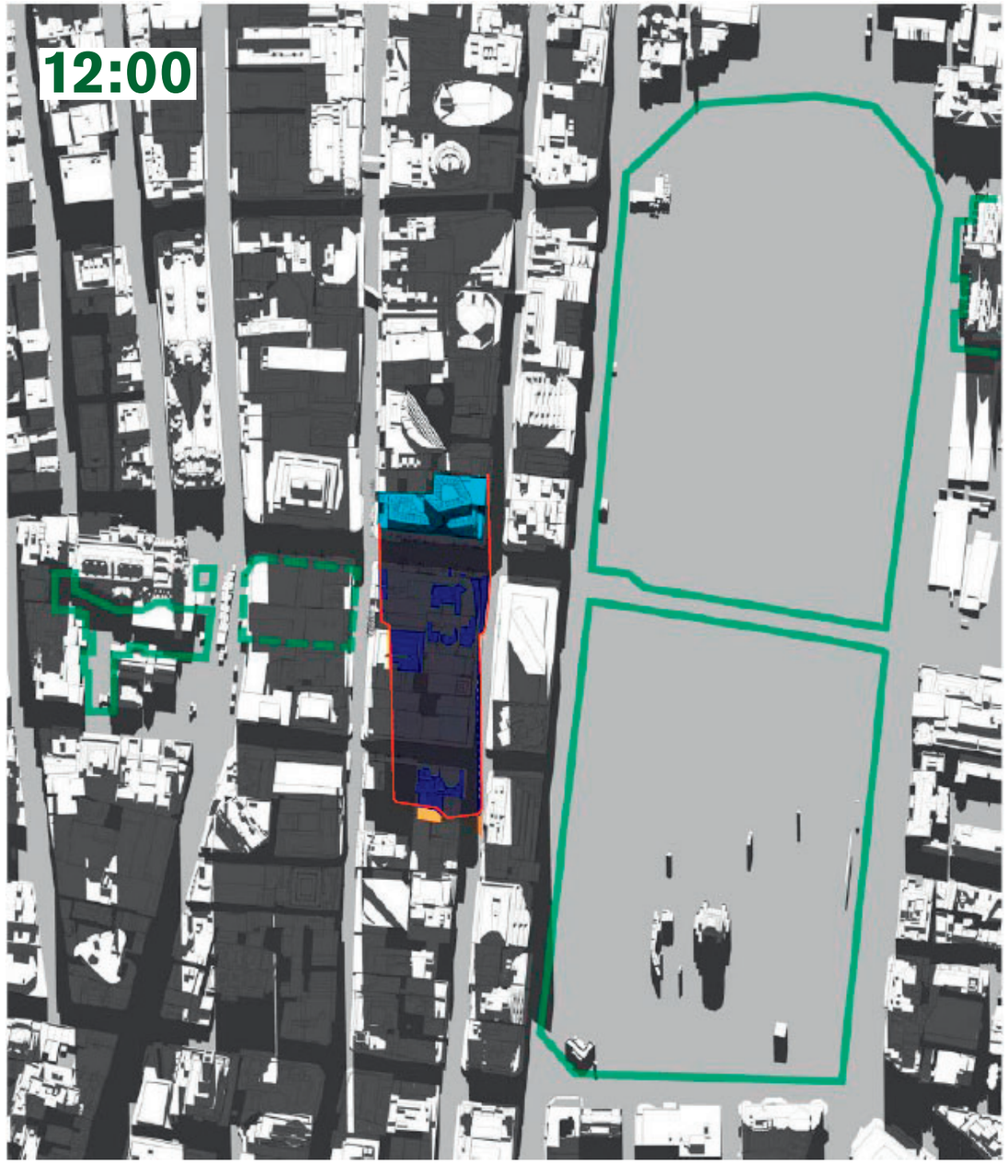
Shadow Diagrams June 21st



01 - Hyde Park
02 - Sydney Square / Sydney Town Hall Steps
03 - Future Town Hall Square
04 - St Mary's Cathedral
05 - Anzac Memorial

- Public Space
- Building Envelope Shadow
- Proposed Building Shadow



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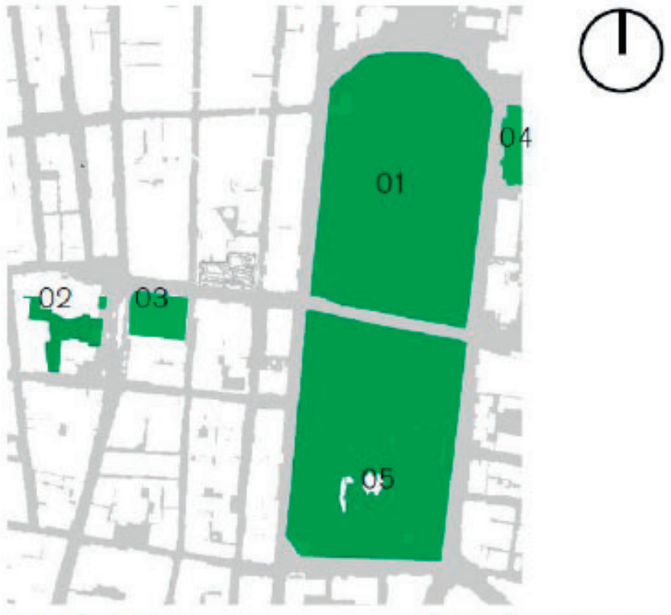

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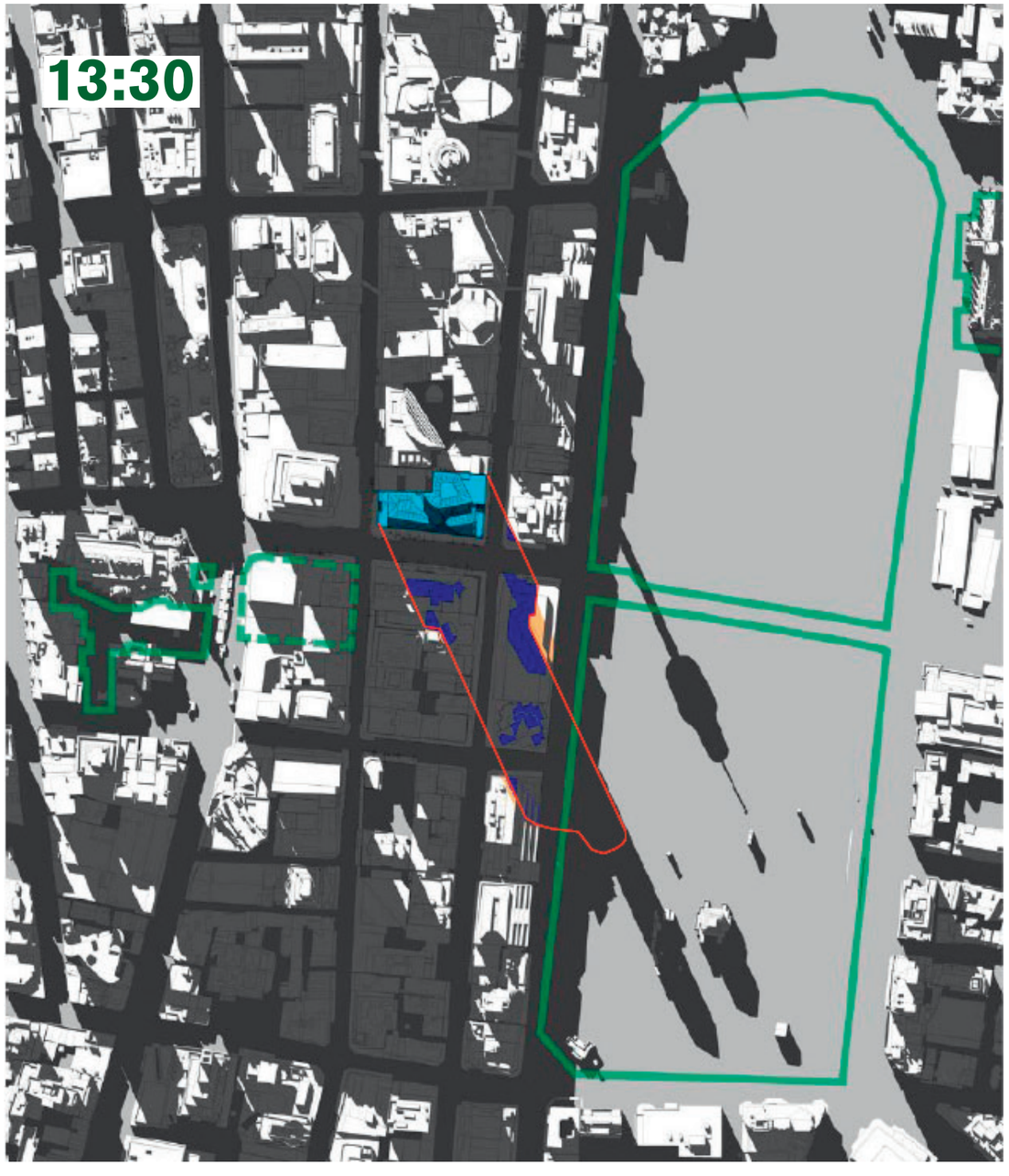

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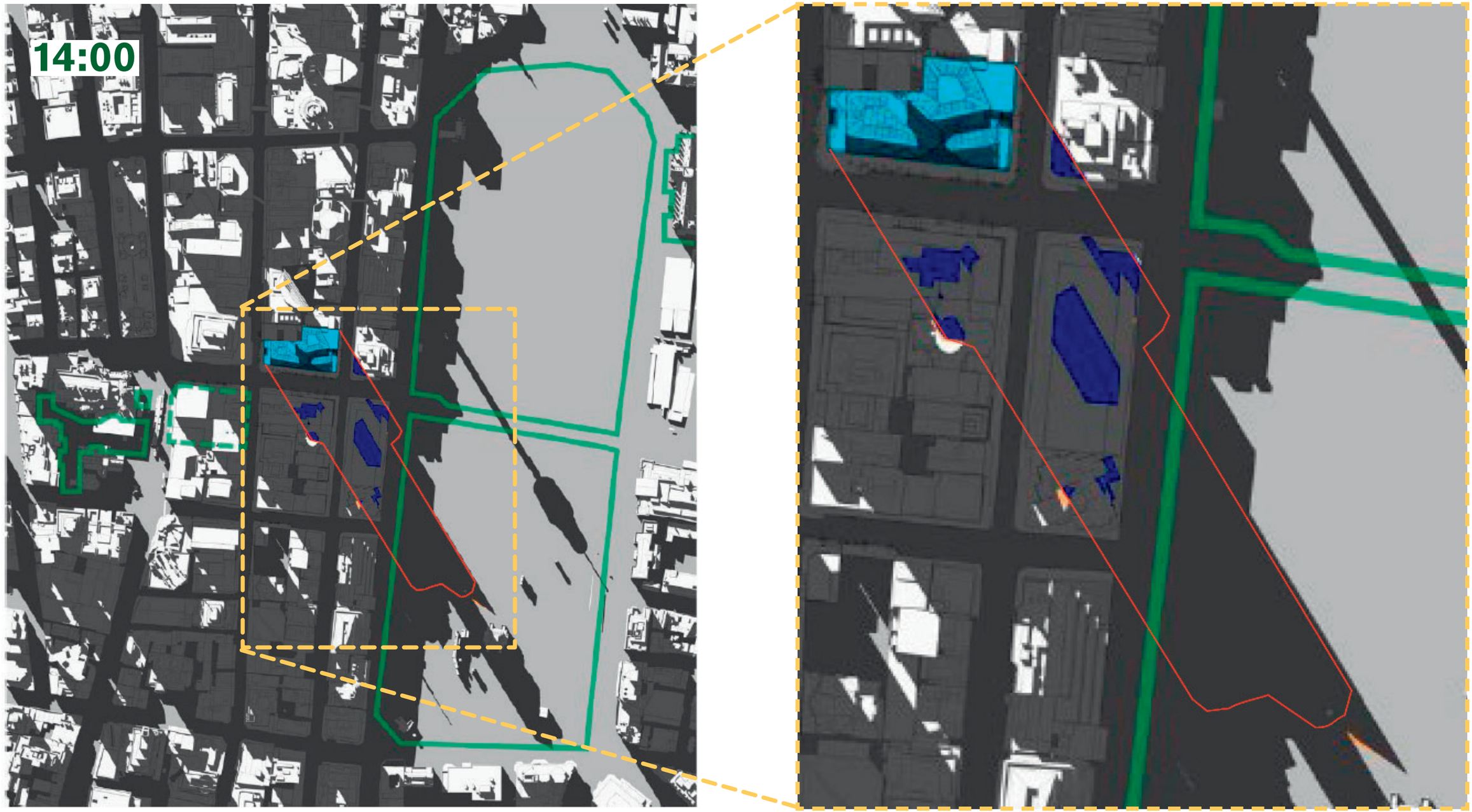


1.2 Shadow Analysis
Overshadowing of Park Regis Apartments

Review the distribution of floor space to minimise external impacts and satisfy the following Design Guidelines requirements:

(9.c) Minimise overshadowing impacts to surrounding residences, including private residences at 27 Park Street (Park Regis).

Massing Principles & Design Guidelines

The development massing is a direct response to the very detailed and descriptive Design Guidelines that were set out at the beginning of this project by the City of Sydney and Sydney Metro during the RFT phases.

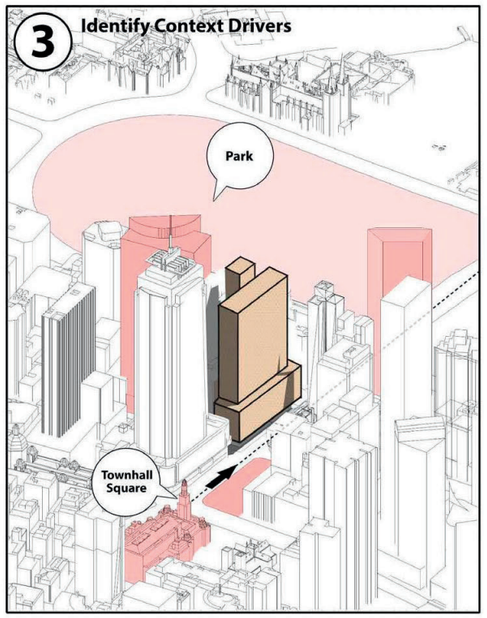
Below is an extract of the relevant Design Guidelines that have influenced the design and more particularly the Massing. Please refer to original SSDA Architectural Design Report for in-depth description.

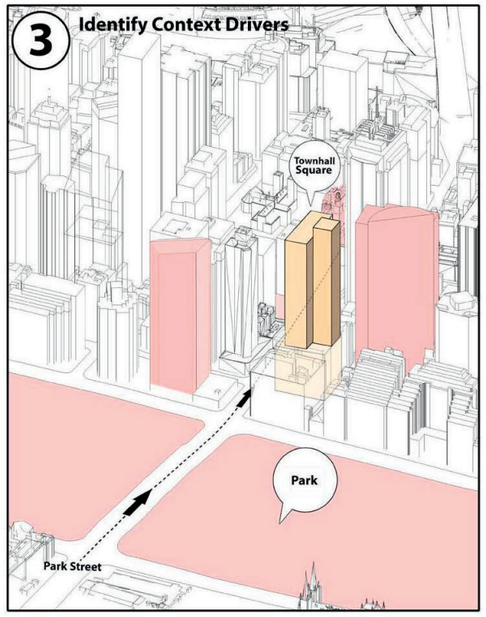
(4) Modulation of the design to minimise the overall scale of the development relative to ANZ/Liberty Place & Citigroup, considering tower crowding as perceived particularly from Hyde Park & Town Hall

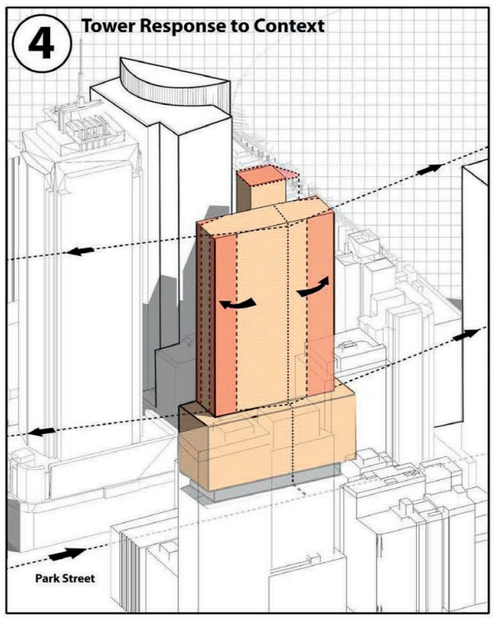
(5) Avoiding the continuation of the diagonal NW plane facade alignment otherwise established by the proposed 201Elizabeth Street & ANZ/ Liberty Place.

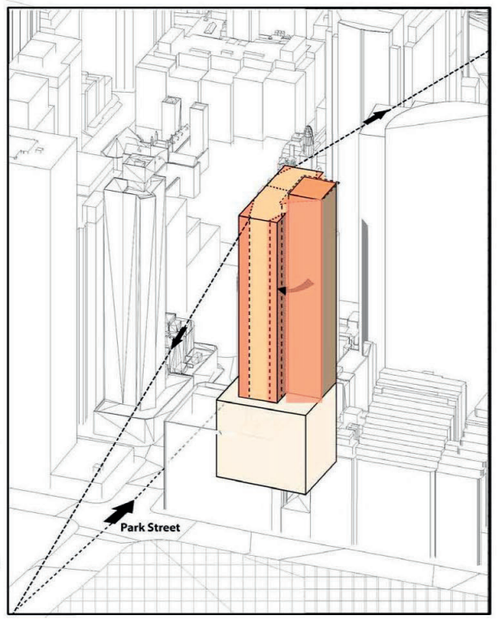
(6) Maximise Solar Access to the public domain, through:

- Design and articulation to ensure no additional overshadowing to Hyde Parkon June 21st, between 12PM and 2PM
- Responding to the reduced shadow cast by the redevelopment of 201 Elizabeth Street on Hyde Park on June 21st, between 12PM and 2 PM.
- Creation of opportunities to increase solar access to the proposed Town hall Square
- The Design and articulation of roof forms to minimise additional shadow impacts to Hyde Park between 12 noon and 2PM throughout the year.









1.2 Shadow Analysis
Overshadowing of Park Regis Apartments

Review the distribution of floor space to minimise external impacts and satisfy the following Design Guidelines requirements:

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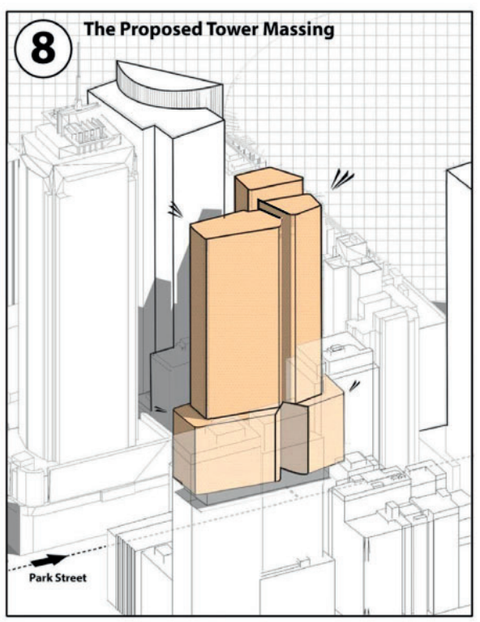
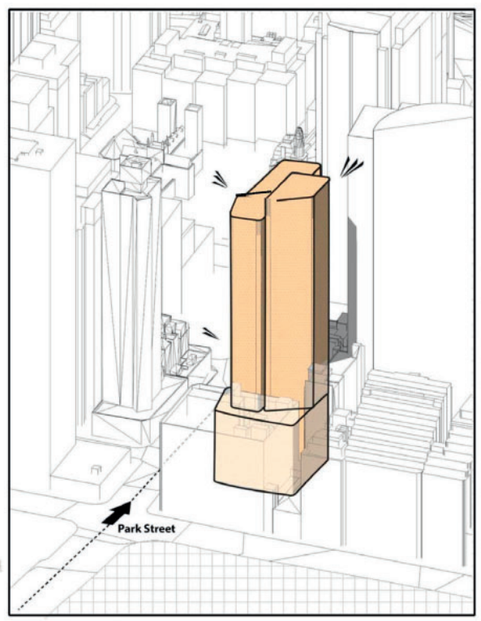
(10) Provide articulation of the tower to present as multiple forms, when viewed from both Town Hall and Hyde Park, with vertical expression along Park Street incorporating continuous elements of relief for the full height of the building above the podium to reduce the mass and scale of the future built form better responds to the massing and scale of surrounding buildings.

(11) Incorporate building articulations, building modulations and facade treatments to provide distinctive visual breaks along the Park Street frontage of the site, respecting the surrounding subdivision and built forms patterns. The distinctive visual breaks shall be proportional to the overall building height and length of the street frontage.





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Overshadowing of Park Regis Apartments

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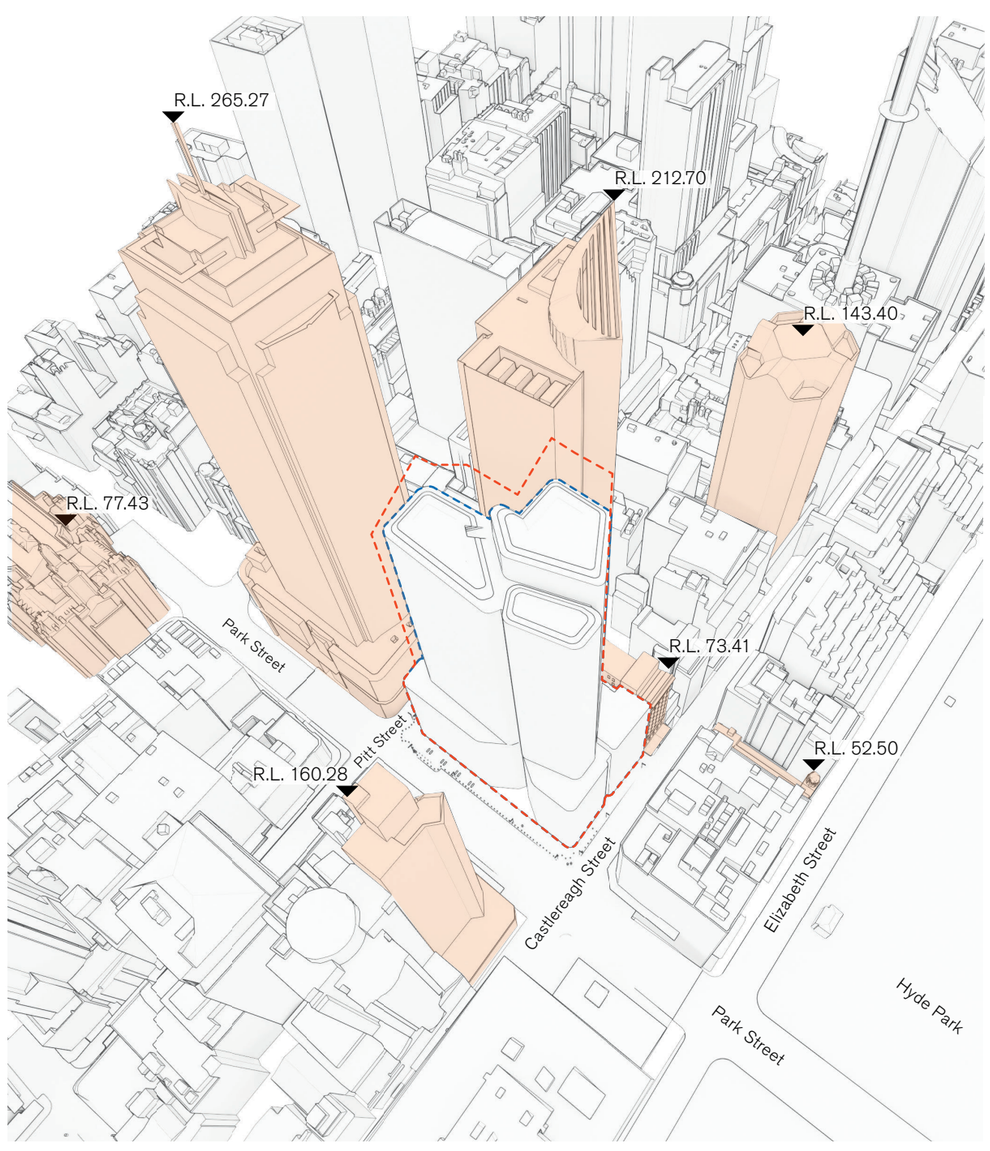
Comparison Stage 1 Envelope and SSDA Scheme

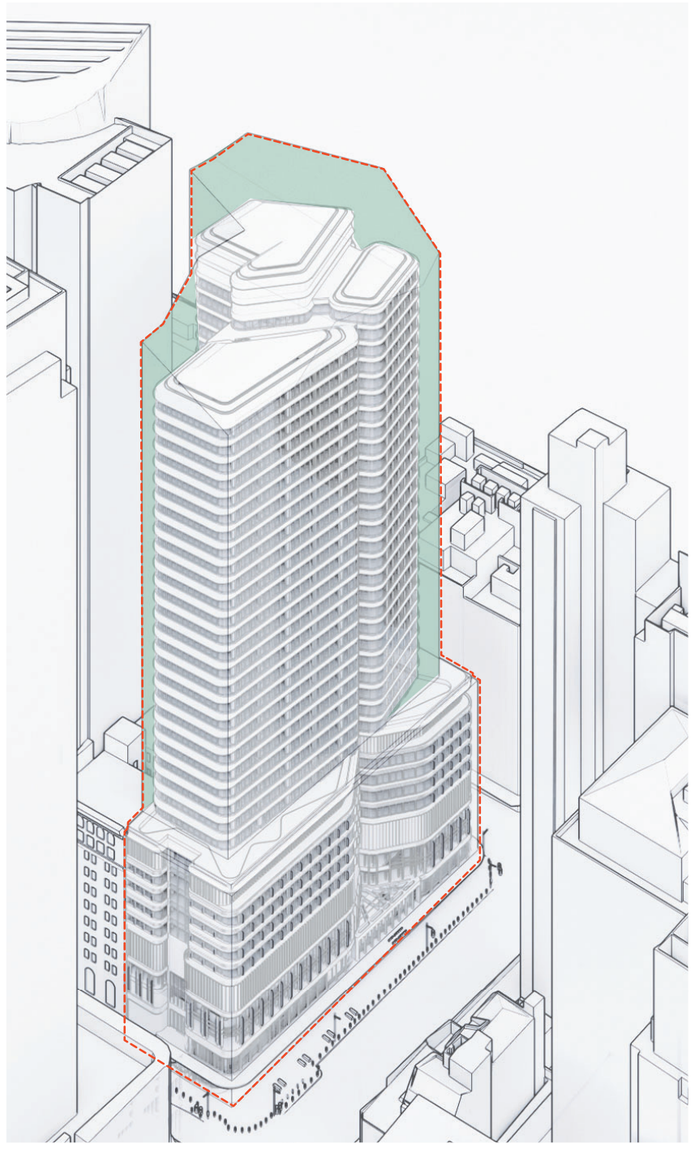
The diagrams on this page illustrate in green the difference between the approved Stage 1 tower envelope and the proposed SSDA Scheme for the Pitt Street North site. Amoung other things, the design has focussed carefully on the South-eastern corner and the top of the development to ensure the Design Guidelines listed on the previous pages are met.

In keeping with the design guidelines and in an attempt to allow more sunlight access to the future Town Hall Square while also allowing as much solar access to the Park Regis apartments, the South-Eastern tower volume has been angled away from the East-West Park Street axis. This deliberate move has ensured an increase in the number of Park Regis apartments achieving compliance with SEPP 65 and ADG solar access provisions, when compared with that which would result from the approved Stage 1 envelope. As a result and within the Overall envelope, only 84% has been taken up by the Commercial Development built form.

The stepped tops of the 3 distinct roof volumes, which all sit comfortably within the Solar Access plane at the top of the development, further allow additional solar access compliance under SEPP 65 and ADG to the top levels of the Park Regis tower as illustrated on the diagrams on the following pages.

For further detailed analysis please refer to E.4 Shadow Analysis Report for Park Regis, produced by Walsh2Architects (Revision B - dated 26/05/20)





1.2 Shadow Analysis

Overshadowing of Park Regis Apartments

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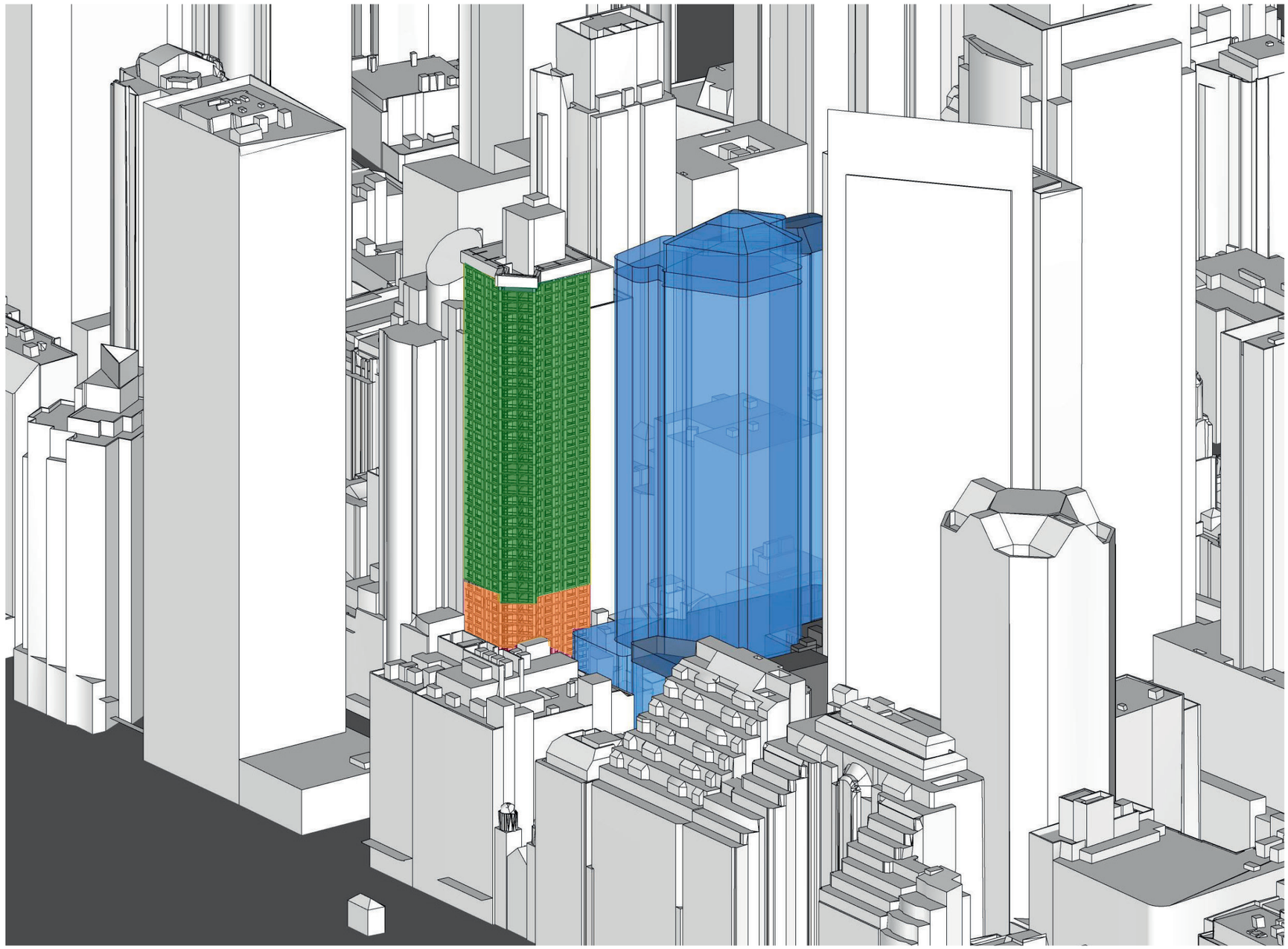
Configuration of Park Regis tower

The Park Regis tower comprises a range of uses. The lower levels (indicated in orange) comprise hotel accommodation. The upper floors (indicated in green) comprise residential apartments.



Location of Hotel Rooms within Park Regis Tower

Location of Residential Apartments within Park Regis Tower

Current Pitt Street North OSD Massing

1.2 Shadow Analysis
Overshadowing of Park Regis Apartments

Review the distribution of floor space to minimise external impacts and satisfy the following Design Guidelines requirements:

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Comparison SEPP65/ADG compliance Park Regis

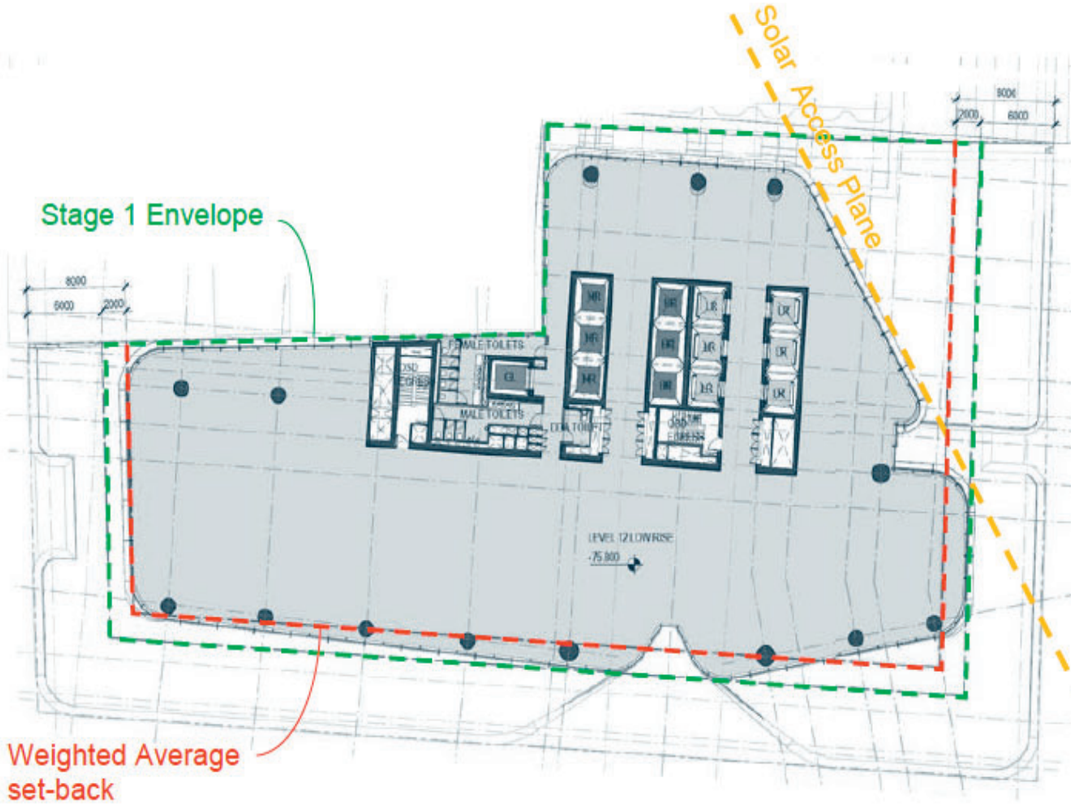
Given the Park Regis tower is situated immediately to the south of the proposed site, it can be expected to be impacted by additional shadows cast by the Pitt Street North development.
Walsh2Architects undertook a detailed quantification of the Approved Stage 1 Envelope and the projected solar access status of individual apartments. The table on this page reports the comparison between the Stage 1 envelope and SSDA proposal in terms of SEPP65 / ADG direct sun access compliance to the Park Regis apartments.

The overshadowing impact of the SSDA proposal increases this proportion to 61/182 (33.5%) in comparison to the Approved Stage 1 envelope merely achieving 54/182 (29.7%), of an overall improvement of 13% (7 additional apartments).
As a large portion of the apartments face East, the sun prior to 9AM is very beneficial to those apartments. we refer to the judgement by Brown C. in the matter of Botany Development Pty Ltd v Botany Council LEC 10360 of 2013, at paras. 79 through 87 where extended hours could be implemented for certain sites.

Based on the above and when looking at the hours of 8AM - 4PM, solar compliance within the Park Regis residential tower increases from 129/182 (70.9%) to 154/182 (84.6%), which is an overall improvement of 19.4% (resulting in 25 additional apartments achieving SEPP 65 / ADG compliance for direct sun access) which is compliant with the objective 3B-2 of the ADG.

Additional studies were undertaken to assess whether a further 2m reduction to the massing of the proposed OSD tower at Castlereagh Street might have any additional benefit to the Park Regis compliance, however no improvement could be measured within the solar access compliance figures (achieving 2 hours of direct sunlight on June 21, between 9Am-3PM). Furthermore this change would also result in a reduced expression / articulation of the 3 distinct tower volumes when viewed from Hyde Park. This change would also reduce the building slot depth (Design Guideline 10/11).
In addition this change would be negatively impacting the carefully considered moves to break the massing alignment between ANZ and the new 201 Elizabeth St Stage 1 Envelope (Design Guideline 4/5)

	Approved Stage 1 Envelope compliance	Current SSDA Scheme compliance	% improvement from approved Stage 1 Envelope	Unit compliance increase from Stage 1 Envelope
> 2 hours 9AM - 3PM (living)	54/182 = 29.7%	61/182 + 33.5%	**+13%**	**+7**
> 2 hours 8AM - 4PM (living)	129/182 = 70.9%	154/182 + 84.6%	**+19.4%**	**+25**



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Overshadowing of Park Regis Apartments

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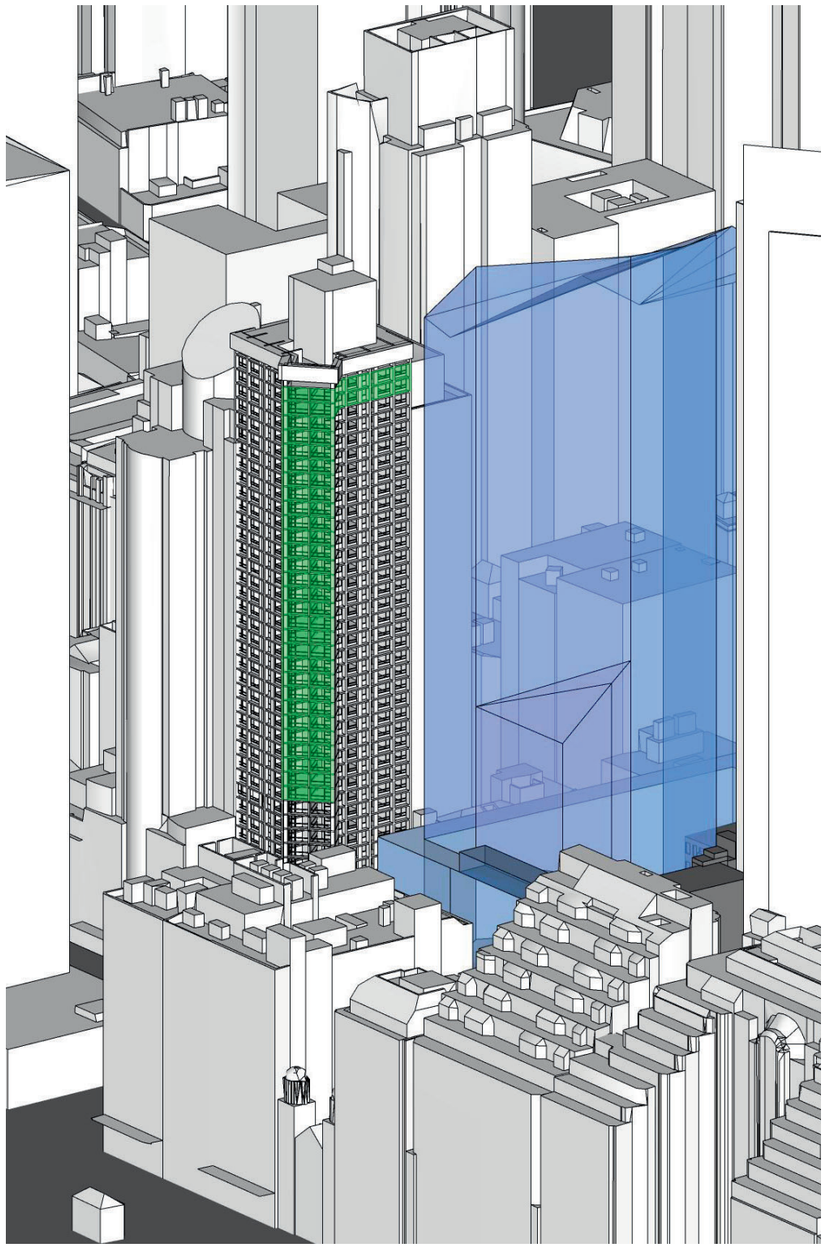
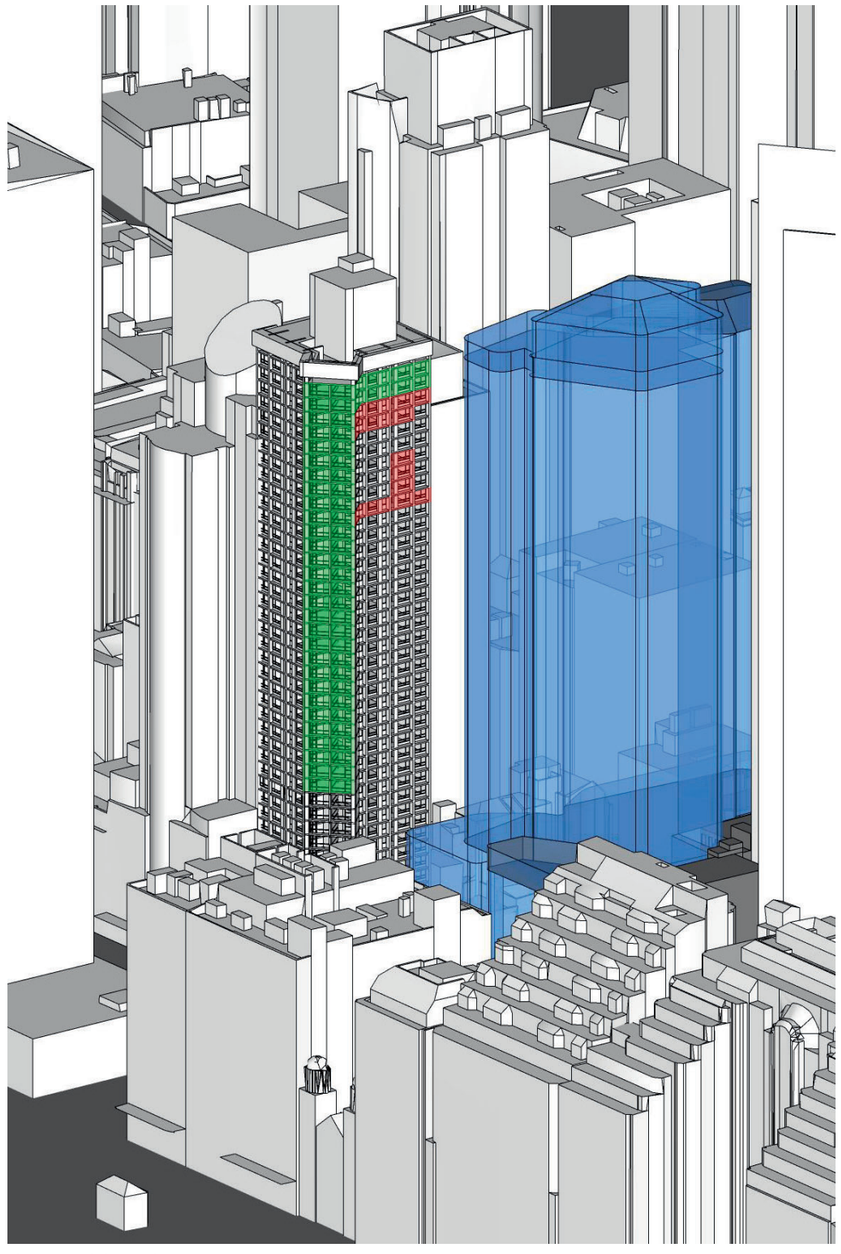
View from the Sun at 9:00 AM

Residential Apartments within Park Regis Tower achieving 2 hour of direct sunlight on June 21, between 9AM-3PM (Stage 1 Envelope)

Additional Residential Apartments within Park Regis Tower achieving 2 hour of direct sunlight on June 21, between 9AM-3PM (SSDA Scheme)



Stage 1 Envelope



Current SSDA Scheme massing

1.2 Shadow Analysis

Overshadowing of Park Regis Apartments

Review the distribution of floor space to minimise external impacts and satisfy the following Design Guidelines requirements:

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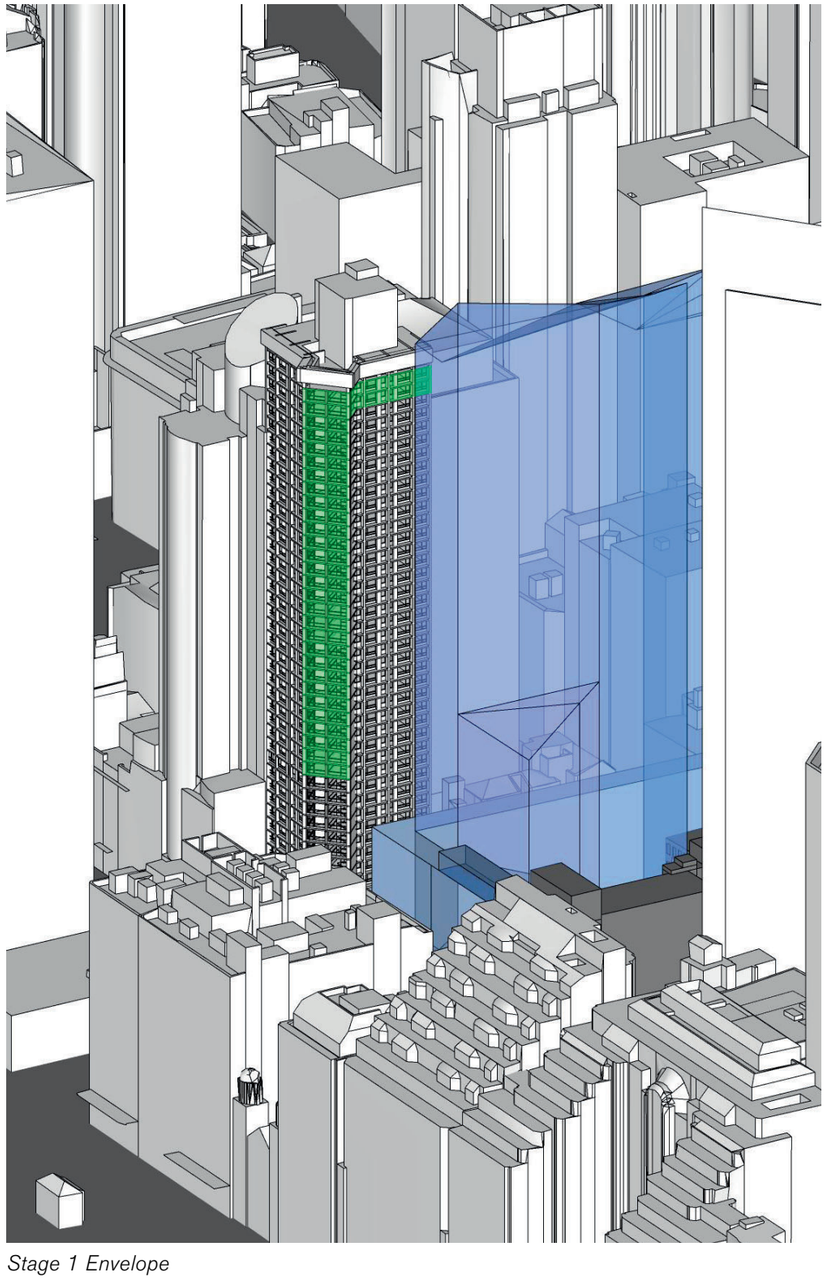
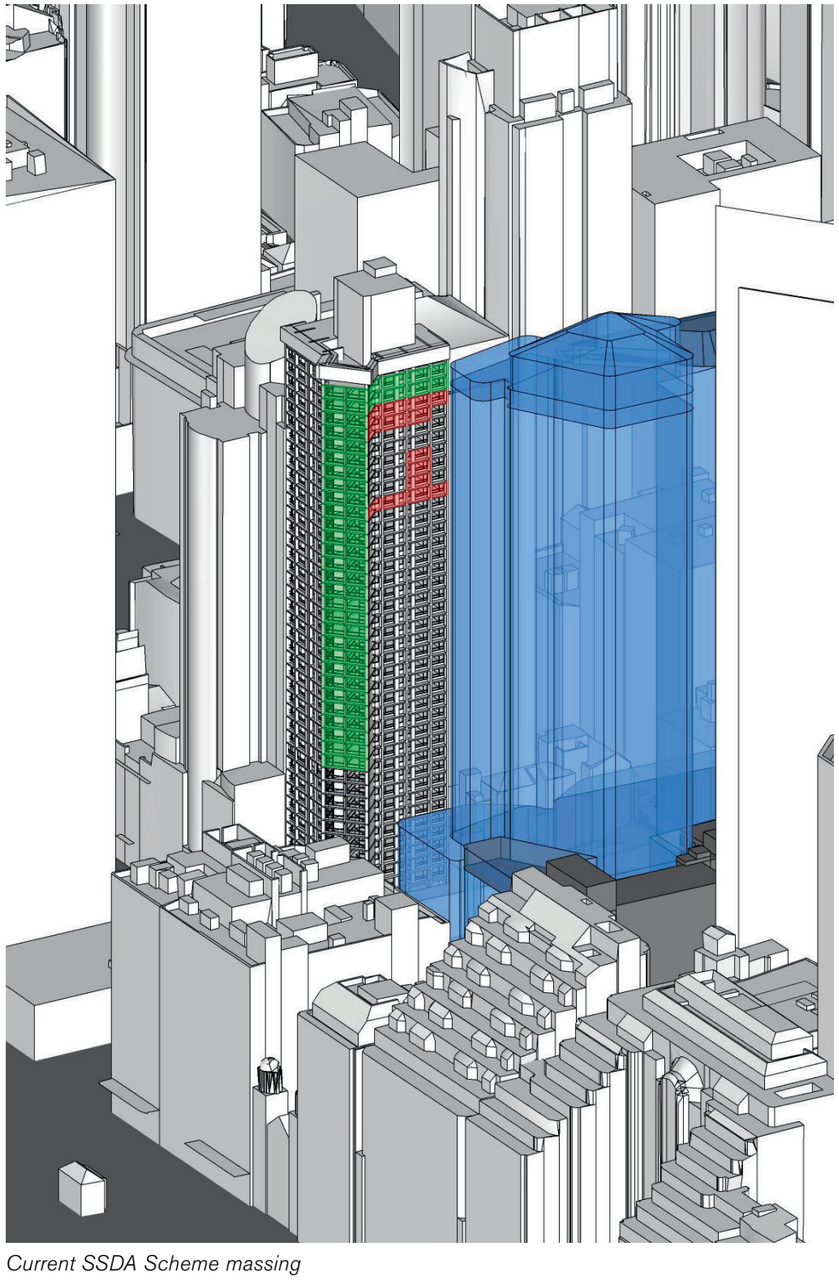
View from the Sun at 9:30 AM

Residential Apartments within Park Regis Tower achieving 2 hour of direct sunlight on June 21, between 9AM-3PM (Stage 1 Envelope)

Additional Residential Apartments within Park Regis Tower achieving 2 hour of direct sunlight on June 21, between 9AM-3PM (SSDA Scheme)



Stage 1 Envelope



Current SSDA Scheme massing

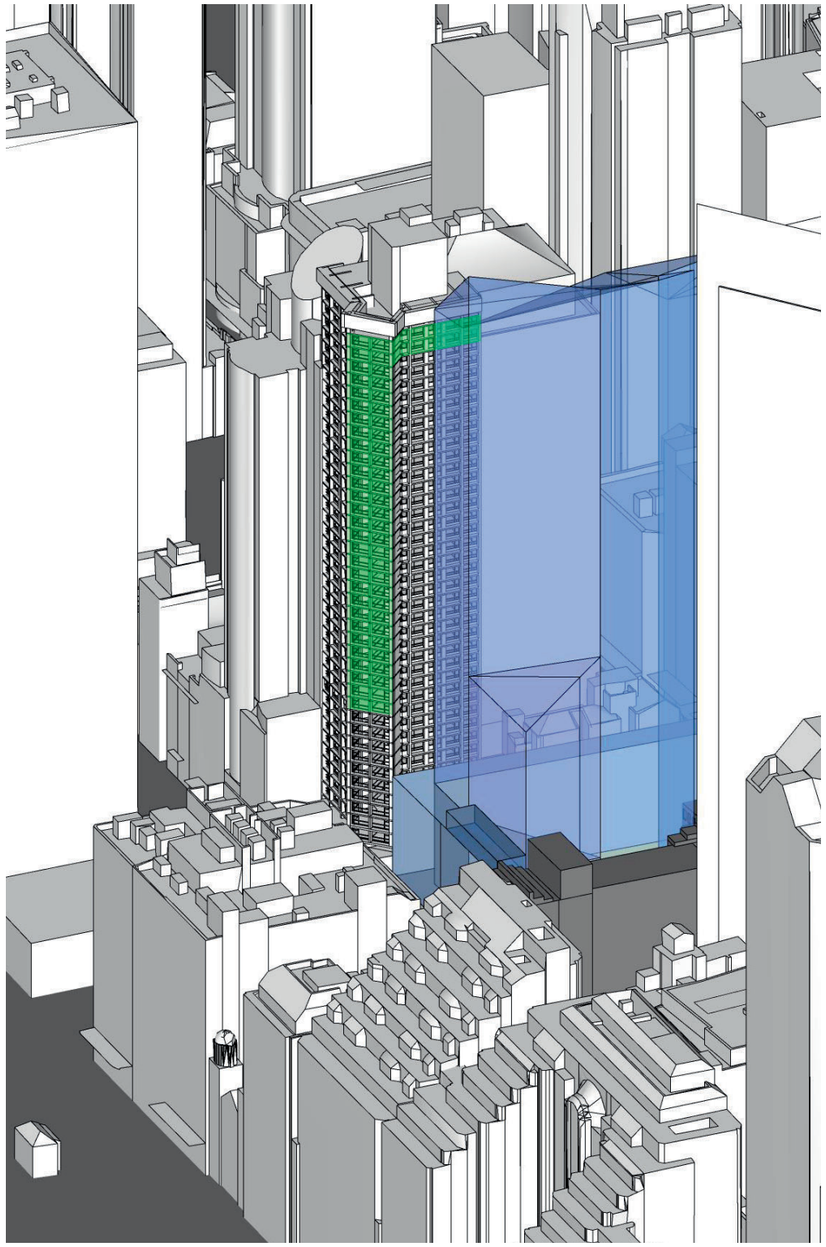
1.2 Shadow Analysis

Overshadowing of Park Regis Apartments

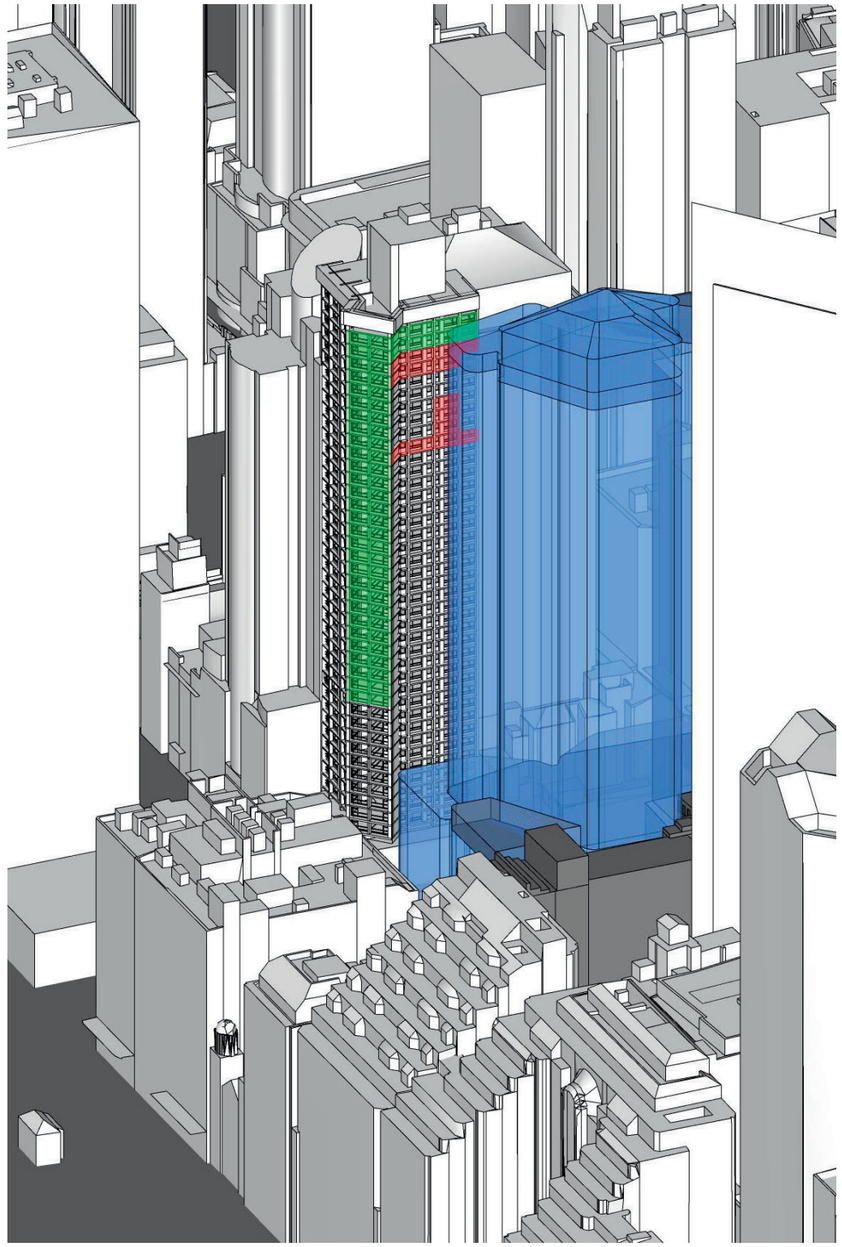
Review the distribution of floor space to minimise external impacts and satisfy the following Design Guidelines requirements:

(9.c) Minimise overshadowing impacts to surrounding residences, including private residences at 27 Park Street (Park Regis).

View from the Sun at 10:00 AM



Stage 1 Envelope



Current SSDA Scheme massing

Residential Apartments within Park Regis Tower achieving 2 hour of direct sunlight on June 21, between 9AM-3PM (Stage 1 Envelope)

Additional Residential Apartments within Park Regis Tower achieving 2 hour of direct sunlight on June 21, between 9AM-3PM (SSDA Scheme)

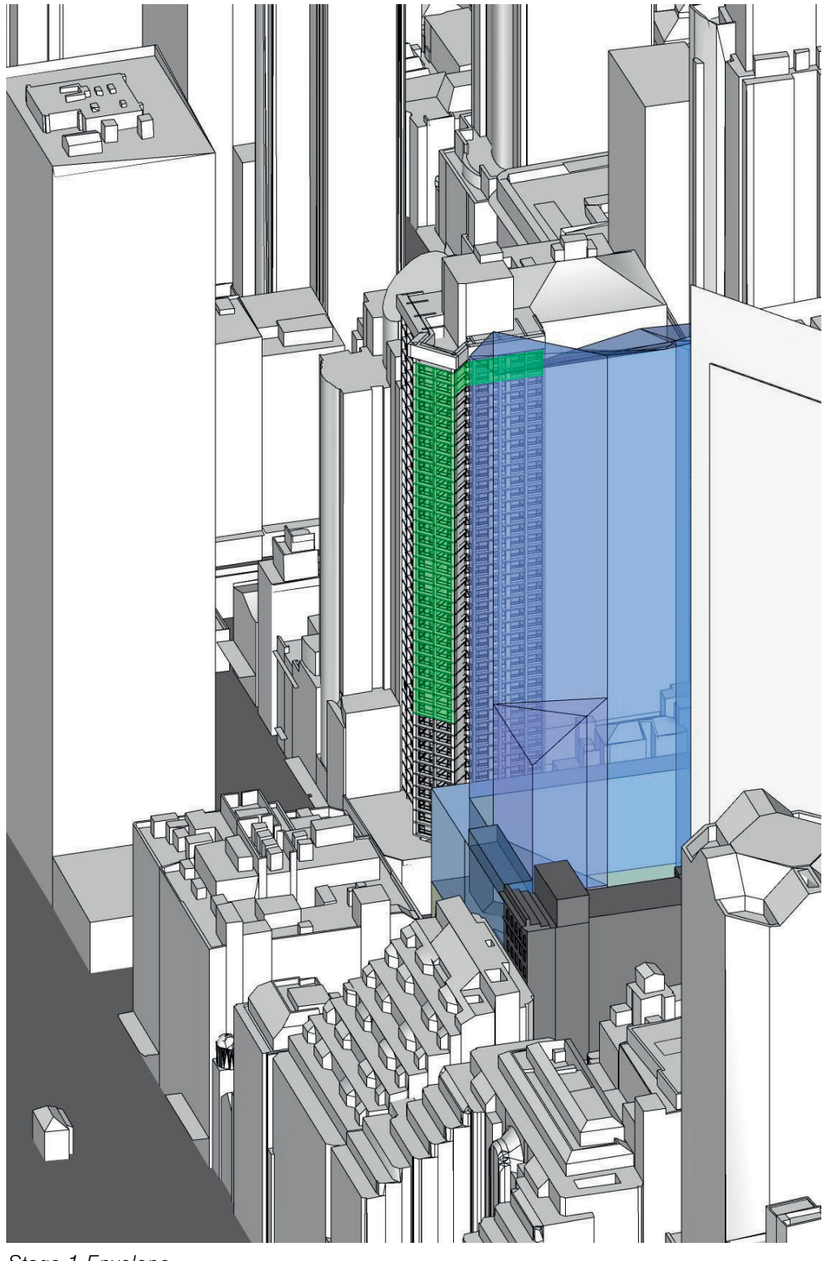
1.2 Shadow Analysis

Overshadowing of Park Regis Apartments

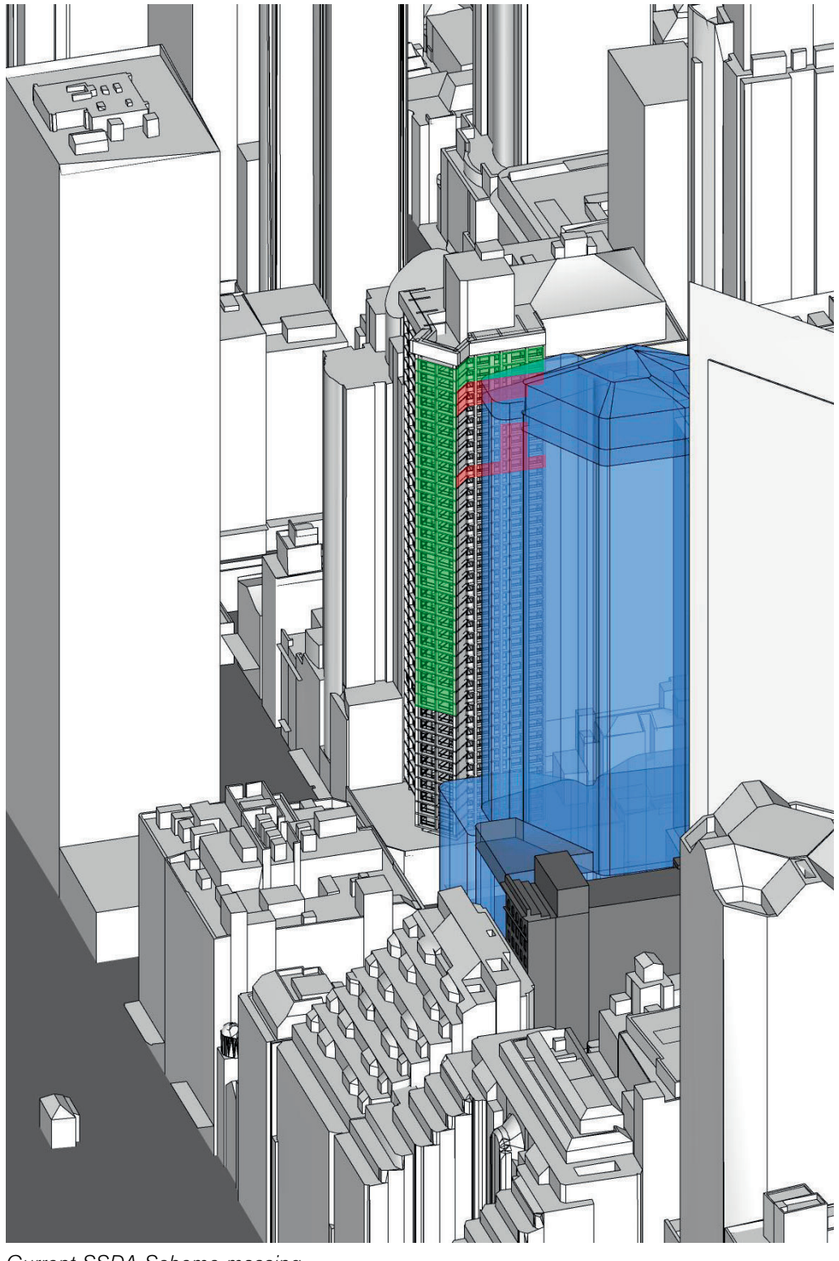
Review the distribution of floor space to minimise external impacts and satisfy the following Design Guidelines requirements:

(9.c) Minimise overshadowing impacts to surrounding residences, including private residences at 27 Park Street (Park Regis).

View from the Sun at 10:30 AM



Stage 1 Envelope



Current SSDA Scheme massing

Residential Apartments within Park Regis Tower achieving 2 hour of direct sunlight on June 21, between 9AM-3PM (Stage 1 Envelope)

Additional Residential Apartments within Park Regis Tower achieving 2 hour of direct sunlight on June 21, between 9AM-3PM (SSDA Scheme)

1.2 Shadow Analysis

Overshadowing of Park Regis Apartments

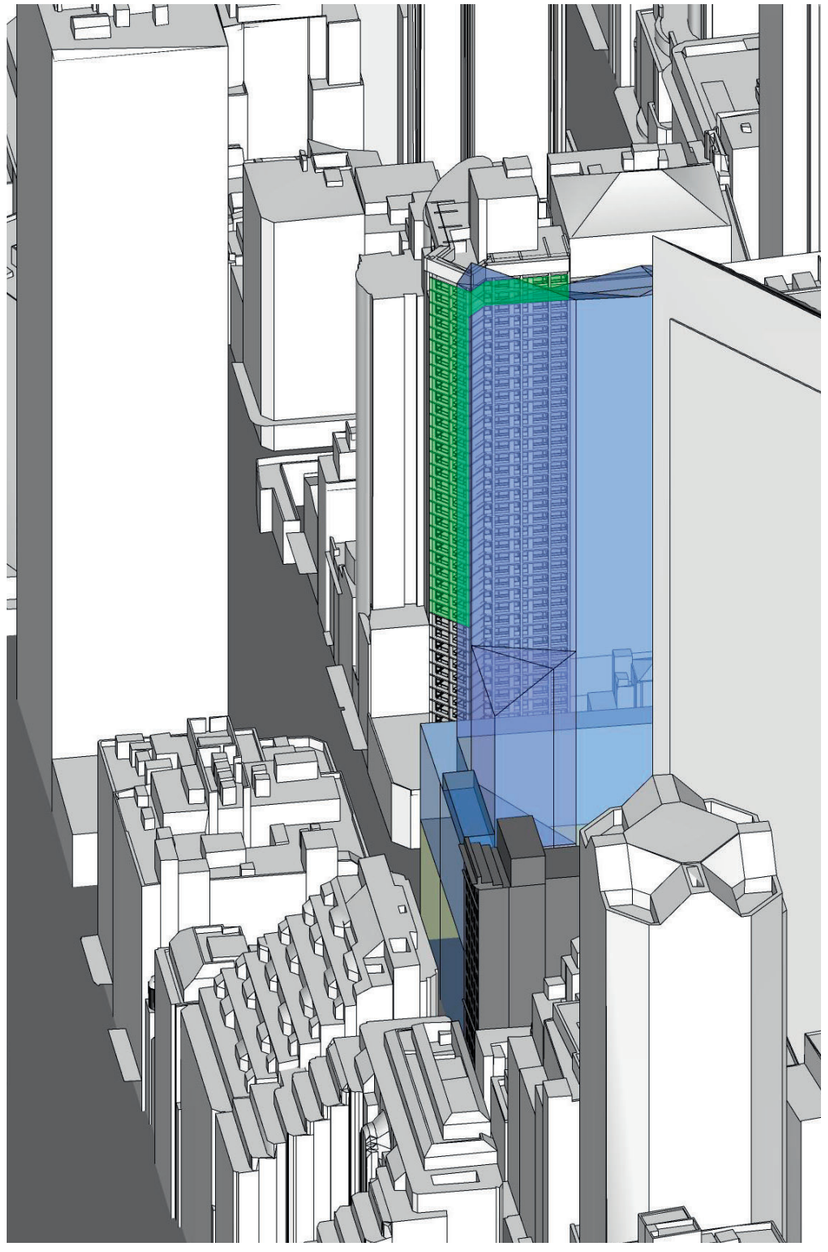
Review the distribution of floor space to minimise external impacts and satisfy the following Design Guidelines requirements:

(9.c) Minimise overshadowing impacts to surrounding residences, including private residences at 27 Park Street (Park Regis).

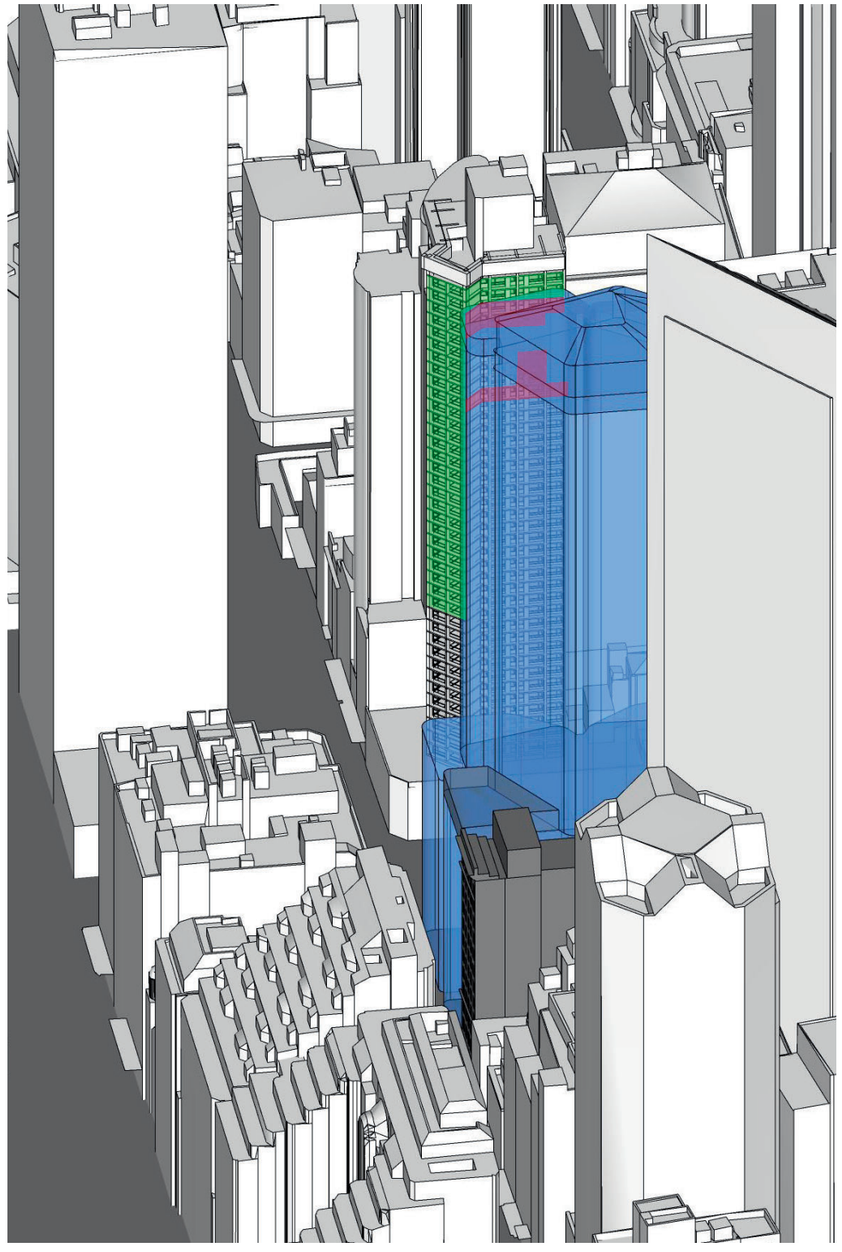
View from the Sun at 11:00 AM

Residential Apartments within Park Regis Tower achieving 2 hour of direct sunlight on June 21, between 9AM-3PM (Stage 1 Envelope)

Additional Residential Apartments within Park Regis Tower achieving 2 hour of direct sunlight on June 21, between 9AM-3PM (SSDA Scheme)



Stage 1 Envelope



Current SSDA Scheme massing

1.2 Shadow Analysis

Overshadowing of Park Regis Apartments

Review the distribution of floor space to minimise external impacts and satisfy the following Design Guidelines requirements:

(9.c) Minimise overshadowing impacts to surrounding residences, including private residences at 27 Park Street (Park Regis).

1.2 Shadow Analysis
Overshadowing of Park Regis Apartments

Review the distribution of floor space to minimise external impacts and satisfy the following Design Guidelines requirements:

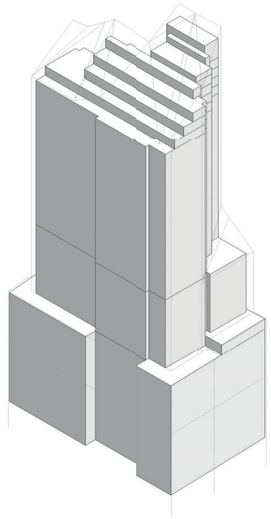
(9.c) Minimise overshadowing impacts to surrounding residences, including private residences at 27 Park Street (Park Regis).

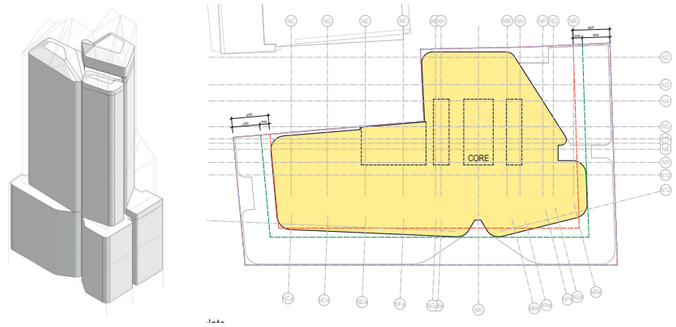
Additional massing studies to investigate ADG improvements to the Park Regis apartments.

Additional studies were undertaken to assess whether an alternative massing for the OSD tower might have a material benefit to the Park Regis apartment compliance.

Option 01, as illustrated on this page consists of the original massing developed in the first phases of the RFT process with Sydney Metro in 2018. The overall GFA of this scheme is on par with the total GFA figure requested for this development in the current SSDA Stage 2 application.

Upon analysis, no improvement could be measured within the solar access compliance figures (achieving 2 hours of direct sunlight on June 21, between 9Am-3PM), in actual fact 2 apartments would lose their compliance in this scheme in comparison with the currently proposed massing for the Pitt Street OSD.

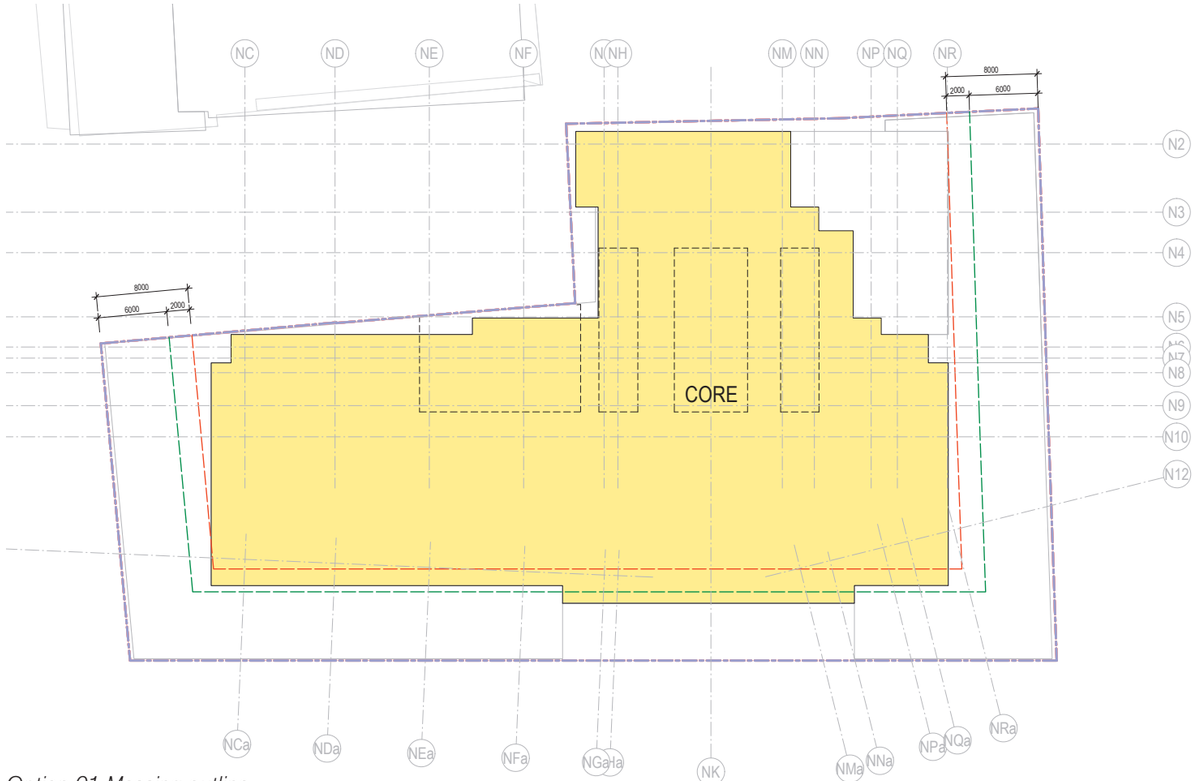




Current Stage 2 Massing outline

	Approved Stage 1 Envelope compliance	Current SSDA Scheme compliance	% Improvement from approved Stage 1 Envelope	Unit compliance increase from Stage 1 Envelope
> 2 hours 9AM - 3PM (living)	54/182 = 29.7%	61/182 + 33.5%	**+13%**	**+7**

	Approved Stage 1 Envelope compliance	Option 01 compliance	% Improvement from approved Stage 1 Envelope	Unit compliance increase from Stage 1 Envelope
> 2 hours 9AM - 3PM (living)	54/182 = 29.7%	58/182 + 32.4%	**+9%**	**+5**



Option 01 Massing outline

1.2 Shadow Analysis
Overshadowing of Park Regis Apartments

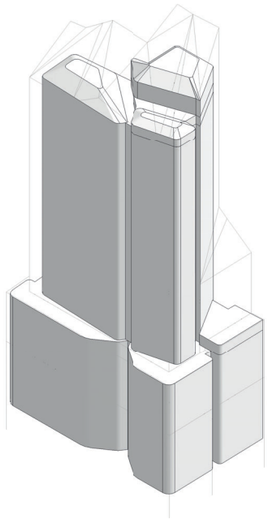
Review the distribution of floor space to minimise external impacts and satisfy the following Design Guidelines requirements:

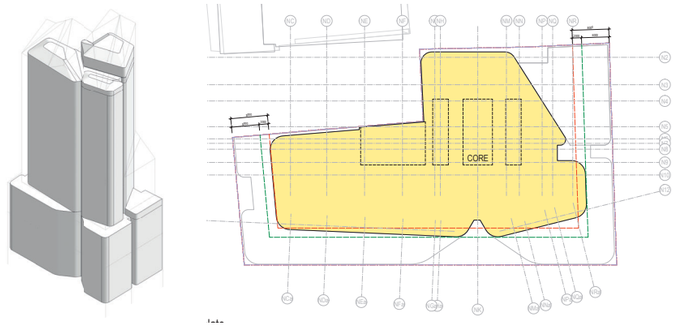
(9.c) Minimise overshadowing impacts to surrounding residences, including private residences at 27 Park Street (Park Regis).

Additional massing studies to investigate ADG improvements to the Park Regis apartments.

Option 02, as illustrated on this page is similar to the current proposed SSDA massing, but has an inboard offset of 1m all around the tower outline. The overall GFA of this scheme is capped to the allowable GFA figure for the site, which is approximately 5,000 sqm less than the GFA requested in the current SSDA Stage 2 application.

Upon analysis, no improvement could be measured within the solar access compliance figures (achieving 2 hours of direct sunlight on June 21, between 9Am-3PM) in comparison with the currently proposed massing for the Pitt Street OSD.
Furthermore this change would also result in a reduced expression / articulation of the 3 distinct tower volumes when viewed from Hyde Park, and thus negatively impacting the carefully considered moves to break the massing alignment between ANZ and the new 201 Elizabeth St Stage 1 Envelope (Design Guideline 4/5/10/11)

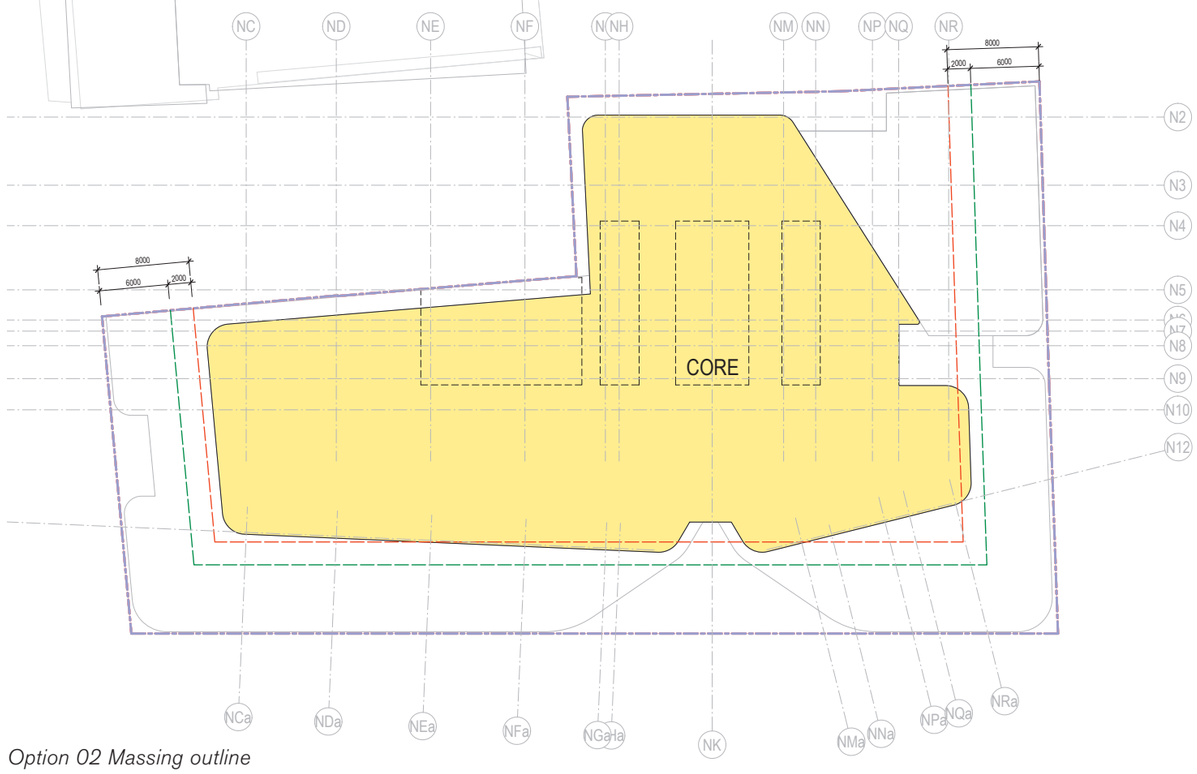




Current Stage 2 Massing outline

	Approved Stage 1 Envelope compliance	Current SSDA Scheme compliance	% Improvement from approved Stage 1 Envelope	Unit compliance increase from Stage 1 Envelope
> 2 hours 9AM - 3PM (living)	54/182 = 29.7%	61/182 + 33.5%	**+13%**	**+7**

	Approved Stage 1 Envelope compliance	Option 02 compliance	% Improvement from approved Stage 1 Envelope	Unit compliance increase from Stage 1 Envelope
> 2 hours 9AM - 3PM (living)	54/182 = 29.7%	61/182 + 33.5%	**+13%**	**+7**



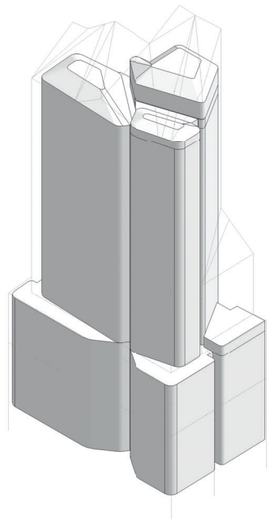
Option 02 Massing outline

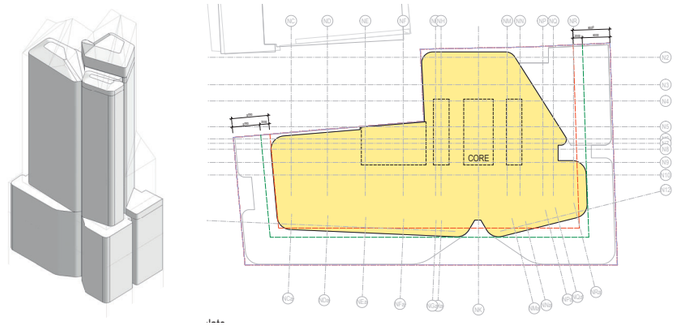
1.2 Shadow Analysis
Overshadowing of Park Regis Apartments

Additional massing studies to investigate ADG improvements to the Park Regis apartments.

Option 03, as illustrated on this page is identical to the current proposed SSDA massing, but through the introduction of building voids has a total GFA capped to the allowable GFA figure for the site, which is approximately 5,000 sqm less than the GFA requested in the current SSDA Stage 2 application.

Upon analysis, no improvement could be measured within the solar access compliance figures (achieving 2 hours of direct sunlight on June 21, between 9Am-3PM), in comparison with the currently proposed massing for the Pitt Street OSD.

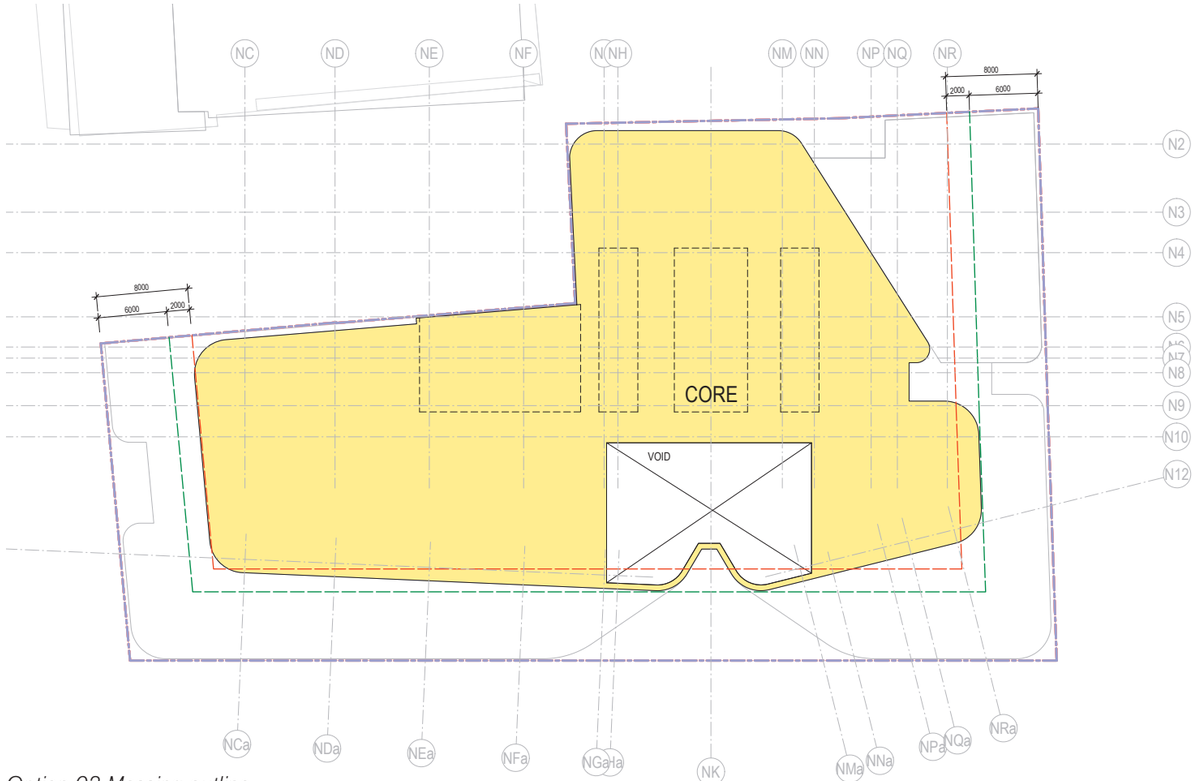




Current Stage 2 Massing outline

	Approved Stage 1 Envelope compliance	Current SSDA Scheme compliance	% Improvement from approved Stage 1 Envelope	Unit compliance increase from Stage 1 Envelope
> 2 hours 9AM - 3PM (living)	54/182 = 29.7%	61/182 + 33.5%	**+13%**	**+7**

	Approved Stage 1 Envelope compliance	Option 03 compliance	% Improvement from approved Stage 1 Envelope	Unit compliance increase from Stage 1 Envelope
> 2 hours 9AM - 3PM (living)	54/182 = 29.7%	61/182 + 33.5%	**+13%**	**+7**



Option 03 Massing outline

Urban Ecology

2.1 Urban Ecology

Powerful Owl Protective Measures

It should be noted that the City's Ecologist has identified the increasing instance of birds striking buildings around the City, particularly owls. Additionally, knowledge of the vulnerable Powerful Owls occupying and breeding at the Royal Botanic Gardens and Centennial Parks, and therefore in close proximity to this site, raises concerns regarding the glazing of the building. On this basis, a localised treatment to the glazed screen should be considered.

The City requests the applicant provide details of a localised translucent glazing treatment that will ensure the glazed screen is visible to birds, particularly any threatened or vulnerable species and species of local conservation significance (refer to the City's Urban Ecology Strategic Action Plan).

The Powerful Owl at the Royal Botanic gardens & Centennial Parks.

The Powerful Owl is Australia's largest owl with a wingspan of up to 1.4m. It occurs from eastern and south-eastern Australia (east of the Great Dividing Range), from south-eastern Queensland to South Australia, mostly in large patches of forest. Despite being classified as threatened throughout its range, the Powerful Owl can and does, survive within cities.

That said, the urban landscape is a hard place to live, with car and (building) glass strikes being the leading causes of mortality for these birds, with an estimates of 12% of the total population dying each year this way in the wider Sydney Region. In addition to this 75% of the adult Powerful Owl mortality rate in 2019 was due to bird strike.

The Powerful Owl Project aims to:

- Inspire the general public, and educate them about owls, and their habitat requirements
- Monitor the distribution and abundance of owls and track breeding success.
- Develop a species distribution models of sufficient accuracy to be used as planning layers
- Identify site-specific management recommendations for Powerful Owls.
- Understand the impact of threats such as vehicle strike, or electrocution.
- Inform, and support land management for the ultimate conservation of the Powerful Owl population.

Source: Birdlife Australia

© David Diehm

2.1 Urban Ecology
Powerful Owl Protective Measures

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The City requests the applicant provide details of a localised translucent glazing treatment that will ensure the glazed screen is visible to birds, particularly any threatened or vulnerable species and species of local conservation significance (refer to the City's Urban Ecology Strategic Action Plan).

The Bird Strike Project

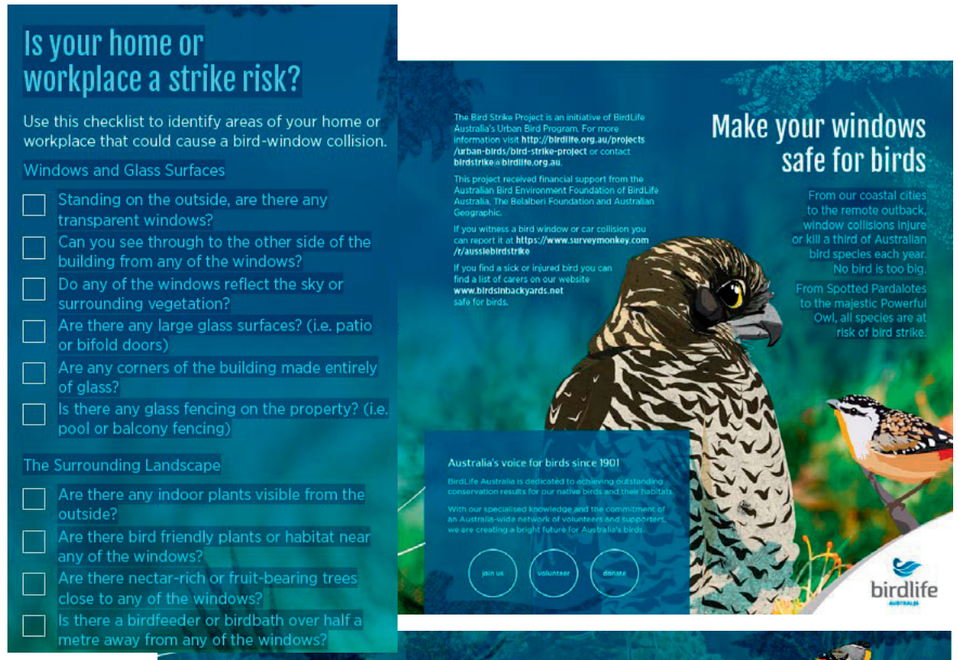
BirdLife Australia's Birds in Backyard Program is investigating the scale of the bird-strike problem in Australia, including both window and car collisions. Research is being conducted to guide solutions and best practice guidelines so that we can begin to understand this issue and how it is affecting Australian birds.

Their aims are to:
- Determine the scale of bird strikes and eventually map potential hotspots and;
- Collate international research and management solutions that may be applied to Australia

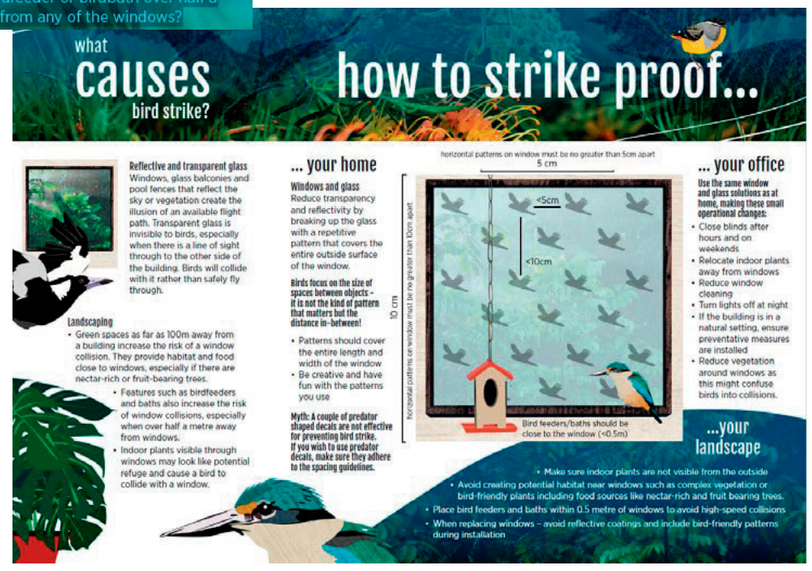
The birds at risk?
- Species who exhibit fast, agile and direct flying patterns
- solitary bird species (opposed to flocking birds)
- From spotted Pardalotes to the majestic Powerful Owl

'At risk' building features and facades?
- Buildings with large areas of uninterrupted glass. (more than 80% glass coverage)
- Transparent glazing which would allow clear views through to the other side of the building.
- Glazing and/or surfaces that reflect sky or vegetation may be confused as an available flight path or habitat.
- Landscaping features, such as resource-rich or fruit-bearing trees, plants and water features bring birds closer to windows and increase the risk of collision. (landscaped rooftops)
- Buildings close to abundant Urban greenspaces with complex vegetation are hotspots for window collisions.
- Abundant interior greenery which is visible from the outside of the building.

Source: Birdlife Australia



Checklist



2.1 Urban Ecology

Powerful Owl Protective Measures

It should be noted that the City's Ecologist has identified the increasing instance of birds striking buildings around the City, particularly owls. Additionally, knowledge of the vulnerable Powerful Owls occupying and breeding at the Royal Botanic Gardens and Centennial Parks, and therefore in close proximity to this site, raises concerns regarding the glazing of the building. On this basis, a localised treatment to the glazed screen should be considered.

The City requests the applicant provide details of a localised translucent glazing treatment that will ensure the glazed screen is visible to birds, particularly any threatened or vulnerable species and species of local conservation significance (refer to the City's Urban Ecology Strategic Action Plan).

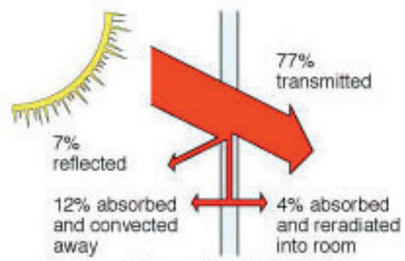
Effective Glazing & Facade treatments (Tower)

There are a number of measures which building owners and architects can incorporate into the design of a building to ensure the risk of birdstrike is reduced to the minimum.

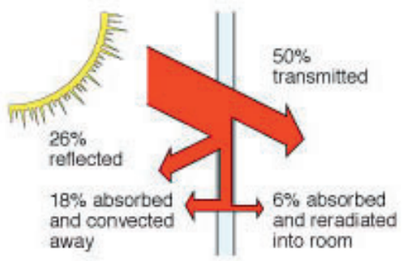
These measures fall into four different categories;

- Landscape elements and/or features, like the introduction of fences, netting, shutters or screens, which can clearly be seen by birds.
- Building features such as street awnings, overhangs, sunhoods and vertical fins which will reduce and obstruct reflections. Furthermore a 20-40 degree angled surface will reflect sky or ground rather than vegetation or trees located immediately adjacent to it
- Glazing treatments which slow birds down sufficiently to reduce mortality rates in case of window strike, such as opaque/translucent glass, decals and specialised UV-coatings
- Reflectance or remaining glazing is governed by the type of glazing, the quality/flatness of the glass surface, the presence of coatings and body-tents, the angle of incidence of light.

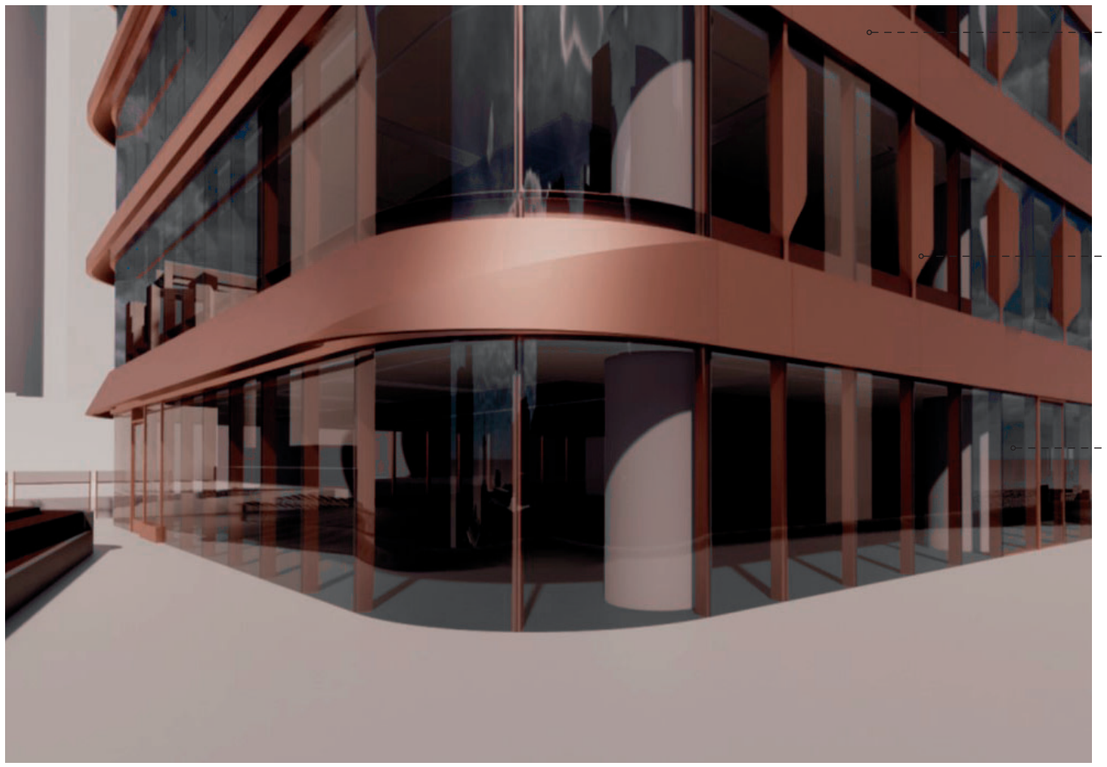
The proposed Pitt Street north site is located in close proximity to Hyde Park and is also fitted with landscaped roof terraces on levels 10 and 11. The following diagrams and markups illustrate how the Pitt Street North tower facade design on level 10/11 addresses specific concerns related to the risk of bird strike.



CLEAR GLASS



REFLECTIVE GLASS



View towards tower facade from the level 10 roof terrace (SW corner)

Solid Spandrels on the South and expressed / angled sunhoods on the North, East and West facades, reducing the overall glass surface of the tower to less than 70%.

Vertical fins on the Southern facade, obstructing reflections along the E-W park Street axis

The proposed glazing for the development is un-coated/tinted, has a reflectivity of approximately 7-8% only resulting in very subtle reflections of podium trees and other vegetation.

Note: The north-facing glazing does sometimes has an incident sunlight angle of more than 80 degrees, however no trees are proposed on this side of the building, thus reducing the risk of bird strike.

2.1 Urban Ecology
Powerful Owl Protective Measures

It should be noted that the City's Ecologist has identified the increasing instance of birds striking buildings around the City, particularly owls. Additionally, knowledge of the vulnerable Powerful Owls occupying and breeding at the Royal Botanic Gardens and Centennial Parks, and therefore in close proximity to this site, raises concerns regarding the glazing of the building. On this basis, a localised treatment to the glazed screen should be considered.

The City requests the applicant provide details of a localised translucent glazing treatment that will ensure the glazed screen is visible to birds, particularly any threatened or vulnerable species and species of local conservation significance (refer to the City's Urban Ecology Strategic Action Plan).

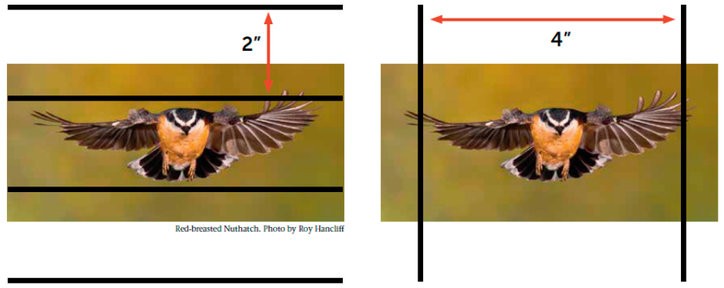
Effective Glazing & Facade treatments (Balustrade)

The following diagrams and markups illustrate how the design of the Pitt Street North podium balustrades on level 10/11 addresses specific concerns related to the risk of bird strike.

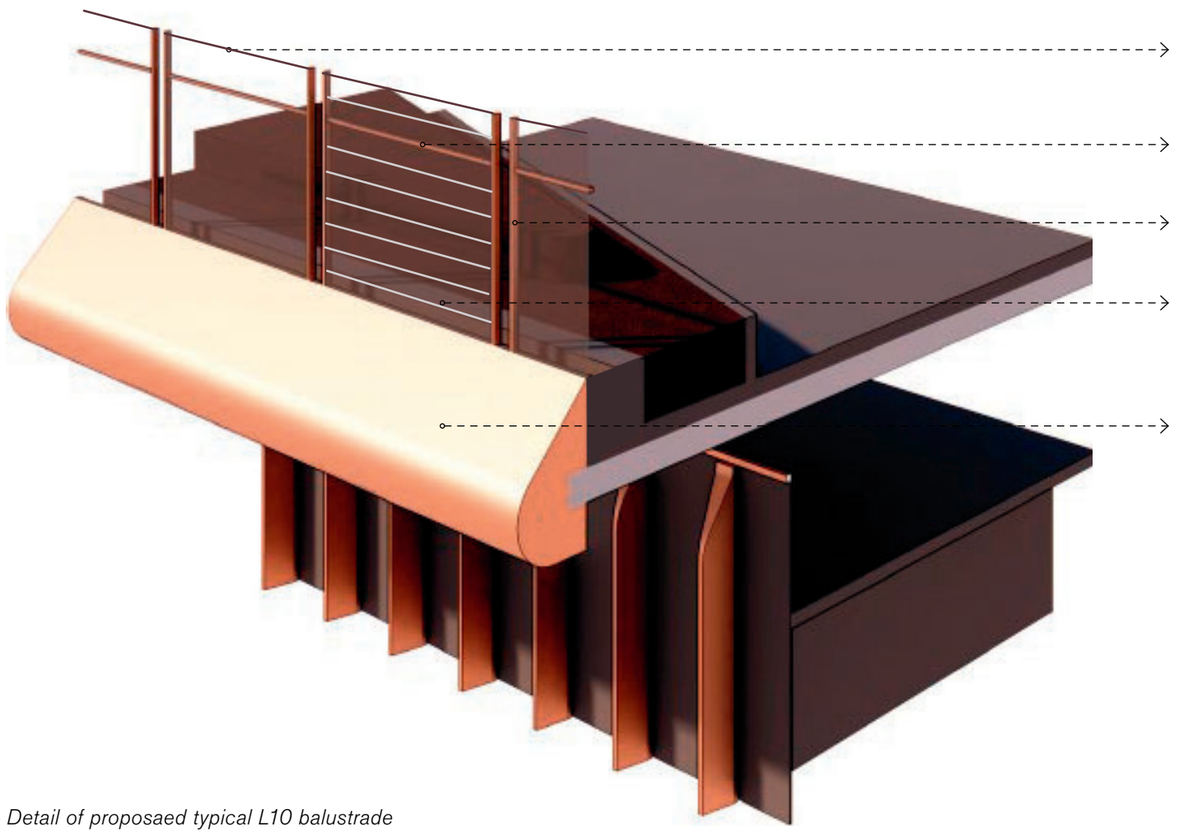
For the introduction and spacing of glazing decals on the clear glazed balustrades surrounding the Level 10 and 11 roof terraces, the 2x4 Rule as defined has been applied. Detailed research has shown that in order to deter the majority of birds from flying into the glass horizontal lines must be approximately 50mm or less apart. Vertical spaces must be approximately 100mm or less apart. These dimensions relate to the shape of a flying bird. As birds have a very precise understanding of their own physical dimensions, they are able to assess the width of the gaps relative to their body size and adjust their flight behaviour accordingly. In order to fly between the horizontal/vertical lines, a bird will slow down their flight and thus have a beter chance of spotting the glass surfaces in time, in term reducing mortality due to birdstrike.

(*Source: BirdSafe USA)*

Example of problematic transparent glazed balustrade design with vegetation placed immediately behind the glass surface.



The 2 x 4 Rule



Detail of proposaed typical L10 balustrade

NSW Masonic Club

3.1 NSW Masonic Club

Lightwell consistency with Concept Approval

The Club notes the use of light and reflective cladding materials to the walls of the proposed building which face into the lightwell. Instead of the proposed translucent glass of light-coloured material currently proposed, the Club would support an attractive, decorative mural to provide a better outlook for hotel guests.

Masonic Light well facade Design proposal

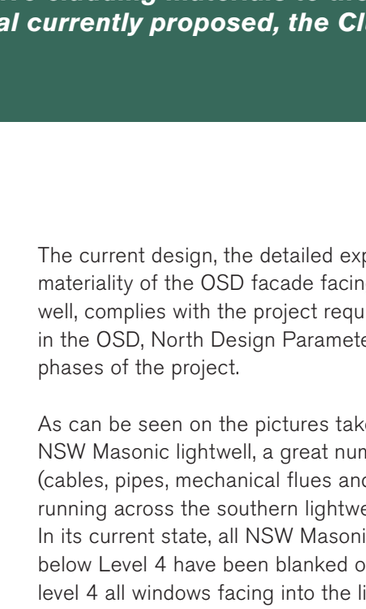
The northern facade of the OSD tower is providing a set-back between 3 and 3.4m from the site boundary for the length of the Masonic light well above the Station transfer level on level 4, which complies with the Design Parameters set for the Pitt Street North site.

The proposed podium facade from level 5 to 11 is suggested to utilise a mix of reflective opaque glazing and reflective light coloured solid materials to maximise reflected daylight access into the NSW Masonic Club, while also ensuring privacy between the Masonic guests and the commercial tenants within the Pitt Street North development. This carefully considered materiality and the quality of the proposed facade, comprised of white spandrel and translucent glazing, will reflect increased light into the Masonic lightwell.
All facade elements and glazing will be maintained and cleaned regularly to ensure a pleasant outlook from the Masonic club.

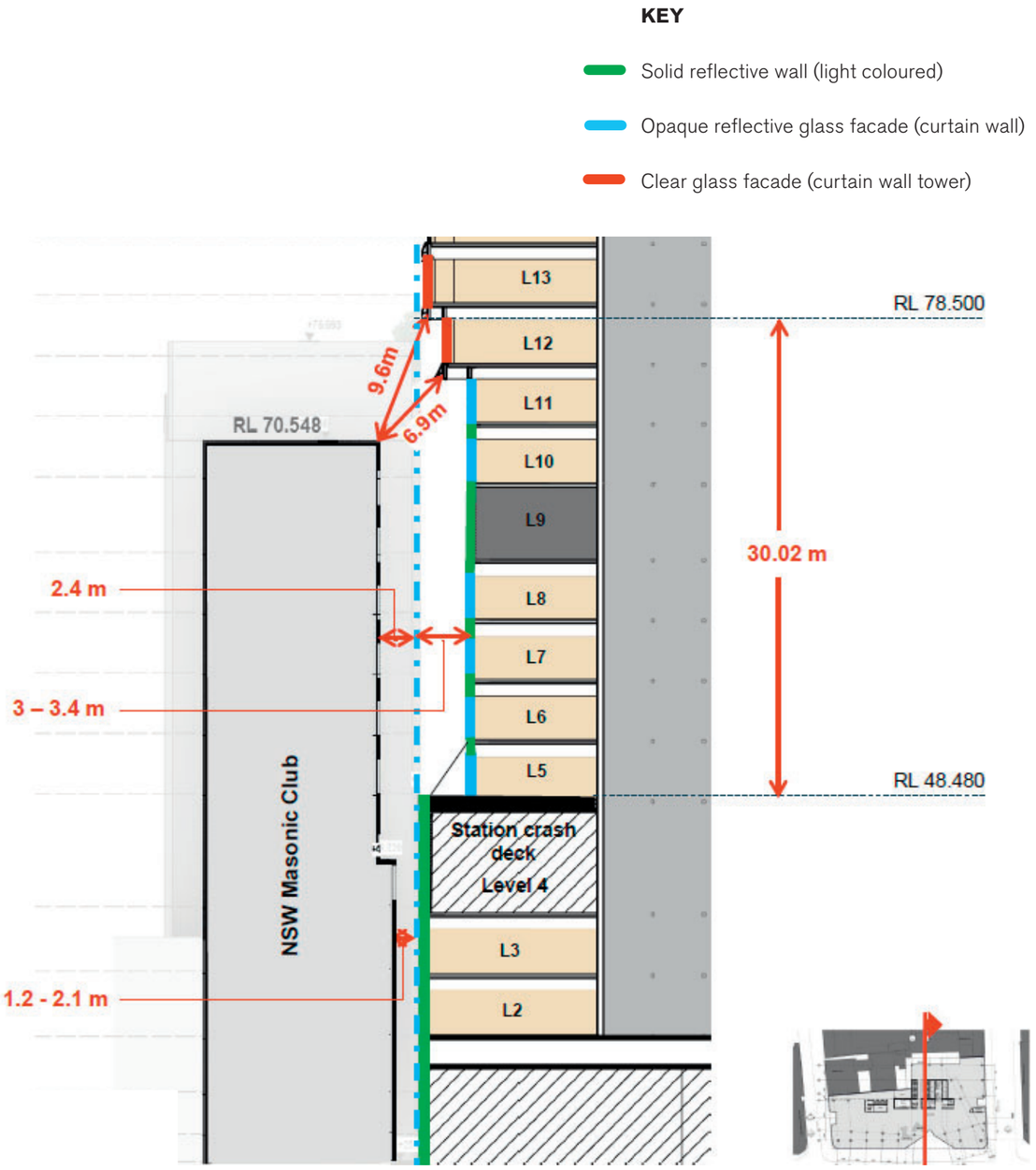
The current design, the detailed expression and materiality of the OSD facade facing the Masonic light well, complies with the project requirements established in the OSD, North Design Parameters during the RFT phases of the project.

As can be seen on the pictures taken from within the NSW Masonic lightwell, a great number of services (cables, pipes, mechanical flues and duct work) are running across the southern lightwell elevation.
In its current state, all NSW Masonic Club windows below Level 4 have been blanked out or filled in. Above level 4 all windows facing into the lightwell currently incorporate opaque textured glazing thus preventing a clear view into the lightwell. If in the future the windows to the Masonic hotel rooms would be made clear, the outlook for the building users would ba a pleasant looking modern facade, reflecting a maximum amount of sunlight into the lightwell.

View at base of the NSW Masonic Club lightwell



View of opaque hotel windowns



Section through the NSW Masonic Club' Southern lightwell

3.2 NSW Masonic Club

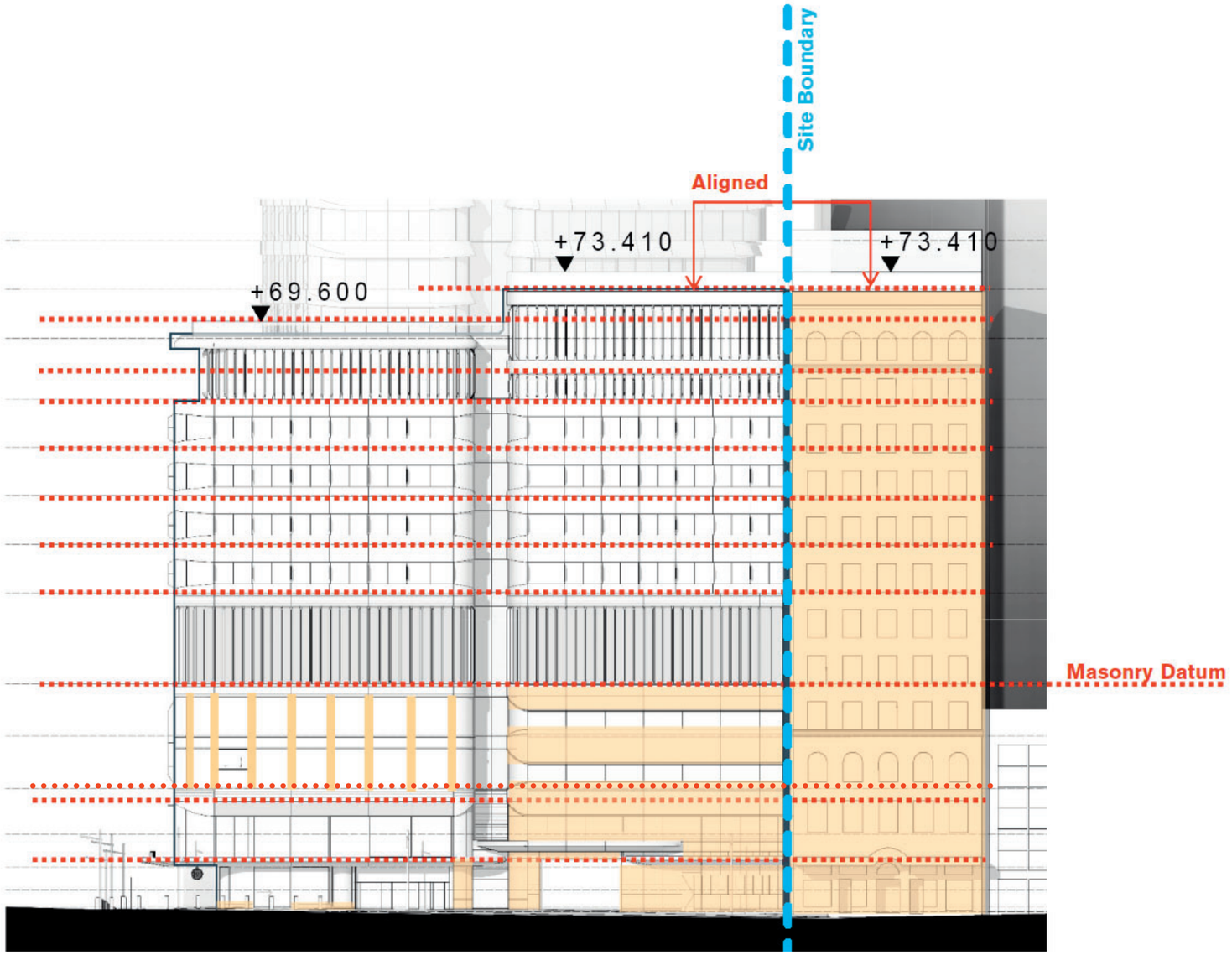
Facade Interface on Castlereagh Street

The Club's skilfully designed sandstone façade is an important contributor to the Castlereagh streetscape. We are concerned about the design of the Castlereagh St façade and how it will relate to the Club's façade. We therefore ask that the Department seeks specialised heritage advise to ensure that the proposed building sympathetically relates to the Club's façade. A heritage assessment prepared by Weir - Phillips is attached (Appendix 2) to assist in your analysis.

Castlereagh Street Facade

The design and expression of the Castlereagh Street facades are governed by the height and composition of the adjoining NSW Masonic Club, taking cues from both its materiality, as well as the horizontal composition of its heritage listed facade, determining clear datum lines within the Pitt Street North Castlereagh Street facade.

The principle of gradual transition from the beautiful and intricately detailed Masonic stone-clad heritage facade to the predominantly glass and bronze materiality and corresponding permeability of the proposed Park Street facade has been established by introducing stone cladding to the lower podium levels near the Masonic building, which gradually feathers out towards the top, attempting not to upstage the Masonic facade while still ensuring high quality materials are introduced directly adjacent to it.
This story line has been completed by introducing a small stone up-stand which runs along the ground floor facades , while vertical stone fins in front of the semi-public level 2 and the level 3 commercial sky lobby complete the gradual transition from the full stone clad Masonic Facade to the permeable Pitt Street North facade on Park Street.



Castlereagh Street Elevation showing horizontal alignments between the Pitt Street North facade and the NSW Masonic CLub

Public Responses to Submission

4.1 Public Responses to Submission

Building Bulk & Setback

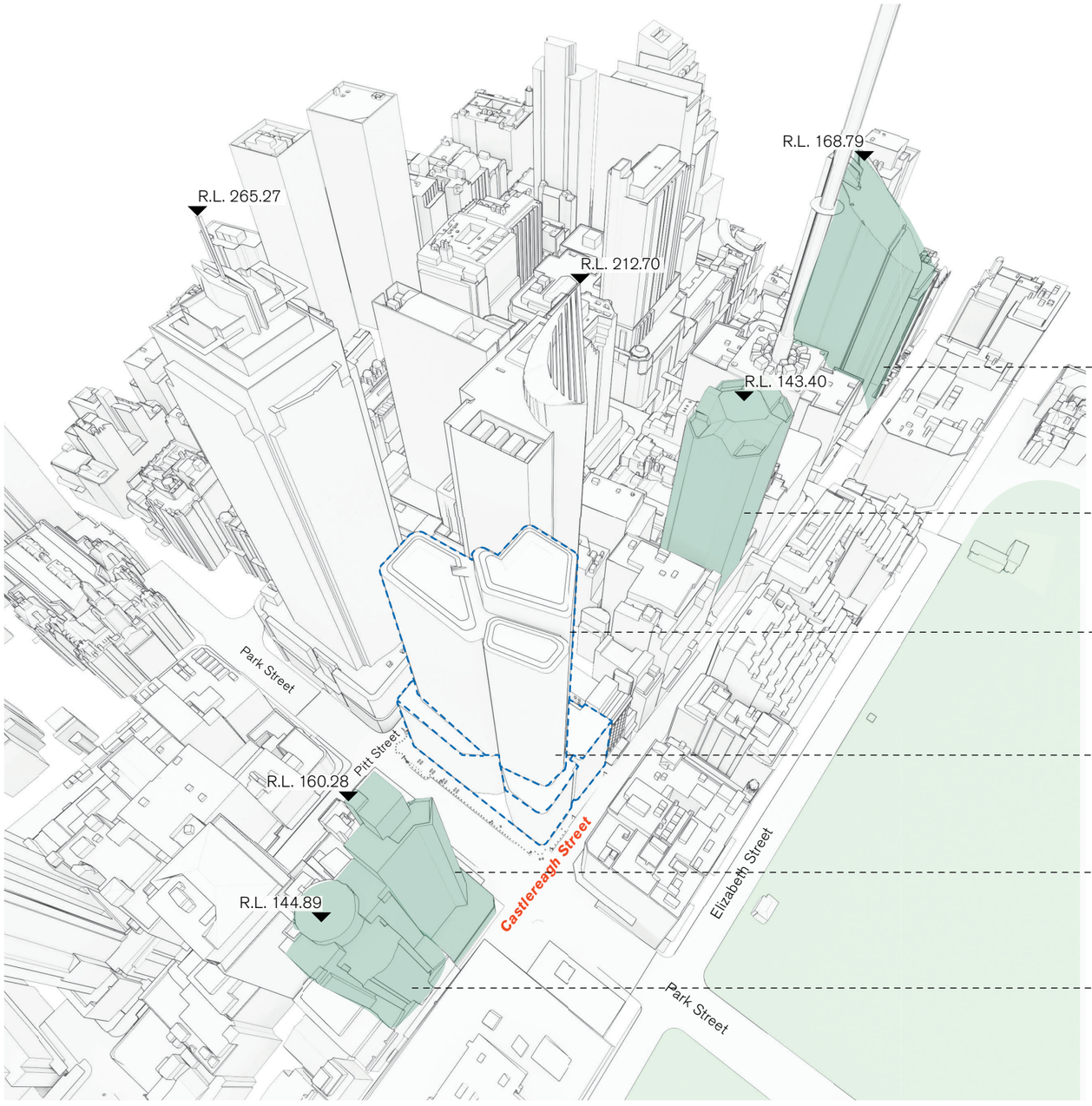
Objects to the bulk of the project as seen from Castlereagh Street. The building should be set back much further from the Castlereagh Street frontage. Most existing high-rise buildings are set back from the Castlereagh Street frontage which opens up a city view. As currently designed, it blocks the view of the cityscape and Centrepoint tower in particular.

Castlereagh Street Streetscape

Within the immediate vicinity of the site along Castlereagh Street there are only a very limited number of high-rise developments. Refer to diagram on this page in which high-rise buildings with Castlereagh Street addresses have been highlighted in green.

The diagram also indicates the existing tower facade setbacks from their Castlereagh Street site boundary. The SSDA Scheme developed for the Pitt Street North site has two very distinct volumes on Castlereagh, one has been set back 6m from the site boundary and the other tower volume varies in setback between 10 and 21m. As noted most towers -apart from the Park Regis Tower- are set back less than 6m from the Castlereagh Street boundary

As indicated on the visualisations, the Centrepoint tower can still be seen from the corner of Park and Castlereagh Street at grade.
Given the proposed Pitt Street North Development falls entirely within the approved Stage 1 envelope, as such no further loss of views to Centrepoint tower are expected, as the development is not maxing out the entire available height at the top of the envelope. It is likely that additional levels within the Park Regis Tower and other buildings within the surroundings will maintain (partial) views to the Centrepoint Tower and other cityscape elements over and above what was allowed for within the approved Stage 1 envelope.



4.1 Public Responses to Submission

Building Bulk & Setback

Objects to the bulk of the project as seen from Castlereagh Street. The building should be set back much further from the Castlereagh Street frontage.
Most existing high-rise buildings are set back from the Castlereagh Street frontage which opens up a city view.
As currently designed, it blocks the view of the cityscape and Centrepoint tower in particular.

4.2 Public Responses to Submission

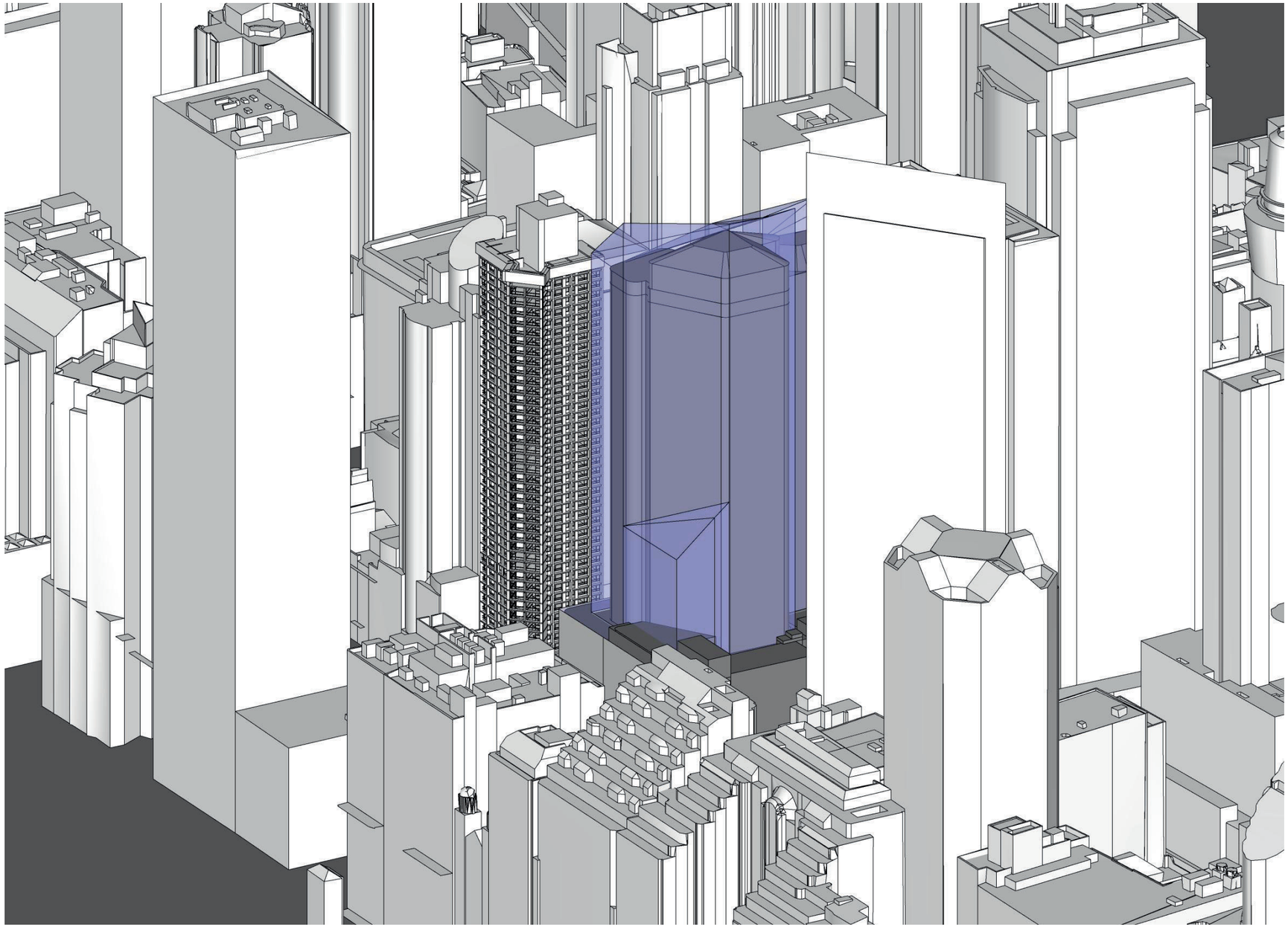
Park Regis Impact

Views from the Park Regis would be blocked as a result of this development, specifically concerned about Hyde Park view. Other concerns about: Construction noise, Shadowing and Loss of privacy because of new development

Hyde Park views from Park Regis

The proposed SSDA Scheme for the Pitt Street North development is not fully utilising the approved Stage 1 envelope massing on the South-Eastern corner of the site, thus providing additional view to Hyde Park that would have otherwise been blocked.

The following images show the additional views to Hyde park and architectural landmarks within and around Hyde Park that will be visible from the western most apartments and the apartments located at the North-Eastern corner of the Park Regis tower, when comparing the current SSDA massing with the approved Stage 1 envelope.



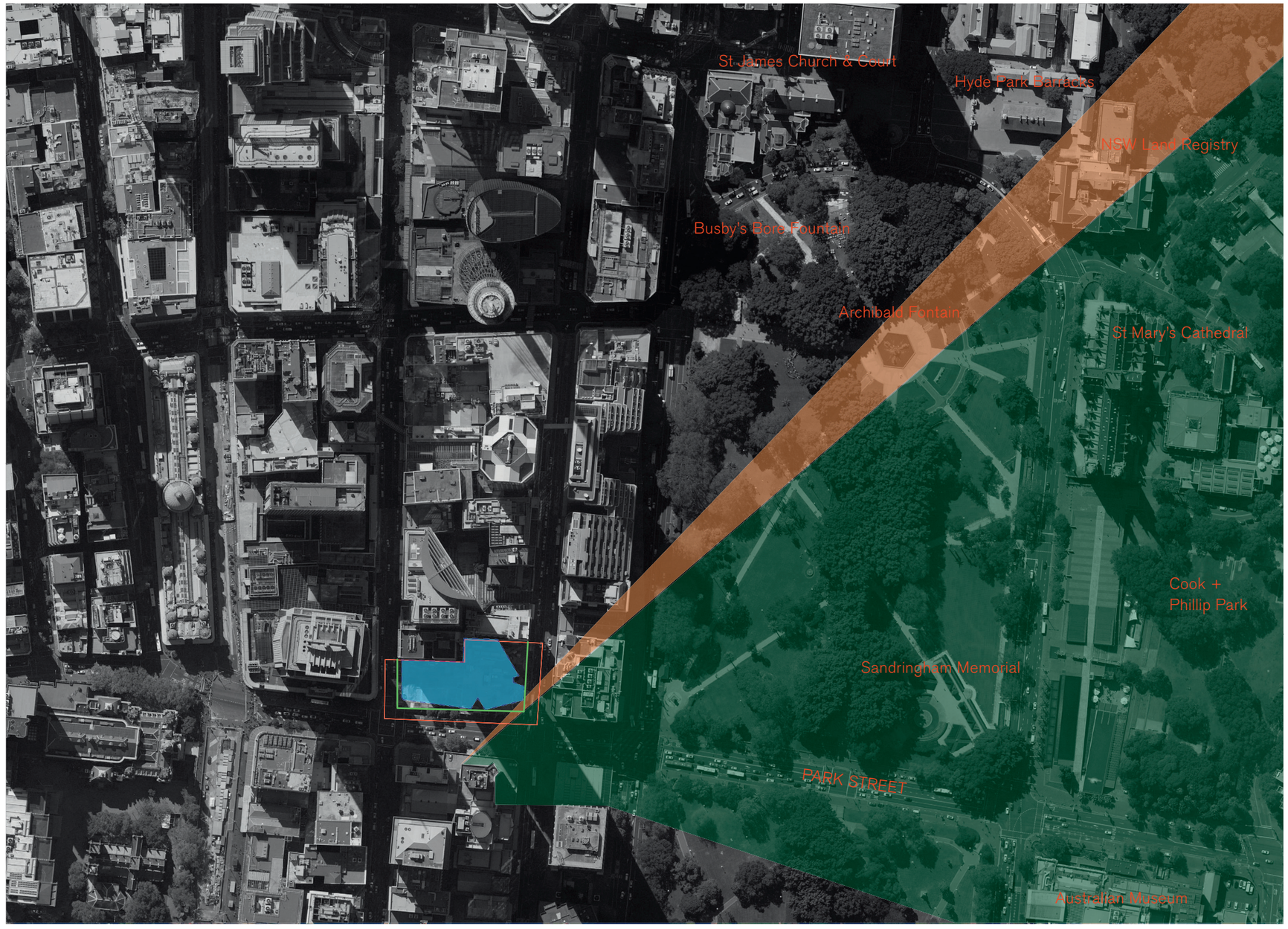
3D perspective showing overlay of the approved Stage 1 Envelope and Current SSDA Scheme

4.2 Public Responses to Submission

Park Regis Impact

Views from the Park Regis would be blocked as a result of this development, specifically concerned about Hyde Park view. Other concerns about: Construction noise, Shadowing and Loss of privacy because of new development

Views from most western Residential apartments within Park Regis tower



Pitt Street North Site Boundary

Approved Stage 1 Envelope

Views to Hyde Park from Park Regis Apartments assuming Approved Stage 1 envelope

Additional views to Hyde Park from Park Regis Apartments assuming current SSDA Scheme

Current Pitt Street North OSD Massing

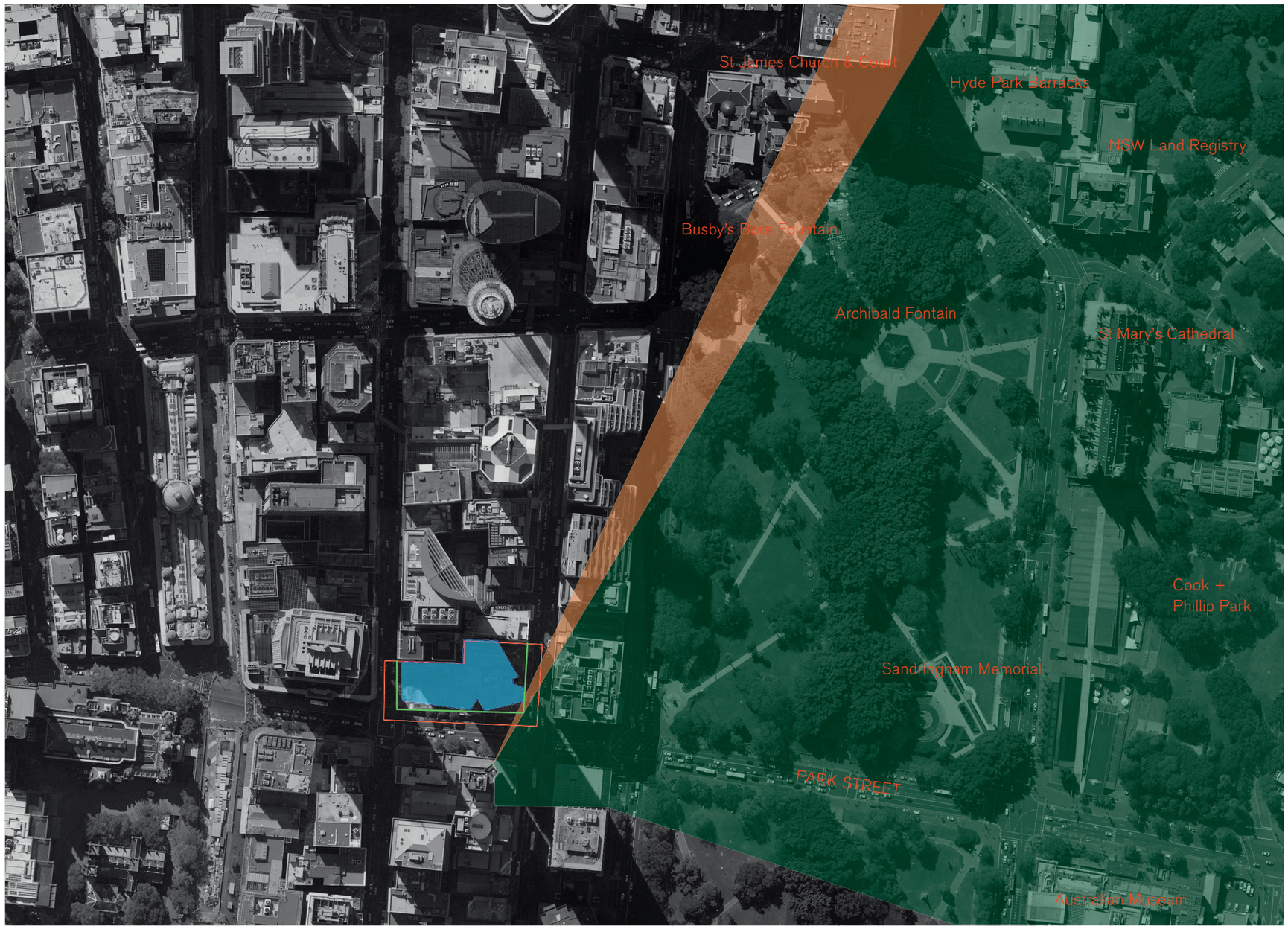
Aerial view of wider Pitt Street North site

4.2 Public Responses to Submission

Park Regis Impact

Views from the Park Regis would be blocked as a result of this development, specifically concerned about Hyde Park view. Other concerns about: Construction noise, Shadowing and Loss of privacy because of new development

Views from North-eastern Residential apartments within Park Regis tower



Aerial view of wider Pitt Street North site

Pitt Street North Site Boundary

Approved Stage 1 Envelope

Views to Hyde Park from Park Regis Apartments assuming Approved Stage 1 envelope

Additional views to Hyde Park from Park Regis Apartments assuming current SSDA Scheme

Current Pitt Street North OSD Massing

4.2 Public Responses to Submission

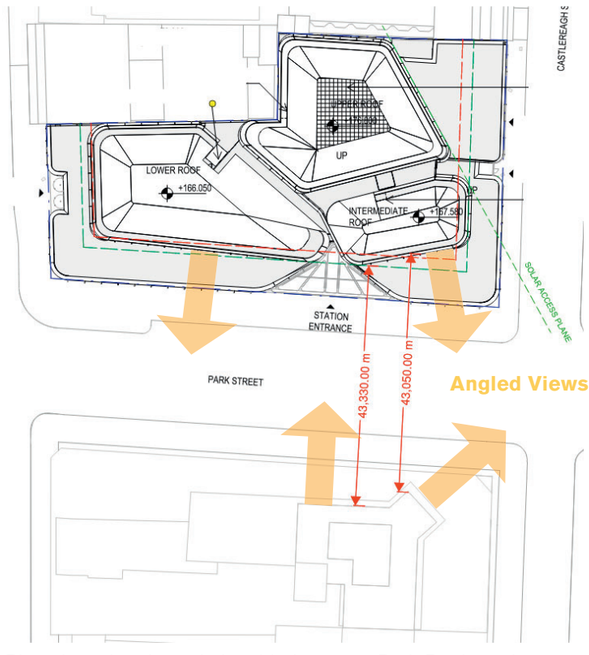
Park Regis Impact

Views from the Park Regis would be blocked as a result of this development, specifically concerned about Hyde Park view. Other concerns about: Construction noise, Shadowing and Loss of privacy because of new development

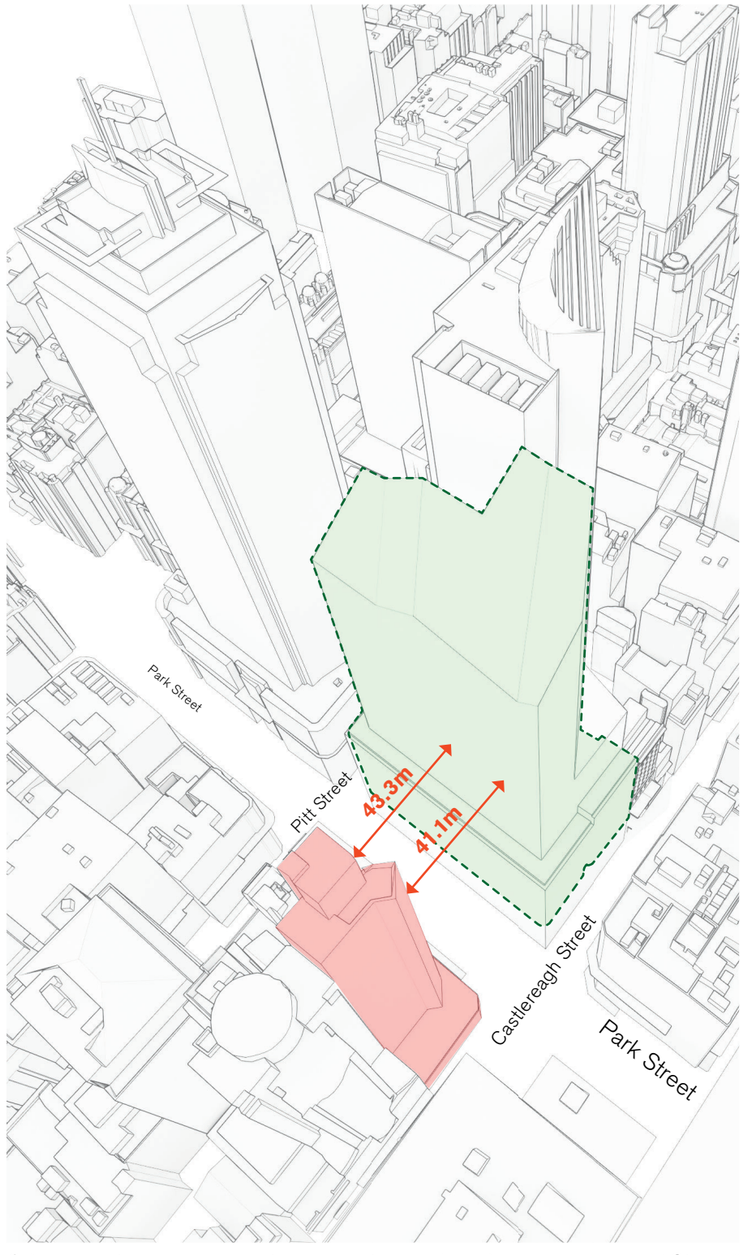
Privacy and overshadowing to/from Park Regis

As the building is wholly captured within the existing Approved Stage 1 envelope, there is no additional loss in privacy between the Park Regis Tower and the new Pitt Street North development. The dimension between the northern facade of the Park Regis tower and the most southerly point of the Pitt Street North tower facade is always more than 43m, when the approved Stage 1 envelope was achieving only 41.1m in some locations. As both Pitt Street southern tower volume facades are angling away from Park Street it can be expected that additional privacy can be expected in comparison with the approved Stage 1 envelope which runs parallel with Park Street.

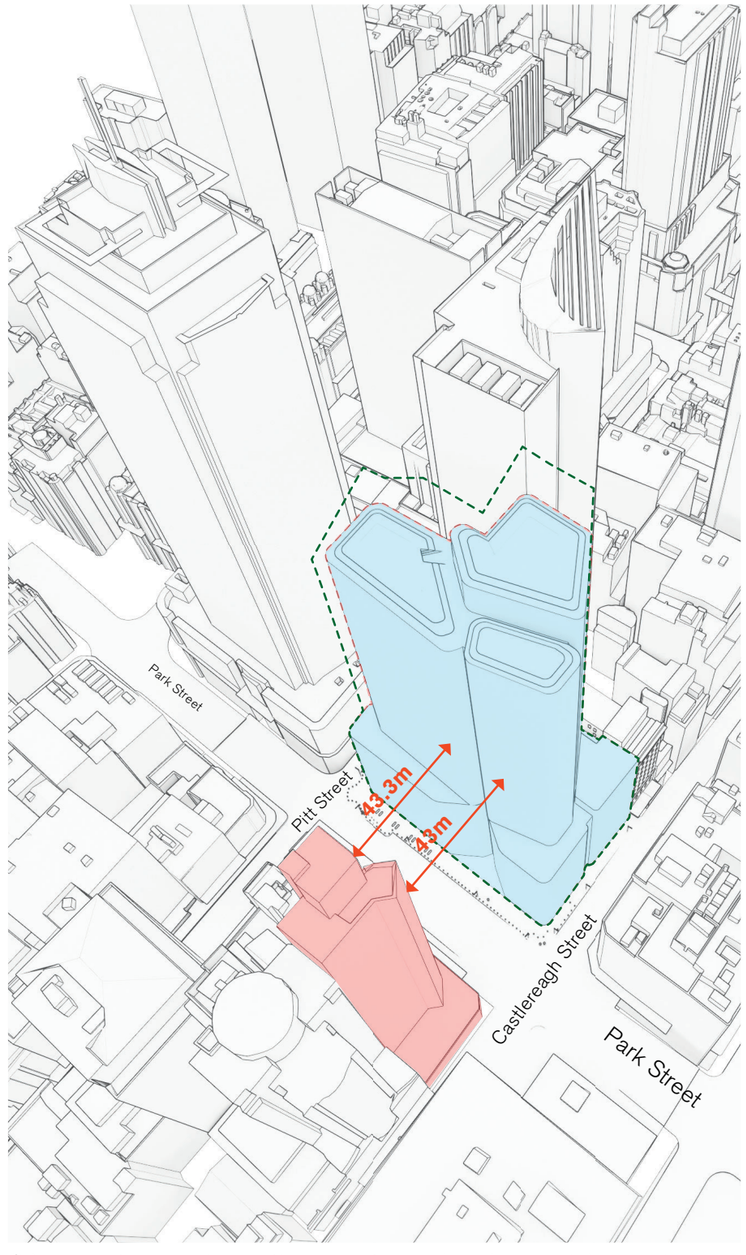
For further information on overshadowing of Park Regis residential apartments, please refer to Chapter 1.2 of this RtS Design report.



Plan view showing relationship between Park Regis and Proposed Pitt Street North development



3D perspective showing relationship between Park Regis and Approved Stage 1



3D perspective showing relationship between Park Regis and Proposed massing

4.3 Public Responses to Submission

Podium Height, Natural Light & Views to/from the National Building

Raises issue with podium height and sunlight access to the National Building. Increasing podium height to the top of the National Building will block all existing light access to suites on level 1 and 2. Offices on top of podium will further impact sunlight access. The sculptural artwork commissioned by the Owners Corporation of 250 Pitt St, positioned in the light well of 250 Pitt St will no longer be visible to occupants within the National Building.

Podium height relationship with National Building

The proposed modified envelope for the Pitt Street North intentionally aligns with the adjoining heritage buildings, both of which are slightly higher than the DCP suggested street wall height of 45m.
This approach is supported within the Heritage statement prepared by GBA Heritage, as well as the OSD Design Parameters where the alignment with the neighbouring heritage buildings is considered to deliver the best contextual answer and design aesthetic for the street.

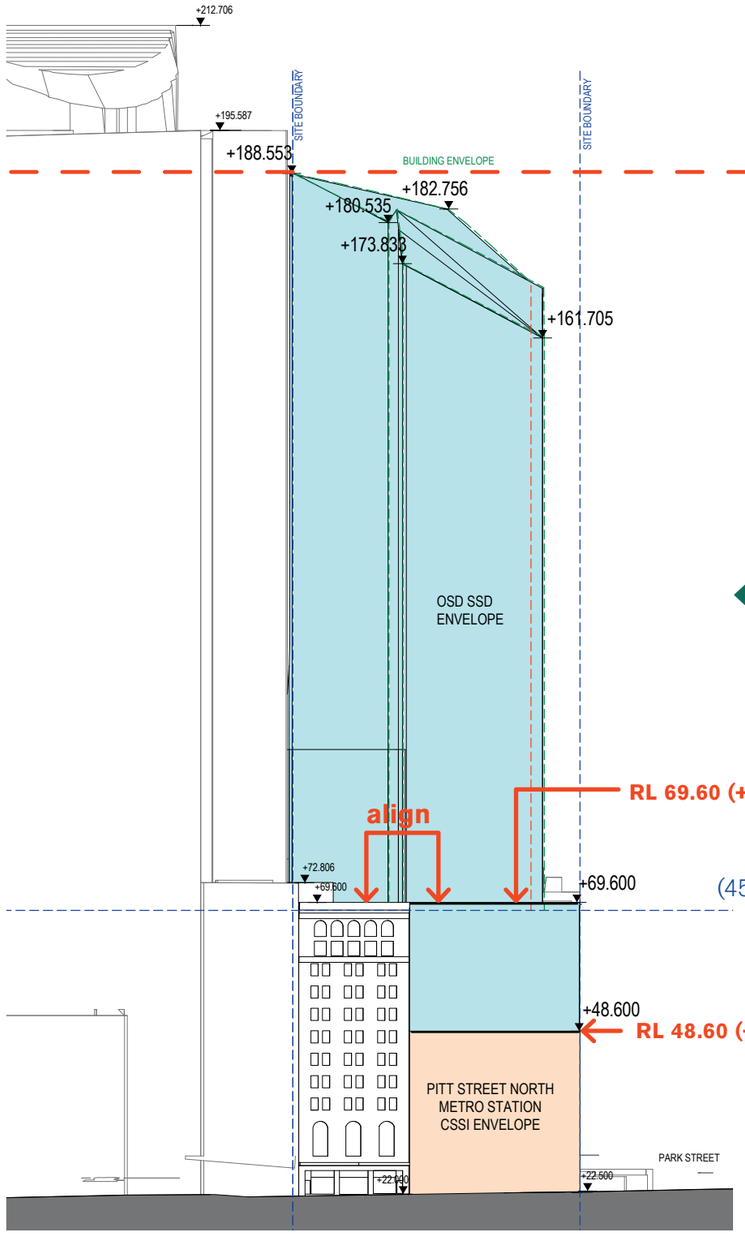
The height of the podium component to the West and South matches that of the adjoining twelve-storey heritage building to the North of the site: the National Building (Ashington Place) on the Pitt Street side, with a top of facade RL of 69.60, which is 1,600mm above the previously approved podium height.

Eventhough the preferred design response was to continue the height of the adjoining heritage building heights from an aesthetic and consistency standpoint, this increase in height has not resulted in additional GFA, as the additional height on the podium roof terraces will be delivered through the installation of raised planterboxes, delivering the concept of a 'planted edge' visible from the street.
This change will further strengthen the concept of the 'greening of Park Street' which has been identified in the Integrated Landscape concept by Sue Barnsley.

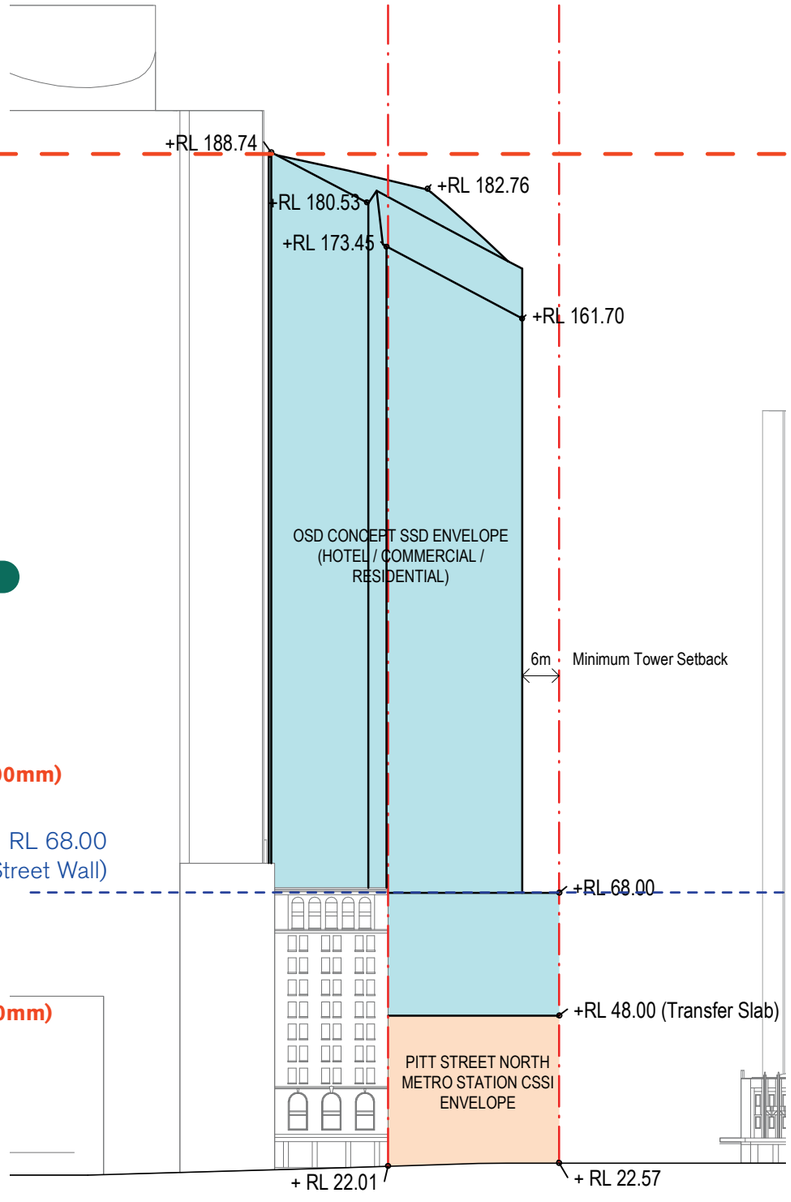
Key

OSD North areas (SSDA Areas)

Station areas (Concept DA CSSI Areas)



Proposed Modified Envelope



Stage 1 Approved Envelope

4.3 Public Responses to Submission

Podium Height, Natural Light & Views to/from the National Building

Raises issue with podium height and sunlight access to the National Building. Increasing podium height to the top of the National Building will block all existing light access to suites on level 1 and 2. Offices on top of podium will further impact sunlight access. The sculptural artwork commissioned by the Owners Corporation of 250 Pitt St, positioned in the light well of 250 Pitt St will no longer be visible to occupants within the National Building.

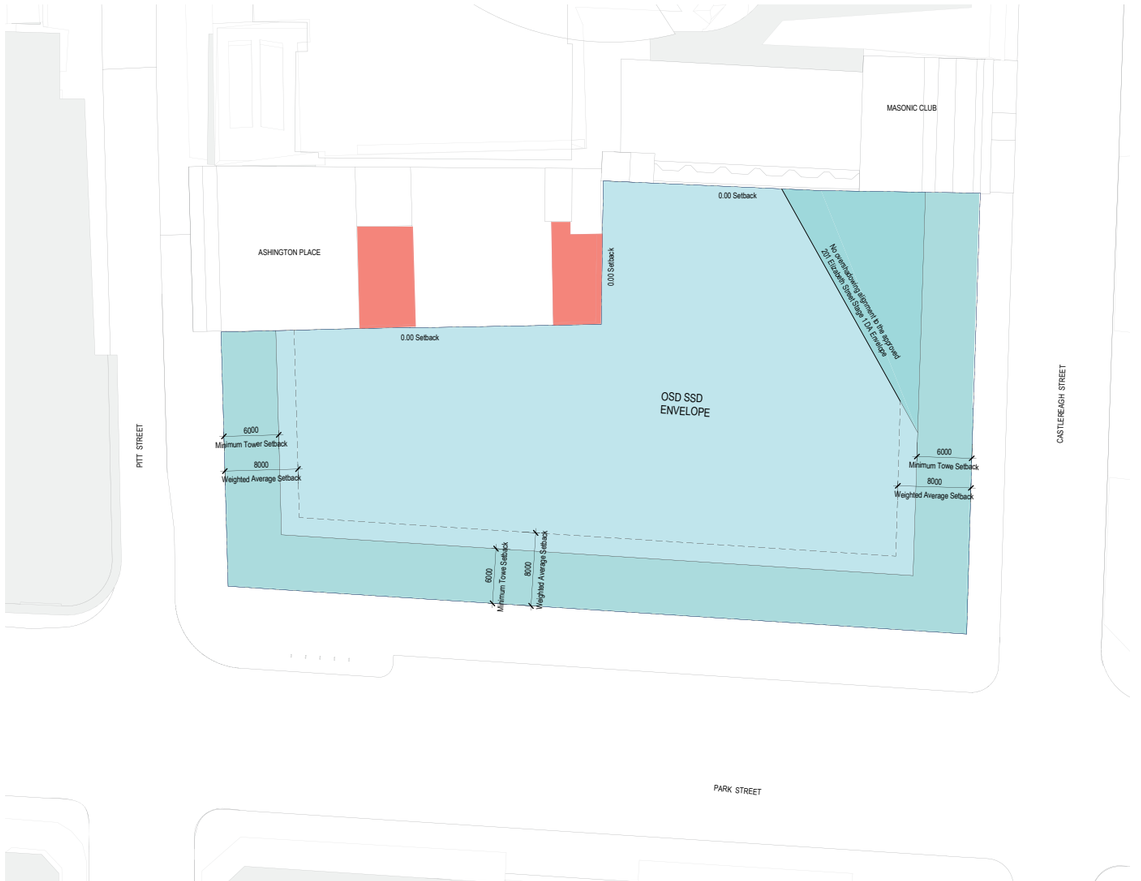
Tower & Podium rear setbacks

The approved Stage 1 Envelope further allowed for a 0m setbacks to the rear boundary for both tower and podium levels, given the adjoining sites heritage significance and inability to develop any higher. As such a change in the datum location between podium and tower will not have any impact on the daylight access to the Ashington Place/ National Building lightwells.

Key

- OSD North Envelope
- Ashington Place / National Building lightwells
- Site Boundary

Envelope for a typical Podium level



Envelope for a typical Tower level

4.3 Public Responses to Submission

Podium Height, Natural Light & Views to/from the National Building

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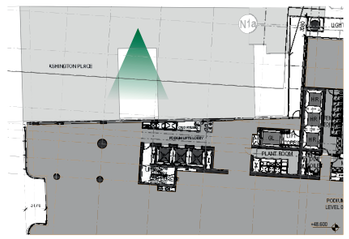
Ashington Place lightwell sunlight access

As both lightwells are south facing there has always been limited opportunity for direct sunlight access to the office areas within the National building and to the base of the lightwell which houses the sculptural artwork commissioned by the Owners Corporation of 250 Pitt St.

At present, the 2 Park Street high-rise tower to the West of the site topping out at an RL of 265.27 and the ANZ tower directly North of the National Building topping out at an RL of 212.70 are preventing direct sunlight from accessing the lightwell.



Sculptural Artwork within the National Building western lightwell as seen from the level 2 lift lobby

4.3 Public Responses to Submission

Podium Height, Natural Light & Views to/from the National Building

Raises issue with podium height and sunlight access to the National Building. Increasing podium height to the top of the National Building will block all existing light access to suites on level 1 and 2. Offices on top of podium will further impact sunlight access. The sculptural artwork commissioned by the Owners Corporation of 250 Pitt St, positioned in the light well of 250 Pitt St will no longer be visible to occupants within the National Building.

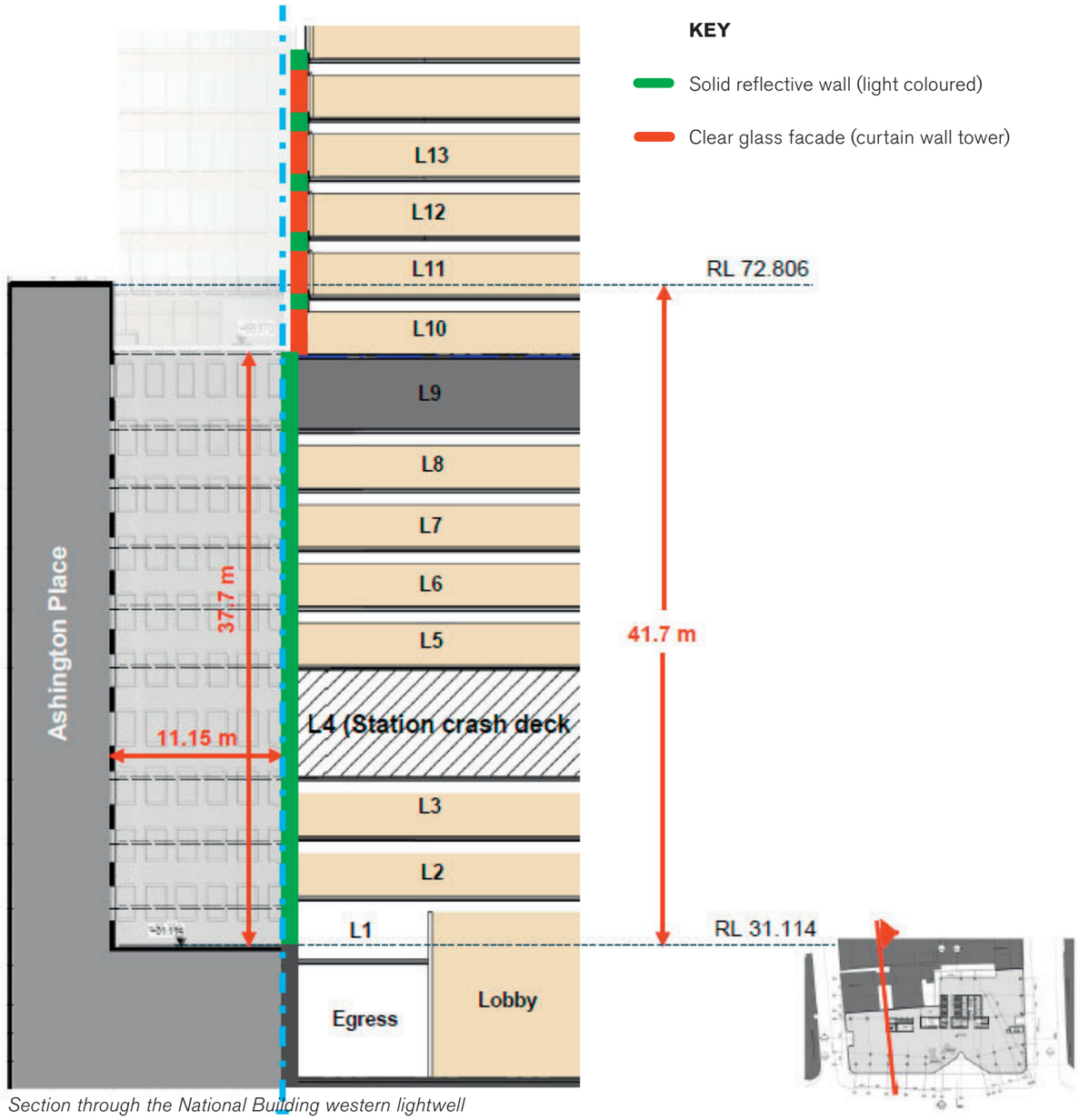
Ashington Place lightwell walls & artwork

In the proposed SSDA design, the detailed expression and materiality of the OSD facade facing the Ashington Place lightwell fully complies with the project requirements established in the OSD North Design Parameters during the RFT phases of the project.

The proposed Pitt Street podium facade from level 1 up to level 9 facing the lightwell is suggested to be solid and painted in a reflective light colour to match the existing lightwell walls, thus not only complementing the existing look and feel of the space, but also maximising daylight access into the Ashington Place lightwell terrace and commercial offices surrounding the void space.

The tower commercial facade above has a mix of reflective bronze coloured sunhoods and clear curtain wall glazing as indicated on the diagrams on this page. The resultant facade treatment will help to improve the bounding of any light into the lightwell noting that sun access is blocked by the ANZ and 2 Park Street towers to the north and west.

Plan section showing the facade treatment to the Ashington Place / National Building podium lightwells



Section through the National Building western lightwell

Additional updates to SSDA Drawings

5.1 Additional updates to SSDA Drawings

Roof Design Improvements

Orginal 'Fifth Facade' Design

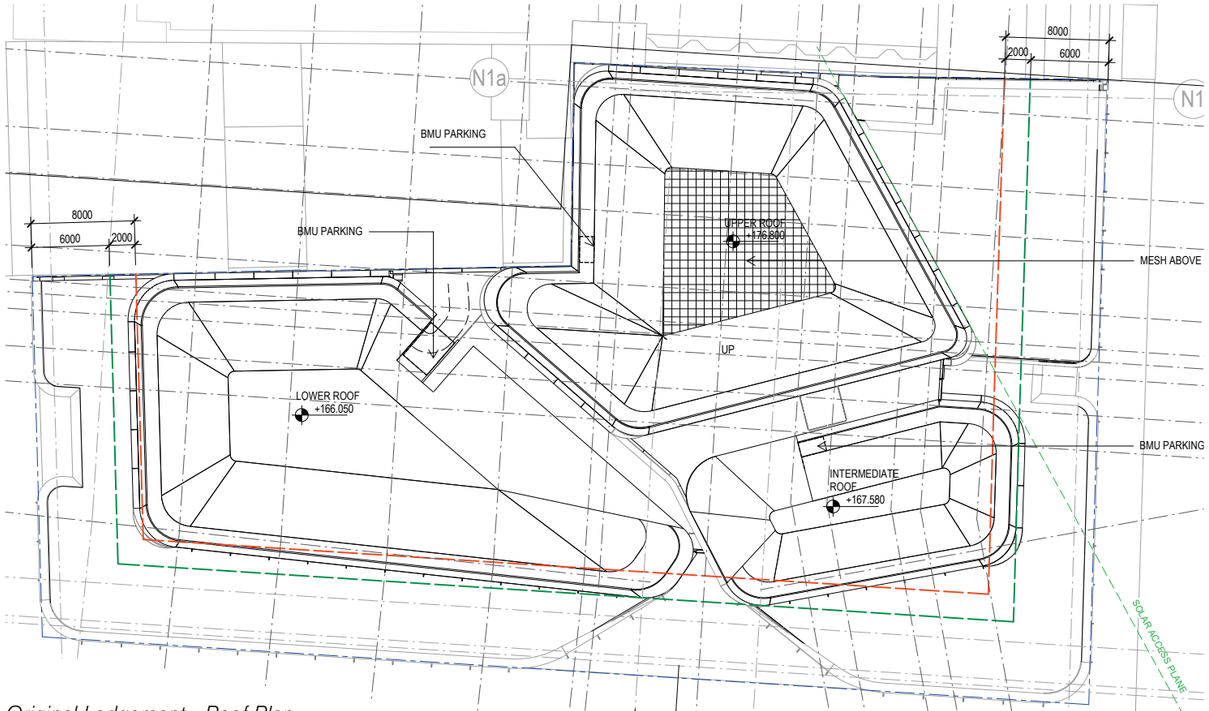
The following pages focusses on the original design of the roof and the external changes proposed to be implemented to the Roof design, poviding a plan, elevational and perspective comparisons between the original (~ie SSDA original lodgement) and the proposed updated design:

The original three stepped roof volumes at the top of the Pitt Street North Development were wholly contained within the building envelope which is governed by the Solar Access Plane as outlined in Sydney LEP Sun Access Protection Map15, with the Pitt Street project site governed specifically by the Hyde Park West 3 sun access plane. The lowest roof had an RL of 166.050, the intermediate roof has an RL of 167.580 and the highest roof of the built form has an RL of 176.800, all located below the critical Solar Access Plane as illustrated on the diagram to the right.

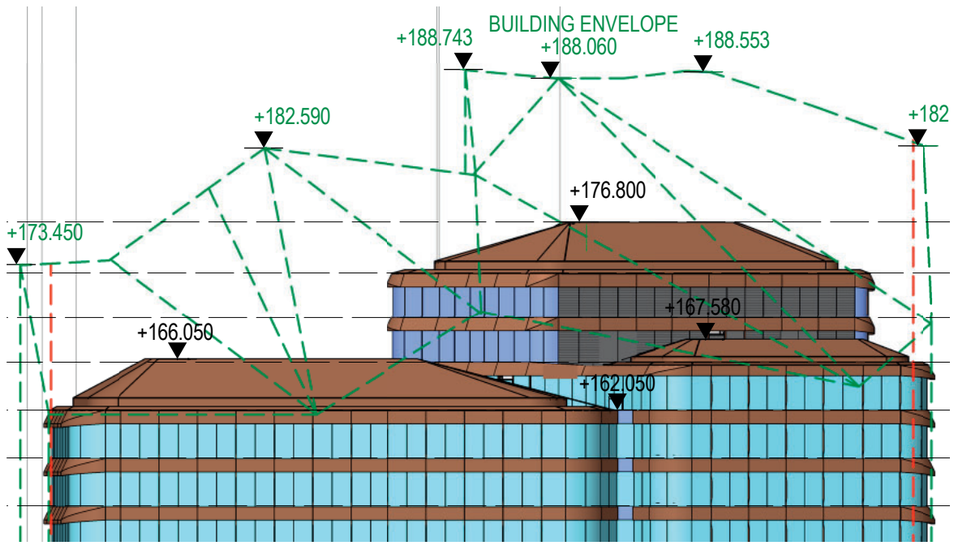
The original fifth elevation follows the bronze colour finish of the tower awning to contain plantroom equipment within an enclosed geometry while also seamlessly integrating the Building Maintenance Unit (BMU) accross the three roofs. Furthermore, the BMU parking areas were descretely integrated into the sides of the roof shape

Following the introduction of a perforated mesh to the top of the tallest tower volume, the original roof top design allows for free air to the cooling towers located below. Other louver areas were discretely integrated in the vertical face between the continuous BMU track along the perimeter and central roof volume. The roof inclination was implemented to maximise the plantroom area while remaining within the SSDA envelope and creating an elegant architectural solution to the fifth elevation.

Original Lodgement - Roof Perspective



Original Lodgement - Roof Plan



Original Lodgement - Park Street Elevation

5.1 Additional updates to SSDA Drawings

Roof Design Improvements

Minor updates to the 'Fifth Facade' Design

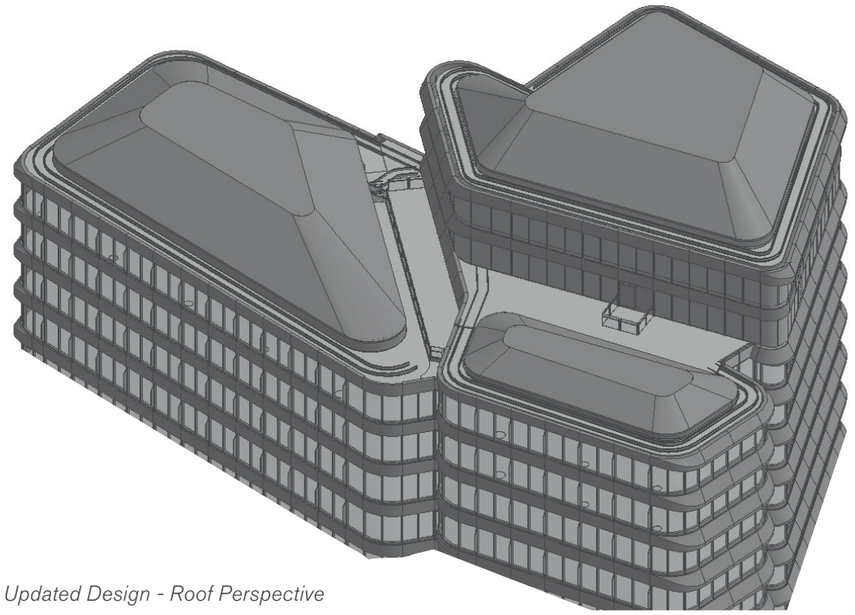
The revised three stepped roof volumes at the top of the Pitt Street North Development remains wholly contained within the building envelope, with the RLs of the original submission remaining unchanged. However the shape of the flat top surfaces of the roof have been amended to soften their appearance and bring them more in alignment with the design philosophy and organic nature of the rest of the building as can be seen on the plan and 3D perspective on this page.

Additional detail has been added in the form of the BMU tracks which sit within the recessed slot at the perimeter of each roof volume. As a result of detailed coordination with specialist access and maintenance consultants, we have been able to ensure that the BMUs can be hidden entirely within the massing of the building (Intermediate and highest roof volume) or hidden below the slope of the roof (lowest roof volume) when not in operation.

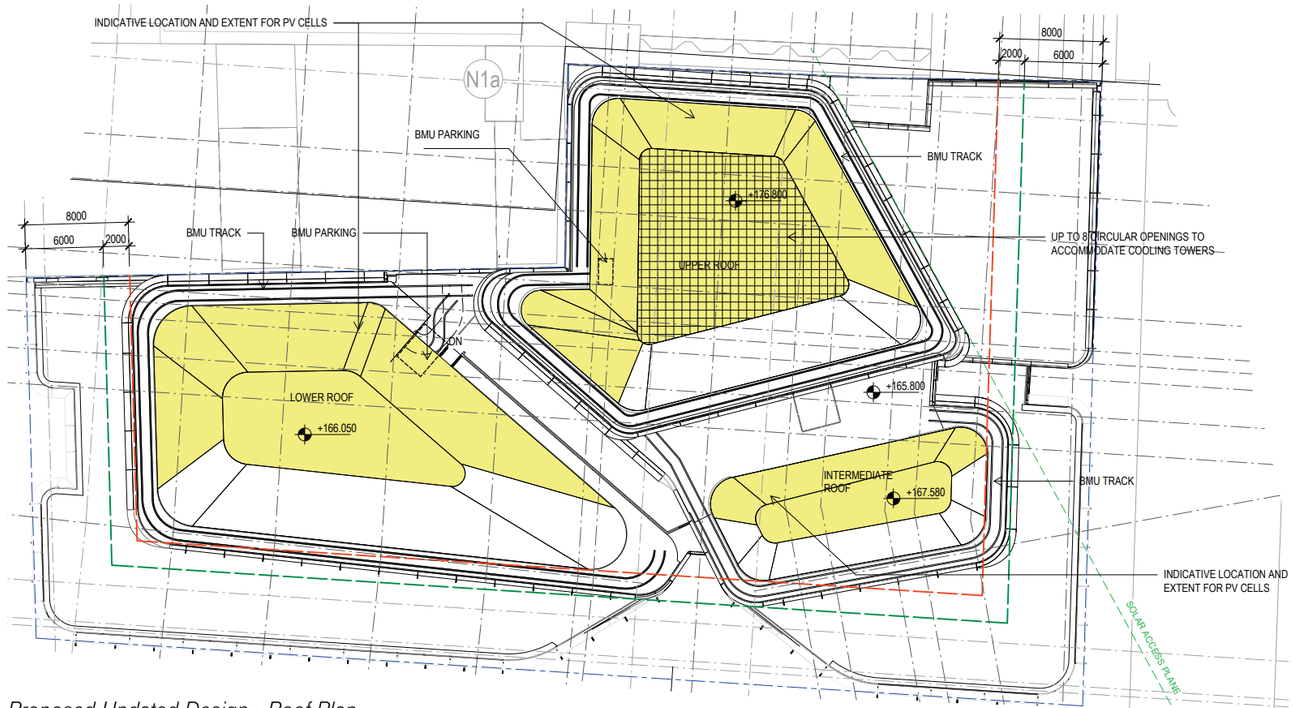
Furthermore we have indicated in a yellow fill , areas in which we are looking to introduce Building Integrated Photo-voltaics (BIPV) The exact specification, extent and placement of these cells are subject to ongoing design coordination, but they will be sensibly integrated within the current roof design.

The highest roof volume maintains the original design with a trafficable dark coloured coloured mesh at the top surface, however there will be a need to intruce up to 8 circular openings to accommodate the future cooling tower outlets. The design of these will need to be coordinated when the mechanical design is finalised.. The future cooling tower outlets will however not protrude past the roof top RL of +176.800.

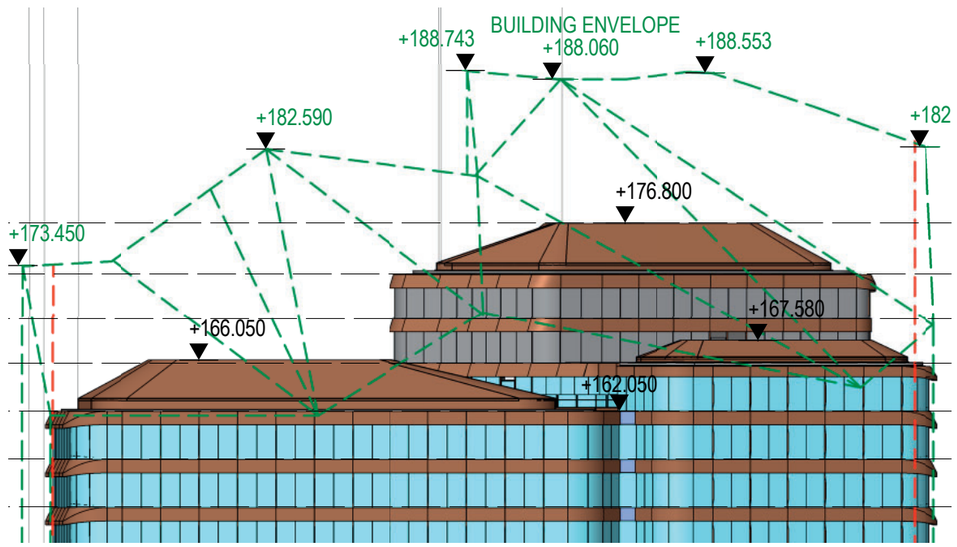
The above mentioned changes have no further impact on the overall building GFA, the overshadowing of the building to Hyde Park nor on the Park Regis Tower solar access as established in Chapter 1 of this report.



Proposed Updated Design - Roof Perspective



Proposed Updated Design - Roof Plan



Proposed Updated Design - Park Street Elevation

5.2 Additional updates to SSDA Drawings

Minor updates to Building Facades

Overview of podium facade changes to Pitt Street

This page focusses on the external changes proposed to be implemented to the Pitt Street facade, poviding an elevational and plan comparison between the original (~ie SSDA original lodgement) and the proposed updated design;

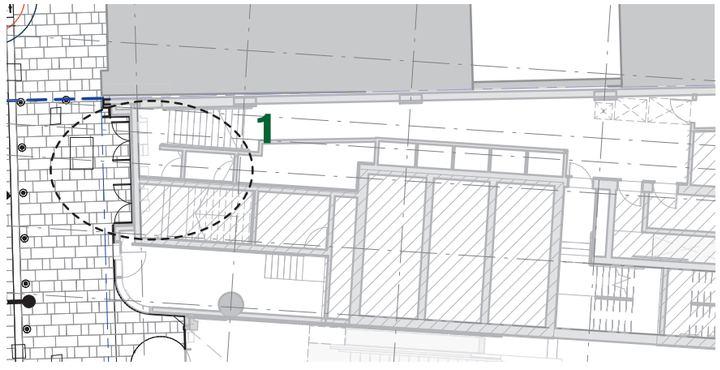
1. The gas meter room on the ground floor now has a direct access point to Castlereagh Street. The fixed strip between the egress doors is now bronze clad rather than stone.

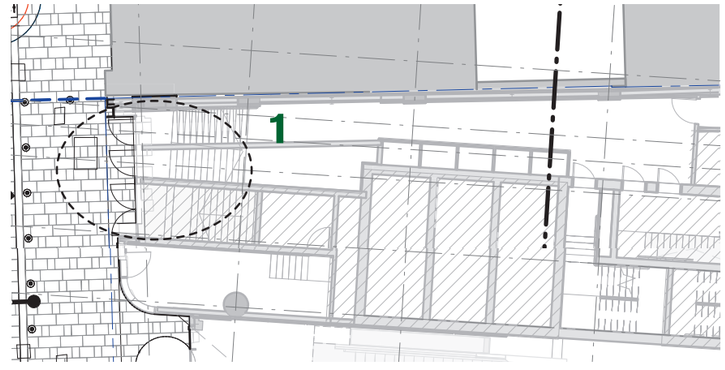
2. Increased DDA entrance sliding door width

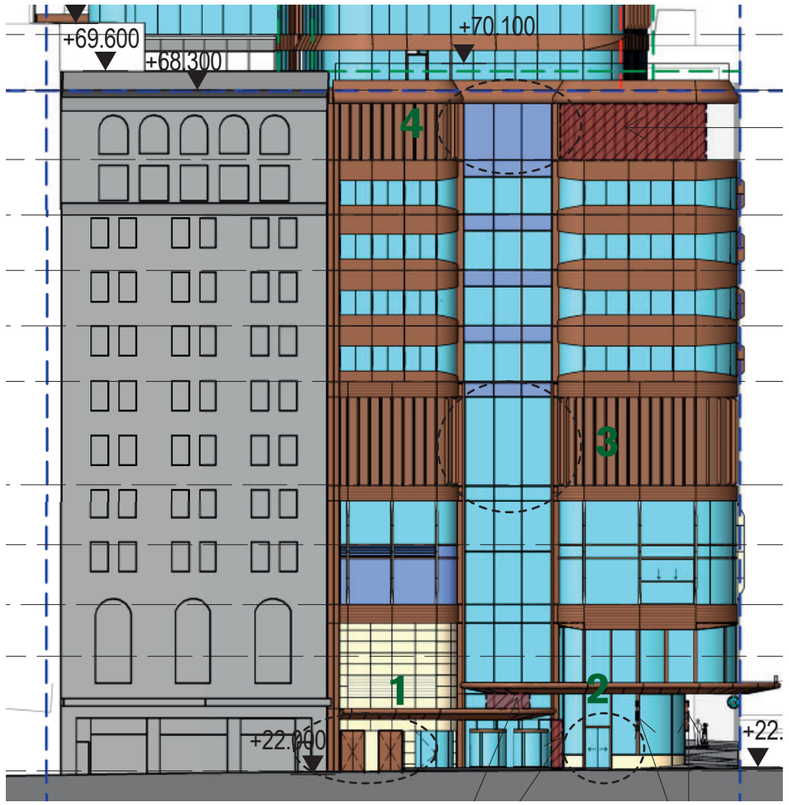
3. Plantroom facade on level 4 has been revised to a back-painted glass facade. The original representation was an error on the original plans.

4. The plantroom facade on level 9 now has glass louvers instead of a solid spandrel facade.

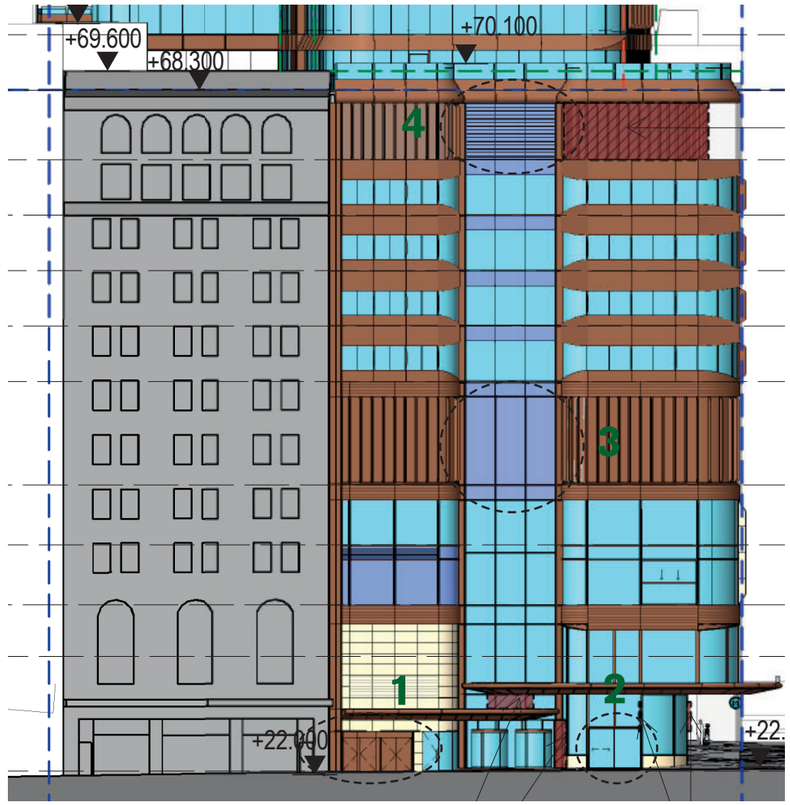
All three items on this page are located at the ground level or within the podium facade which forms part of the CSSI 7440 approval and are therefore not subject to detailed approval as part of this SSD DA, but rather via the Station Design and Precinct Plan (SDPP) required by the CSSI Approval. They are noted in this document, however, to indicate recent coordination.







Original Lodgement



Proposed Updated Design

KEY

- GLASS CURTAIN WALL
- BACKPAINTED GLASS CURTAIN WALL
- METAL CLADDING
- STONE CLADDING
- SIGNAGE

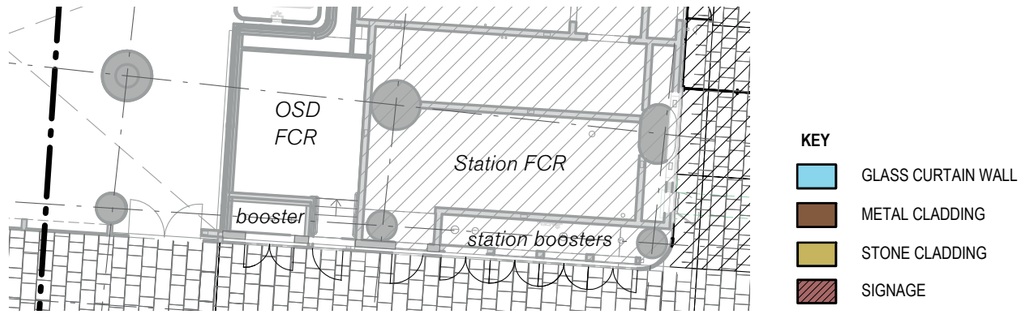
5.2 Additional updates to SSDA Drawings

Minor updates to Building Facades

Overview of podium facade changes to Park Street

This page focusses on the external changes proposed to be implemented to the Park Street ground floor facade, providing an elevational comparison between the original (~ie SSDA original lodgement) and the proposed updated design; The doors to the OSD Boosters, Station Booster, station Fire Control and OSD fire control room have been changed from some stone/some bronze cladding in the original design, to entirely bronze clad.

All items on this page are located at the ground level or within the podium facade which forms part of the CSSI 7440 approval and are therefore not subject to detailed approval as part of this SSD DA, but rather via the Station Design and Precinct Plan (SDPP) required by the CSSI Approval. They are noted in this document, however, to indicate recent coordination.



Original Lodgement

Proposed Updated Design

5.2 Additional updates to SSDA Drawings

Minor updates to Building Facades

Overview of podium facade changes to Castelreagh Street

This page focusses on the external changes proposed to be implemented to the Castlereagh Street facade, poviding an elevational acomparison between the original (~ie SSDA original lodgement) and the proposed updated design;

1. End of trip glass entrance door has been set into a bronze clad portal to better integrate it into the overall facade

2. Station plantroom facade on level 1 has been updated to a back-painted glass facade. This was an error in the original lodgement

3. Bronze clad louvered facade within base of building slot has been updated to a spandrel panel with glass louvers to better integrate them into the overall slot design and improve the building appearance overall.

4. The height of the loading dock entrance has been slightly increased to cater for the increased height requirements given the station pant equipment replacement stategy required by Sydney Metro.

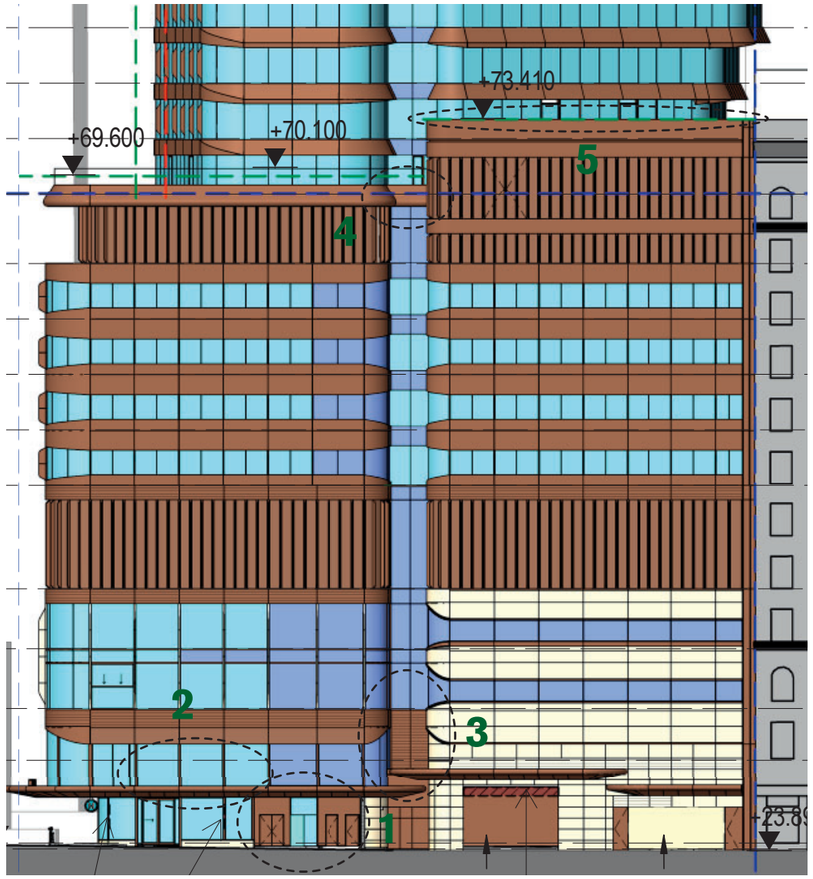
5. The top of the slot has been revised to be a glass spandrel panel to better accentuate the two podium volumes eiher side of the podium slot.

6. A glazed upstand / balustrade has been added to the top of the solid upstand on the NE corner of the development on level 11. This was an error in the original lodgement drawings, although it was noted in the Architectural Design report.

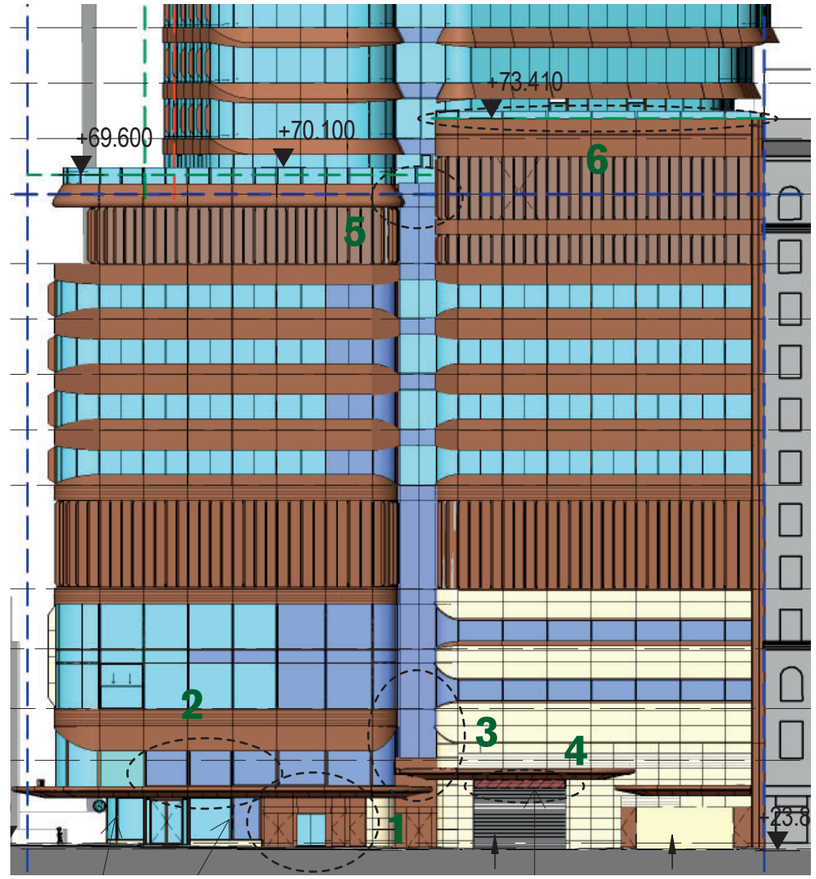
Elements 1-4 on this page are located at the ground level or within the podium facade which forms part of the CSSI 7440 approval and are therefore not subject to detailed approval as part of this SSD DA, but rather via the Station Design and Precinct Plan (SDPP) required by the CSSI Approval. They are noted in this document, however, to indicate recent coordination.

KEY

- GLASS CURTAIN WALLING
- BACKPAINTED GLASS CURTAIN WALL
- METAL CLADDING
- STONE CLADDING
- SIGNAGE



Original Lodgement



Proposed Updated Design

5.2 Additional updates to SSDA Drawings

Minor updates to Building Facades

Overview of changes to Northern podium lightwell facade

This page focusses on the external changes proposed to be implemented to the northern lightwell facades, poviding an elevational acomparison between the original (~ie SSDA original lodgement) and the proposed updated design;

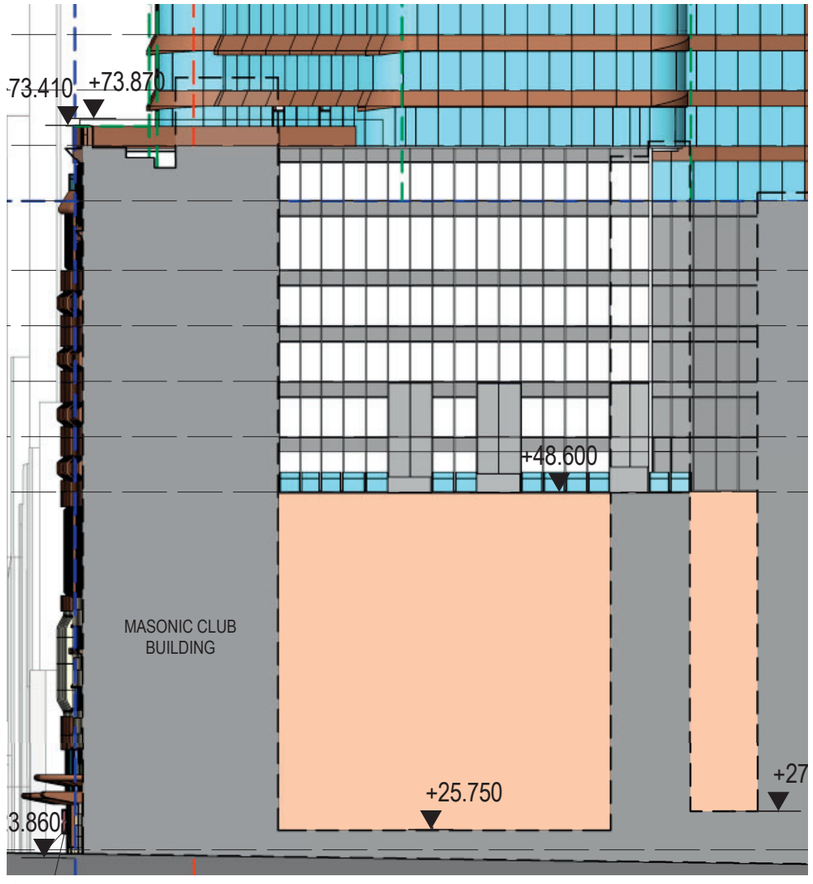
1. The north-facing Level 9 plantroom facade has been revised to have reflective white back-painted glazing to match the spandrel panel above and below the plantroom. This change was introduced to ensure there are no obscured views into the plantroom, nor any difference in light temperature between commercial levels above and below and platroom level that can be noticed from the NSW Masonic Club.

2. White aluminium intake louvers have been introduced to the level 9 plantroom facade, thus ensuring that they are carefully integrated with and match the white back-painted glazing adjacent to it.

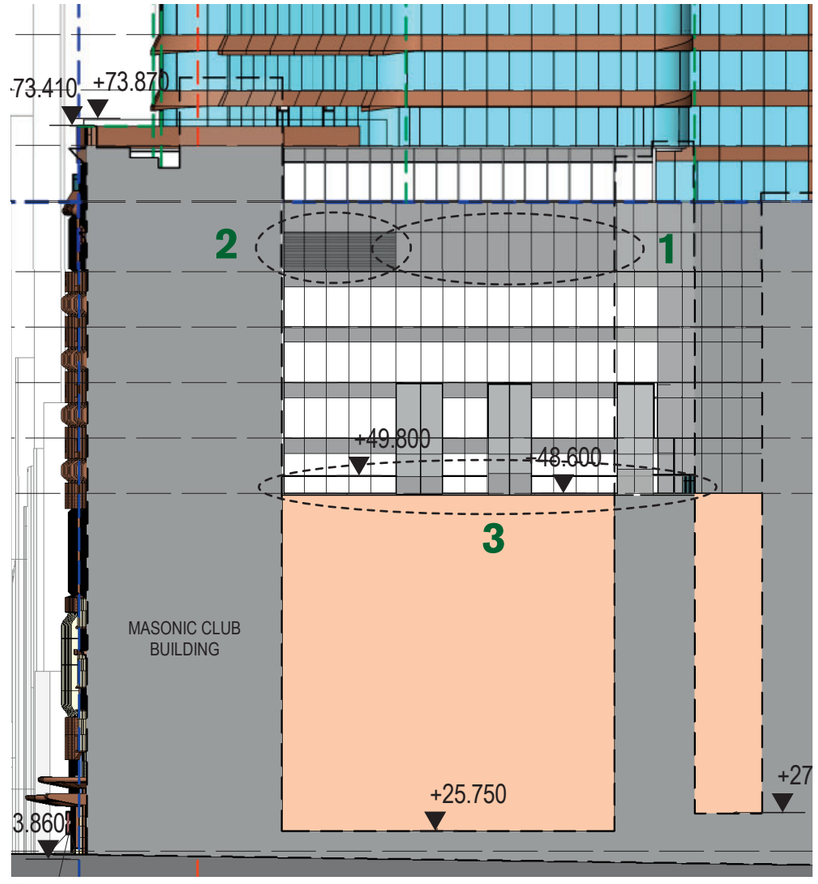
3. The balustrade to the maintenance area to the North of Level 5 has been revised to be a minimal metal framing, thus ensuring minimal obstruction of the reflected daylight into the NSW Masonic lightwell below.

KEY

- GLASS CURTAIN WALLING
- BACKPAINTED GLASS CURTAIN WALL
- METAL CLADDING
- STONE CLADDING
- LOUVRE
- TRANSLUCENT CURTAIN WALL
- WHITE SPANDREL GLAZING
- PAINTED RENDER
- SIGNAGE



Original Lodgement



Proposed Updated Design

5.3 Additional updates to SSDA Drawings

General Arrangement Plan updates

Internal Changes to Design

The following page show a number of minor internal general arrangement changes between the original (~ie SSDA original lodgement) and the proposed updated design;

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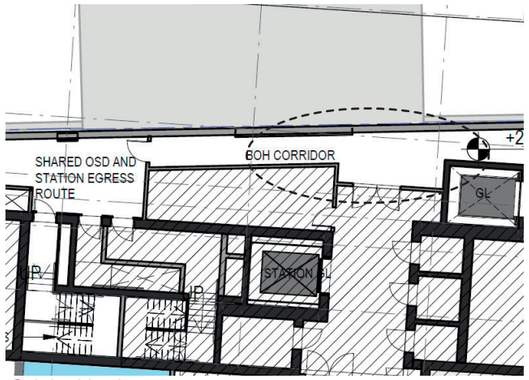
1. Back of House corridor realignments due to increased structural zones / boundary wall detailing or changes to services reticulation.



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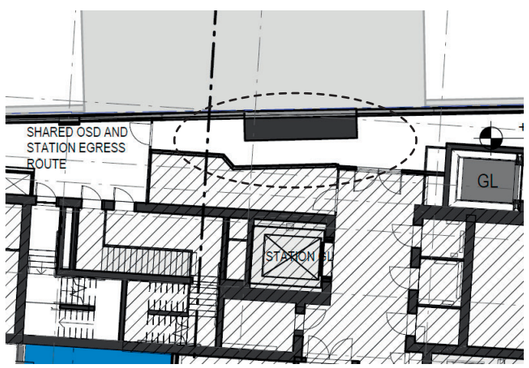
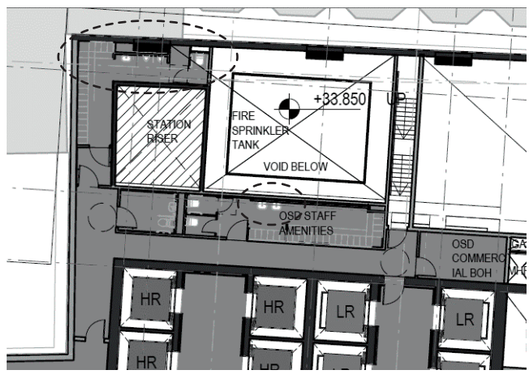
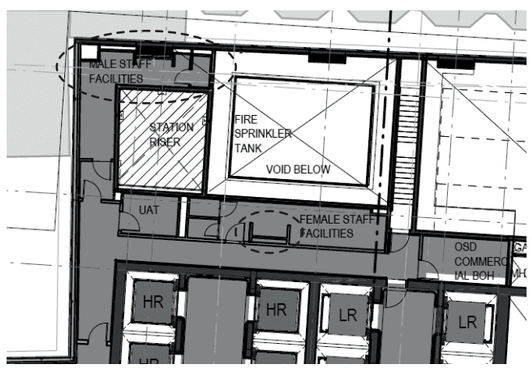


Proposed Updated Design

2. Slight changes to L03 Staff male and female change room facilities layout

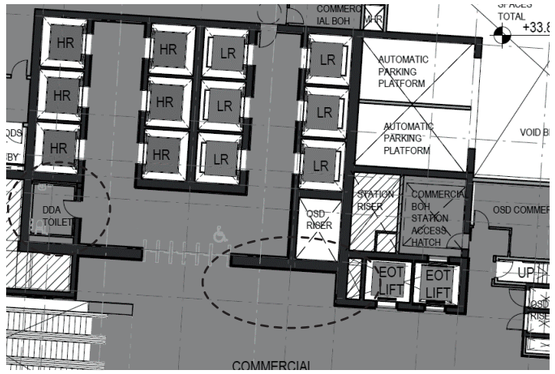


Original Lodgement



Proposed Updated Design

3. Minor internal partition wall location changes to Level 3 LR/HR lift lobby and relocation of DDA toilet.



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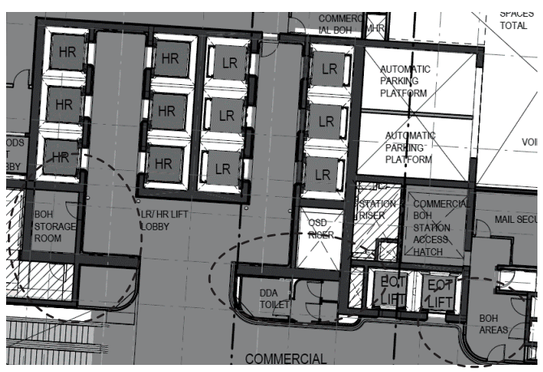
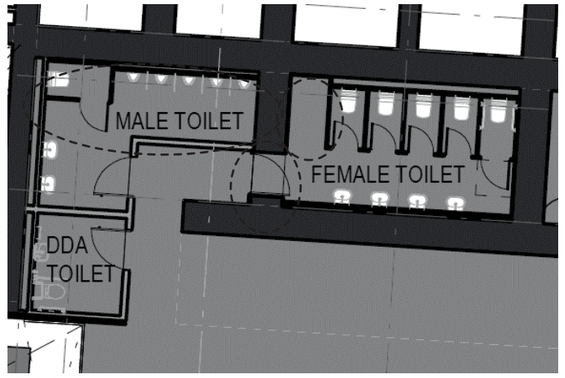
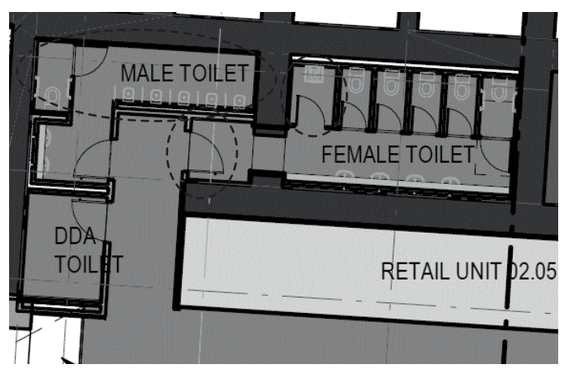


Proposed Updated Design

4. light retail bathroom layout re-configuration on L02 and introduction of dedicated cleaners cupboard.



Original Lodgement



Proposed Updated Design

5.3 Additional updates to SSDA Drawings

General Arrangement Plan updates

Internal Changes to Design

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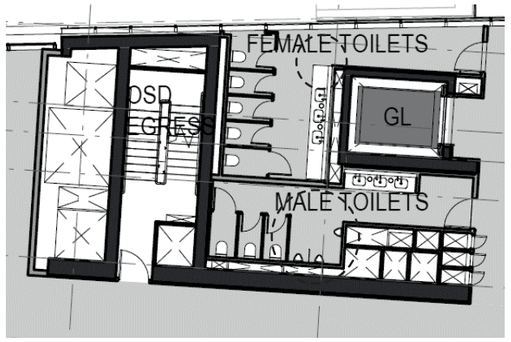
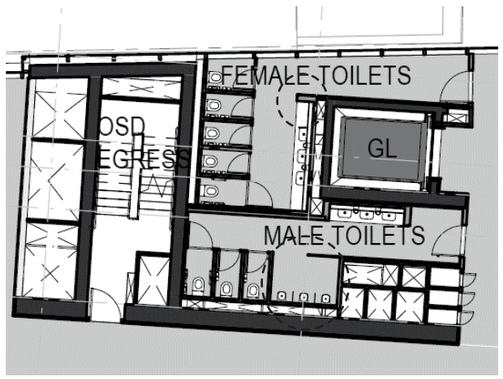
5. Slight podium commercial (L05-08) and commercial tower (L10-L35) bathroom layout re-configuration

Original Lodgement Podium

Proposed Updated Design Podium

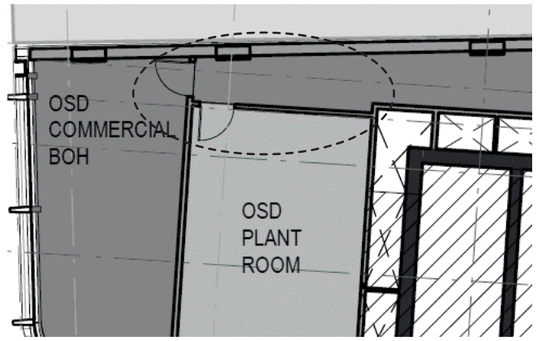


Original Lodgement Tower

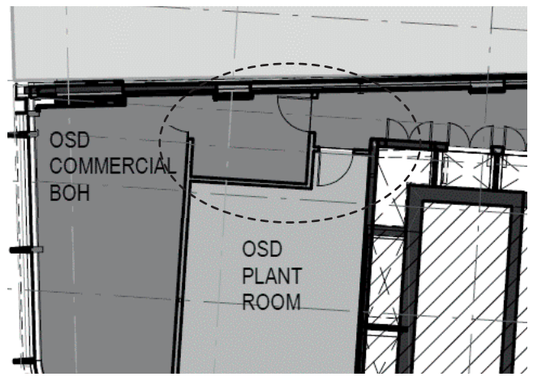


Proposed Updated Design Tower

6. Changes in wall location between lobby plantroom and OSD BOH area on level 3.

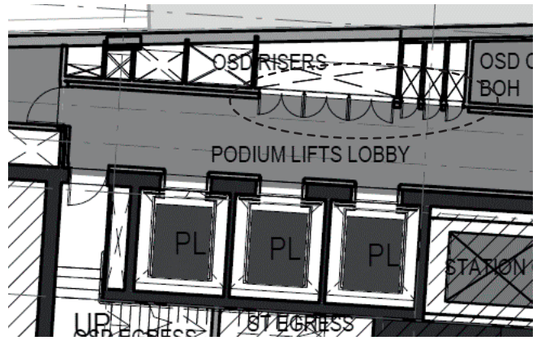


Original Lodgement

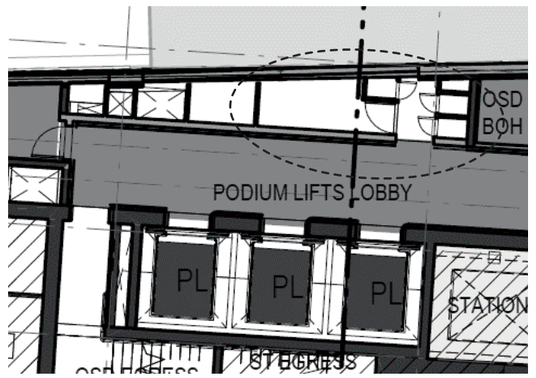


Proposed Updated Design

7. Improvements to the commercial podium lift lobby



Original Lodgement



Proposed Updated Design

5.3 Additional updates to SSDA Drawings

General Arrangement Plan updates

Internal Changes to Design

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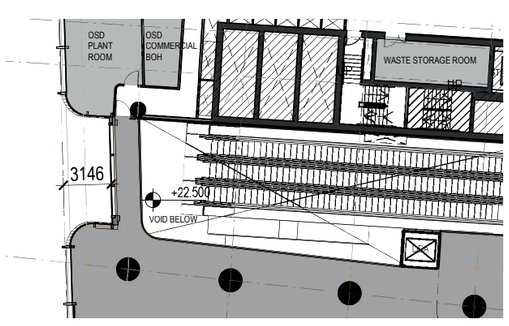
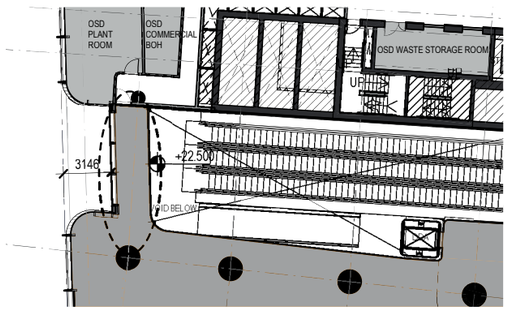
8. Change to overall width of bridge on Level 02

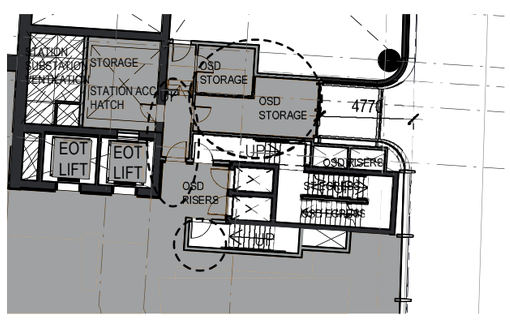


Original Lodgement

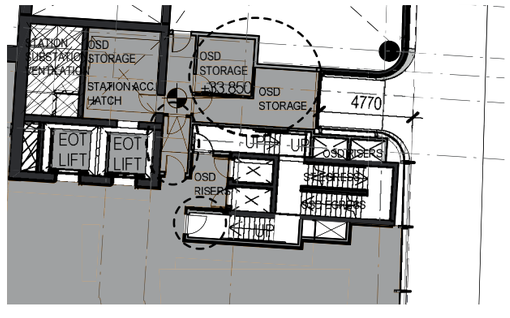


Proposed Updated Design

9. Internal RL changes to L02 Retail storage areas on the eastern side of the floorplate and relocation of egress door.

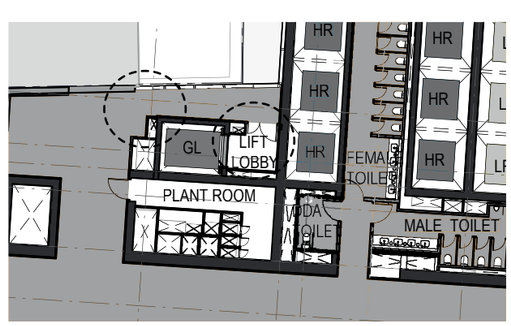


Original Lodgement

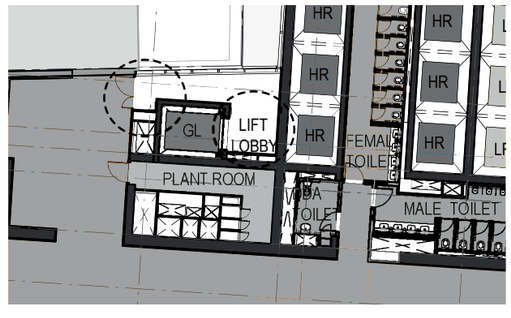


Proposed Updated Design

10. Changes to door location of the podium (L5-8) goods lift lobby and some minor services riser relocation to aid glass replacement strategy for the project.

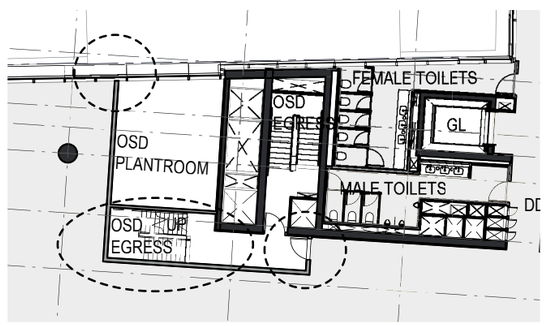


Original Lodgement

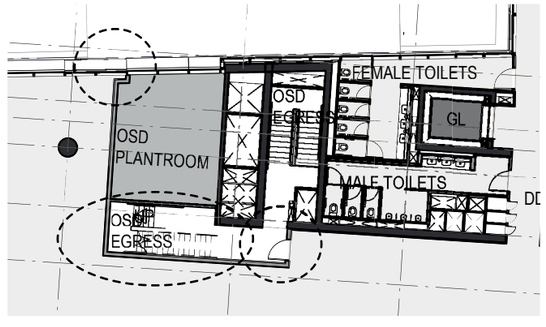


Proposed Updated Design

11. Internal changes to L34 egress stair and plantroom wall abutting the facade.



Original Lodgement



Proposed Updated Design

5.3 Additional updates to SSDA Drawings

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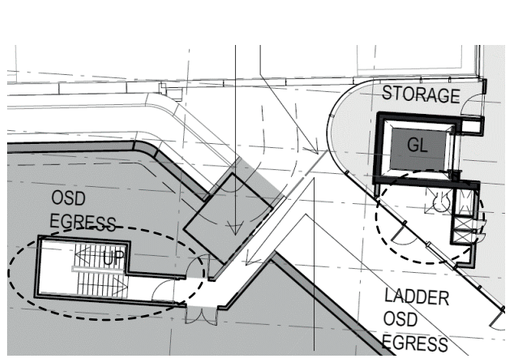
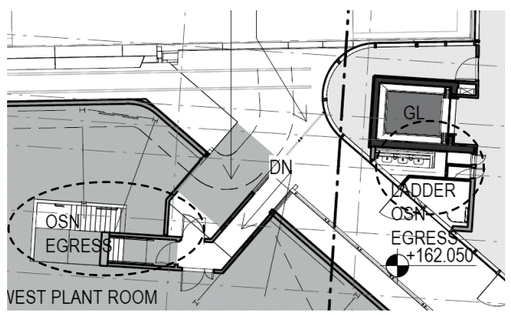
12. Internal changes to L35 plantroom egress stair and egress ladder location from L36/37 plantroom above

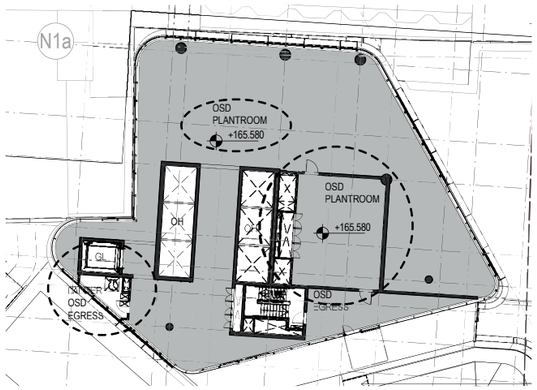


Original Lodgement

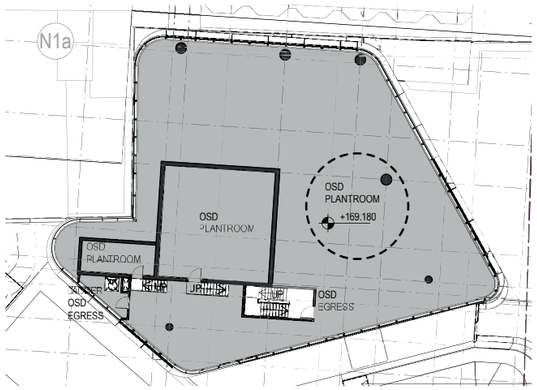


Proposed Updated Design

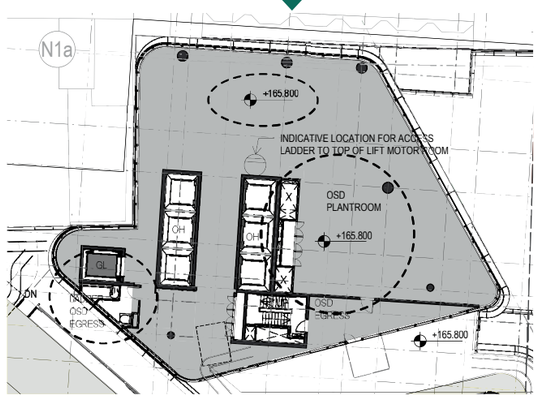
13. Internal RL and plantroom partition wall changes to L36/37 plantroom levels



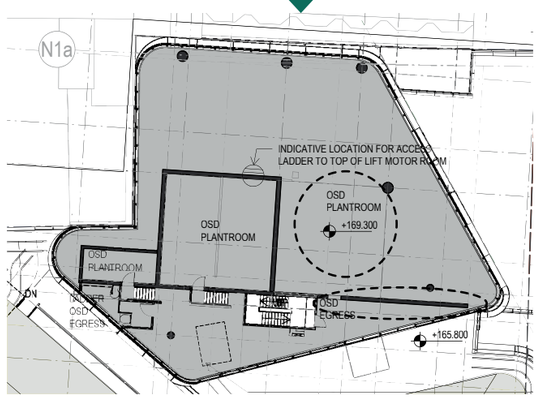
Original Lodgement L36



Original Lodgement L37



Proposed Updated Design L36



Proposed Updated Design L37

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