

BUILT FORM AND URBAN DESIGN REPORT

APPENDIX G





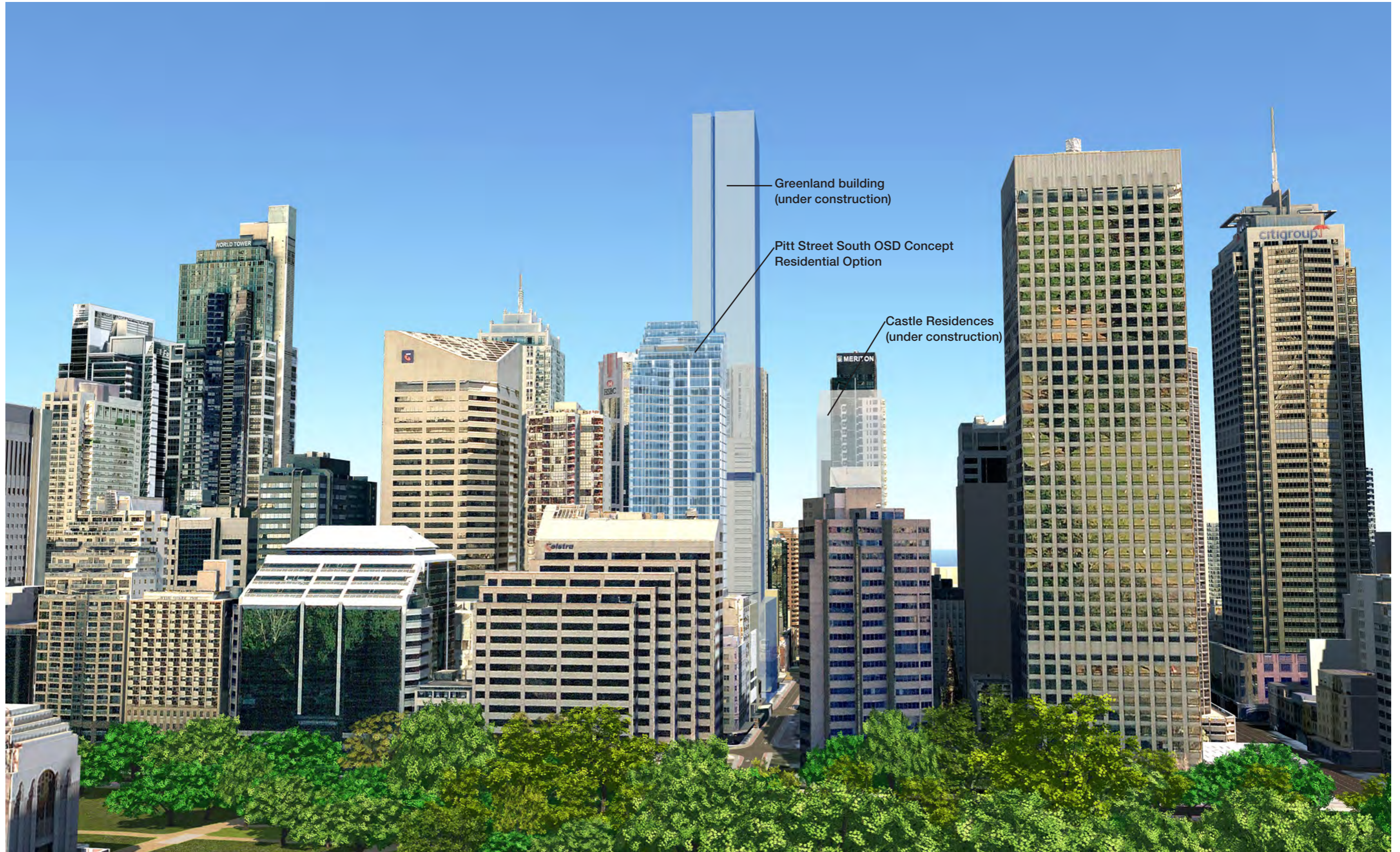
Sydney Metro City & Southwest Pitt Street South Over Station Development

Built Form and Urban Design Report

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“The vision for the integrated development is of a unique, quintessentially Sydney building; one that significantly enhances the public realm, ground plane and urban setting, displays exceptional design, function and sustainability, provides great amenity and delivers a legacy for the city.”

300 Pitt Street is the address proposed for the over station development (OSD) building, located on a key consolidated site in the mid town precinct of the Sydney Central Business District. The site has been assembled to enable the creation of the southern entrance to the new Pitt Street Station integrated with an appropriate development above, the latter of which is the subject of this concept SSD Application.

The site is very well located, having a close relationship with major city features and infrastructure including Hyde Park, George Street and Town Hall. The immediate precinct is undergoing significant redevelopment including the Greenland Centre and Primus Hotel directly opposite the site, the proposed 116 Bathurst Street, the future Town Hall Square, the light rail, Mirvac's proposed 505 George Street development, and the proposed Hans development at 338 Pitt Street. The increased pedestrian flows from the introduction of a new metro station will be a further catalyst for activation of the ground plane in the broader precinct, driving greater amenity.

The project will be transformational for the precinct and presents an exceptional opportunity to enhance the public realm with best practice in urban design. As the world embraces the technological age, there is an emerging demand for unique experiences that are particular to certain places and cultures. Place making that provides physical or cultural differentiation is attractive to counter the trends towards homogenisation that otherwise dominate our urban context. These unique experiences of place are central to the making of cultures and memories and are rooted in the geographies, climates, histories and people of any place.

The vision for the overall project is of a unique, quintessentially Sydney public/private initiative, one that significantly enhances the public realm, ground plane and urban setting, displays exceptional design, function and sustainability, provides great amenity and delivers a legacy for the city.

The OSD aims to contribute positively to the City with a design response that acknowledges its prominent location and addresses city making and place making principles, whilst also meeting its explicit public and private objectives.

In reviewing the physical characteristics of the site in the context of the envelope controls, it is best suited to residential or commercial use. It is capable of delivering a high level of sun access particularly at the upper levels, and excellent view amenity due to protection afforded by the Hyde Park sun access plane and the heritage listed Fire Station to the East.

In analysing the site a series of key urban design issues have been identified. These include:

- Height Controls
- Setbacks
- Sun Access (site and neighbouring properties)
- Land use mix
- Urban grain
- Streetscape and urban character (pattern and texture)
- Skyline
- Amenity
- Sustainability

The major envelope control affecting the site is Hyde Park West Sun Access Control plane.

In addressing these issues to define the development envelope, underlying principles for the future design of the proposed OSD have evolved.

This submission addresses the above key issues and identifies the principles that determine the resultant OSD envelope and outlines an indicative designs to demonstrate compliance with the planning and environmental performance requirements and the potential for a major contribution to Sydney's built environment.

Residential use is identified in the Strategic Land Use Analysis Report as the most suitable for the site. Commercial use is also potentially desirable. This report develops an indicative design for residential use in detail, with accompanying demonstration of the suitability of a commercial option within the proposed envelope.

01





01

Urban Design Report

Context and Key Principles

1.1 Context

“300 Pitt Street is exceptionally well located for a major residential or commercial development within the Sydney CBD. The site is within one kilometre walking distance of a large range of excellent retail, restaurant, function, sporting and cultural facilities, as well as major open spaces and parklands.”

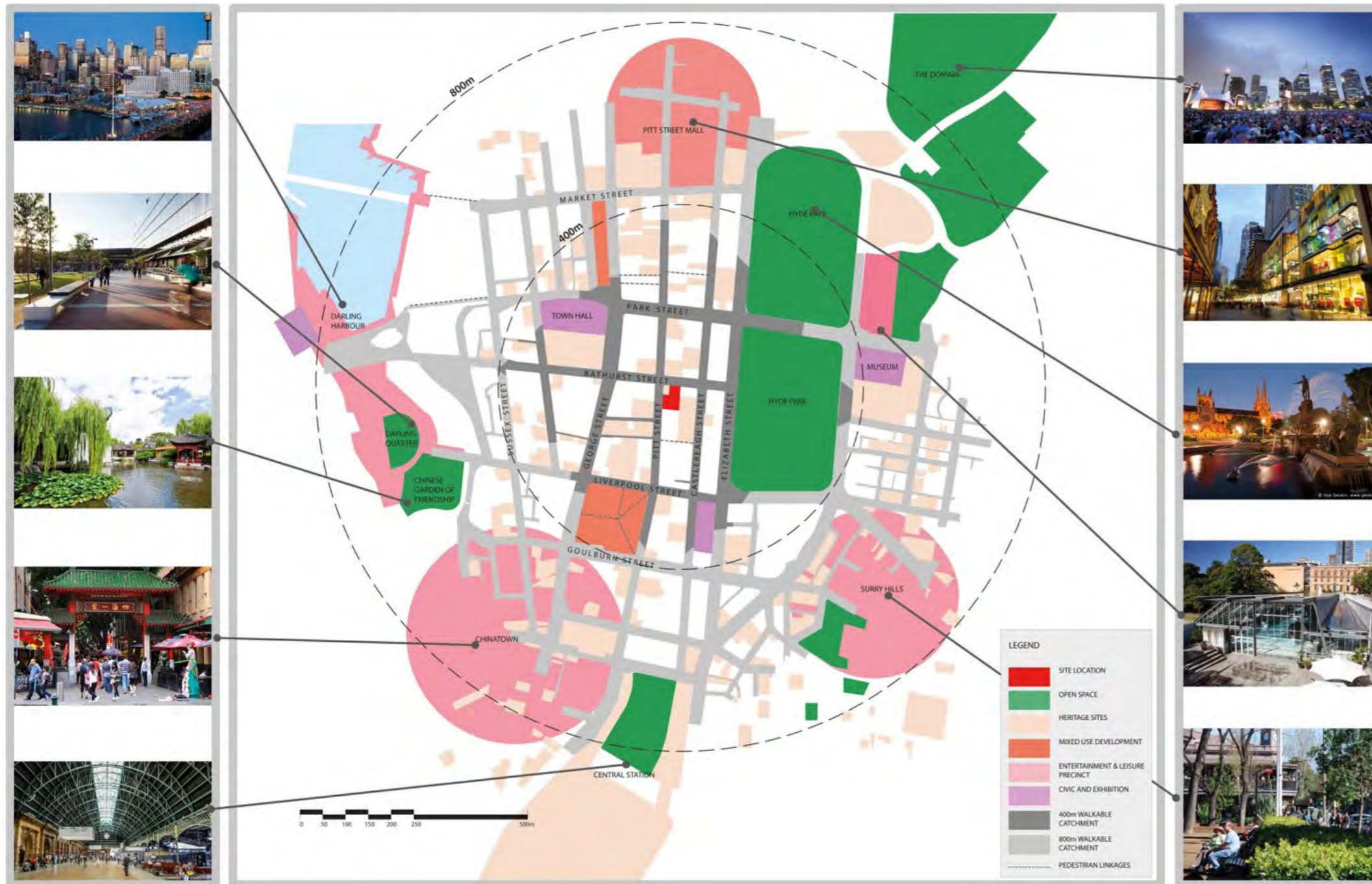


Diagram 1.01
Precinct Connectivity

1.1 Context

1.1.1 Local Context

300 Pitt Street is located within 400m walking distance of key city features such as Hyde Park, World Square, Town Hall and the QVB, as well as major convenience stores such as Woolworths.

A very wide range of transport options are available in the immediate vicinity including bus, rail and the future light rail and metro.

The current streetscape on both Bathurst and Pitt Streets is a broad mix of scale and materiality organised around the heritage architecture of the Edinburgh Castle Hotel and dominated by the heritage façade of the Primus Hotel in Pitt Street (see following page).



Diagram 1.02
Local Pedestrian and Transit Connectivity

1.1 Context

“The current streetscape on both Bathurst and Pitt Streets is a broad mix of scale and materiality organised around an element of heritage architecture in the Edinburgh Castle Hotel and dominated by the very imposing heritage façade of the Primus Hotel in Pitt Street.”

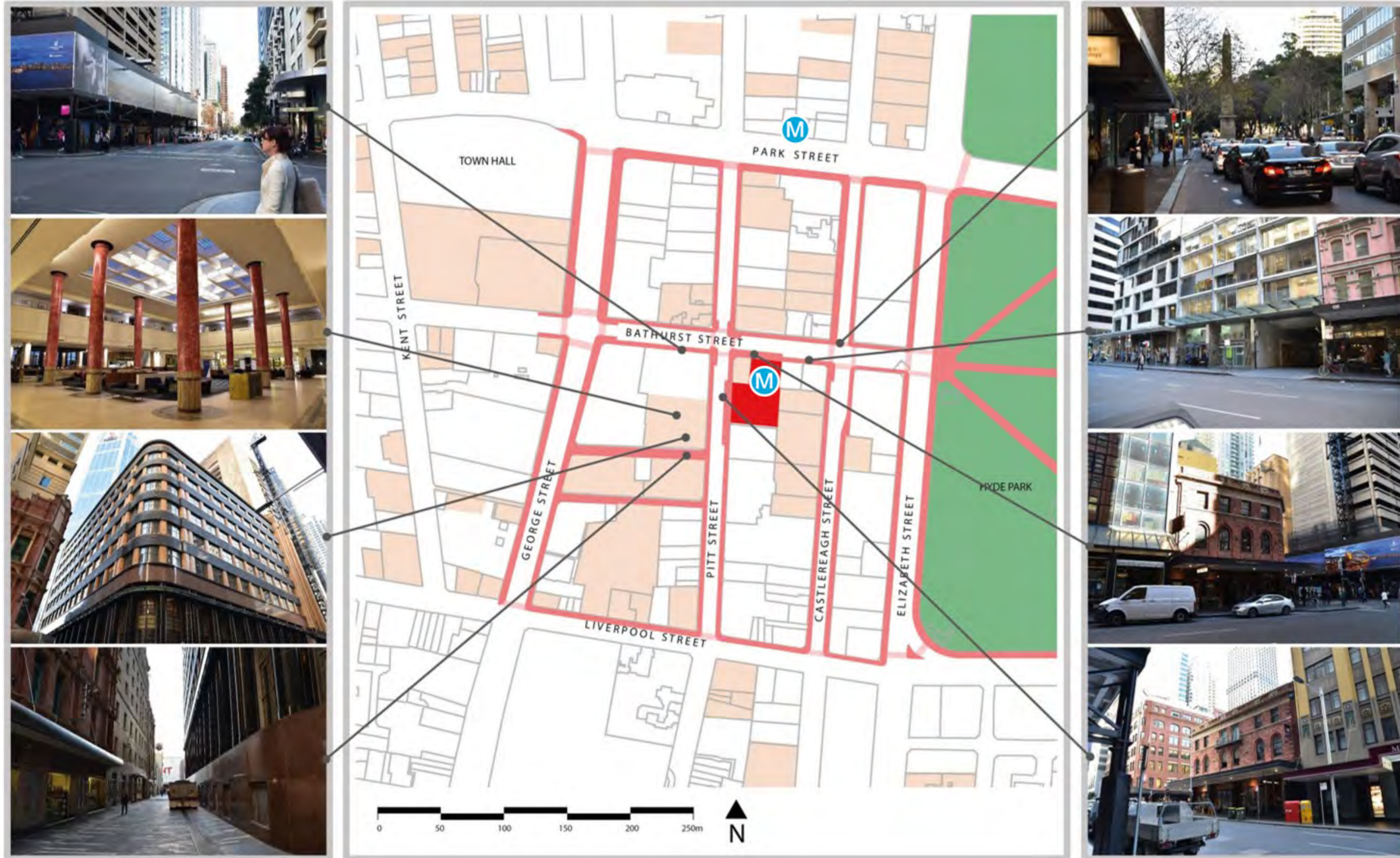


Diagram 1.03
Local Built Form

1.1.2 Emerging Context

The immediate precinct is undergoing a major upgrade with the Greenland and 116 Bathurst Street Developments under construction, and the recent completion of the Primus Hotel.

The Greenland Development is to be built to the city height limit, while the 116 Bathurst Street project is of a lower scale due to its position under the Hyde Park West sun access plane.

The redevelopment at 338 Pitt Street is also proposed to reach the city height limit, creating a very different context for 300 Pitt Street than is currently visible.

This emerging context fundamentally alters the skyline and provides an opportunity for a productive visual dialogue with a tower at 300 Pitt Street.

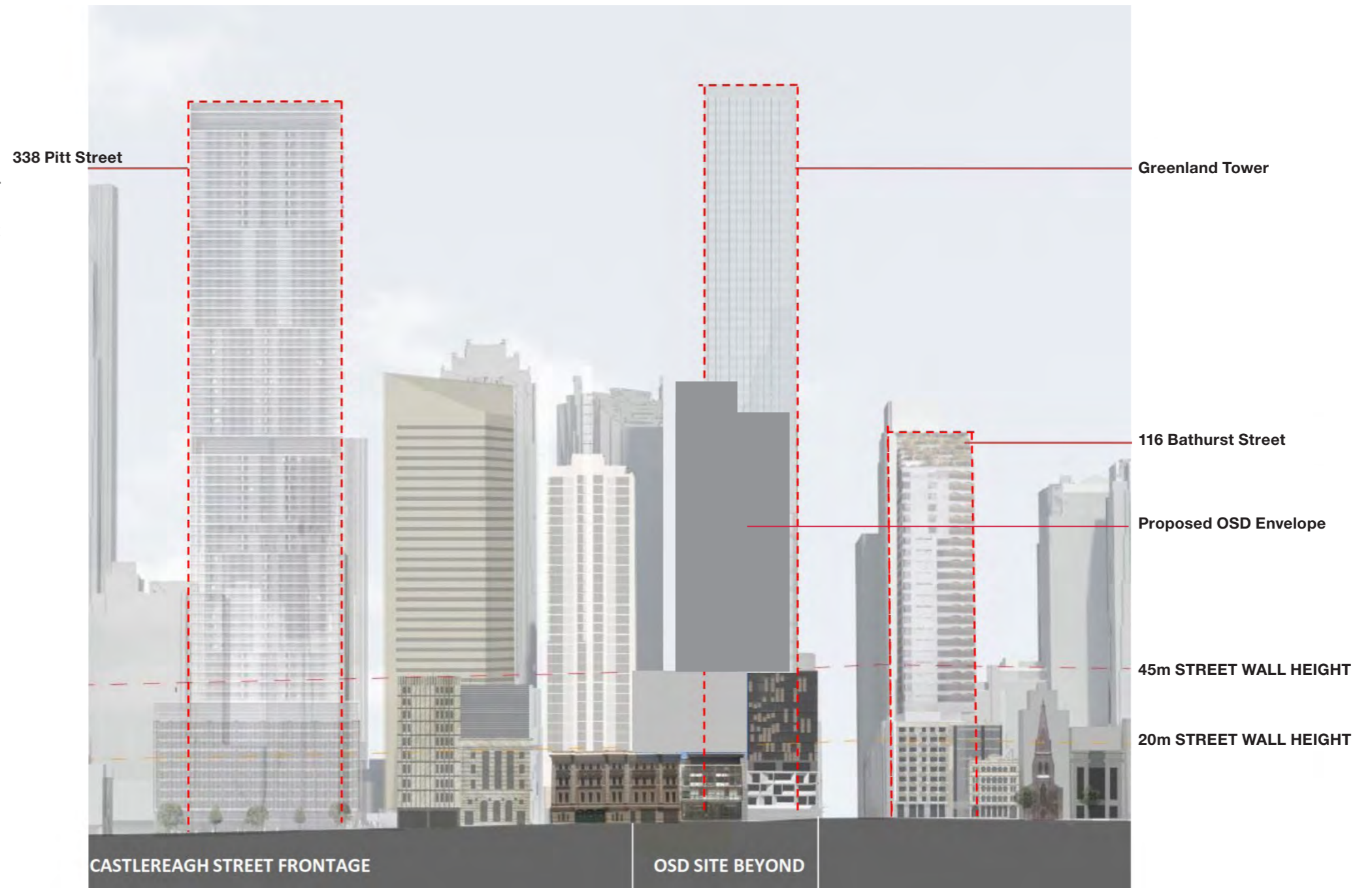


Diagram 1.04
Emerging Context

1.2 Immediate Context

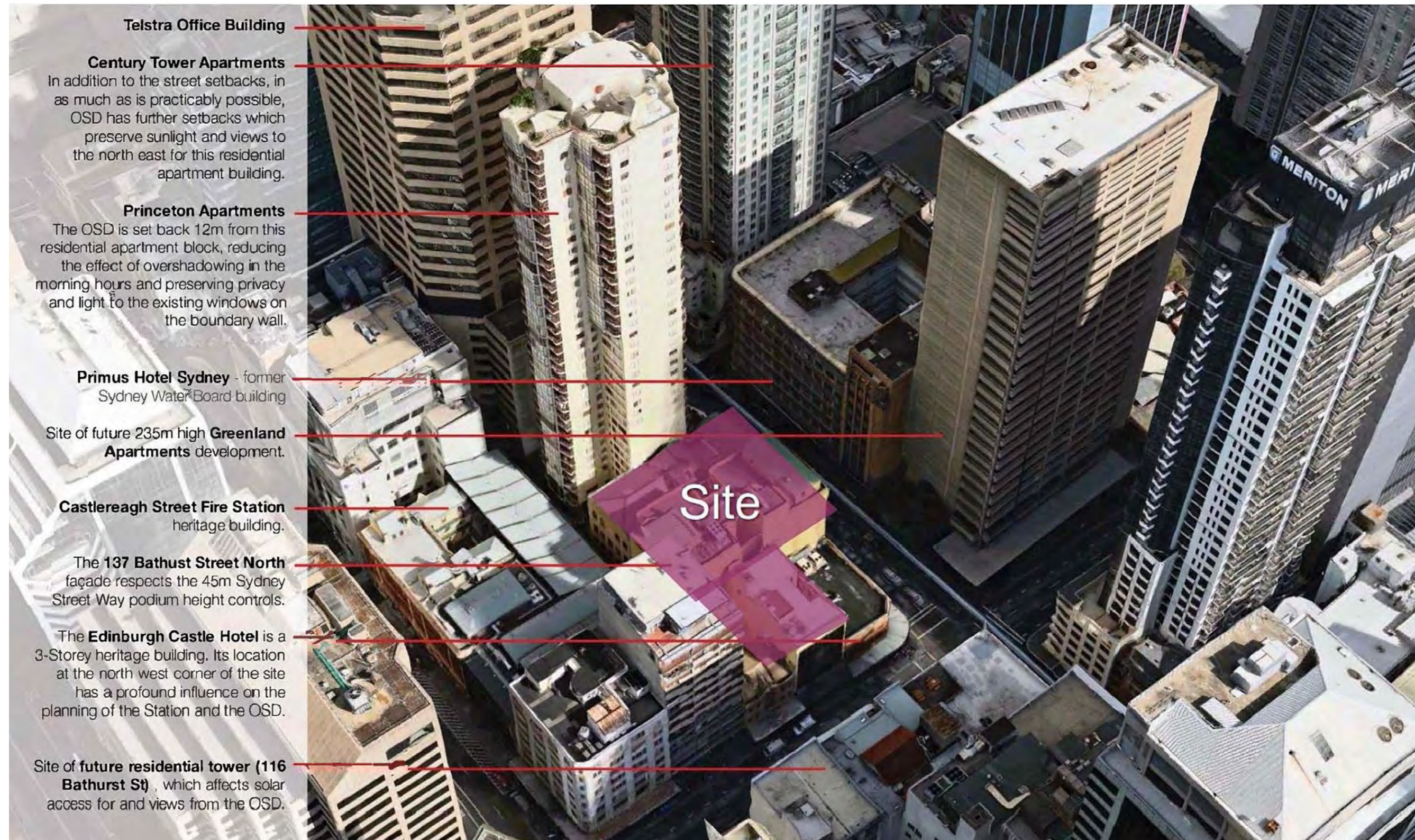


Diagram 1.05
Immediate Context

1.3 Podium Demarcation

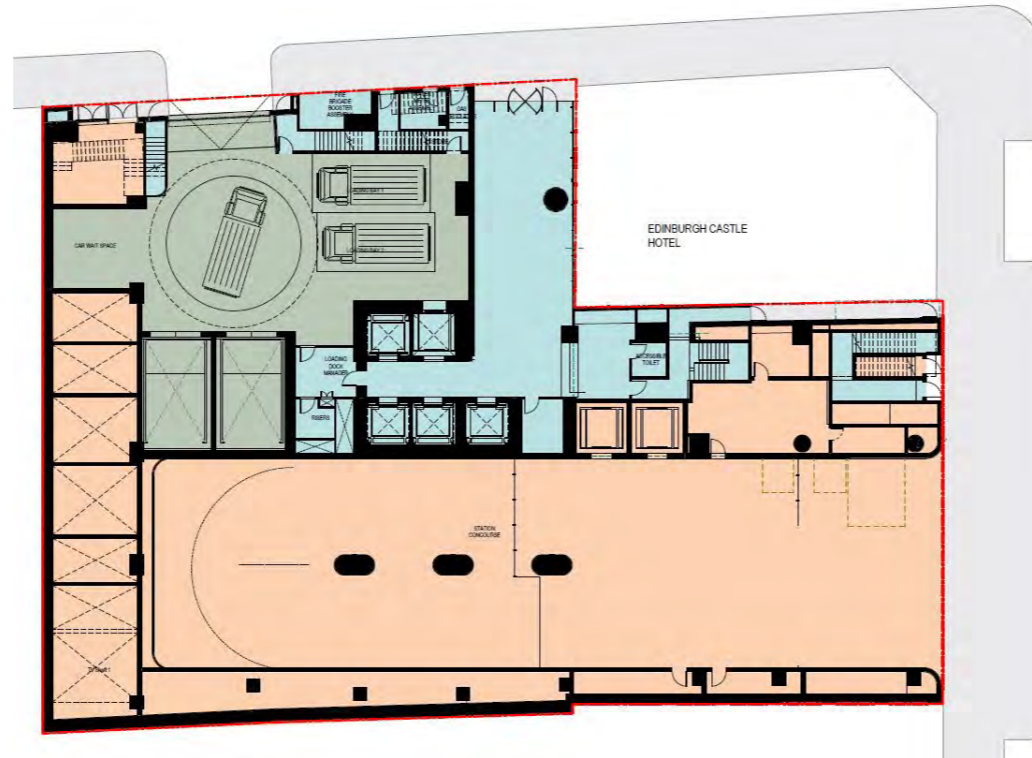
1.3.1 Podium Demarcation Diagrams

The podium volume up to RL 58.25, which includes the station portion of the development is the subject of a separate planning approval.

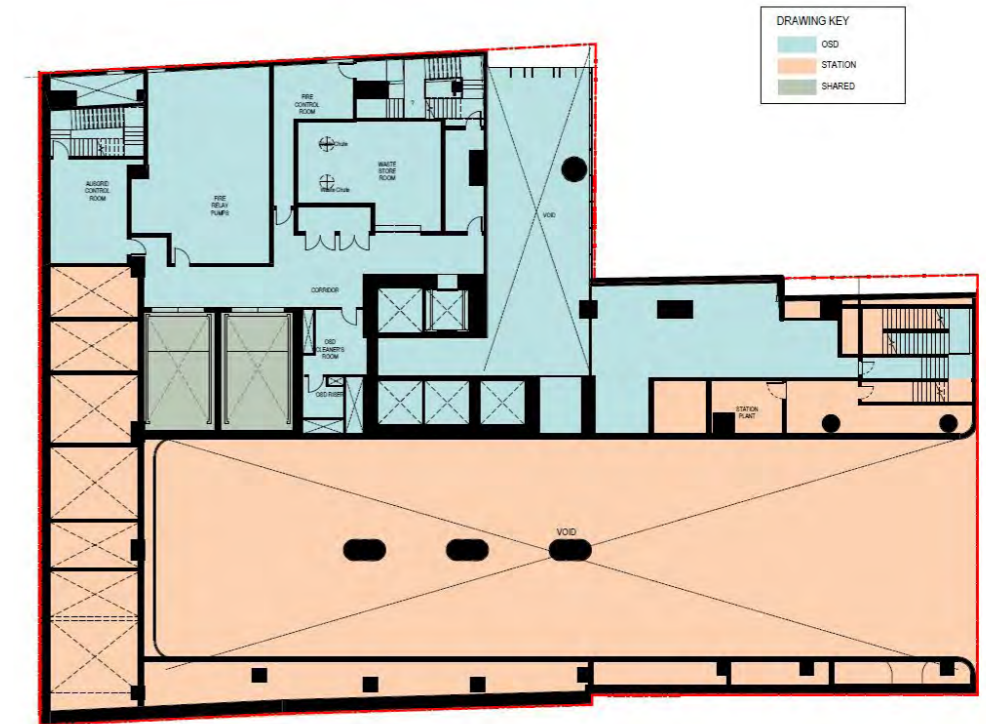
These diagrams illustrate the demarcation between station uses and residential over station use in the lower podium. They demonstrate that the indicative residential scheme can be accommodated with the approved CSSI envelope.

The plans of the podium levels specifically prepared to illustrate the commercial option in Section 3.7 demonstrate that the commercial indicative concept option is also suitable for integration into the approved CSSI envelope.

The blue areas represent OSD uses, the pink represent station uses and the green represent shared facilities/areas.



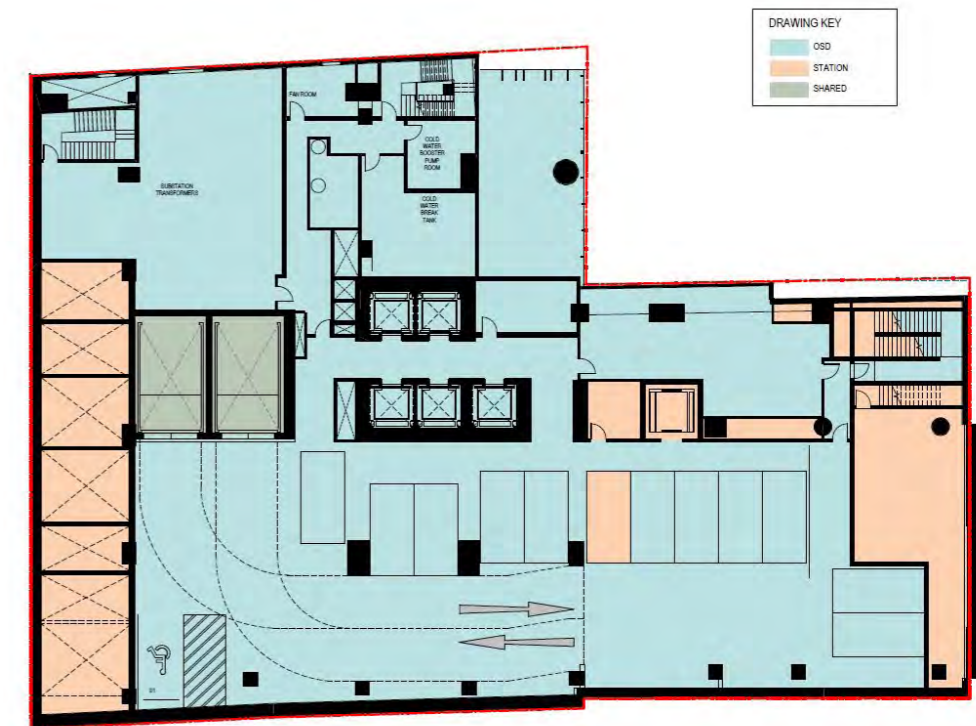
Ground floor



Level 1



Basement 1 Mezzanine

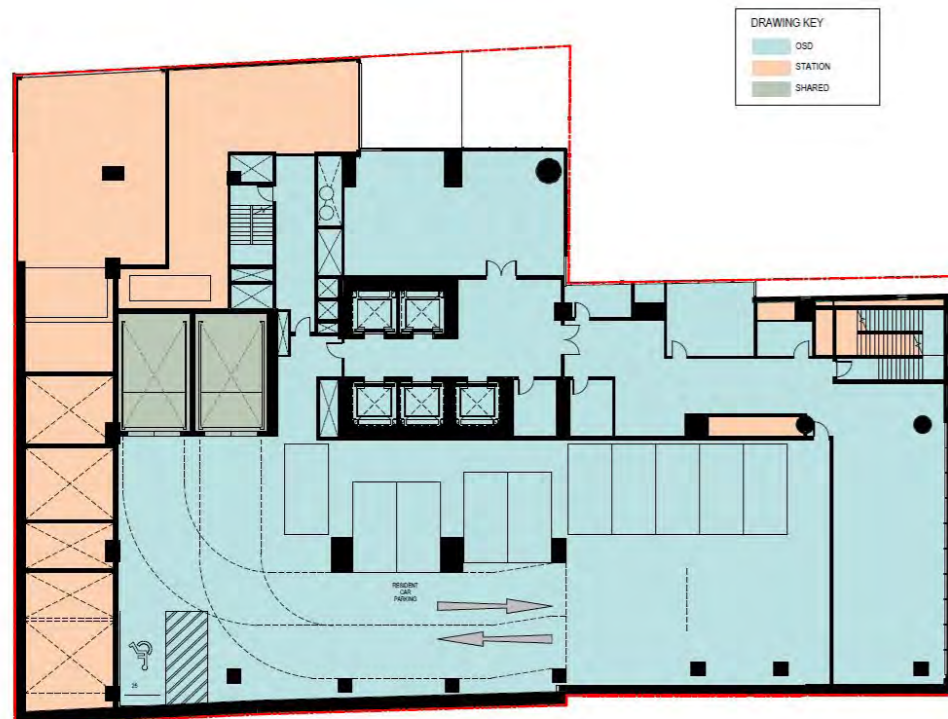


Level 2

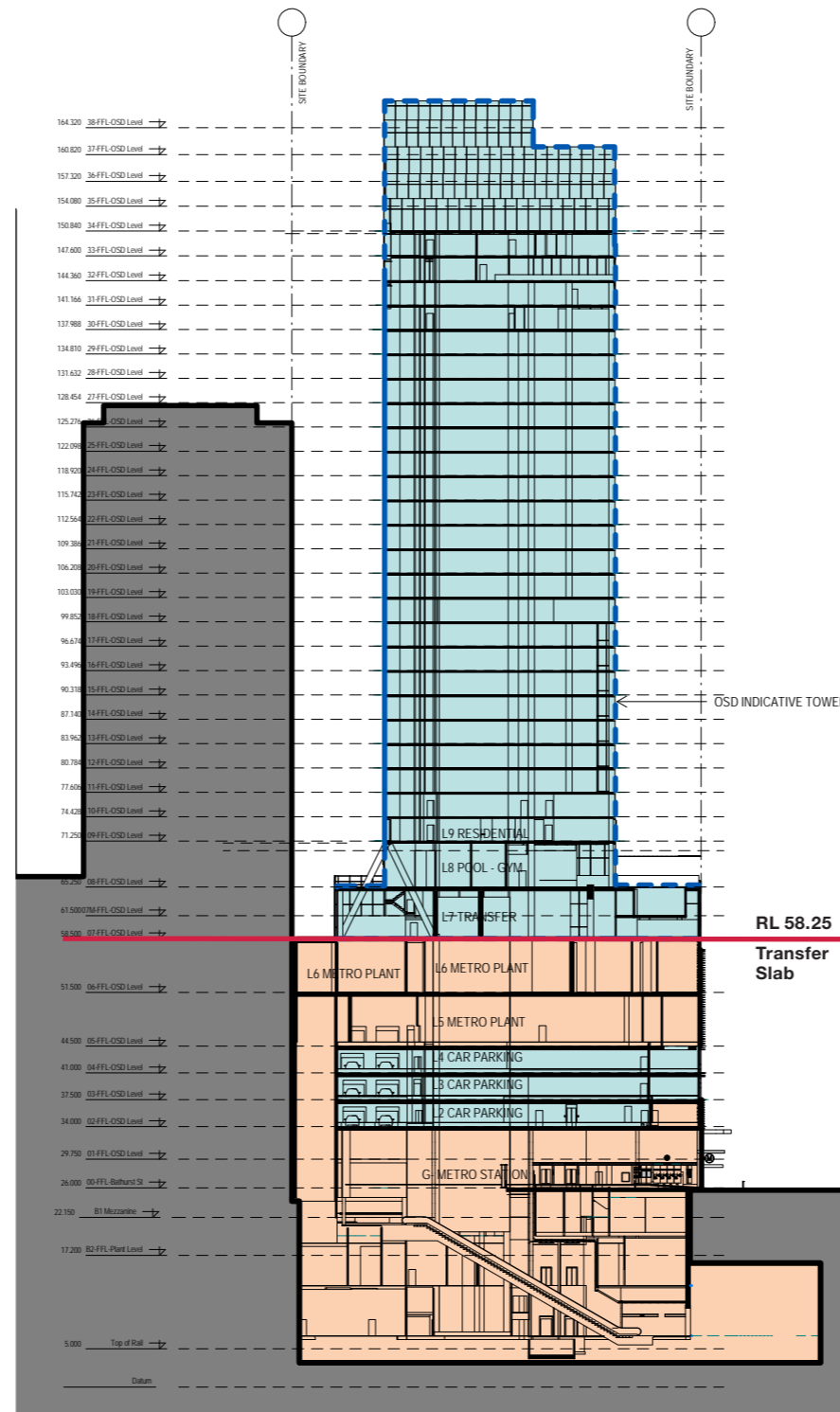
1.3 Podium Demarcation



Level 3



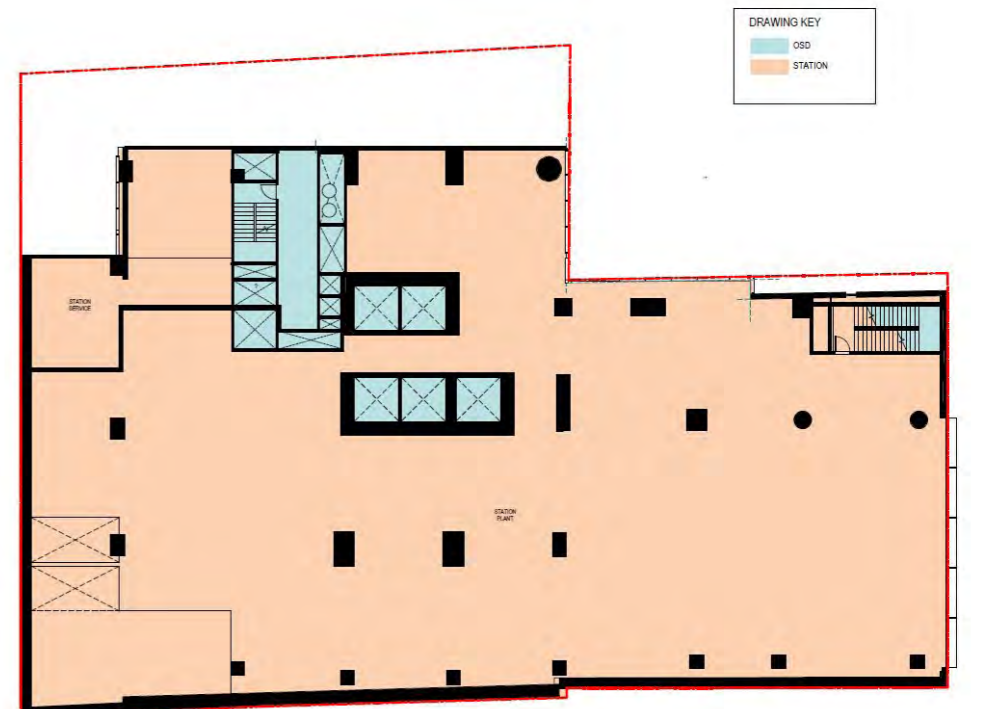
Level 4



Section North-South - CSSI Podium Approval below RL 58.25



Level 5



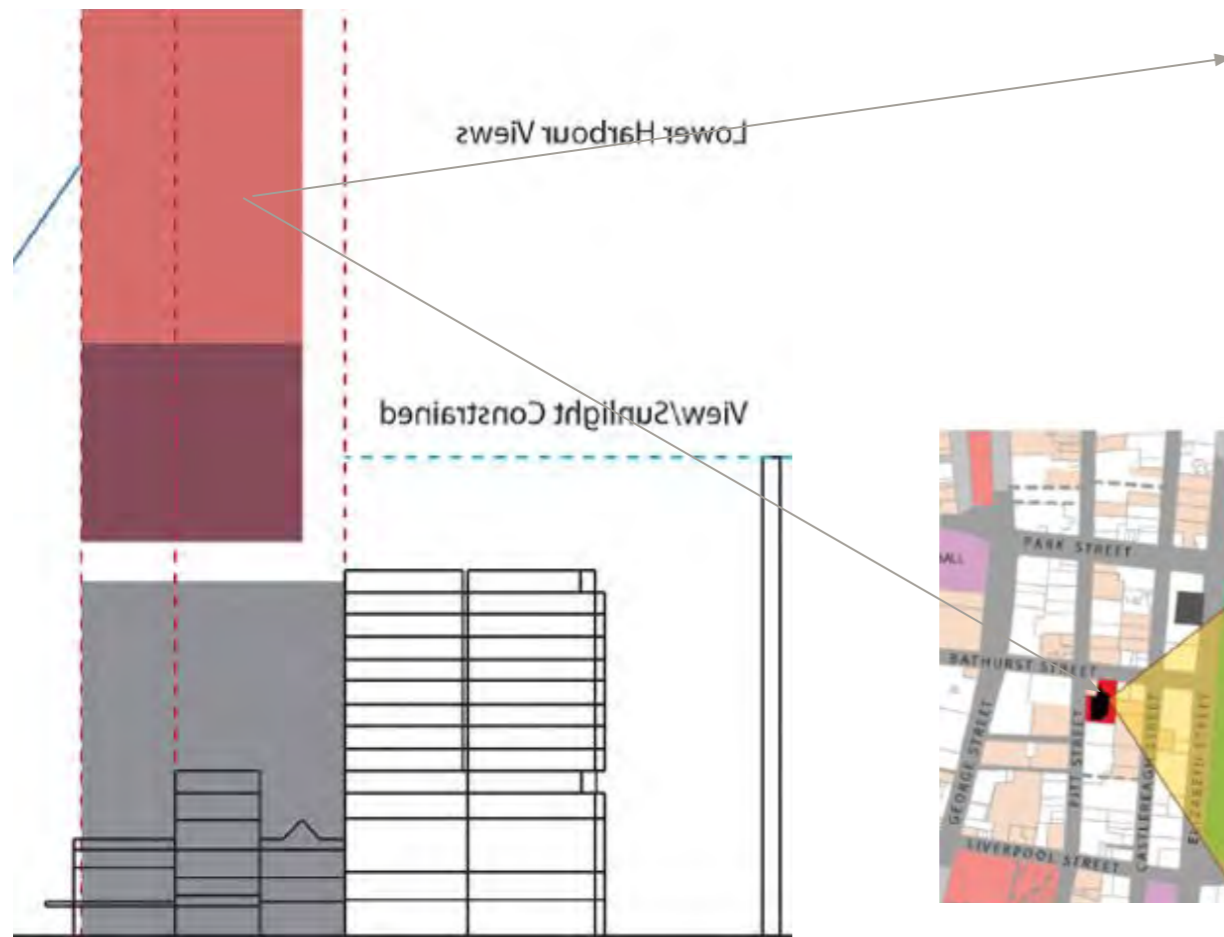
Level 6

Diagrams 1.07
Demarcation Section and Plans

1.4.1 Available Views

The broader context of the site includes the harbour and the eastern suburbs to the ocean which will provide an excellent outlook for the majority of floors above the podium as illustrated in diagrams 1.08.

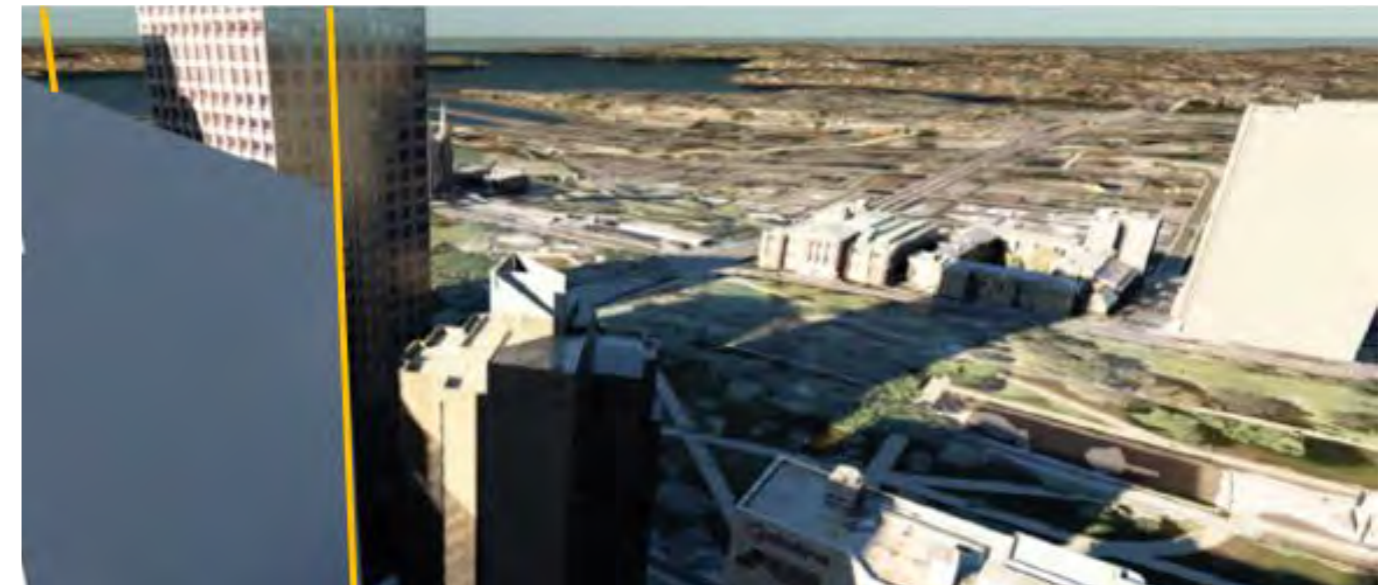
The lower third of the OSD building will have views constrained by the Telstra building on Elizabeth Street to the east.



Diagrams 1.08
View corridor diagrams



Tower Harbour View Corridor



LEGEND

- Approximate outline of Stage 1 DA for 201 Elizabeth Street
- Available view corridors - approximated from the centre of the envelope face

02





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02

Proposed Envelope

Planning Controls and
Envelope Impacts

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2.1 LEP Controls

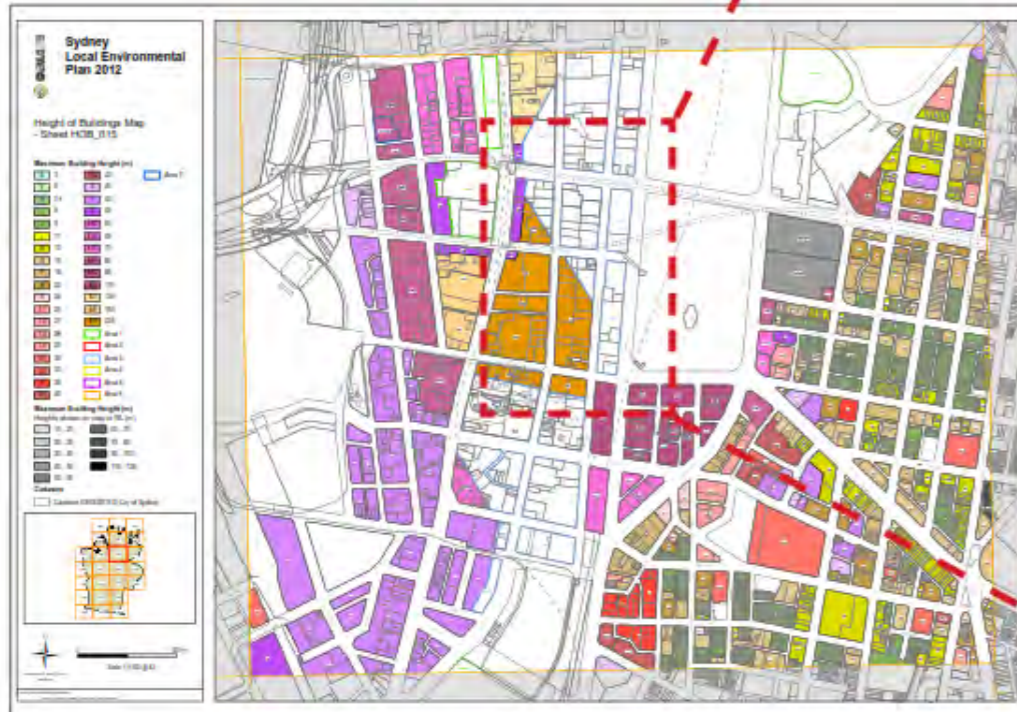
2.1.1 Building Height Map

In accordance with Clause 6.17 of the Sydney LEP 2012, the Hyde Park West Sun Access Plane applies to the full extent of the site.

The orange area in the diagram below shows the extent of Zone AH as shown on the Height of Buildings Map but the blue line indicates the coordinates as per Clause 6.17.

Similarly, on the opposite page, the purple area of Zone 3 relative to the site illustrates the extent of Zone 3 on the Sun Access Map but the yellow line represents the western edge of the zone as per Clause 6.17

Adjusted edge of Zone AH



Maximum Building Height (m)	
A	3
E	6
H	7.5
I	8
J	9
L	11
M	12
O	15
P	18
R	22
S	24
T1	25
T2	27
T3	28
T4	29
U1	30
U2	33
V	35
W1	40
W2	42
X	45
Y	50
Z	55
AA1	60
AA2	65
AA3	70
AB1	80
AB2	85
AC	110
AD	130
AE	150
AH	235
Area 1	
Area 2	
Area 3	
Area 4	
Area 5	
Area 6	

2.1.2 Sun Access Map and Illustration



2.1 LEP Controls

2.1.3 Heritage Map

The precinct is rich in heritage fabric. The zones marked in beige indicate listed heritage items in accordance with the Sydney LEP 2012.

There are several heritage items immediately adjacent or in close proximity to the site.



2.2 Proposed Envelope

2.2.1 DCP Street Setbacks

The proposed envelope has been informed by a range of factors. The DCP setbacks from street alignment (above the 45m street wall height) of 8m inform the first layer of setbacks for the building above the podium.

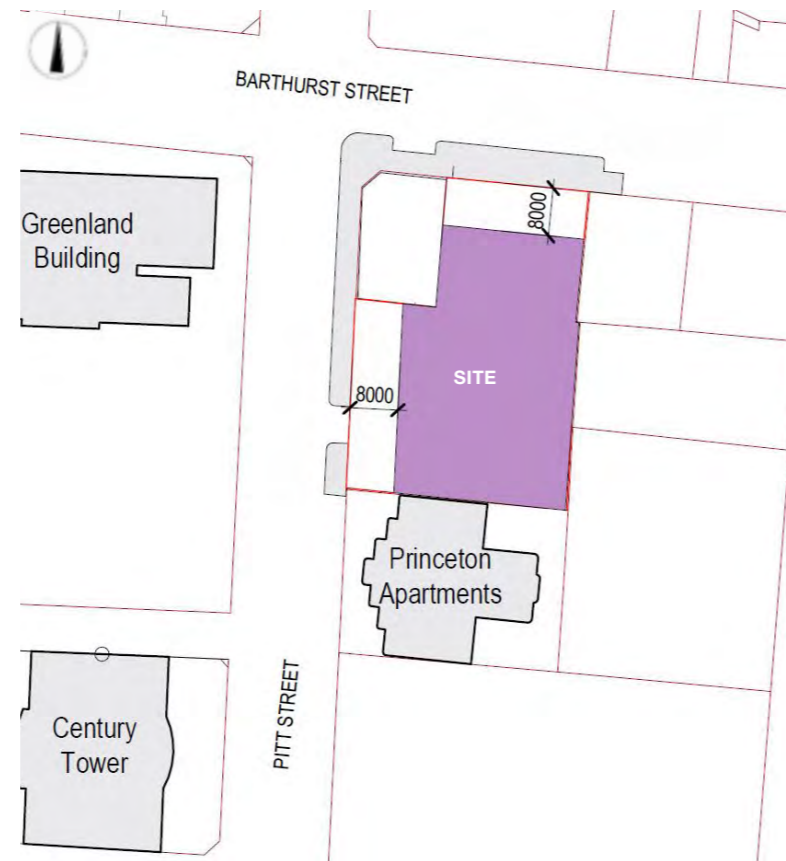
2.2.2 Proposed Setbacks

The Princeton Apartments is located on the southern boundary of 300 Pitt Street. Above the podium, a 12m setback to this building is proposed to reflect the SEPP 65 Apartment Design Guidelines (ADG) in the event of a residential use. A defensive treatment of glazing to habitable rooms is proposed on the southern facade.

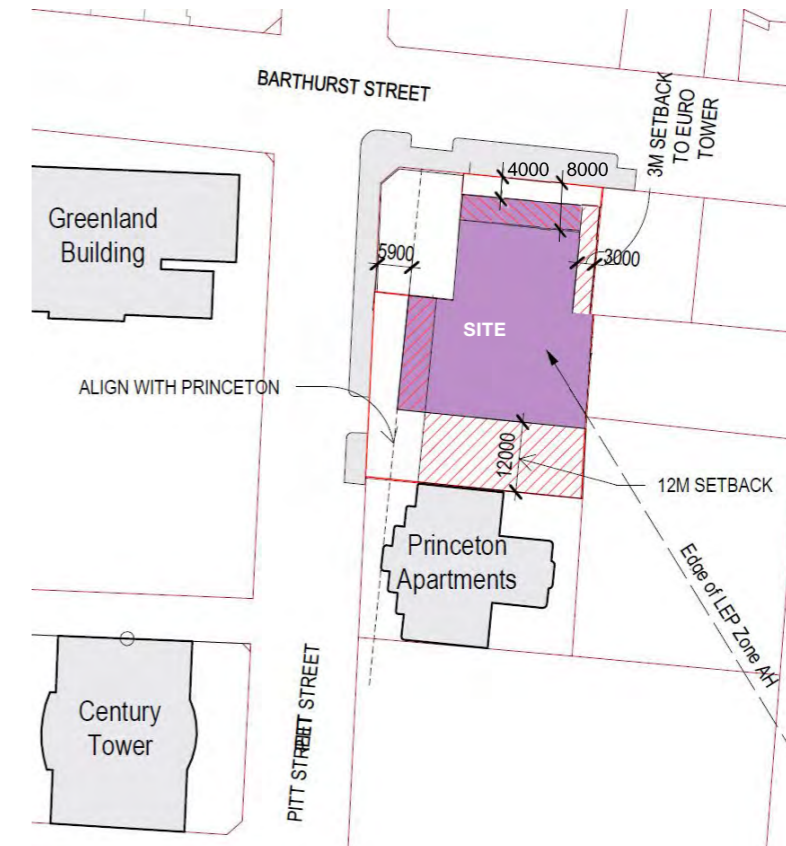
The Princeton facade to Pitt Street is within the 8m setback line and this alignment provides an opportunity for the 300 Pitt Street frontage to better bind the Princeton built form into a coherent built context.

Zero setbacks are proposed to the heritage buildings given their restricted development potential. A 3m setback is proposed to the Euro apartments on the eastern boundary in Bathurst Street given the north-south orientation of the apartments in that building and that the first typical level of apartments is above the highest Euro Tower Apartment.

The Bathurst Street setback is proposed to be reduced to 4m to better relate to the Greenland building in the streetscape.



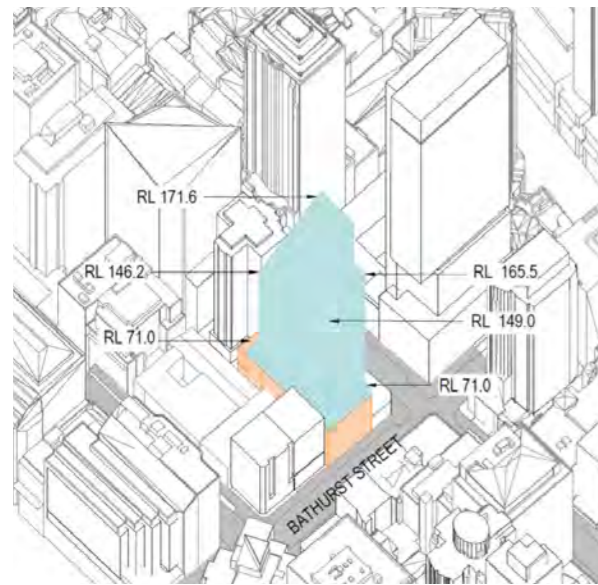
DCP Setback Diagram



Typical Tower Levels - Proposed setbacks

Diagrams 2.01
Setbacks Evolution

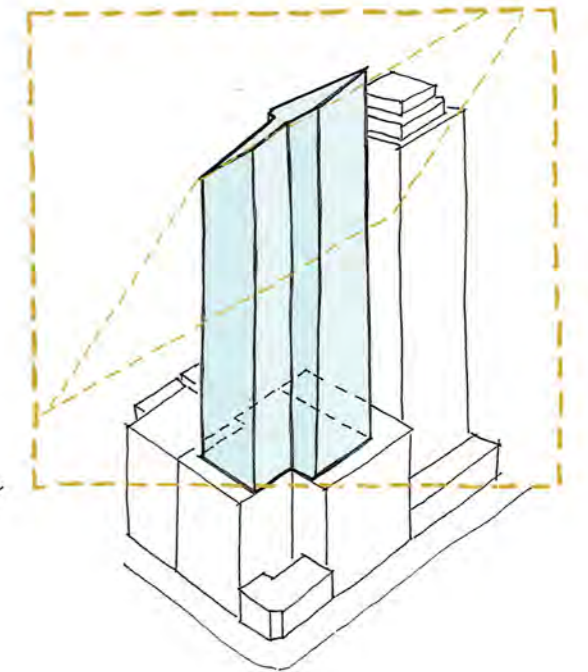
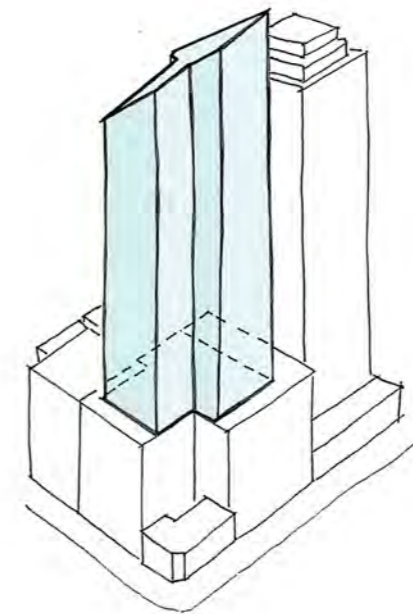
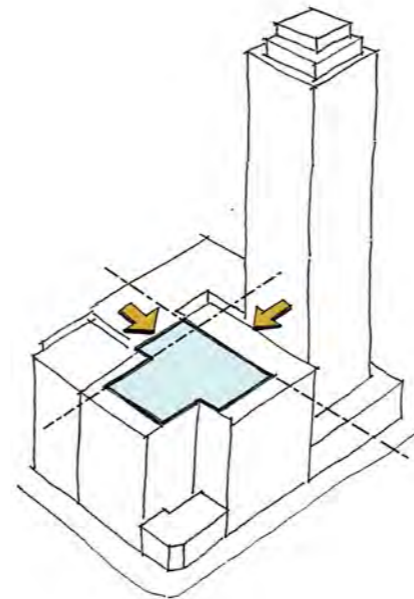
2.2 Proposed Envelope



Aerial View from North East

LEGEND

- PITT STREET SOUTH METRO STATION CSSI INCLUDES STRUCTURE AND BUILDING INFRASTRUCTURE, AND SPACE FOR LIFT CORES, ACCESS, PARKING AND BUILDING SERVICES FOR THE FUTURE OSD
- OSD CONCEPT SSDA INCLUDES OSD AREAS INSIDE THE CSSI 'SHELL' BELOW GROUND AND IN PODIUM LEVELS



2.2.3 Podium Levels

The proposed OSD envelope commences above RL 58.25m and is within the 45m street wall control height. This is indicated in the diagrams as the separation plane between the blue and orange zones in the section and axonometric diagrams.

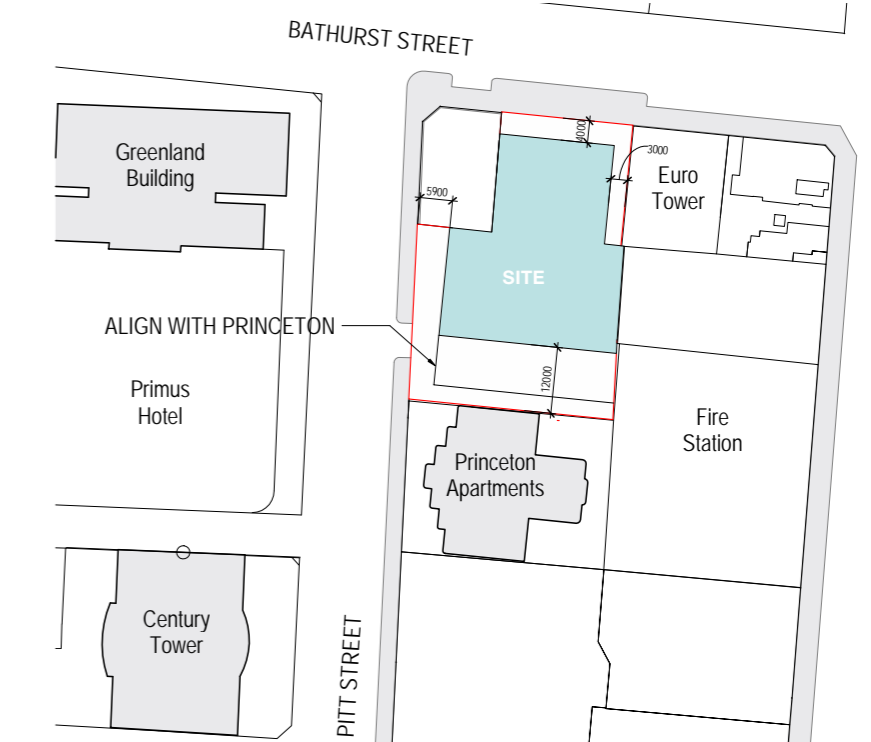
At approximately RL 59.0, there are windows on the Princeton facade. In order to avoid blocking these, the proposed podium envelope is set back from the southern boundary by 3m above RL 58.25m up to RL 71.0 above which the setback becomes 12m.

2.2.4 Tower Levels

The proposed envelope for the upper tower levels is the sum of all the setback adjustments as described in Section 2.2.2. The tower is limited in height by the Hyde Park West Sun Access Plane.

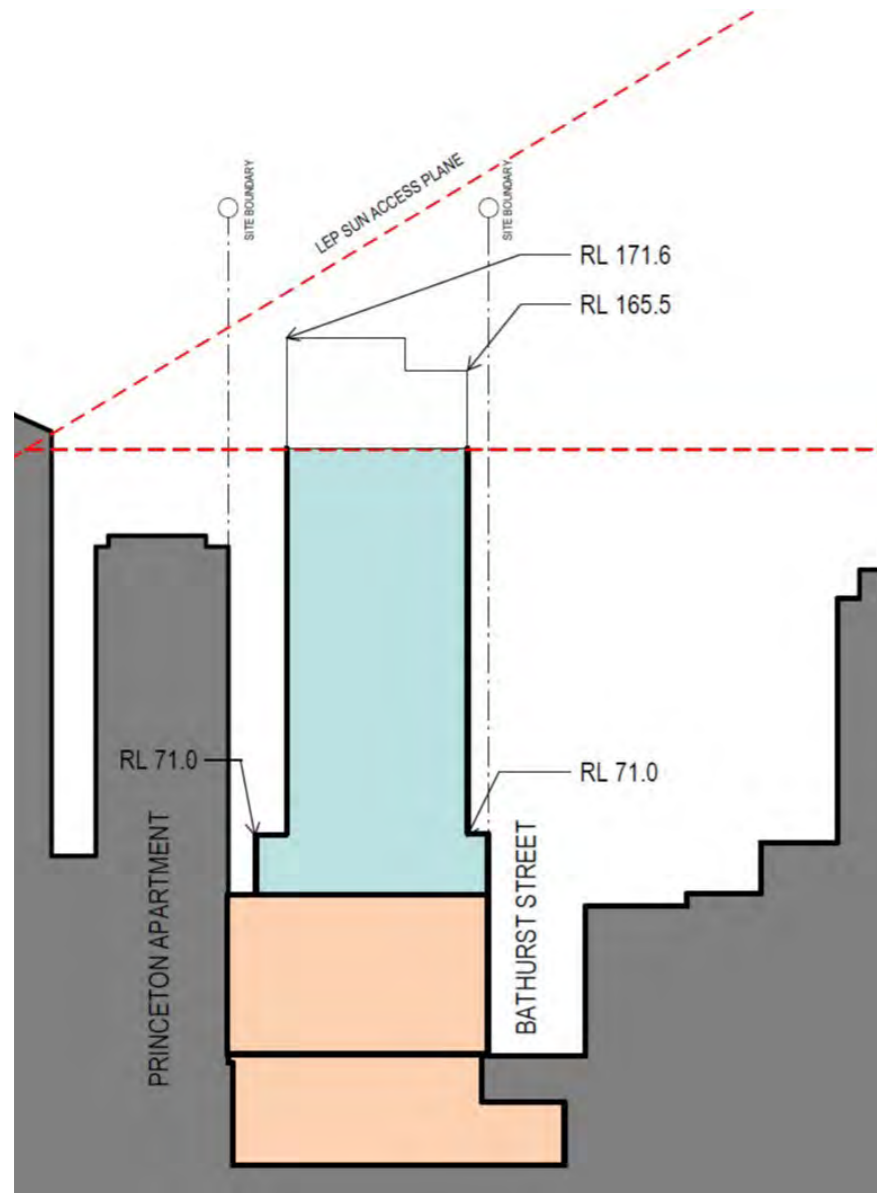


Plan CSSI Transfer Level to RL 71.0

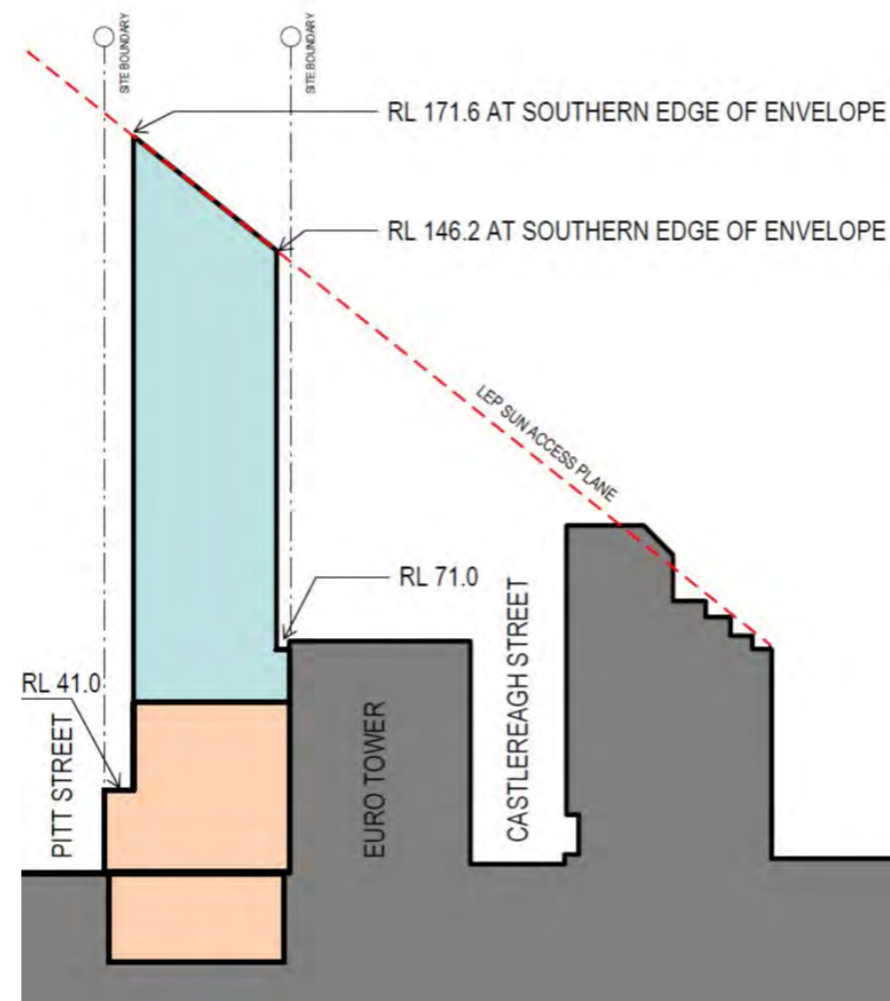


Plan RL 71.0 to RL 147.5

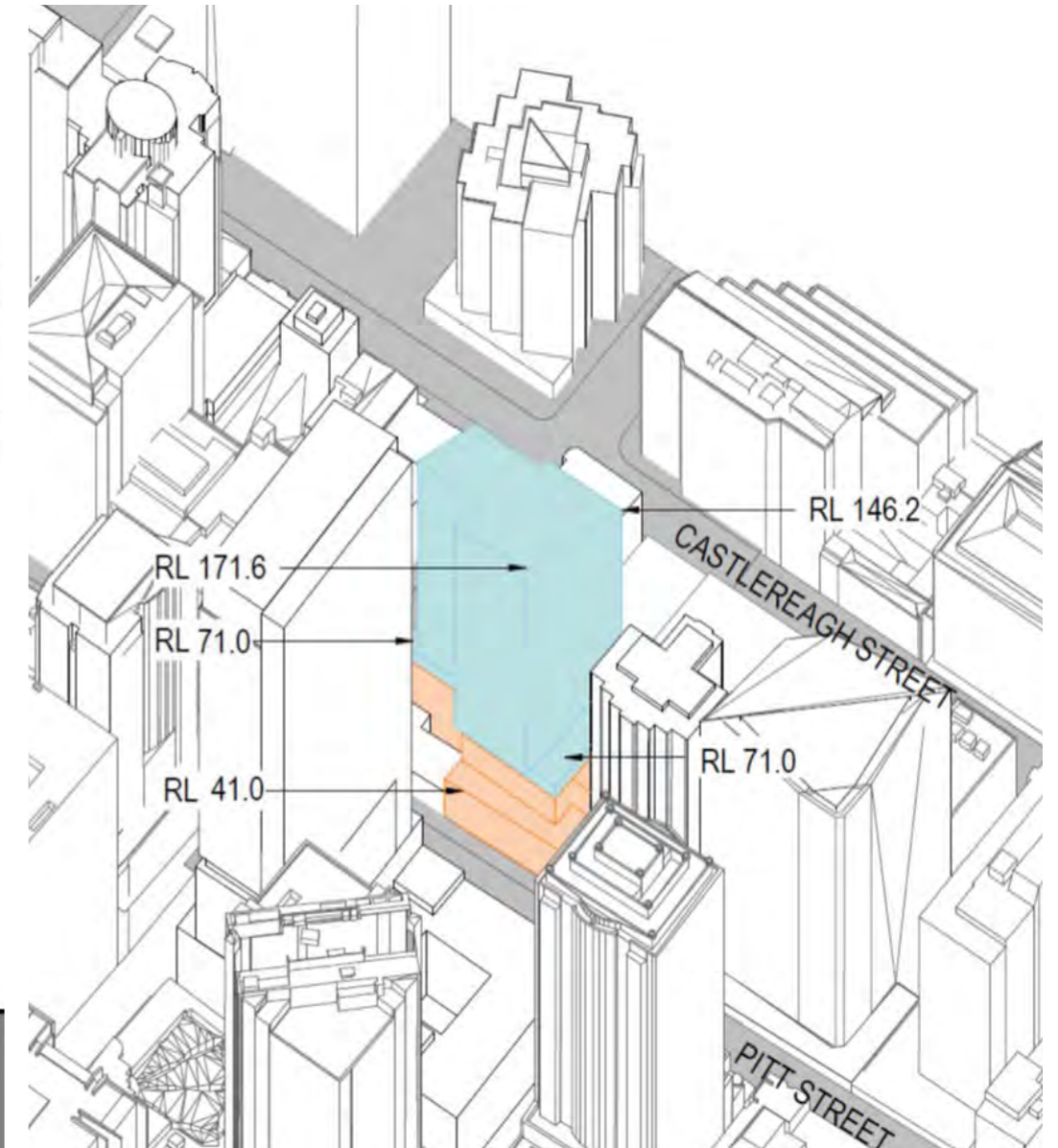
Diagram 2.02
Proposed Envelope Diagrams



Section North-South



Section East-West



Aerial View from South West

Diagram 2.03
Proposed Envelope - Sections and Axonometric

2.3.1 Sun Access

Any development on this site will impact on adjacent residential developments with respect to sun access during the times specified by the ADGs.

The windows on the northern facade of the Princeton apartment currently provide sun access to those apartments, notwithstanding that they are located on the boundary line. These are secondary windows to bedrooms at the lower levels and to living rooms at the upper levels.

While east facing northern apartments in the Princeton will retain complying sun access (excluding any contribution from the northern windows), the western facing upper level living rooms will experience a reduction in sun access from the north facing window, which, in conjunction with the pending impacts of the Greenland development, will reduce sun access to these particular apartments to below the guideline.

Century Tower is also impacted by development on this site. The diagrams at right illustrate the impact of the tower envelope on Century Tower on the central balcony locations on the eastern and northern façades.

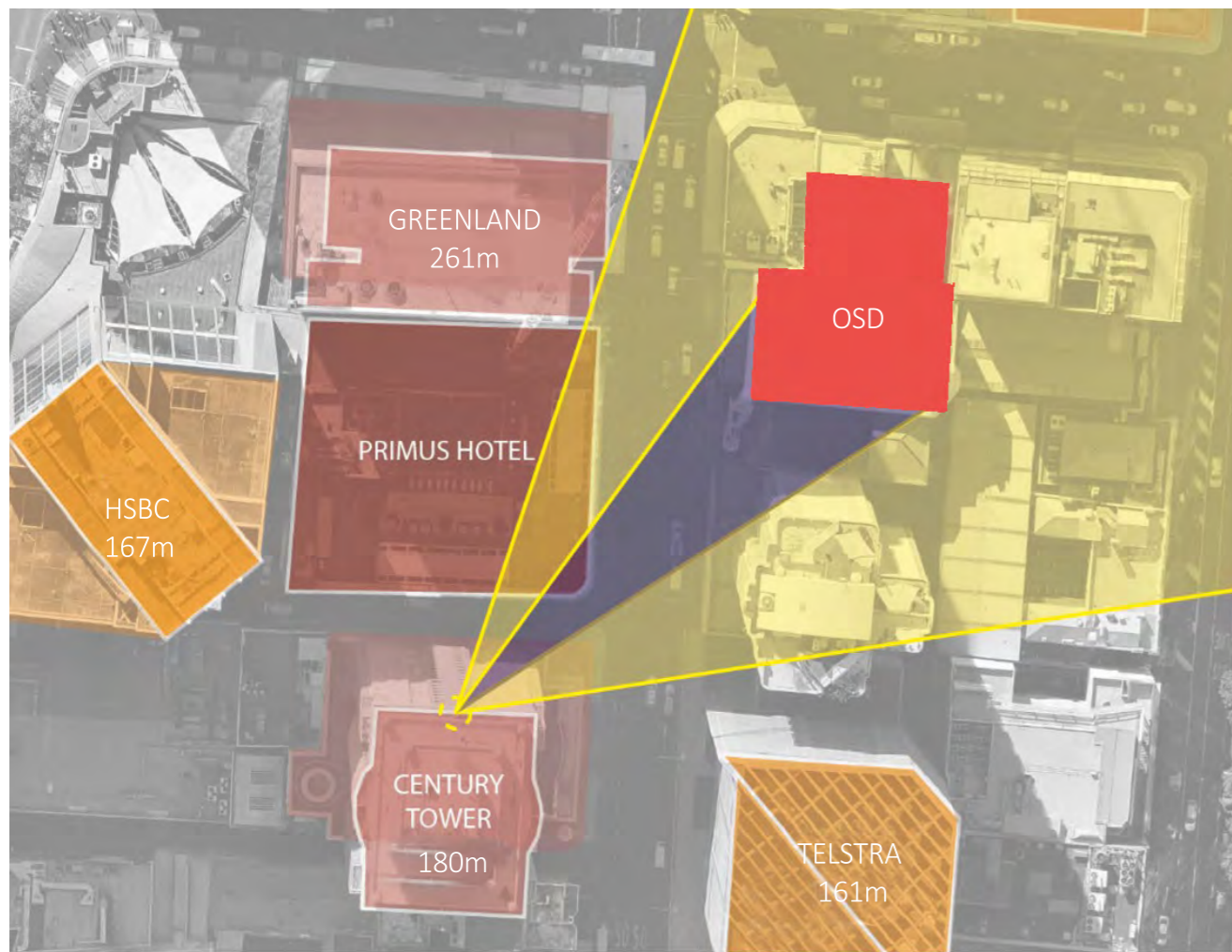
The 12m setback from the southern boundary and the adjusted angle on the north-west corner of the site will mitigate these impacts.

Diagrams 2.04 and 2.05 at right illustrate a reduction in sun access to the central balconies on the upper levels of the northern and eastern façades of Century Tower. A detailed sun access impact report is provided separately.

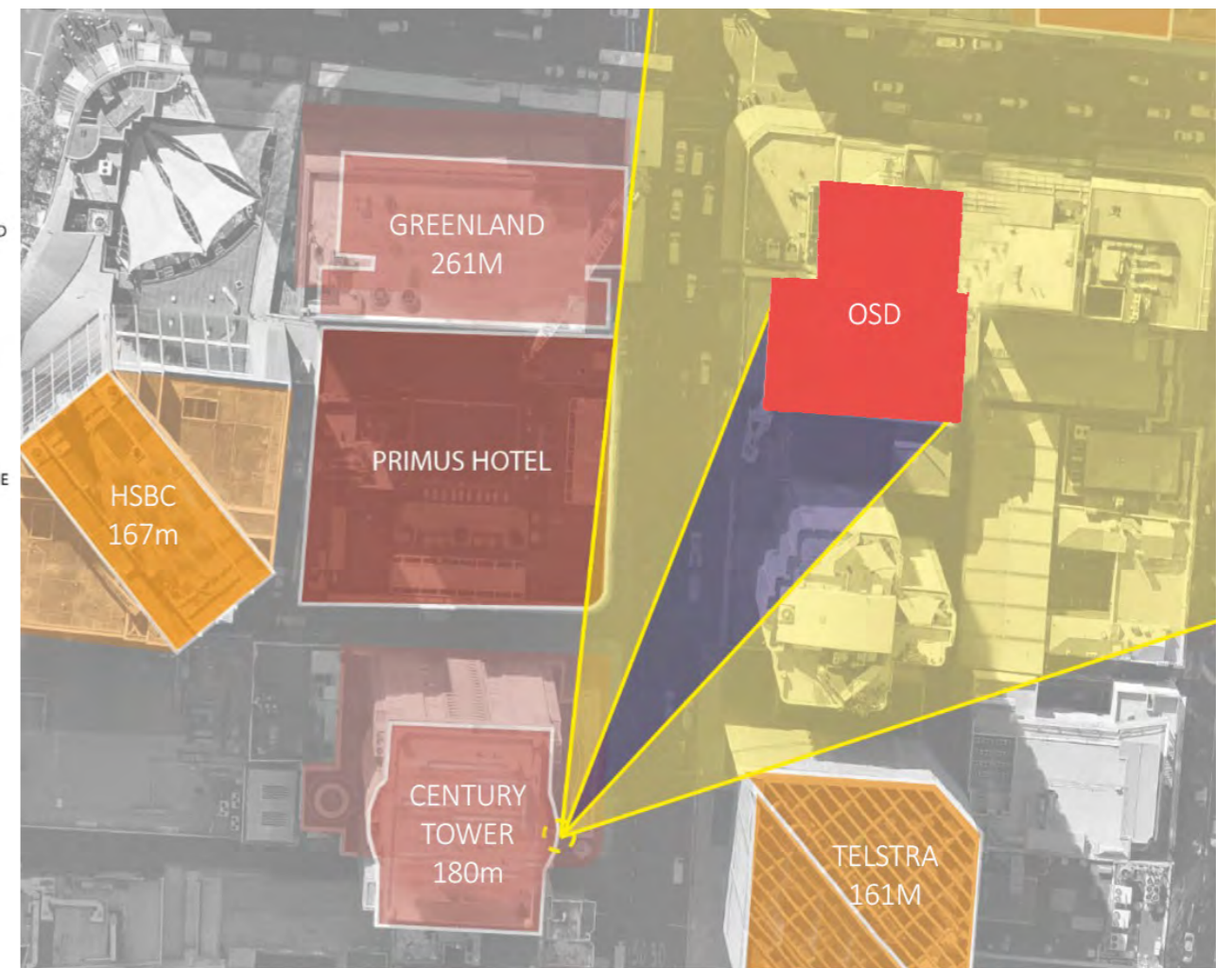


Sun Access to Northern and Eastern Central Balconies of Century Tower (heights given are above Street Level)

Diagram 2.04
Sun Access to Century Tower



Sun Access to Northern Central Balconies with OSD Envelope (heights given are above Street Level)



Sun Access to Eastern Central Balconies with OSD Envelope (heights given are above Street Level)

Diagram 2.05
Sun Access to Century Tower

2.3.2 View Access

The diagram at right demonstrates the view loss impacts of the proposed envelope to living rooms on the Greenland Eastern facade up to 140m above street level and from the upper levels of the Northern face of Century Tower.

A detailed View Impact Report is provided separately.



Diagram 2.06
View Impacts Summary Diagram (heights given are above Sea Level)

2.3.3 Princeton North Facade Windows

The Princeton apartment windows on the northern facade provide a secondary window to bedrooms at those levels.

The diagram at right illustrates:

- The height of the current station plant envelope adjacent to the boundary noted as the Transfer Deck Level.
- The height of a previously approved DA for a hotel on the site adjacent to Princeton, which was setback from those windows by less than 3m (brown)

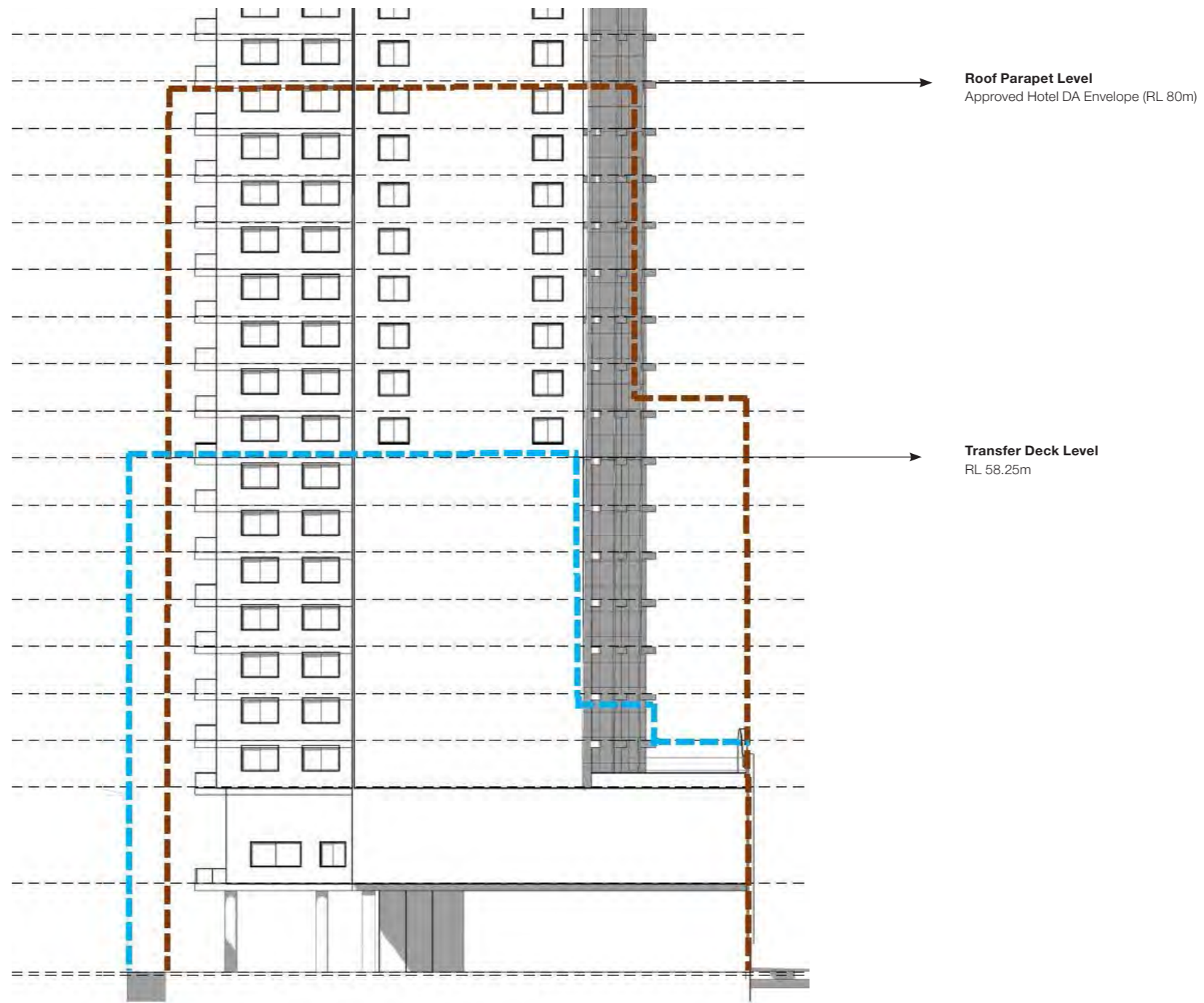


Diagram 2.07
Princeton Northern Window Diagrams

03



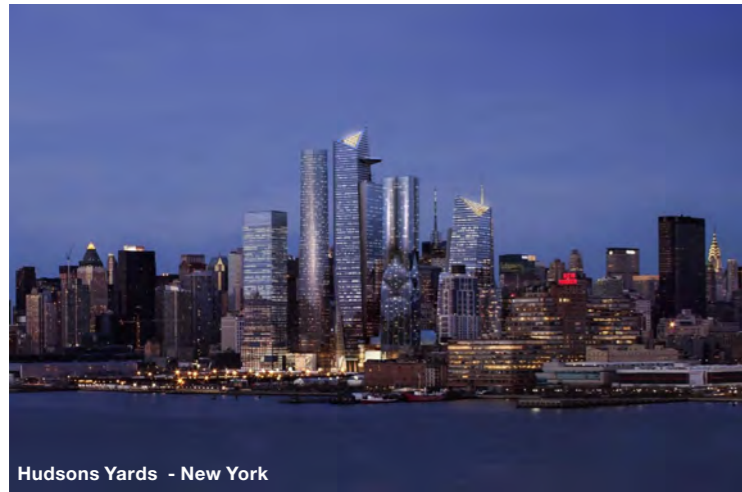


03

Indicative Design

Concept outlines, Plans
and Compliance

“The potential for the Pitt Street South OSD to contribute to the public realm raises it to a project of global significance.”



Hudsons Yards - New York

Diagram 3.01
International Precedent

3.1.1 Introduction

Residential and Commercial uses are identified as the optimal land use outcomes for this site due mainly to ground plane and floor plate constraints (refer to the Strategic Land Use Analysis Report). Given this, an Indicative Design is provided for both a commercial and residential scheme, with a bias towards residential due to:

- the planning strategy of the concept proposal (to assess residential but provide flexibility in the planning approval for a commercial use),
- the requirements to demonstrate compliance with the ADG and
- the land use challenges presented by commercial.

The following sections thus primarily illustrate the indicative design of the built form and streetscape of the residential use. Key differences between residential and commercial tower built form are either noted and/or illustrated through patterning to façades, improving their contribution to the skyline and urban texture.

3.1.2 Trends and Precedent

There are two significant trends in urban development within major urban centres.

Firstly, the emergence of slender residential towers and fully glazed commercial buildings which seek to maximise the amenity available from views, sun and light.

Secondly, groupings of towers around significant pieces of urban infrastructure, creating density and vibrancy at the ground plane. Hudsons Yards in New York is one recent example, below left.

In terms of relevant precedent, the twin aspirations of amenity and sustainability are driving façades that are much more active than in prior decades. This activation can be seen in active/passive ventilation strategies, external and enclosed blinds and in winter-gardens which are very often combined with floor to ceiling glazing.

This activation adds a level of richness of patterning to façades, improving their contribution to the skyline and urban texture.

300 Pitt Street has all the relevant characteristics to be able to build on these precedents to the benefit of its occupants and the City.



Diagrams 3.02
Facade Precedent

3.1.3 Massing Options

To take advantage of the premium Hyde Park view from the north east elevation within the Hyde Park West sun angle requirements, the indicative tower will naturally be oriented to benefit from the superior views in this direction.

The indicative residential tower is set back from the eastern envelope line in order to provide excellent amenity in terms of daylight penetration to the apartments along that face, as well as from Bathurst Street.

The commercial use indicative design tower form is illustrated in Diagram 3.04a as filling the available envelope to provide the most marketable floor plate area.

The diagram below shows a comparison between the envelope and the indicative residential floor plate design for the tower levels.

A detailed Built Form Options Analysis is provided in Appendix 4.3.

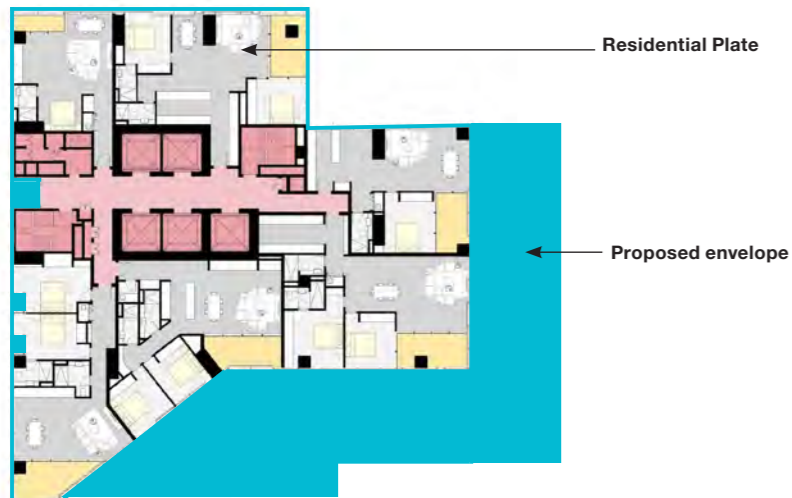


Diagram 3.03
Comparison Plans Envelope/Residential Plate

Diagram 3.04a
Northeast View of Proposed
Planning Envelope and
Indicative Commercial
Tower Form

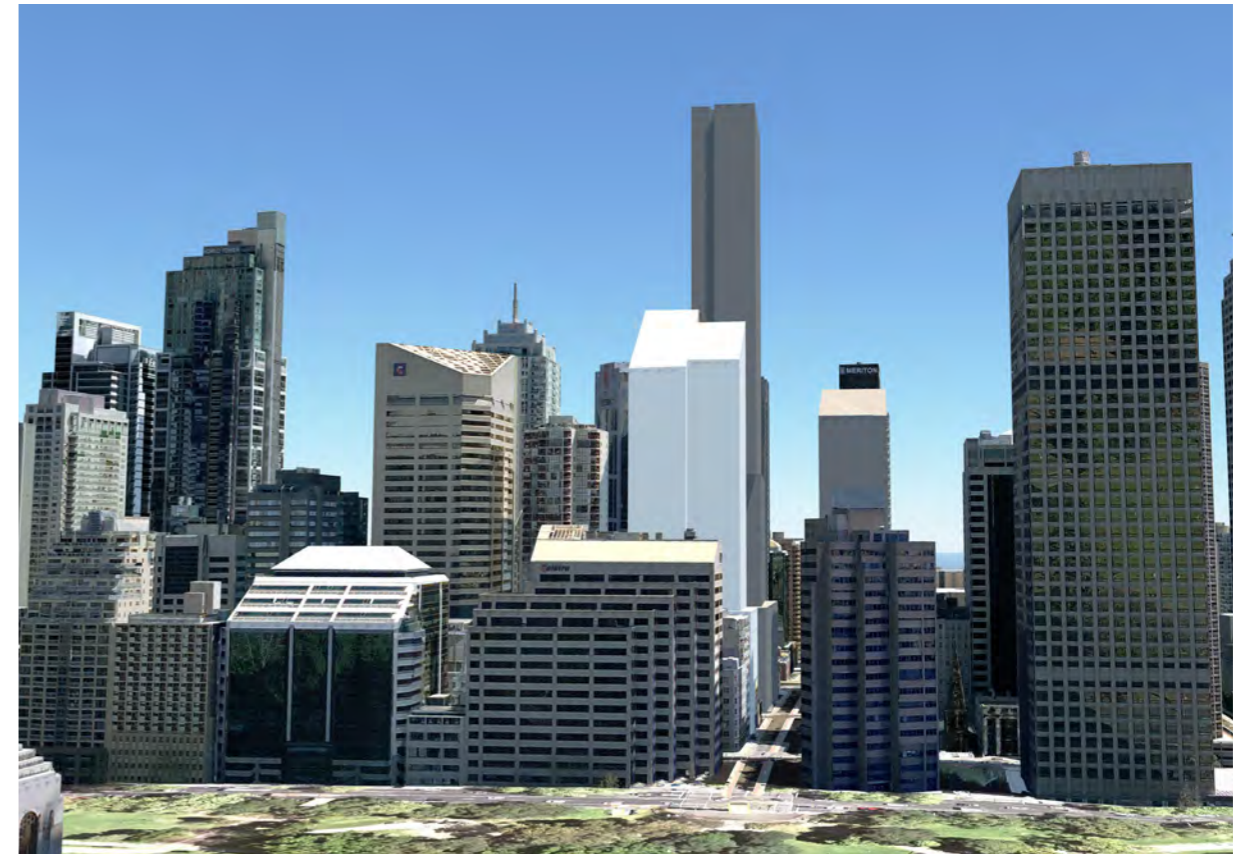
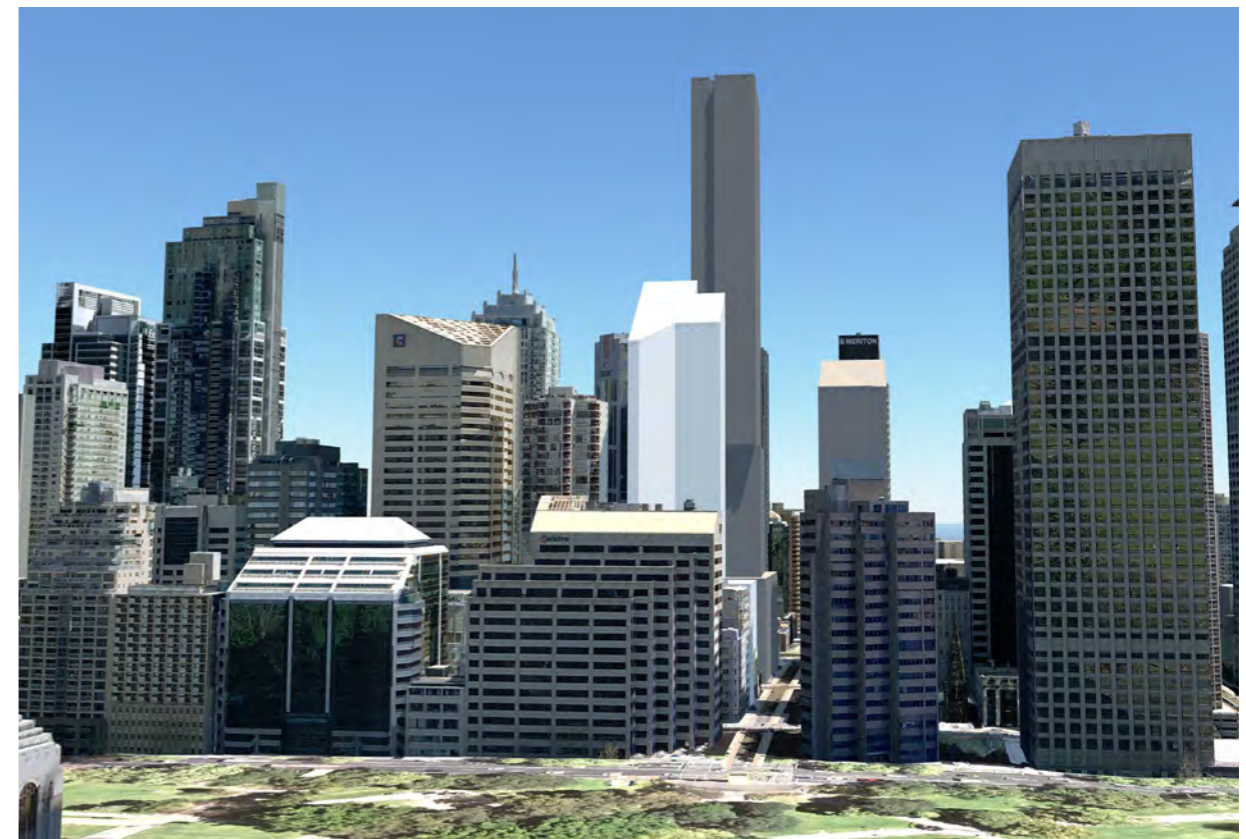


Diagram 3.04b
Northeast View of Indicative
Residential Tower Form



“Key to a sustainable outcome is the maximisation of sun access and natural ventilation for resident amenity.”

3.1.4 Towards A Sustainable Architecture

For the residential option, key to a sustainable outcome is the maximisation of sun access and natural ventilation for the amenity of future occupants.

Utilising the envelope to the full height available will enable maximum sun access and cross ventilation made available by the building shape, further enhanced by the relatively small floor plate and the options for innovative wind-affected balcony treatments.

The raised podium provides the opportunity for excellent sun access to OSD amenities such as pool and gym and a 'quiet' garden space.

Co-location with a metro station provides the opportunity for leadership in sustainable architecture specifically related to transit efficiency.

The location of the building over a station provides a unique opportunity to offer a communal virtual office facility for resident use. This will allow residents to work in an office environment within the building when they don't need to travel to a workplace; reducing travel sustainably.

The podium also includes limited car parking, all of which will be serviced with battery charging facilities and extensive bicycle parking facilities for resident and visitor use.

For the commercial option, a sustainable outcome will involve investigation of the highest possible Greenstar rating and alignment with the principles of the WELL standard. The extensive views available and access to sun and daylight provide an excellent foundation.

Utilising the envelope to the full height available will enable maximum sun /daylight access, distant green views and potential for cross ventilation made available by the relatively small floor plate and potential for large contiguous office areas.

The raised podium provides the opportunity for excellent sun access to a sunny sky lobby lounge and terrace for diversity of work and meeting modes.

Co-location with a metro station provides the opportunity for leadership in sustainable architecture specifically related to transit efficiency.



3.1.5 Ground Plane

The precinct currently exhibits quite a rich, fine grain in the public realm in the Greenland development opposite. This fine grain character is further enhanced when the lobby of the Primus Hotel is included, given its public accessibility and visibility. This contrasts strongly with the very coarse grain of the northern end of the block within which the development is set, where there are no laneways or other block disaggregation at the ground plane.

The station entry is an excellent opportunity to enrich the urban grain with an extension of the street into the block, footpath widening and enhanced connections across the streets.

Further, the OSD entry can be conceived and expressed as a laneway element that has been enclosed, implying a richer grain that links to Greenland opposite, as illustrated. This can be reinforced if the station plant building presents strongly along its northern edge coinciding with the OSD lobby line.

This laneway concept is an important element informing the design of the tower. The laneway language can be integrated into the streetscape with a strong visual link between tower and podium facade, as illustrated in the indicative design.

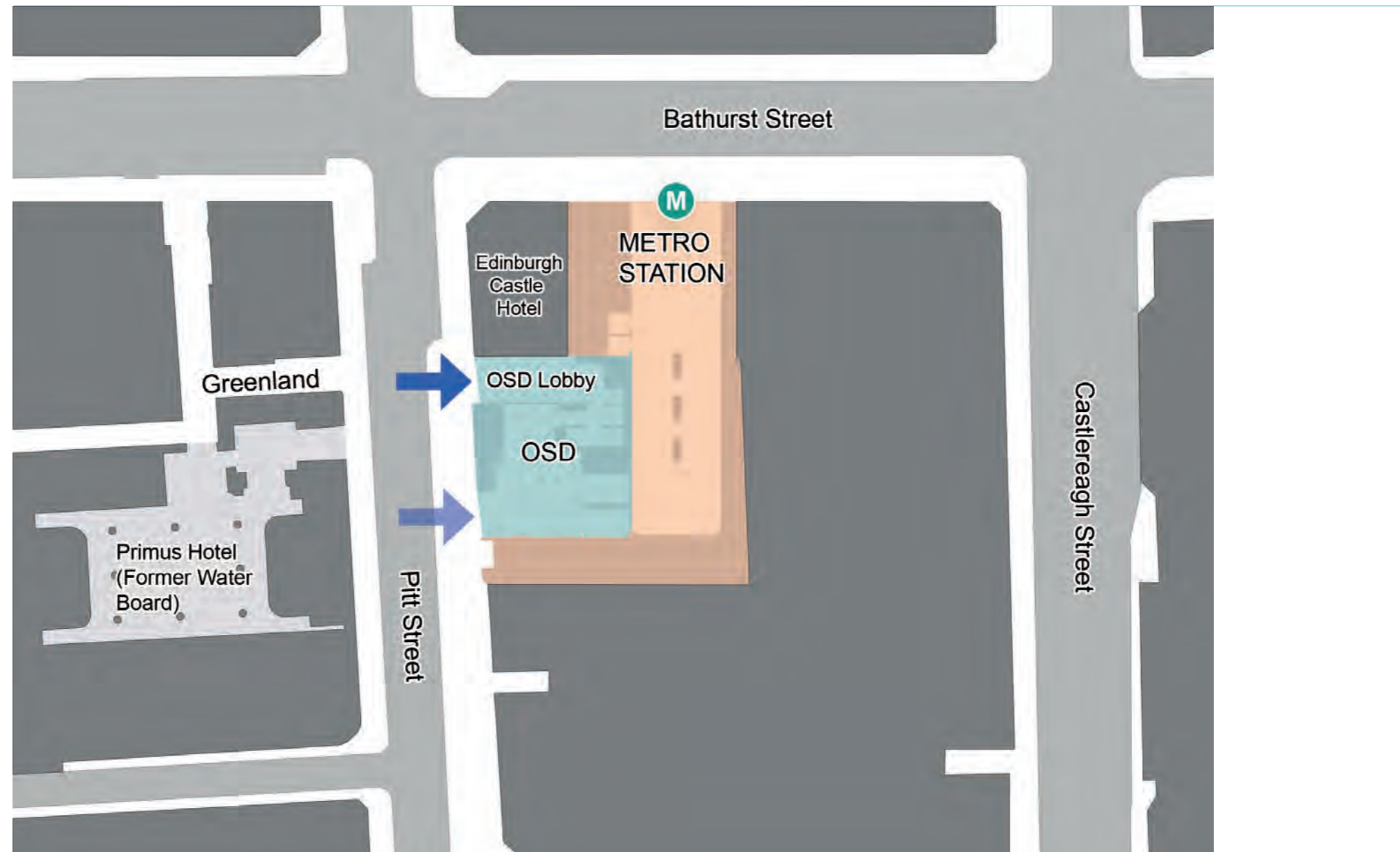


Diagram 3.05
OSD Entry Urban Grain Integration

3.1 Concept Outline

“The strongly reinforced 45m podium height line of Bathurst Street creates a design challenge as to how to mediate between the Bathurst Street frontage and the much lower parapet line of the Edinburgh Castle Hotel.”

3.1.6 Streetscape

The current streetscape on both Bathurst and Pitt Streets is a broad mix of scale and materiality organised around a piece of heritage architecture in the Edinburgh Castle Hotel and dominated by the imposing heritage façade of the Primus Hotel on Pitt Street. Along Bathurst Street, however, the 45m podium height is strongly reinforced by the two apartment blocks to the east. This podium height line of Bathurst Street creates a challenge as to how to mediate between the Bathurst Street frontage and the much lower parapet line of the Hotel on the corner.

For Pitt Street, (Diagram 3.08) the parapet line of the Edinburgh Castle Hotel is continued by the heritage façades of the Princeton apartments to the south with no immediate reference to the 45m podium control, and well below the 20m minimum in the DCP. There is an opportunity to build an intermediate reference block in this location, particularly given the scale of the heritage Primus Hotel building opposite.

The future Greenland tower podium exhibits a number of different scale elements. Within the 45m high podium is an expressed framed box which, at its base, creates a scale linkage across to the Edinburgh Castle Hotel. The location of the upper framing piece of this element can usefully provide a visual reference and connection piece for an intermediation element to the east of the Edinburgh Castle Hotel along Bathurst Street.

The indicative design illustrates the potential for a strong and coherent streetscape integrating both podium and tower with station and OSD entries.

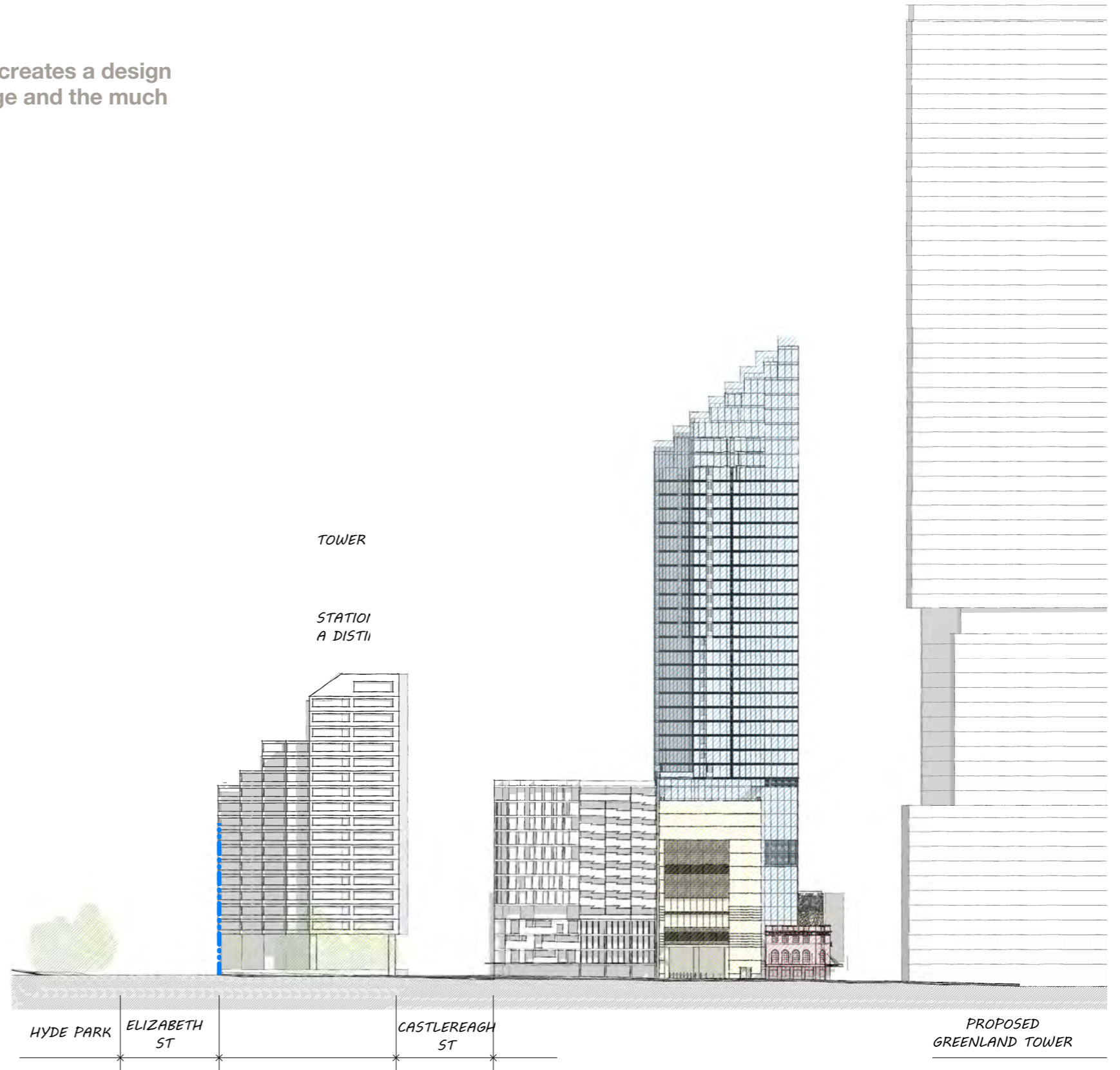


Diagram 3.06
Bathurst Street Podium Heights Diagram

3.1 Concept Outline

3.1.7 Future Development Potential of the Edinburgh Castle Hotel

The future development potential of the Edinburgh Castle Hotel as a stand alone development is very limited.

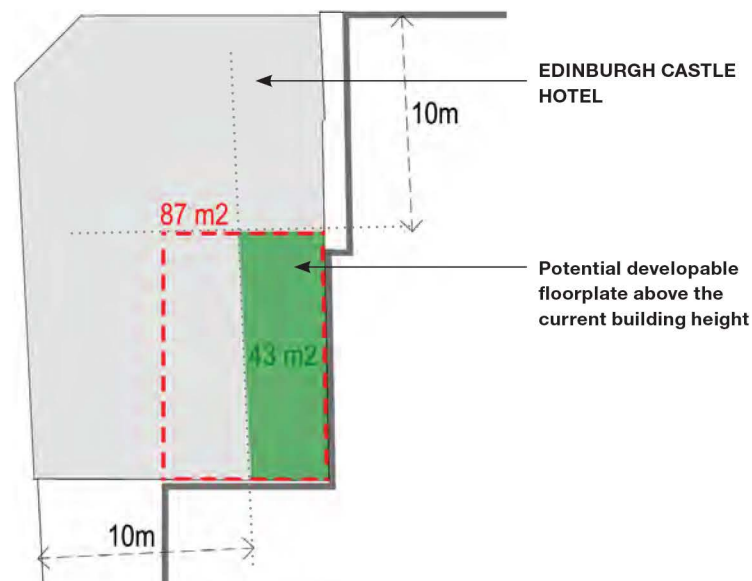


Diagram 3.07
Edinburgh Castle Hotel Setbacks

As can be seen from the Diagram 3.07 above, assuming that a 10m setback from the street frontages is required, a floorplate of 43sqm is possible. This would have to be located directly above the Level 1 garden terrace in the current hotel organisation. Assuming minimal vertical circulation, this would possibly allow one small bedroom (approx 15sqm) per floor.

A reduced setback in Pitt Street to align with the indicative design would increase the available floorplate to 87sqm, allowing two double bedrooms per floor (30sqm each). This is less than 10% of the industry standard for the number of bedrooms per floor.

Should the larger plate be extended to the maximum allowable height of 55m, this would result in a maximum of 28 additional rooms.

As can be seen from the sun access analysis in Appendix 4.1, sun access to the podium zone above the hotel is limited and will not achieve compliance with SEPP 65 for residential use in this zone, should that be contemplated as an alternative to hotel use.

Given the above, and the heritage significance of the interior fabric of the hotel, development of the air space above the hotel is unlikely as a stand alone development.

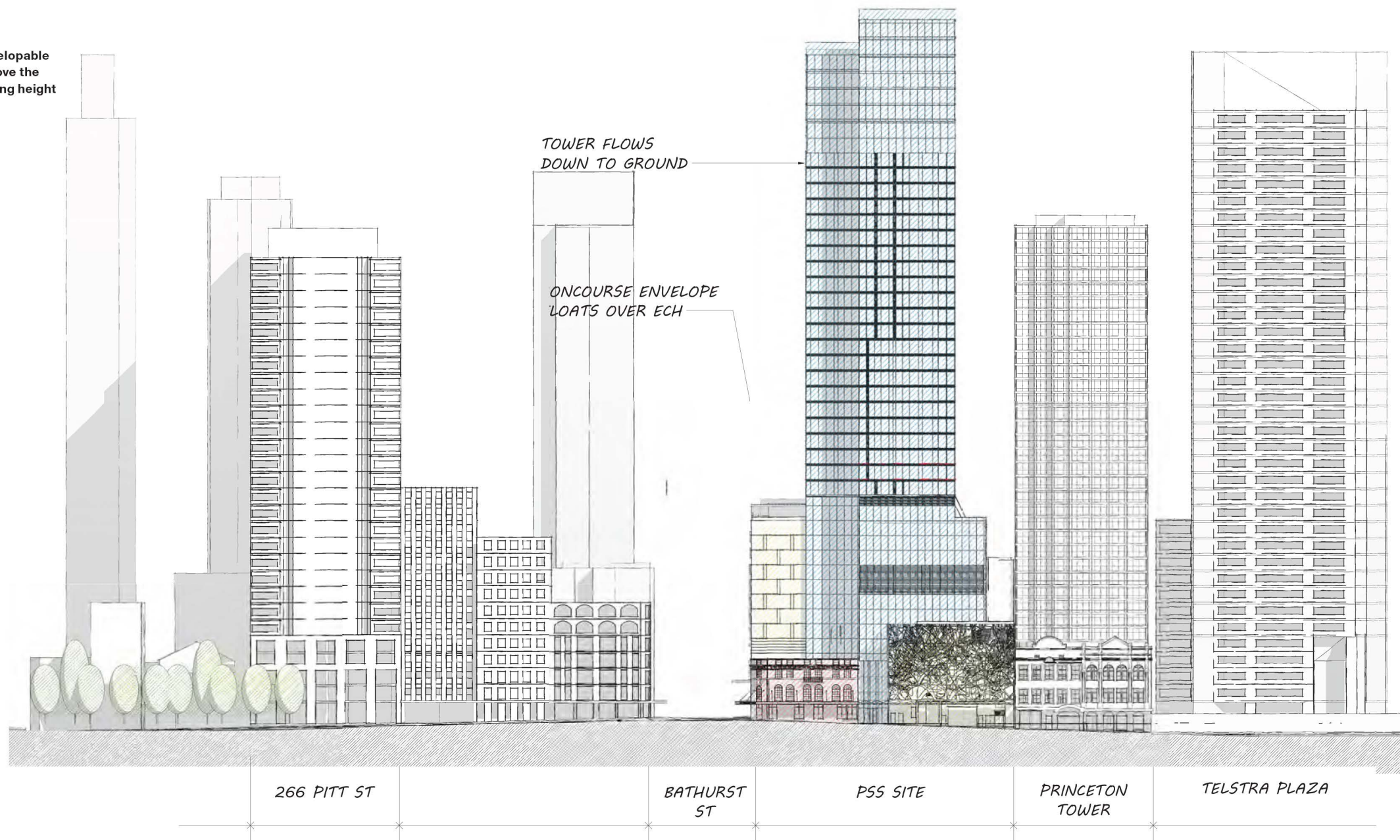


Diagram 3.08
Pitt Street Podium Heights Diagram

“The urban context surrounding 300 Pitt Street is rich and varied in height plane and texture. The indicative design responds to this strategically, presenting a podium that responds to and builds on the character and scale of its neighbours whilst integrating a tower form in such a way that its facade can be seen to flow towards the entry on Pitt Street.”

3.2.1 Tower Podium Dialogue

One of the key challenges for the OSD project is the seamless integration of station and tower in the podium within a multi-scaled and visually noisy streetscape.

The indicative integrated massing strategy is illustrated at right: dividing the tower into three major elements podium, mid levels and upper levels. This is in combination with a podium integration strategy that breaks the station into two components (station plant and entry concourse). This facilitates the tower having a major presence in the street while flowing down to the Pitt Street entry between the two podium masses of the Hotel and the OSD Services building.

As a part of the Public Art Strategy, the indicative design illustrates the potential for a major art installation on the Pitt Street facade to screen the functional spaces and louvres behind.

There is also potential for a distinctive installation on the north western facade above the station entry given its exposure to the Bathurst Street traffic flowing east.

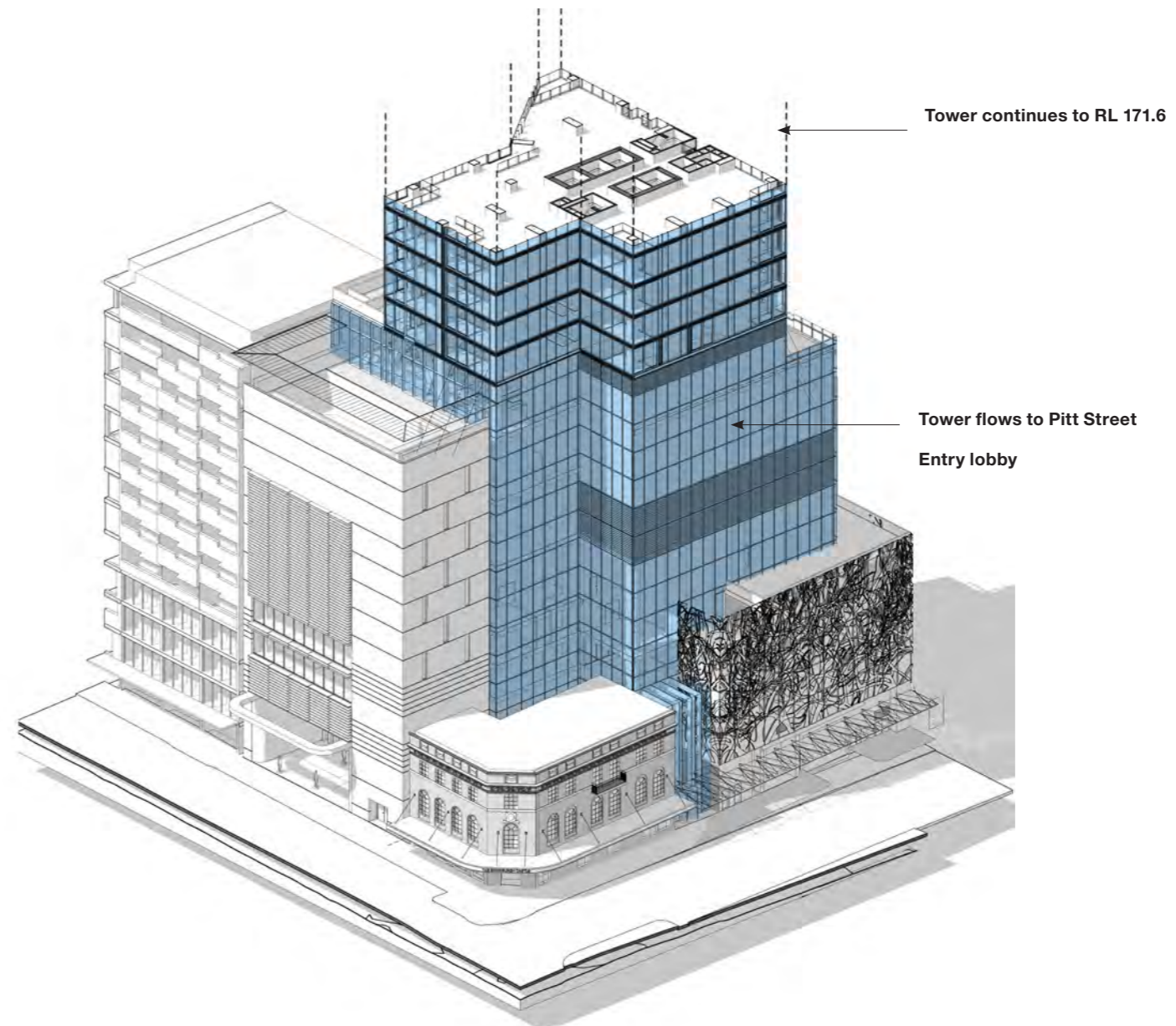


Diagram 3.09
Podium Tower Dialogue Diagram

“The approach illustrated in the indicative design separates the building from the backdrop.”

3.2.2 Urban Texture

Above the podium, there is a very uneven mixture of fine and coarse building shapes, materiality and elements forming the backdrop to the city skyline. The indicative building envelope sits in front of this backdrop providing a range of opportunities.

At one extreme, the building façade texture could separate the building from backdrop with consistent materiality, a regular grid and a singular planar presentation. At the other end of the spectrum, the design approach could meld the building into the dynamic and uneven background with materiality patterning and planar disaggregation similar to much of the adjacent context.

The approach illustrated in the indicative design separates the building from the backdrop, thus making it more distinctive, aiming to assist the achievement of the vision for the project in terms of enhancing both the public realm and legacy, particularly if integrated with the skyline strategy.

A wind affected balcony strategy has been developed in order to demonstrate the potential for both excellent internal amenity and for a more vertical facade language than is generally associated with residential towers, the visual texture of which can also serve to enrich the relationship with the surrounding context.

The commercial building can naturally have a more vertical language given the potentially vertical orientation of the separation between solid and glazing in the core areas and a continuous glazed curtain wall to the office areas. This would fit well into the adjacent context.

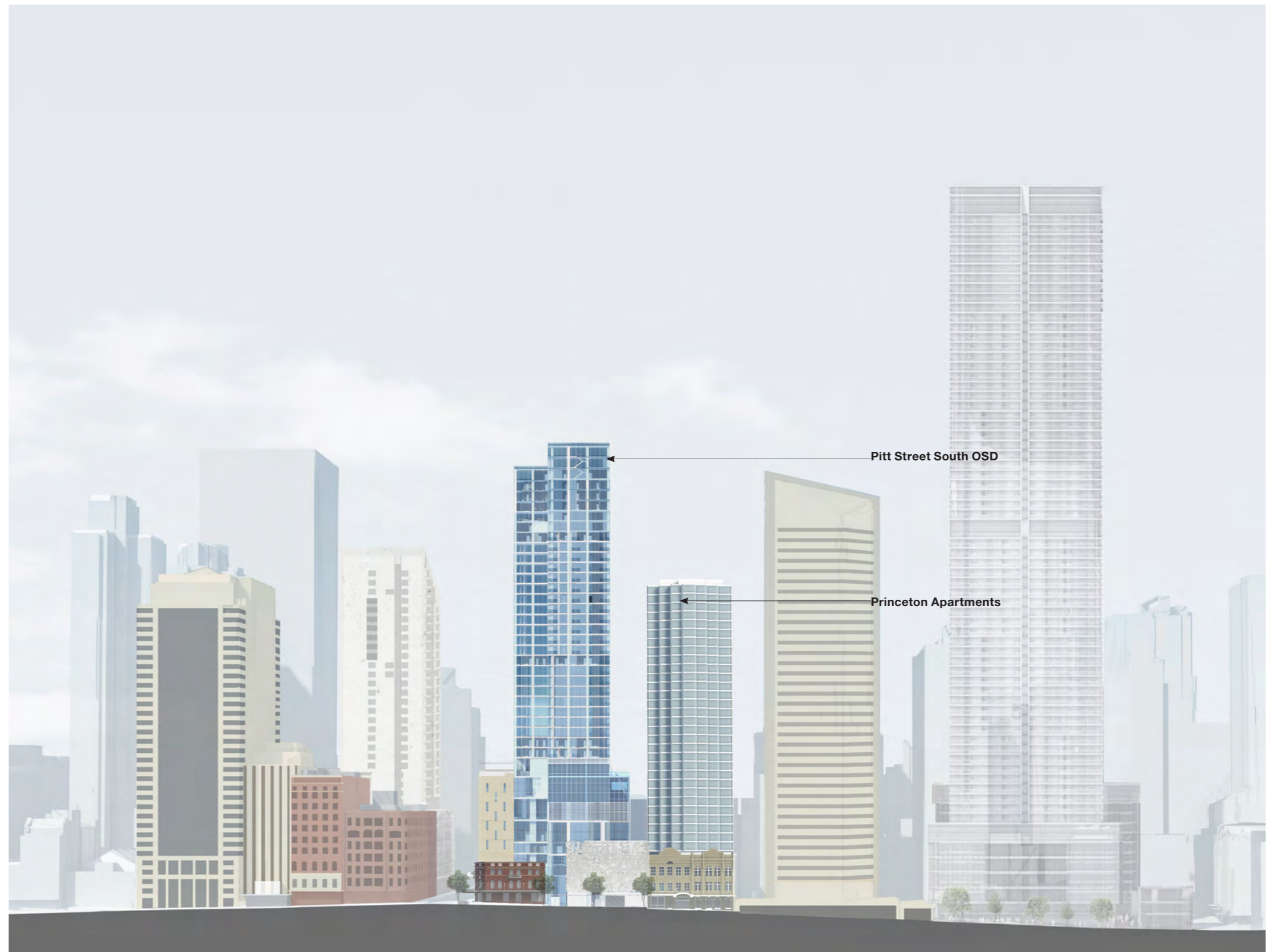


Diagram 3.10
Pitt Street Elevation diagram

“The urban context surrounding 300 Pitt Street is rich and varied in height plane and texture. The indicative design responds to this strategically, presenting a podium that responds to and builds on the character and scale of its neighbours whilst integrating a tower form in such a way that its facade can be seen to flow towards the entry on Pitt Street.”

3.2.3 Skyline

Visual analysis of the views of the potential envelope from the eastern approaches to the city (including distant harbour views) and particularly from Hyde Park indicate a prominent skyline presence for the upper levels of the building form projecting past the visually noisy backdrop.

This could be further accentuated through a stepped form in the upper floor plates of the OSD tower which, when viewed from below, show the potential for an emblematic skyline element without the need for additional articulation or applied architectural features.

3.2.4 Public Art Strategy Statement

The Pitt Street South OSD Public Art approach will be developed to align with: the City of Sydney Public Art Strategy; the City of Sydney Public Art Guidelines for Art in Private Developments; and The City and Southwest Public Art program, described in the City and Southwest Metro Public Art Masterplan, (CSW Metro PA Masterplan).

City of Sydney Standards for Artistic Excellence

The Pitt Street South OSD Public Art approach will build on the criteria outlined in the Art Guidelines which are:

- Standards of excellence and innovation
- The integrity of the work
- The relevance and appropriateness to the site context
- Consistency with current planning, heritage and environmental Policies and Plans of management
- Consideration of public safety and the public's access to and use of the public domain
- Consideration of maintenance and durability requirements.

The Metro Art Program

The Metro program includes art at City Station entrances. The CSW Metro PA Masterplan; outlines Metro's Vision for Metro Public Art, the curatorial theme – storylines; preliminary locations for art; the process by which artists will be engaged to create artworks for the metro sites; and the management structure that will guide art development and approve it at key milestones.

The Metro Vision is; to elevate customer's journeys with art and engagement and the curatorial theme storylines offers an expansive, inclusive thematic to guide works that broadly encompasses heritage; geology/archaeology; sustainability/ecology; community; connectivity and indigenous themes. The Pitt Street Stations are located on some of the city's busiest streets and at this stage the station art will be primarily located at the main entrance, where it can be strongly visible to the customers and the public without interfering in wayfinding and passenger journeys.

Metro will convene a City and Southwest Metro Public Art Working group (CSW Metro PAWG) to administer the development of the art and approve the works.

Pitt Street South Public Art Preliminary Locations

Several potential sites are being considered for Public Art which will be subject to further detailed design and development in future stages. The opportunities are:

Option A

Pitt Street Entry Marker

A suspended artwork directly in front of and directly adjacent to the Pitt Street OSD entry strongly marking this entry in the streetscape. This option would provide a reinforcement of the OSD identity, particularly if integrated with the indicative signage zone. given the potential for the Pitt Street podium frontage to be a dynamic art canvas.

Option B

Pitt Street Services Building Facade

The Pitt Street podium frontage is largely a windowless wall with occasional ventilation louvres. This provides the potential for a dynamic art canvas if appropriate ventilation flows are allowed for within the composition. This is illustrated in the concept design in the form of an organic layered metallic screen.

Option C

An artwork on the western façade adjacent to Bathurst Street over the Edinburgh Castle Hotel

This location is particularly visible approaching from the Bathurst Street side of the St Andrews precinct. There

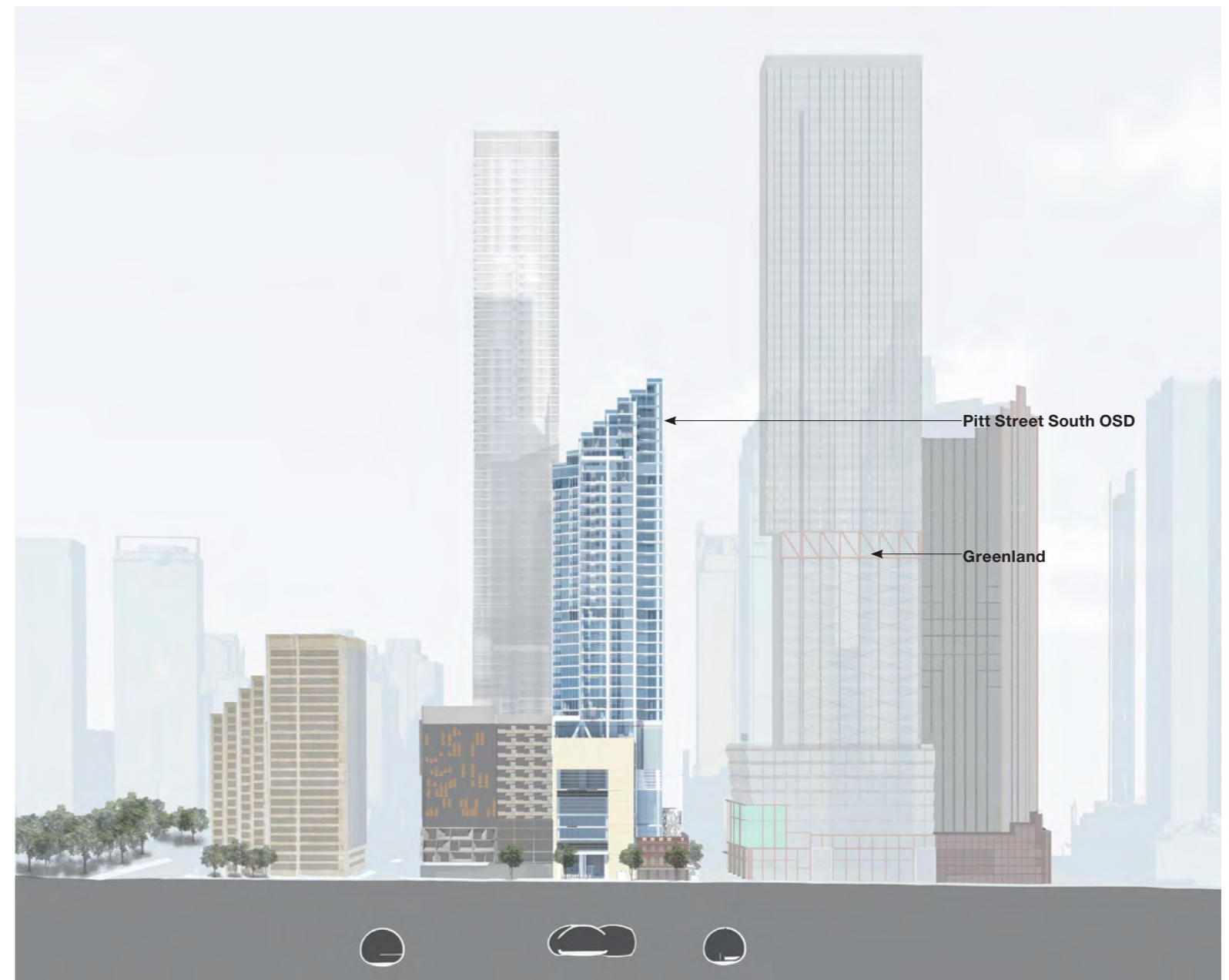


Diagram 3.11
Bathurst Street Elevation Diagram

is potential for a static or dynamic image or sculpture in this location. This option could celebrate the co-location of OSD and Metro in an exciting and dynamic way.

Option D

An artwork in the OSD Lobby

This is a more traditional approach, and could be strongly visible from the public domain and help reinforce the entry as laneway concept envisaged for the lobby.

The Pitt Street South OSD public art and the Metro public art will be seen in close proximity and it is important that they work well together and are compatible, as well as reinforcing the architecture and surrounding public domain. This will need to be managed as the project develops and the precise mechanisms for ensuring it will depend on the construction sequencing of the 2 parts; Metro and the OSD. It could also involve including some of the Metro themes, and materials in the final brief for the OSD Art.

The intention is to present future art plans, selection of artists and artworks for the OSD to the Metro PAWG to help support compatibility between the various art delivery processes.

During detailed design, a public art plan would be prepared that will provide further detail about:

the content, form and location of the art

the process for artist selection and procurement

mechanisms for ensuring compatibility with the Metro public art and suitability within the metro context

a strategy for ensuring compliance with the relevant guidelines listed below.

GUIDELINES

- Sustainable Sydney 2030
- City Art Public Art Strategy
- COS Public Art in Private Development Guidelines
- City Centre Public Domain Plan
- Liveable Green Network
- Laneways Revitalisation Strategy
- Social Policy and Social Plan
- Creative City Cultural Policy



Diagram 3.12
Indicative Tower Perspective

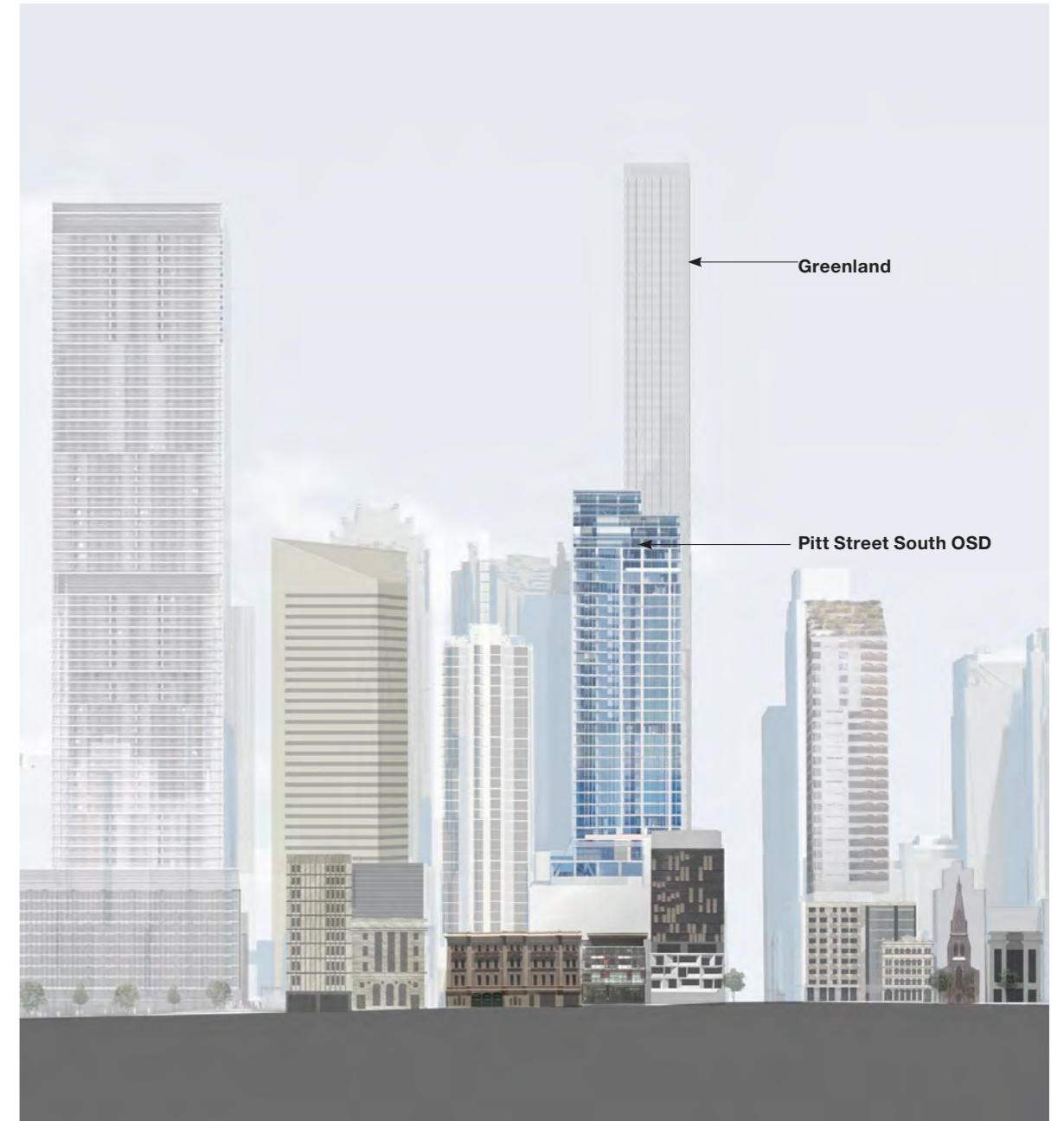


Diagram 3.13
Castlereagh Street Elevation Diagram

“The station and shared spaces in the podium below Level 7 form part of the separate planning approval for Critical State Significant Infrastructure (CSSI) approved by DPE on 9 January 2017, alongside the provisions for OSD within this part of the podium volume. Extensive exploration of alternative OSD and station configurations has resulted in a very efficient integrated concept in design terms and structurally.”

3.3.1 Podium Element Integration

The podium integrates a range of station and OSD programme elements within a simple and clear separation framework in accordance with the need for isolation of OSD construction and operational access requirements.

The volumetric organisational structure emerged from accommodation of compliant separations for station ventilation louvres, the need to accommodate OSD parking spaces in the zone above the concourse and the preference to keep the station envelope below the lowest northern facing Princeton Apartment windows. In addition, the Pitt Street podium facade requires a substantial set back from the street to improve sunlight access into Pitt Street and to accommodate anticipated pedestrian activity.

Diagram 3.14 illustrates the functional connectivity and efficient sleeving of the various major components into the podium in an exploded representation of functional groupings.

The dual street frontage allows natural light to OSD podium uses as well as the requisite flexibility for station ventilation. Locating the OSD plant functions in a block along the Pitt Street frontage provides the necessary opportunities for OSD/station ventilation separations as well as efficient linkages to the OSD vertical lift/services riser areas.

The major challenge with location of the station ventilation louvres on this constrained site is the dual mode nature of the tunnel ventilation, necessitating a minimum 6m separation from both exhaust and intake louvres and the boundary.

Where the tunnel ventilation louvres are directly below apartment balconies, a 15m vertical separation is also required.

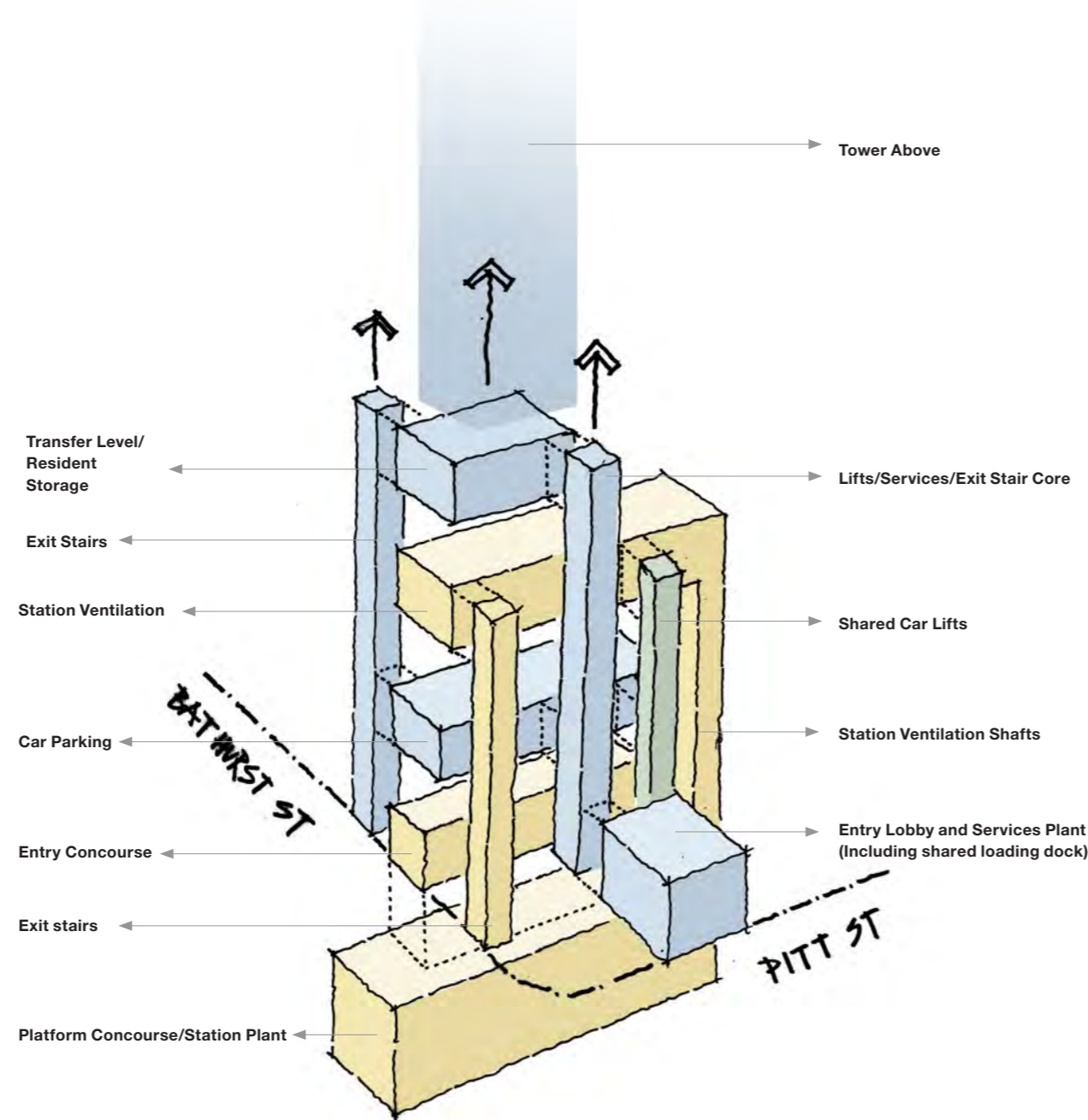


Diagram 3.14
Podium Element Integration

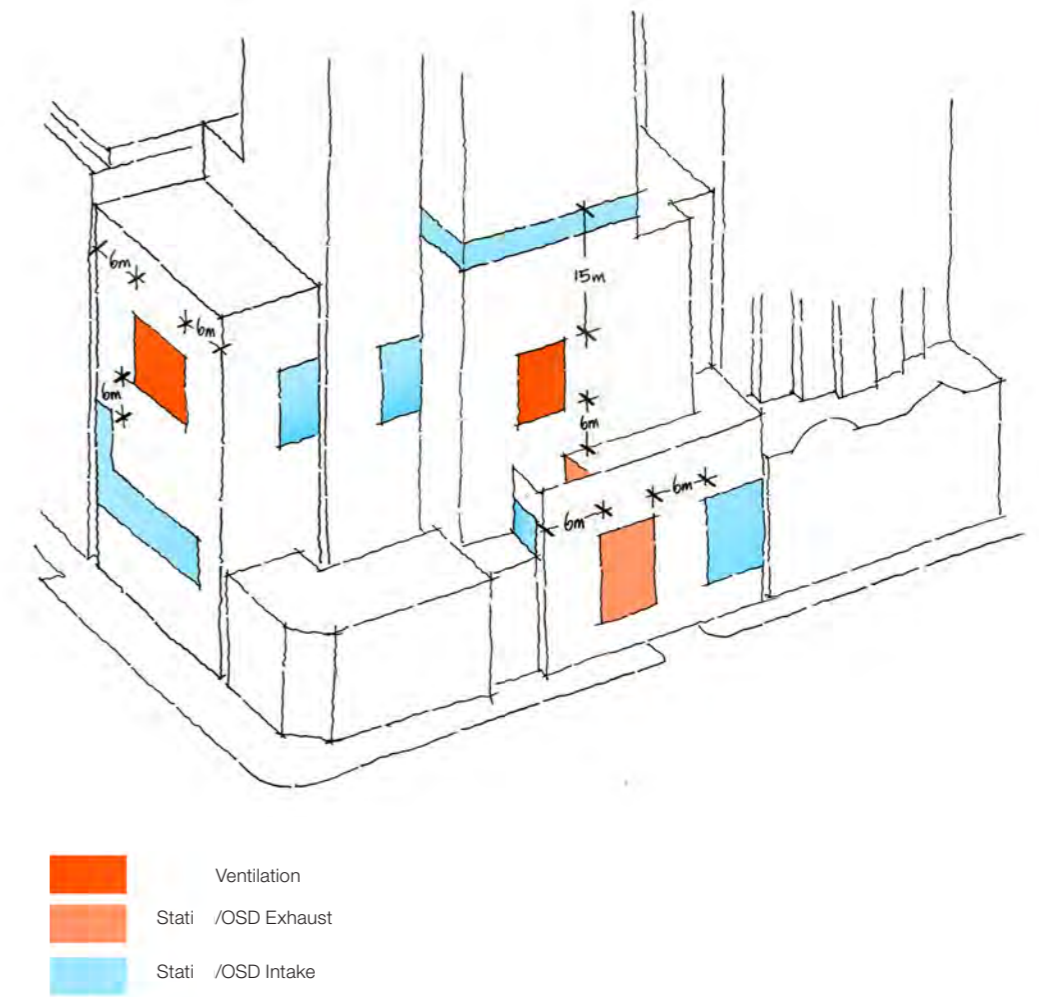


Diagram 3.15
Ventilation Separations

3.3 CSSI Integration

3.3.2 Structural Integration

Diagrams 3.16 show the tight spatial and structural integration between station concourse requirements and tower core/mega column locations and upper level amenity.

Diagram 3.17 illustrates the relationship between the main concourse column location and spacing on car parking capacity. The two southern concourse columns are key structural elements in the tower allowing full vertical integration of tower structure with podium.

The need to provide clear floorspace in the loading dock requires one raked column transfer within the podium, between levels 2 and 5 on the Pitt Street frontage.

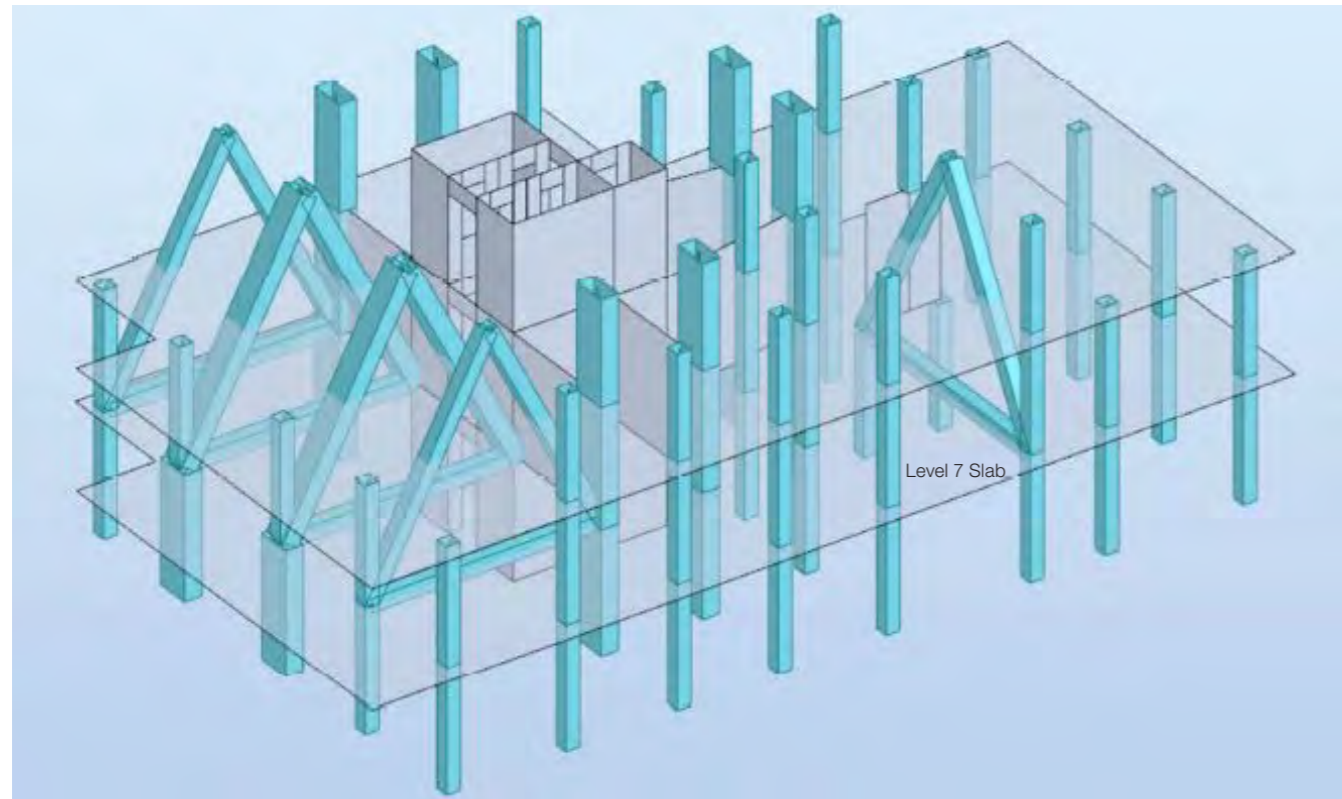


Diagram 3.16
Transfers above level 7

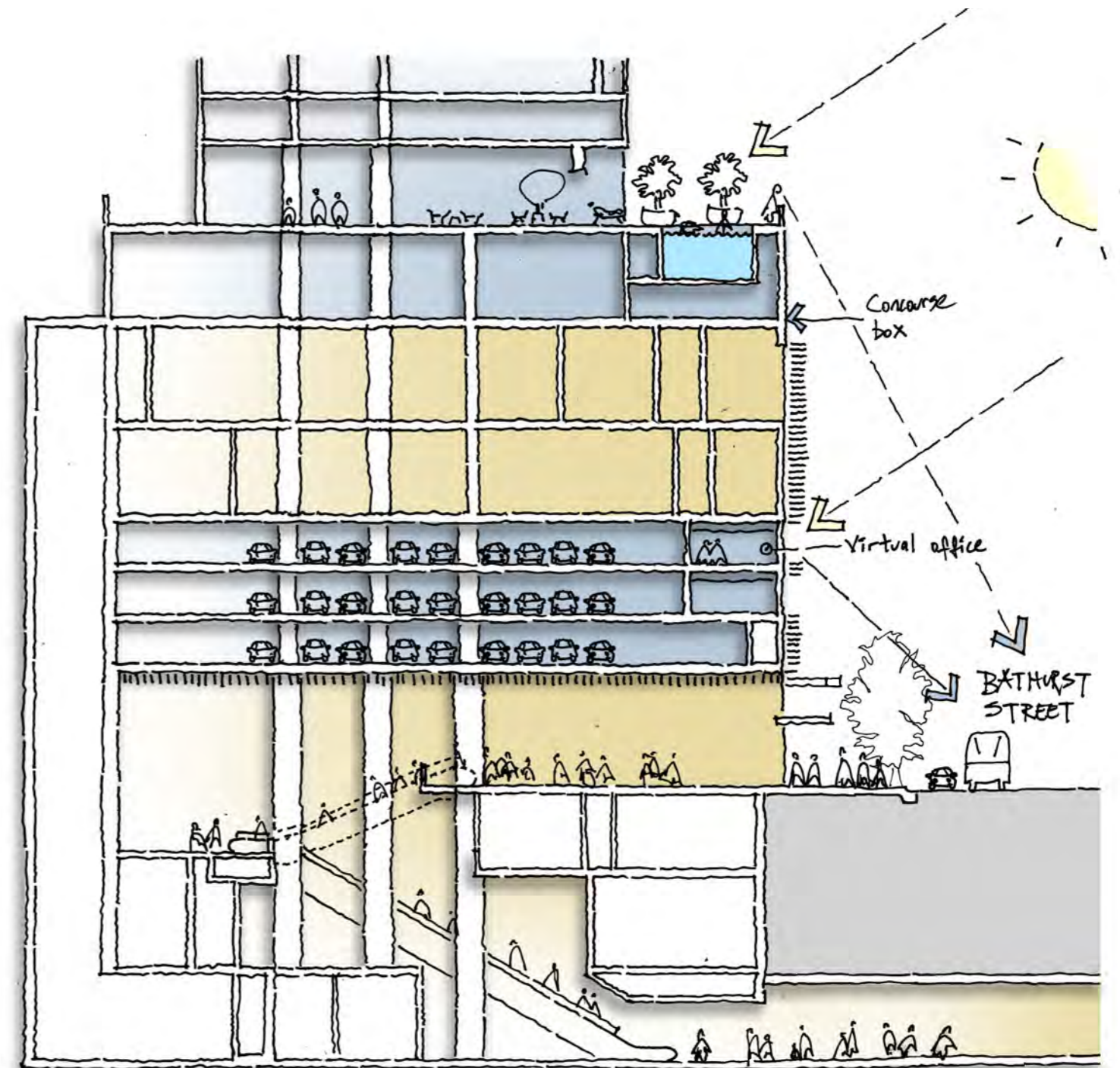


Diagram 3.17
Podium Section

3.4 Residential Podium

“The podium of the residential option contains the main entry lobby, a range of amenities and services for the OSD organised around the station ventilation plant and other services. The Metro station organisation has informed the location at Ground level of the OSD tower core, entry lobby, services and loading area; some of which will be shared with the station. The station and shared spaces on the podium floors form part of the separate planning approval for Critical State Significant Infrastructure (CSSI) approved by DPE on 9 January 2017. The indicative design commences at Level 7 of the podium which, as a structural transfer floor, allows spatial allocation of plant and significant levels of storage for a residential use.”

3.4.1 Entry Lobby

Separated by its location on a different street front and the buffering effect of Edinburgh Castle Hotel on the corner, the entrance to the OSD lobby is setback from the boundary and well separated from the busy commuter-focused entrance to the Station on Bathurst Street.

Due to site dimensional constraints, space is at a premium at ground level, with many practical functions (eg fire escapes, maintenance and dedicated access for utilities and emergency services, vehicle access) vying for space on the street frontage.

Creating a lift bank centrally and with an offset configuration has allowed for a lobby which is grand and spacious, and an integrated built form concept centred on the ‘entry as laneway’ strategy that emerges from responding to the urban grain. The glazed roof adds to the spatial extension.

3.4.2 Vehicle Entry / Loading Bays

The loading dock accommodates two small rigid vehicles (SRVs) and allows driving forward both in and out of the loading area as required by Council. A jockey space is also provided for OSD parking to facilitate prevention of queuing on the street waiting for the car lift service. The loading area will be under the supervision of the loading dock manager, who will also control car entry and exit.

3.4.3 Building Manager

A building manager’s office is shown adjacent to the entry lobby with easy connection to the tower lifts. This can also be the security centre for the OSD.

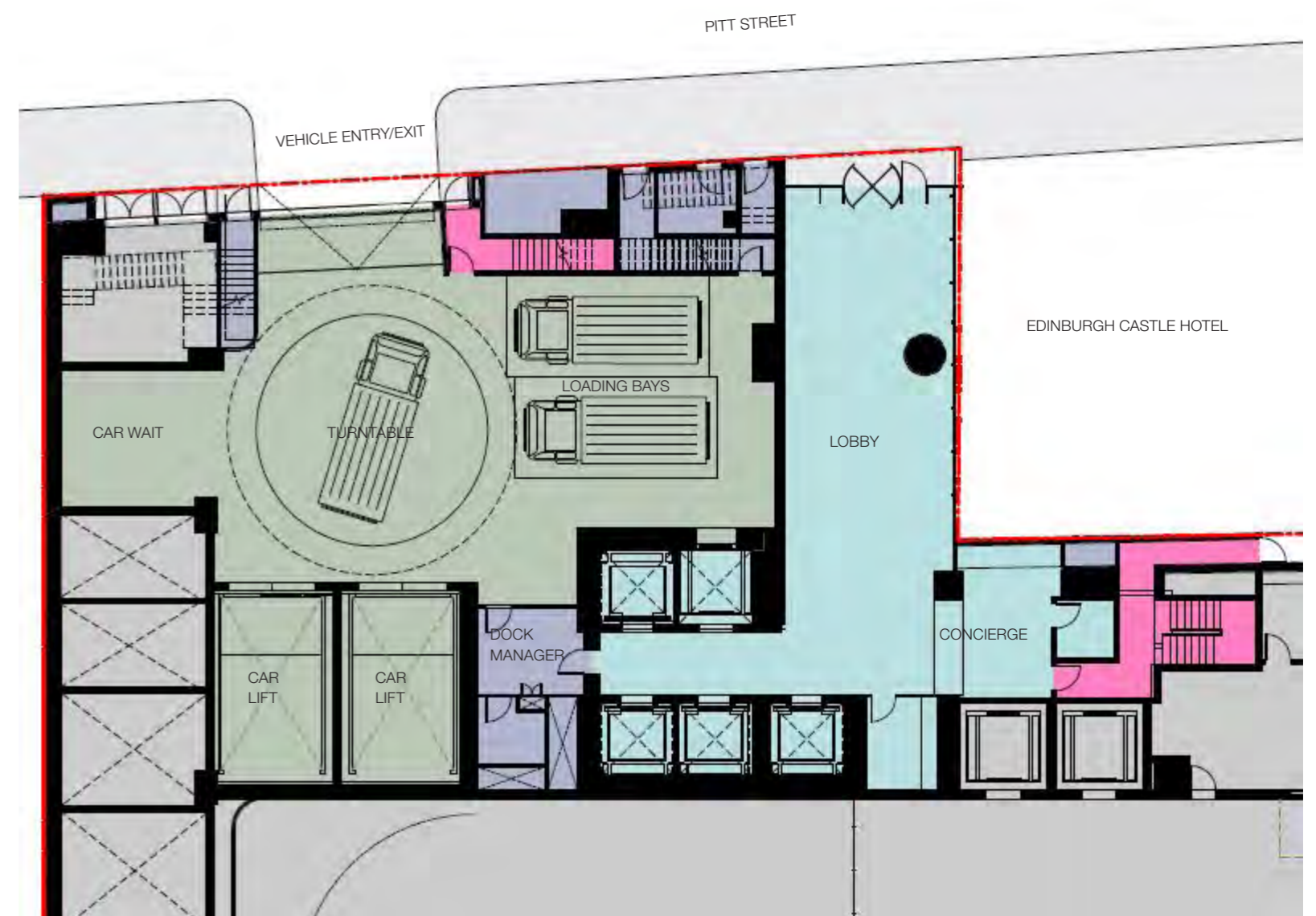


Diagram 3.18
Ground Plane Plan

3.4 Residential Podium

Room Department Legend

- OSD
- OSD BOH (Back Of House)
- OSD Egress
- OSD shared with Station
- Station Services

3.4.4 Communal Resident Virtual Office Facility

A key plank of the environmental strategy underpinning the proposed residential scheme is the potential for the provision of a communal virtual office facility on Level 4 for residents use in a similar way to other common facilities such as the pool deck and entertaining facilities.

The facility will facilitate a 'work from home' mode for residents in a professional and supportive environment separate to their apartments; with the ability to work in a dedicated workstation, have meetings with guests, as well as virtually, in meeting rooms and a board room.

3.4.5 Bicycle Storage

A further potential podium provision is storage for 175 bicycle spaces on Level 3 for residents and visitors.

3.4.6 Car Parking

A minimum potential of 34 residential parking bays is shown on Level 2-4. Access to these floors would be provided via a two car lifts which will provide a high level of service in terms of speed and frequency given the relatively low number of parking bays.

3.4.7 Waste Management

The building is potentially best serviced by two resident waste chutes, one for recycled and the other for general garbage. Each chute would discharge into a waste room at level 1. The loading bay and waste room can be suitable for Council garbage collection services (see Waste Management Report).

3.4.8 Resident Storage

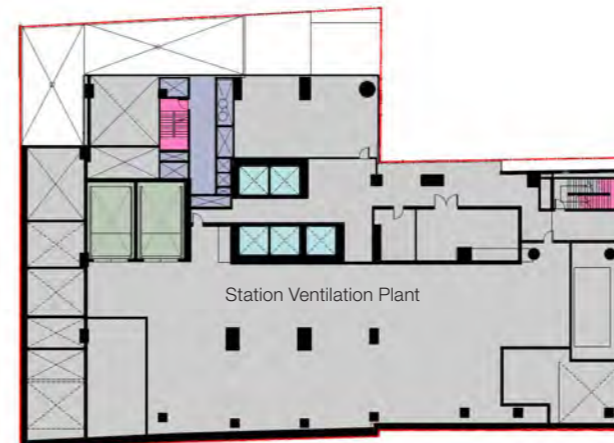
The Level 7 Transfer floor can accommodate the major stormwater detention tanks as well as a significant resident storage facility with capacity for tall items.



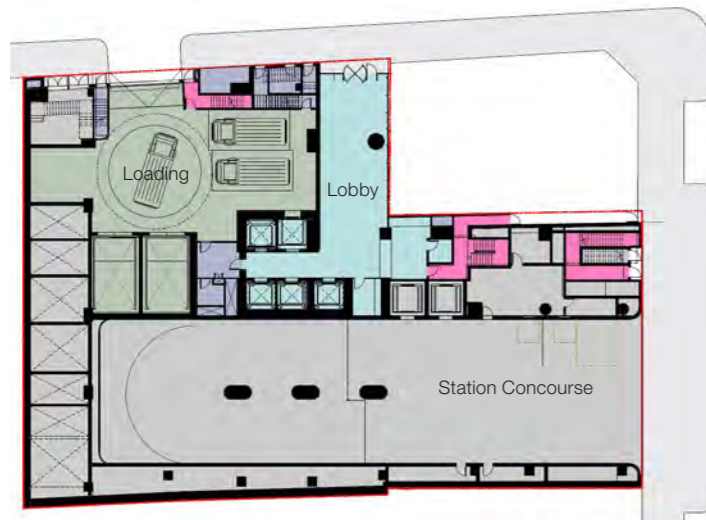
Basement 1 Mezzanine



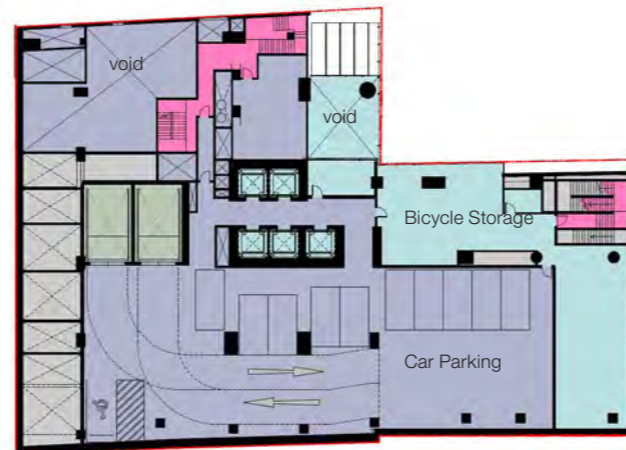
Level 2



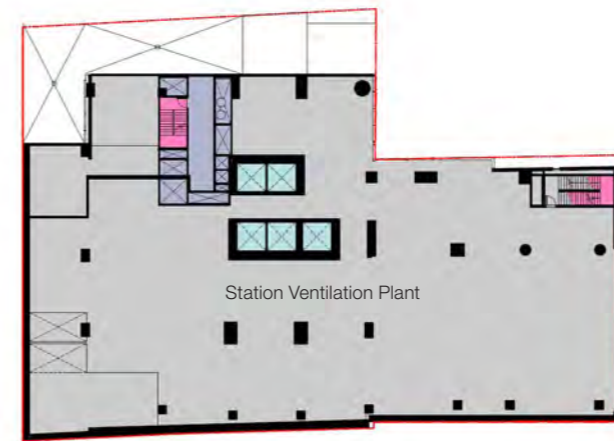
Level 5



Ground Floor



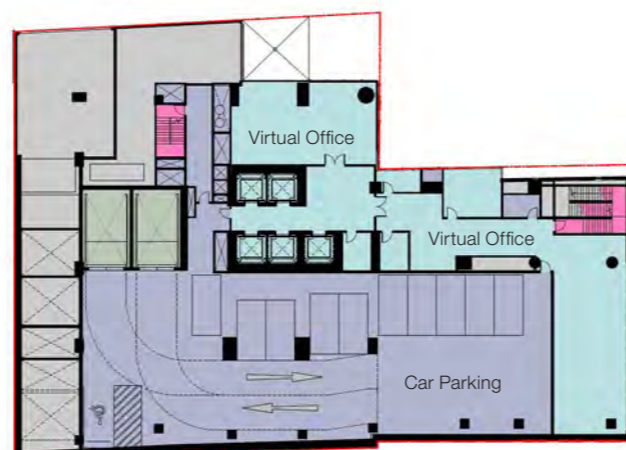
Level 3



Level 6



Level 1



Level 4



Level 7

Diagrams 3.19 Podium Plans

3.5 Residential Building

“At the base of the building over the podium, Level 8 is suitable for the pool and gym. Above Level 8 are all the apartments and further resident amenities.”

3.5.1 Indicative Plans

The indicative design conforms with the proposed setbacks and sets the lower floor levels back from the eastern boundary in order to deliver greater amenity on those levels.

The typical apartment plates have been developed to demonstrate the capacity to provide an appropriate mix of apartments, all with excellent amenity.

Indicative planning of each apartment is illustrated in the plan diagrams at right.

Excellent sun access is also available to the north and east facing resident amenities listed below:

Pool and Gym Deck

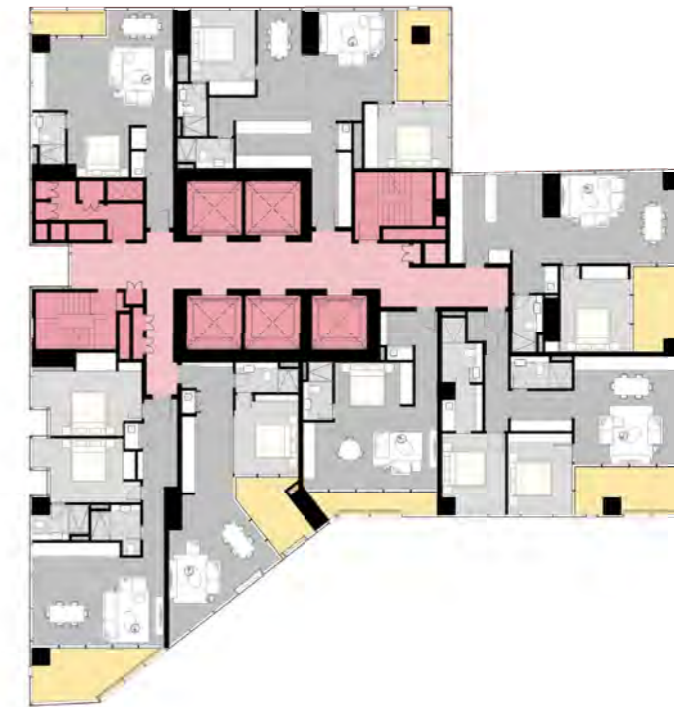
The depth of the transfer structure will allow the provision of a 5m deep swimming pool as a point of difference in the resident amenity set. There will also be space for a gym and change facilities.

Reflection Garden

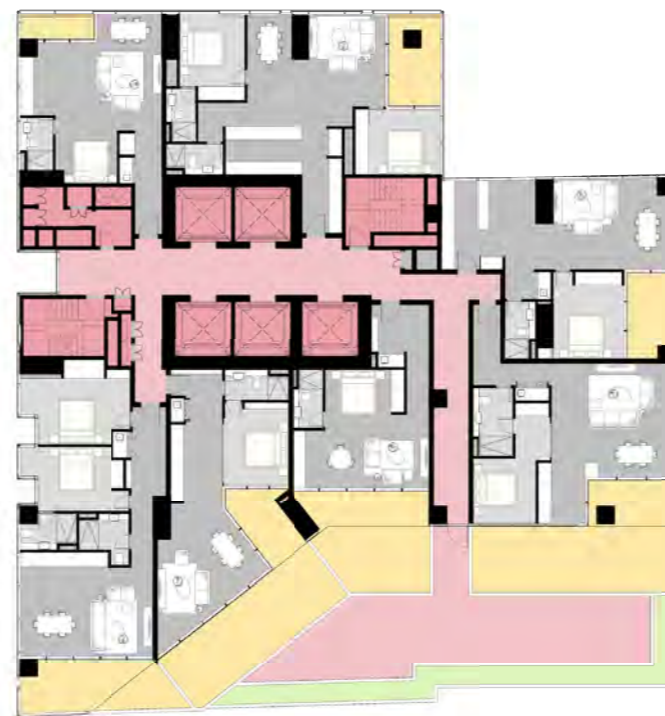
At level 9, over the pool deck level is a sunny landscape deck that is ideal for a quiet, reflective landscape treatment, potentially an oasis.



Level 8



Levels 18-29



Level 9

- END
- TOWER CORE
- TOWER SERVICES
- APARTMENT
- BALCONY

Diagrams 3.20
Levels 8-29 Plans

3.5 Residential Building



Levels 30-32



Level 34



Level 33



Level 35

Diagrams 3.21
Levels 30-35 Plans

3.5 Residential Building

“The amenities constitute over 25 percent of the site area and thus demonstrate potential for compliance with the DCP in terms of private open space available to residents.”

3.5.2 Amenities Levels Landscape

The indicative design shows amenities levels in the building face north and east.

They represent approximately 25 percent of the site area and thus demonstrate potential for compliance with the DCP in terms of private open space available to residents.

They also receive good sun access, particularly at relevant times for resident amenity such as around lunchtime.

Given the height of the facilities, consideration will need to be given to appropriate glazed screening to the spaces and to the types of plantings at each level to ensure comfort, stability and resilience.

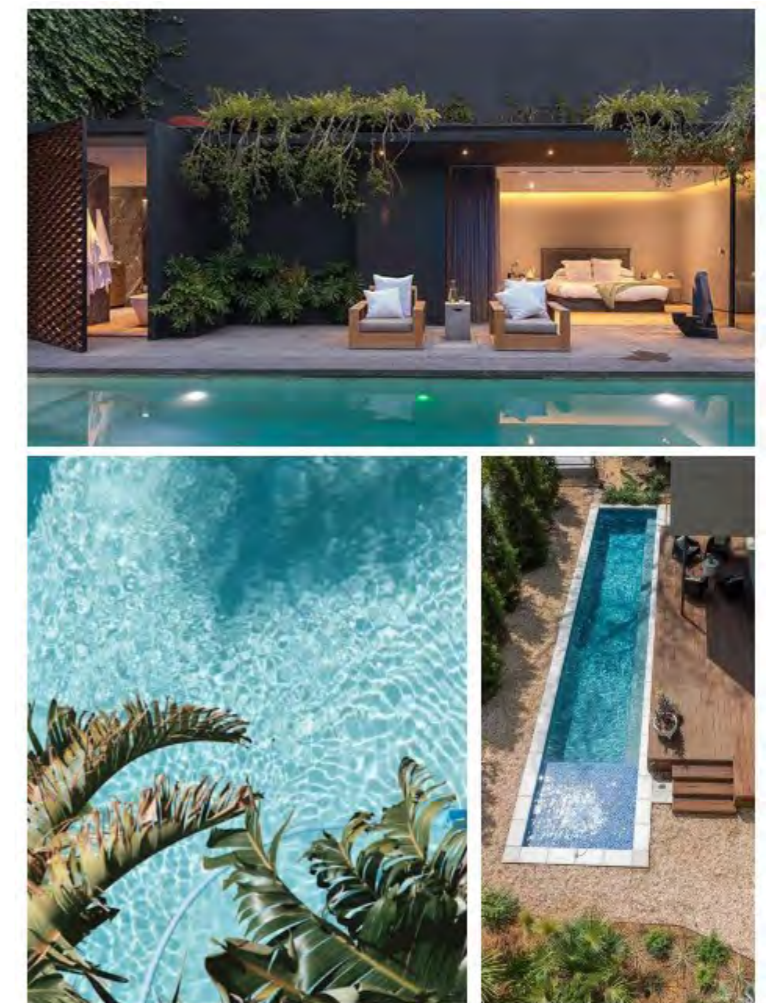


Diagram 3.22
Landscape Plan - Pool/Gym Level 8

3.5 Residential Building



Diagrams 3.23
Landscape Plans - Communal Area Level 9

3.5 Residential Building

“These diagrams illustrate that the floorplates of the indicative design can be fully accommodated within the envelope.”

3.5.3 Typical Floor Plate Mix

The typical floor plate mix diagrams are illustrated below.

These diagrams illustrate that the indicative design, with a floorplate fully within the envelope, can accommodate an apartment mix that is mostly compliant with the DCP.

Apartment Mix

LEVELS	No. of Levels	Studio	1 Bed	2 Bed	3 Bed	Studio	1 Bed	2 Bed	3 Bed	TOTALS
Level 35	1			1	1			1	1	2
Level 34	1				2				2	2
Level 33	1		2	2	1		2	2	1	5
Level 30-32	3	1		2	2	3		6	6	15
Level 18-29	12	1	1	4		12	12	48		72
Level 10-17	8	2	2	3		16	16	24		56
Level 9	1	2	3	2		2	3	2		7
TOTALS	27					33	33	83	10	159
PERCENTAGE of MIX						21%	21%	52%	6%	100%

Sydney DCP 2012 Clause 4.2.3.12 (1) - Permissible Percentages	5-10%	10-30%	40-75%	10-100%
Studio				
1 Bed				
2 Bed				
3 Bed				

Legend

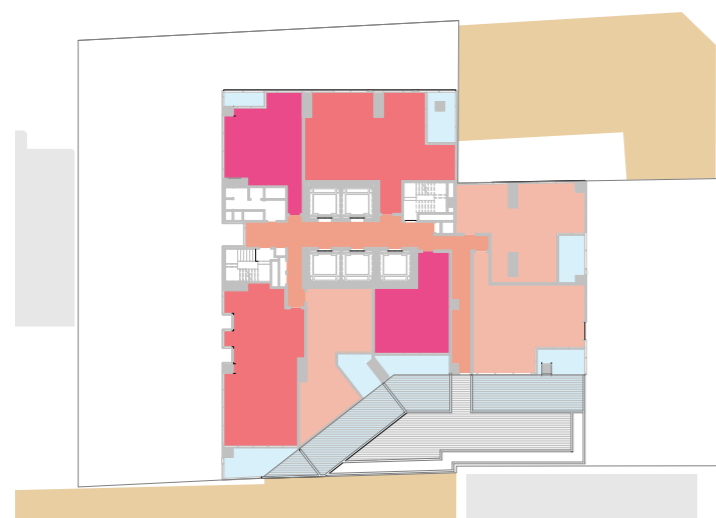
- STUDIO APARTMENT
- 1 BED APARTMENT
- 2 BED APARTMENT
- 3 BED APARTMENT
- PENTHOUSE
- BALCONY
- COMMON ACCESS



Levels 18-29



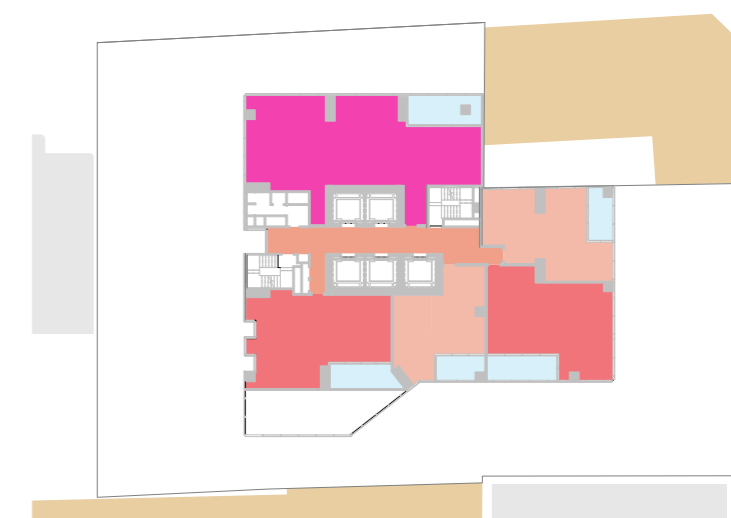
Levels 30-32



Level 9



Levels 10-17



Level 33

Diagrams 3.24
Apartment Mix Diagrams

“The wind-affected balcony configuration has been developed to demonstrate the potential for excellent amenity and a more vertical facade language than is generally associated with residential towers.”

3.5.4 Wind Affected Balconies

The indicative design illustrates an LEP compliant wind-affected balcony arrangement, with some control on ventilation flows through louvres placed at the edges of the balconies. This configuration has been developed in order to demonstrate the potential for excellent amenity and a more vertical facade language than is generally associated with residential towers.

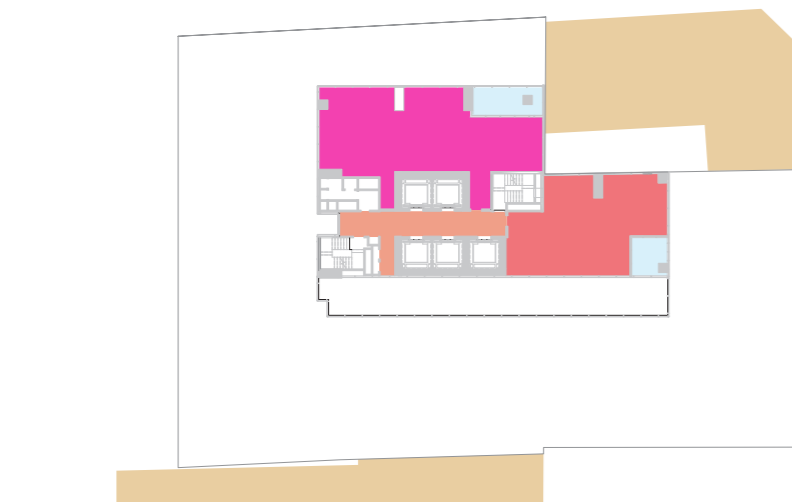
The balcony would consist of sliding glazed doors, clear balustrade glazing to 1.1m high across the full zone when open and a vertical bank of operable louvres.

The arrangement would provide a range of operating modes suitable for different weather conditions.

In closed mode, the permanently open area may require some protection from downdraft (subject to wind tunnel assessment) but, with that risk mitigated, comfort levels could be adjusted with the operable louvres, suitable to induce effective cross flows within the balcony area.

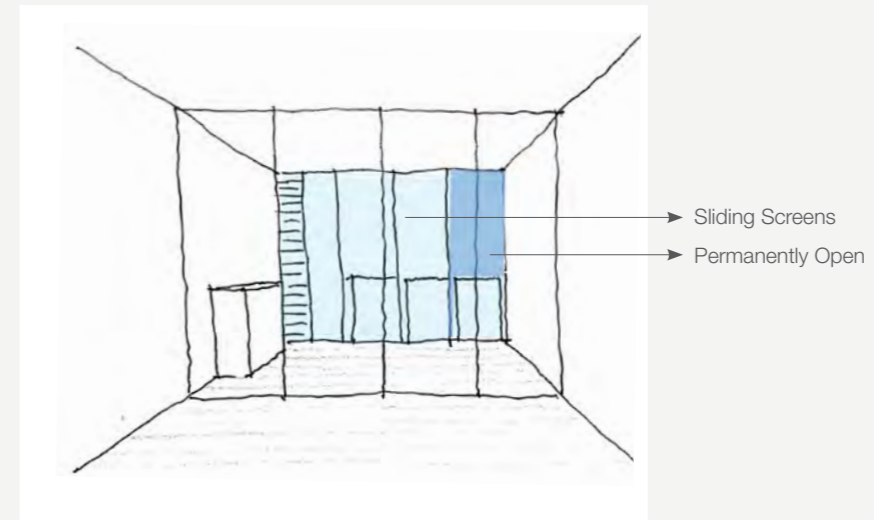


Level 34

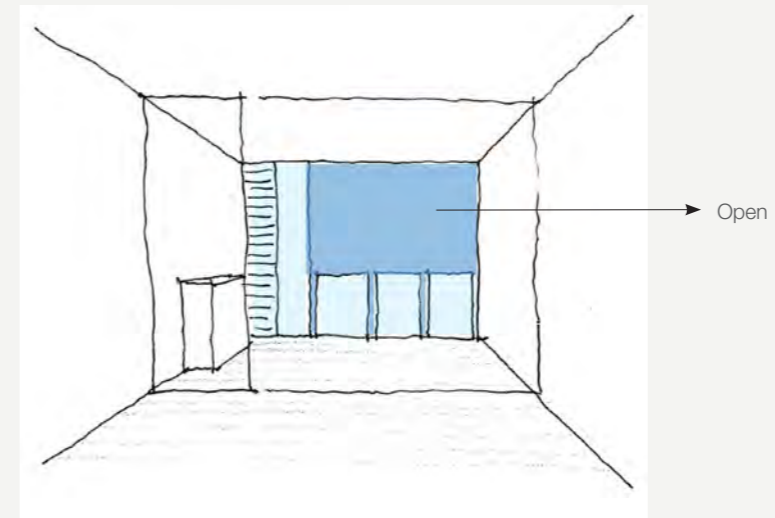


Level 35

Diagrams 3.24 (cont.)
Apartment Mix Diagrams



Partly Closed



Open

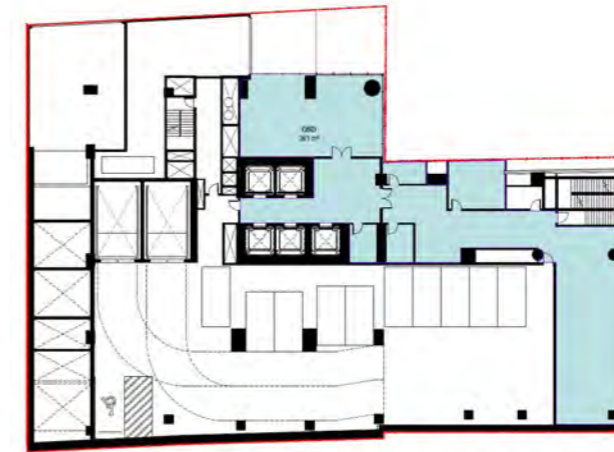
Diagrams 3.25
Wind Affected Balcony Concept - Mode Diagrams

3.6 Residential GFA Summary Schedule and Drawings

“The areas in blue are those subject to this concept proposal representing the dedicated OSD GFA and those in pink are station GFA. The OSD GFA, including station and storage areas (in red), totals 16,840 sqm which equates to a FSR of 9.86:1”

Summary of GFA						
LEVEL	Floor Name	Total GFA	Station	OSD Storage	Typical Floors GFA per Floor	Stage 1 DA Application GFA OSD
L-3	Basement 3	224	224			
L-1	Basement 1 Mezzanine	105	105			
L0	Ground Lobby / Loading	453	305			148
L3	Bicycle Storage	233		233		
L4	Virtual Office	365				365
L7	Resident Storage	691		691		
L8	Pool / Gym / Plant	405				405
L9	Apartments	546			546	546
L10-17	Apartments	4,368			546	4,368
L18-29	Apartments	6,624			552	6,624
L30-32	Apartments	1,644			548	1,644
L33	Apartments	486			486	486
L34	Apartments	399			399	399
L35	Apartments	297			297	297
TOTALS		16,840	634	924		15,282

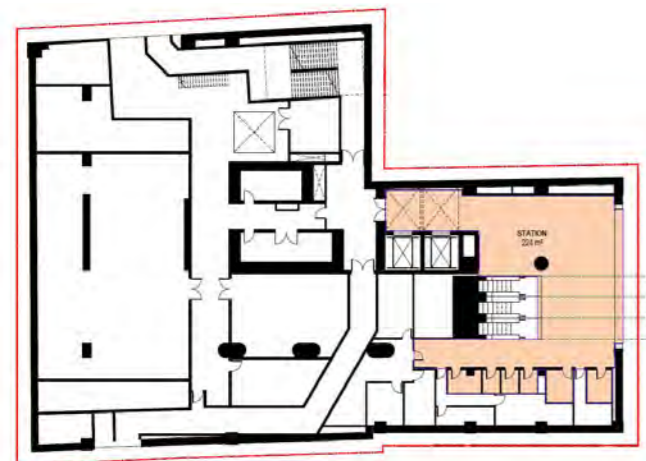
Overall FSR 9.86 :1 Stage 1 DA Application FSR 8.95 :1



Level 4



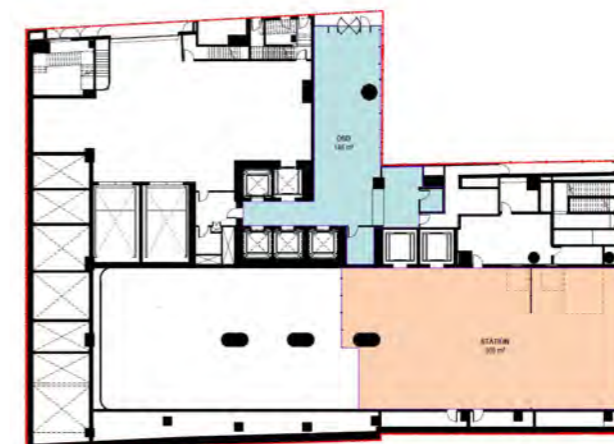
Level 3



Basement 3



Basement 1

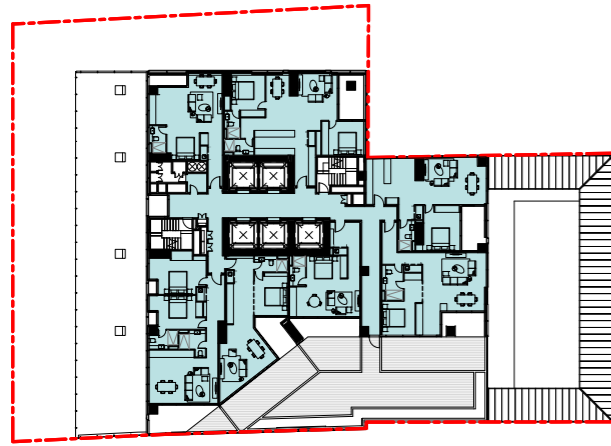


Ground

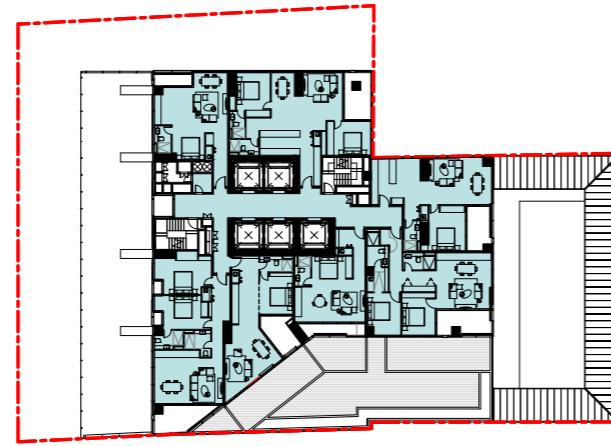
LEGEND
 OSD GROSS FLOOR AREA
 STATION GROSS FLOOR AREA

Diagrams 3.26
Indicative GFA Plan Diagrams

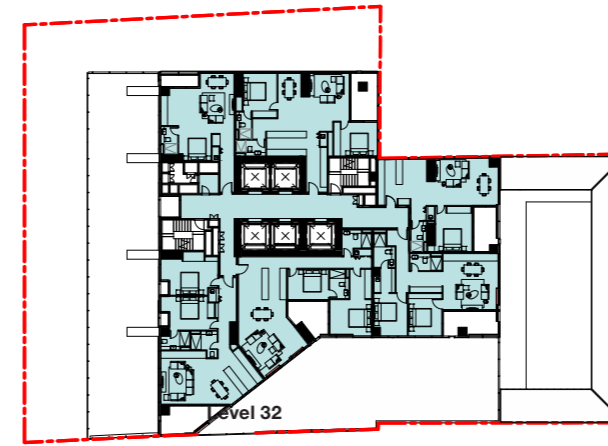
3.6 Residential GFA Summary Schedule and Drawings



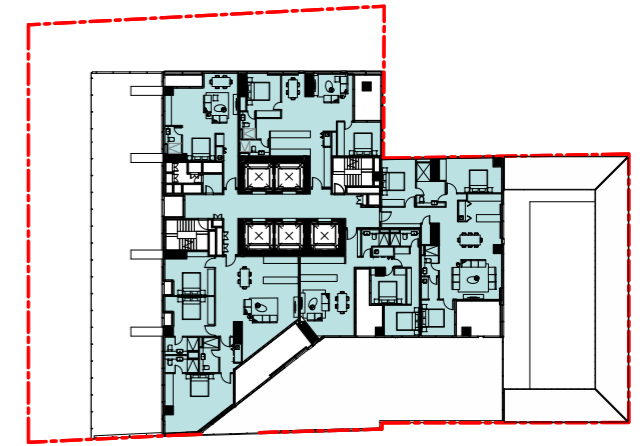
Level 9



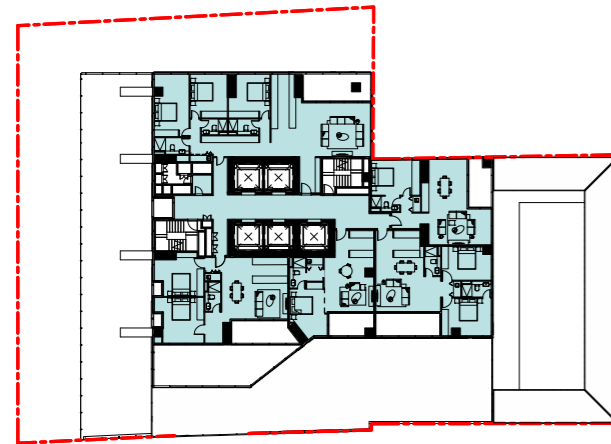
Levels 10-17



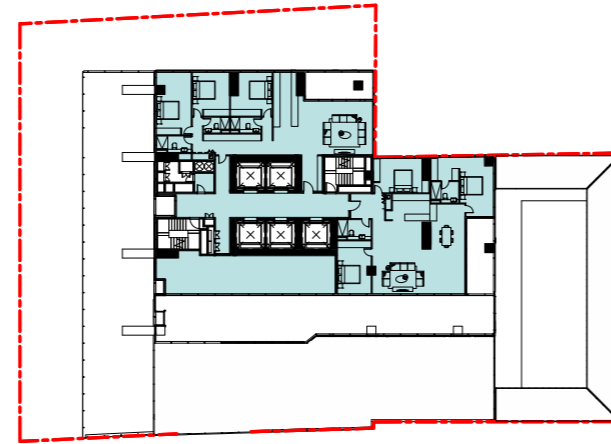
Levels 18-29



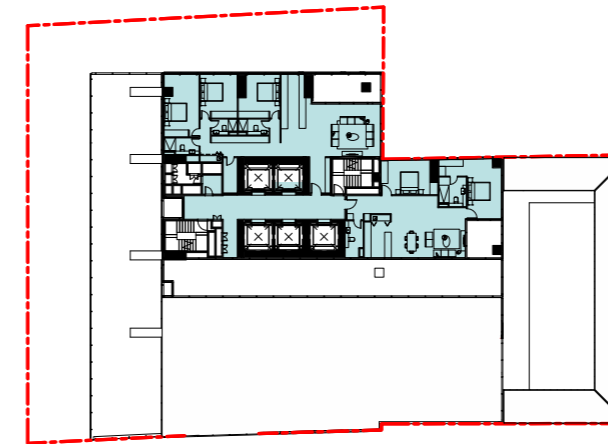
Levels 30-32



Level 33



Level 34



Level 35

3.7 Commercial Option

“Given the additional GFA available within the envelope for a high amenity commercial plate as identified in the Strategic Land Use Analysis Report, preliminary interrogation of a commercial option has been undertaken. This study explores a full utilisation of the envelope for commercial use which provides a high amenity floor plate as illustrated. The study also identified the need for a sky lobby strategy with shuttle lifts from ground floor to a sky lobby and plant at Level 7 where the main lift core would commence.”

3.7.1 Entry Lobby

Separated by its location on a different street front and the buffering effect of Edinburgh Castle Hotel on the corner, the entrance to the OSD lobby is setback from the boundary and well separated from the busy commuter-focused entrance to the Station on Bathurst Street.

Due to site dimensional constraints, space is at a premium at ground level, with many practical functions (eg fire escapes, maintenance and dedicated access for utilities and emergency services, vehicle access) vying for space on the street frontage.

Creating a set of shuttle lifts has allowed for a lobby which is grand and spacious, and an integrated built form concept centred on the ‘entry as laneway’ strategy that emerges from responding to the urban grain. The glazed roof adds to the spatial extension.

3.7.2 Vehicle Entry / Loading Bays

The ground floor loading dock accommodates two small rigid vehicle (SRV) and 3 courier vehicles and allows driving forward both in and out of the loading area as required by Council, and sufficient clearance on the turntable for a Council garbage collection vehicle. Truck/Car lifts provide access to upper level loading and car parking areas.

A jockey space is also provided for OSD parking to facilitate prevention of queuing on the street waiting for the car lift service. The loading area will be under the supervision of the loading dock manager (located either at Ground Level or Level 2, who will also control car access and egress.

3.7.3 Building Manager

A building manager’s office is shown adjacent to the entry lobby with easy connection to the tower lifts. This can also be the security centre for the OSD.

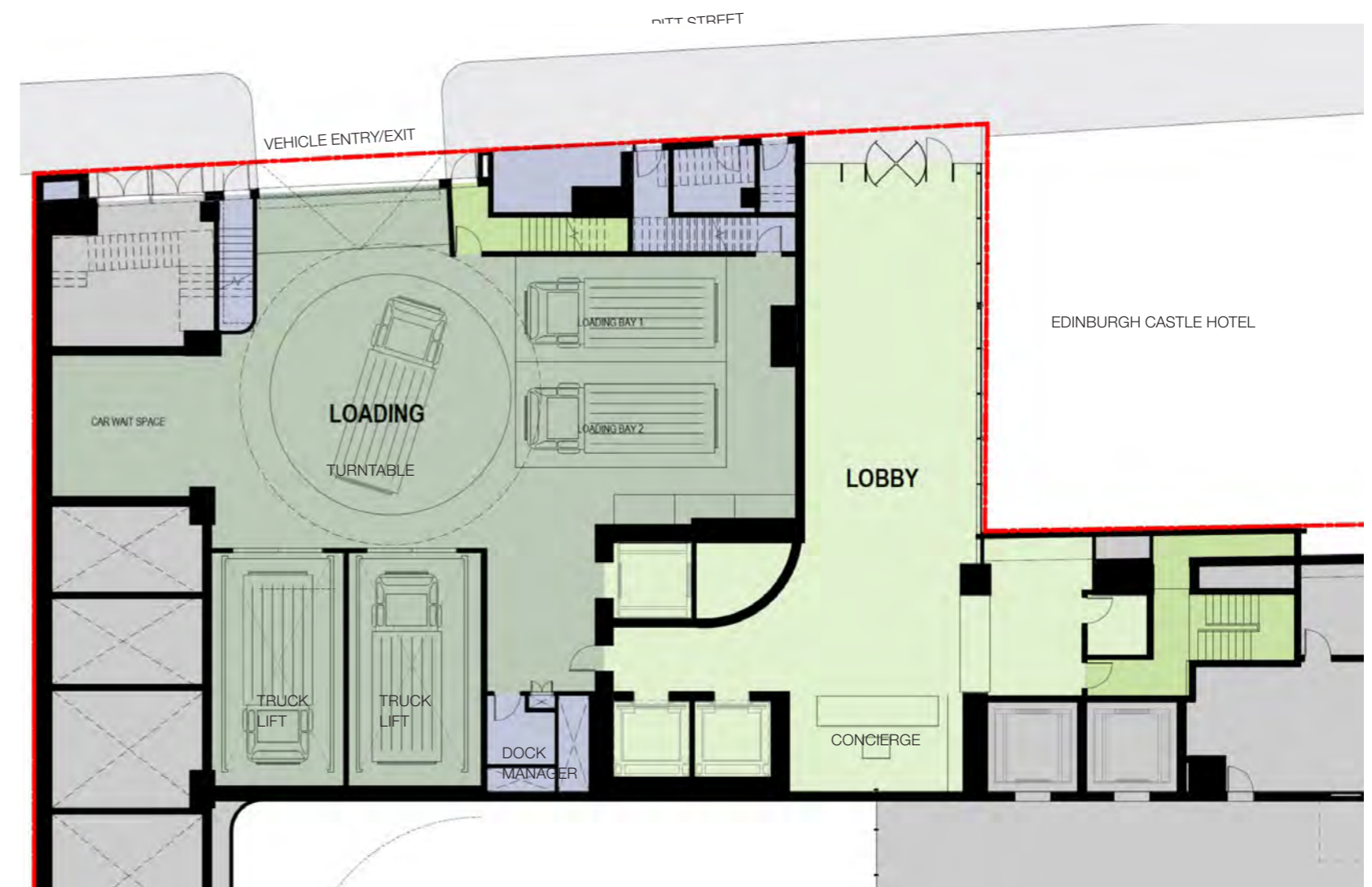
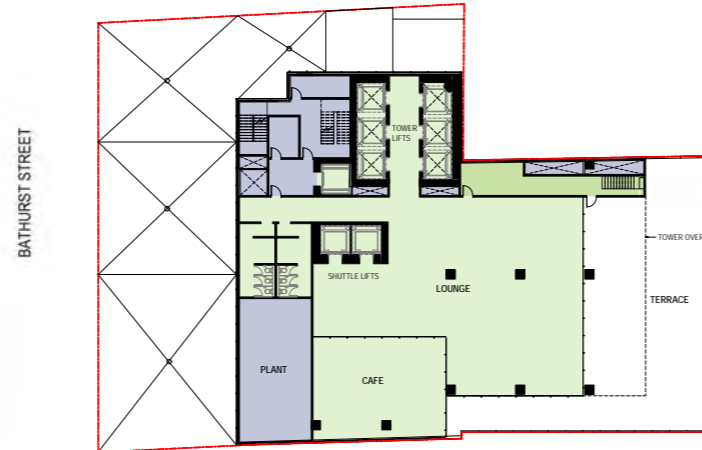


Diagram 3.27
Ground Plane Plan

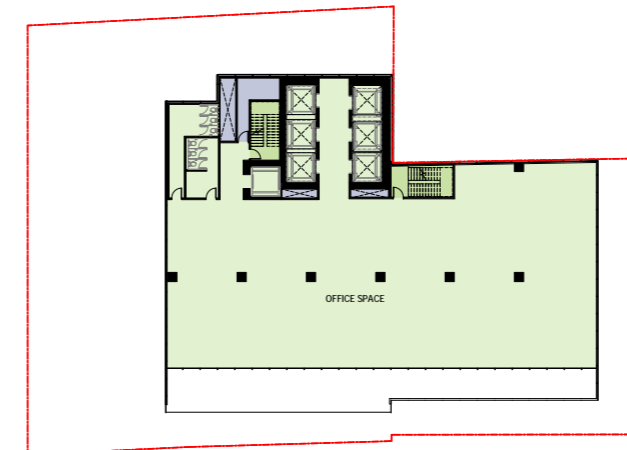
3.7 Commercial Option



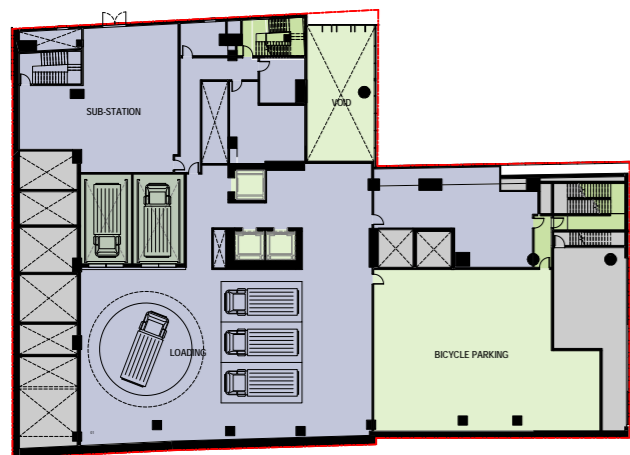
Ground Floor



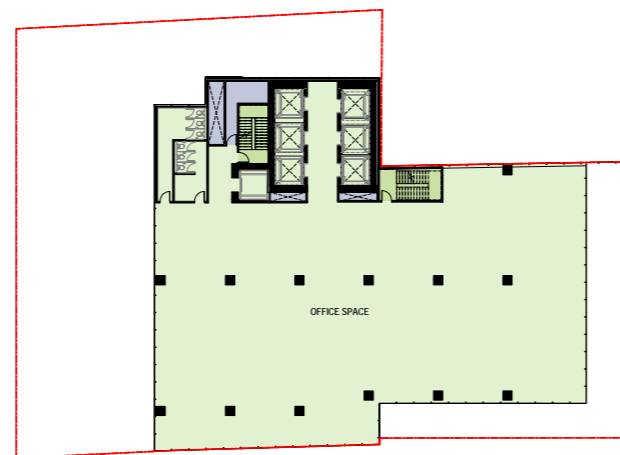
Level 7



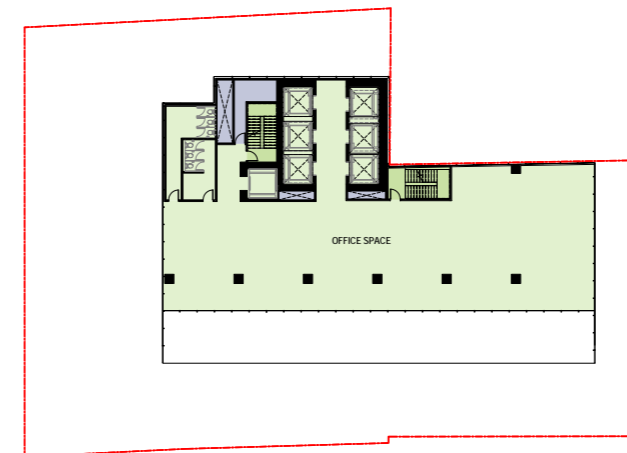
Level 29



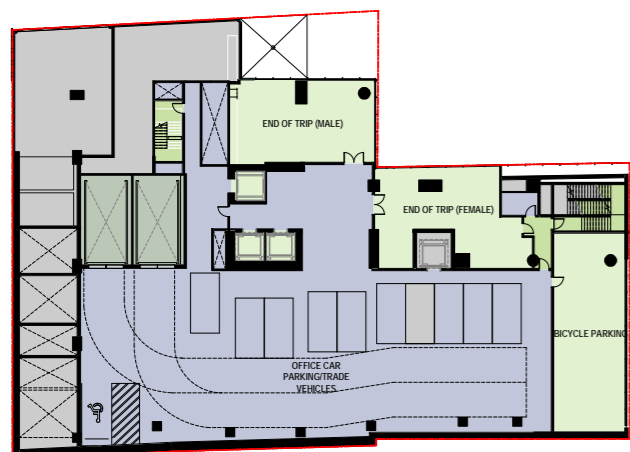
Level 2



Levels 8-28



Level 30



Level 4

Room Department Legend

- OSD
- OSD BOH
- OSD Egress
- OSD Shared & Station
- STATION SERVICES
- Station Services

3.7.4 End of Trip Facilities

A key element of the environmental strategy underpinning the commercial scheme is the potential for the provision of an excellent end of trip facilities on Level 4 for staff and visitor use.

3.7.5 Bicycle Storage

Storage for up to 175 bicycle spaces can be provided on Levels 2 and 4 for staff and visitors.

3.7.6 Car Parking

A minimum of 11 parking bays can be provided on Level 4. Access to this floor would be provided via a two truck/car lifts which will provide a high level of service in terms of speed and frequency given the relatively low number of parking bays. Some car bays can be allocated for trade vehicles if required, given the 3.5m floor to floor height provision.

3.7.7 Waste Management

The loading bay and waste room can be suitable for Council garbage collection services (see Waste Management Report).

3.7.8 Upper Loading Bay Level 2

The provision of two vehicle lifts capable of handling SRVs allows location of the main loading area to be up at Level 2. A turntable allows forward in and out as required by Council.

3.7.9 Sky Lobby

The provision of two shuttle lifts to Level 7 allows transfer to the upper levels lifts at that level, with an adjacent cafe, lounge and outdoor terrace provided as convenient tenant amenities. The shuttle lift strategy also allows relocation of the office floor core to the side providing better typical floor commercial space.

3.7.10 Typical Office Floors

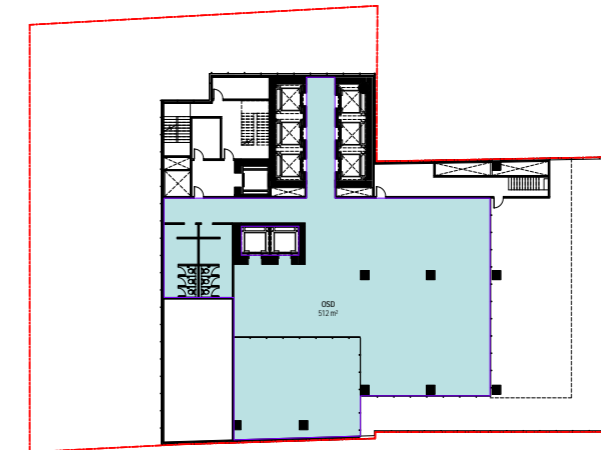
Filling the full envelope, a reasonably large open floorplate with an eastern orientation becomes available with the lift core on the western side.

Diagrams 3.28
Podium Plans

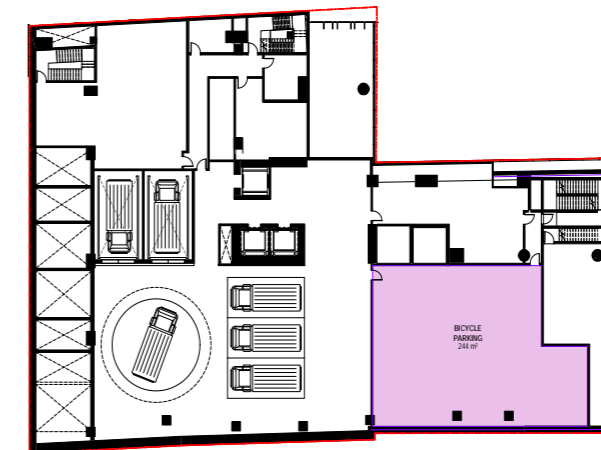
3.8 Commercial GFA Summary Schedule and Drawings

“The areas in blue/green are those subject to this concept proposal representing the dedicated Commercial GFA and those in pink are station GFA. The alternative Commercial Option GFA totals 20,606 sqm which equates to a FSR of 12.06:1”

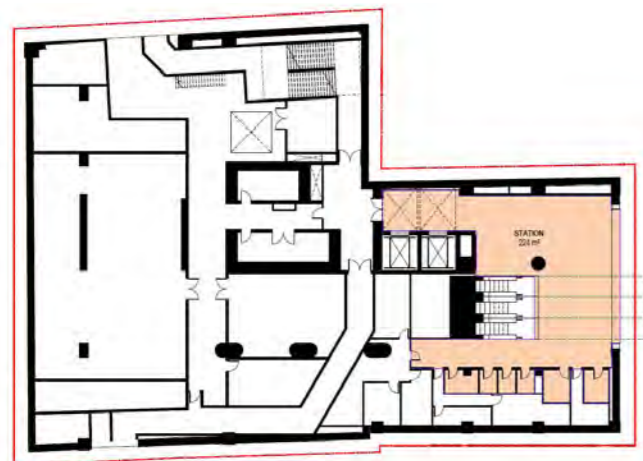
INDICATIVE DESIGN - COMMERCIAL GROSS FLOOR AREA (GFA) SUMMARY SCHEDULE						
Level	Floor Name	Floor Height	GFA Station	GFA Car/Bicycle	TYPICAL FLOOR GFA	STAGE 1 DA APPLICATION GFA
-3	Station Platform		224			
-1	Basement 1 Mezzanine		105			
0	Ground Lobby/Loading	5	305			162
1	Waste/Plant	4				
2	Loading/Bicycle Storage	6.5		244		
3	NOT USED					
4	End of Trip/Bicycle/Car Park	3.5		11 cars	697	184
5	Metro Plant	7				
6	Metro Plant	7				
7	Sky Lobby	9				512
8	Office	4			813	17073
29	Office	4				646
30	Office	4				454
TOTALS			634	941		19031
Station			634			
Car Parking/Bicycle Storage				941		
TOTAL FINAL DESIGN GFA (including car parking)			12.06 :1			20606



Level 7



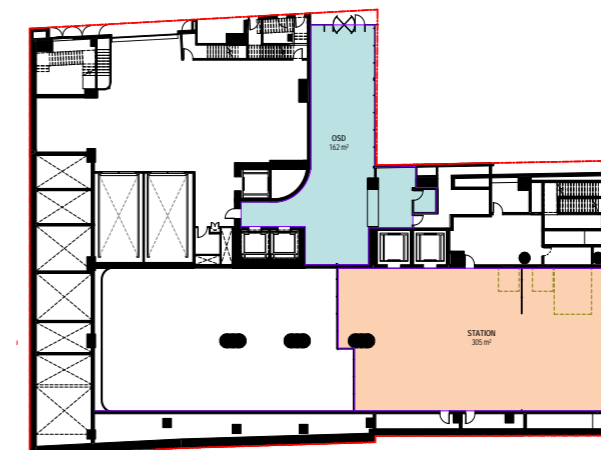
Level 2



Basement 3



Basement 1

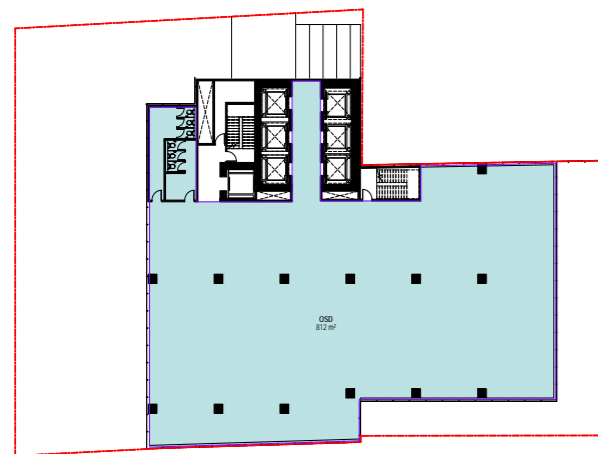


Ground

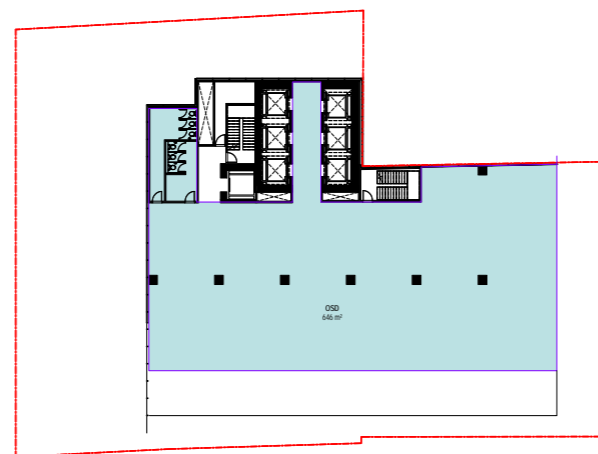
- LEGEND**
- OSD GROSS FLOOR AREA
 - STATION GROSS FLOOR AREA
 - BICYCLE PARKING
 - NETT AREA

Diagrams 3.29
Indicative GFA Plan Diagrams

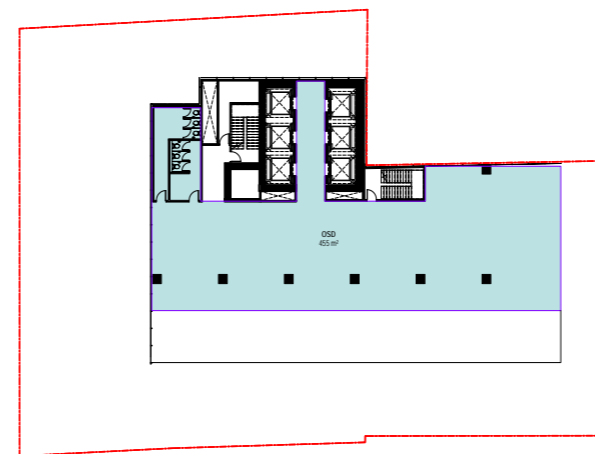
3.8 Commercial GFA Summary Schedule and Drawings



Levels 8-28

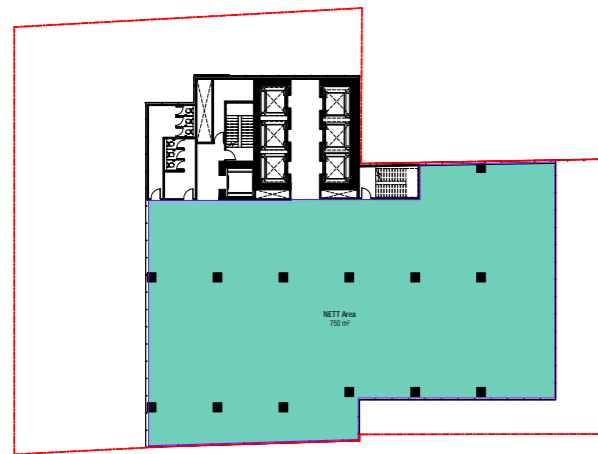


Level 29

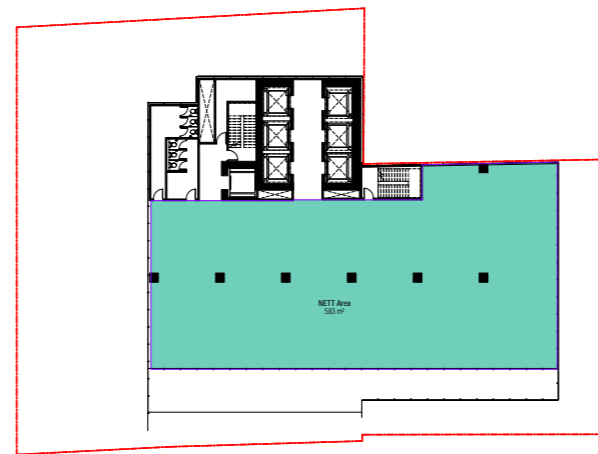


Level 30

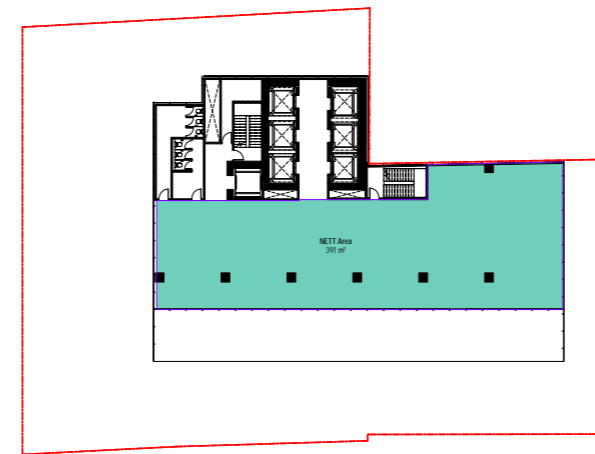
The Commercial Option plans indicate the potential for a typical floor nett area of approximately 751sqm and a total nett area of 16,746sqm



Levels 8-28



Level 29



Level 30

3.9 Indicative Signage

“The urban context surrounding 300 Pitt Street is rich and varied in height plane and texture. The indicative design responds to this strategically, presenting the podium that responds to and builds on the character and scale of its neighbours whilst integrating a building form over the podium in such a way that its facade can be seen to flow towards the entry on Pitt Street.”

3.9.1 Podium Pitt Street Entry

While the tower has the potential to flow seamlessly to the entry lobby, the entry frontage is a relatively narrow slot in the streetscape, particularly given the constraints at the ground plane. This applies for both residential and commercial uses.

In order to bring some visual prominence to the entry in the streetscape and to assist in wayfinding, a 1.5m wide signage zone is proposed over the footpath directly outside the entry at the northern edge of the higher podium form.

This placement will significantly enhance visibility of the entry from both northern and southern approaches in Pitt Street.

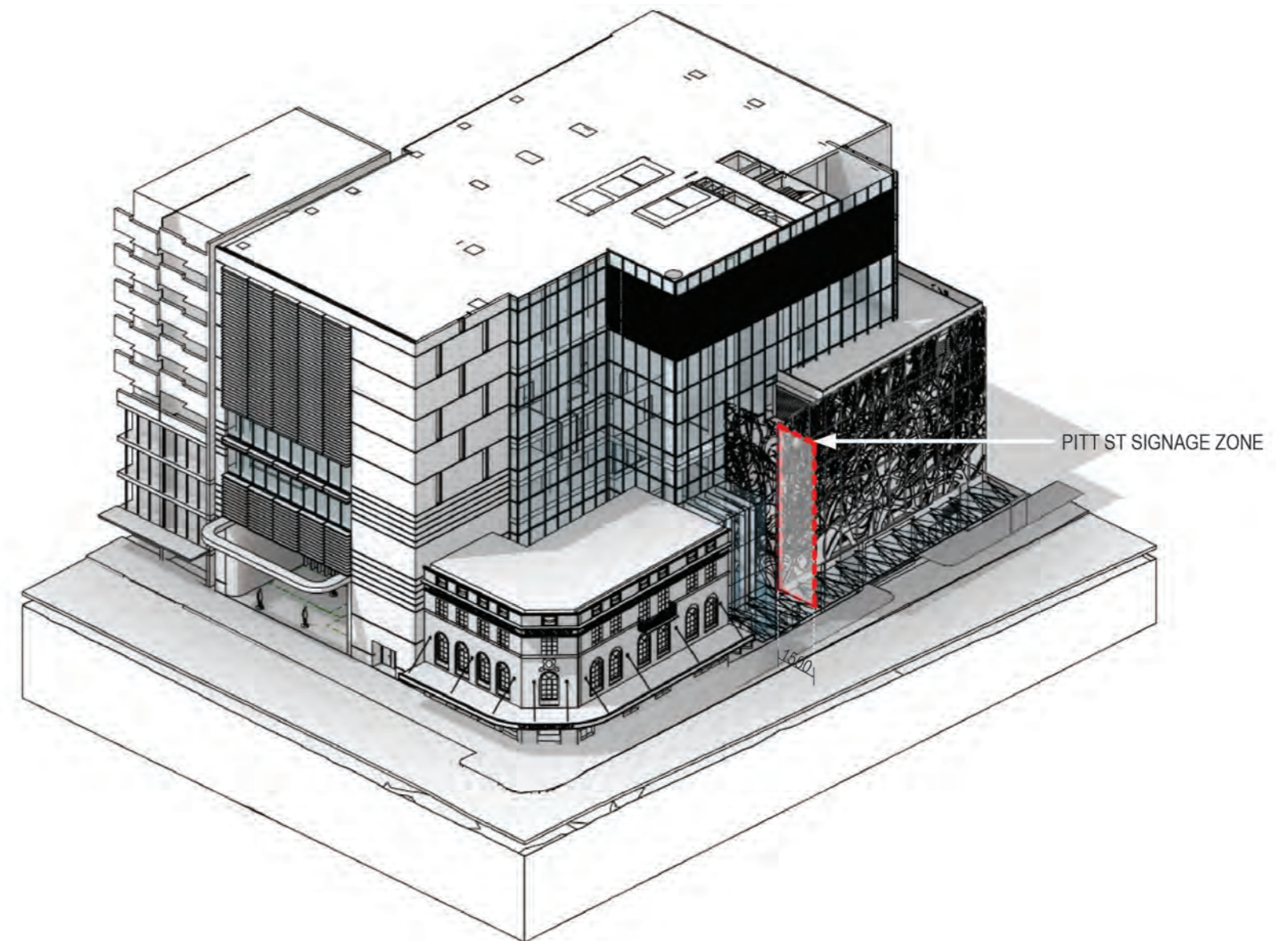


Diagram 3.30
Pitt Street Indicative Signage Zone

3.9 Indicative Signage

“The indicative skyline signage can positively contribute to the urban grain and assist in wayfinding”

3.9.2 Indicative Skyline Signage

Above the podium, there is a very uneven mixture of fine and coarse building shapes, materiality and elements forming the backdrop to the city skyline.

There is however an opportunity for prominent and broadly visible building signage in the upper levels of the building. Given that this is possibly more relevant for commercial use than residential, the visual representation of Built Form Option 3 envelope corresponding to the proposed commercial concept option (see Section 4.3.2 below) has been used as the base for the illustrations. The opportunity is however relevant to other non-residential uses.

The red zones illustrated in Diagrams 3.31-3.33 represent zones within the proposed envelope which will have high visibility from important locations to the east, north (Pitt Street) and west (Bathurst Street).

The indicative skyline signage can positively contribute to the urban grain and assist in wayfinding similar to the existing Telstra and Meriton signage markers as viewed from the East.

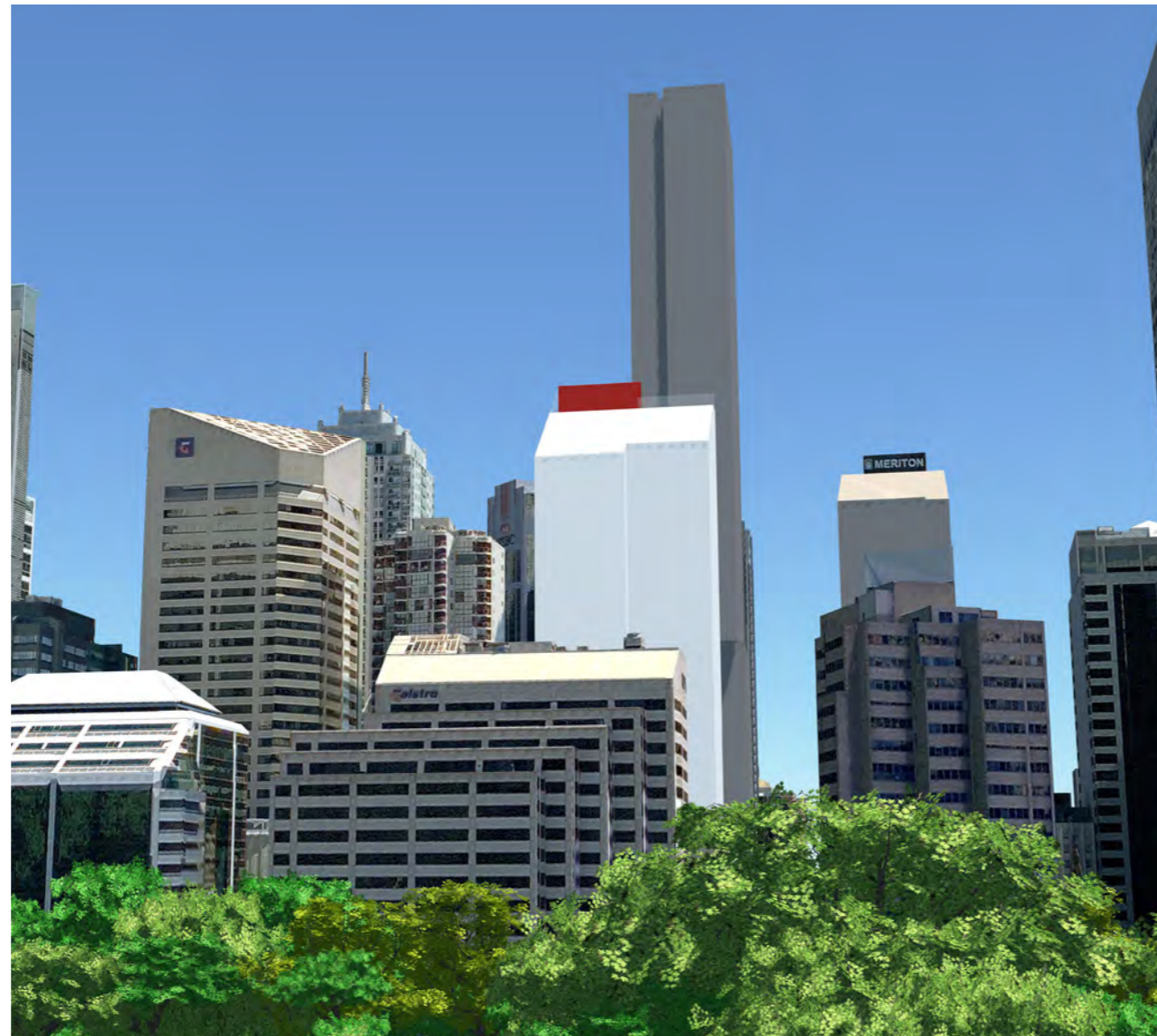


Diagram 3.31
Indicative Skyline Signage Zone - Eastern View

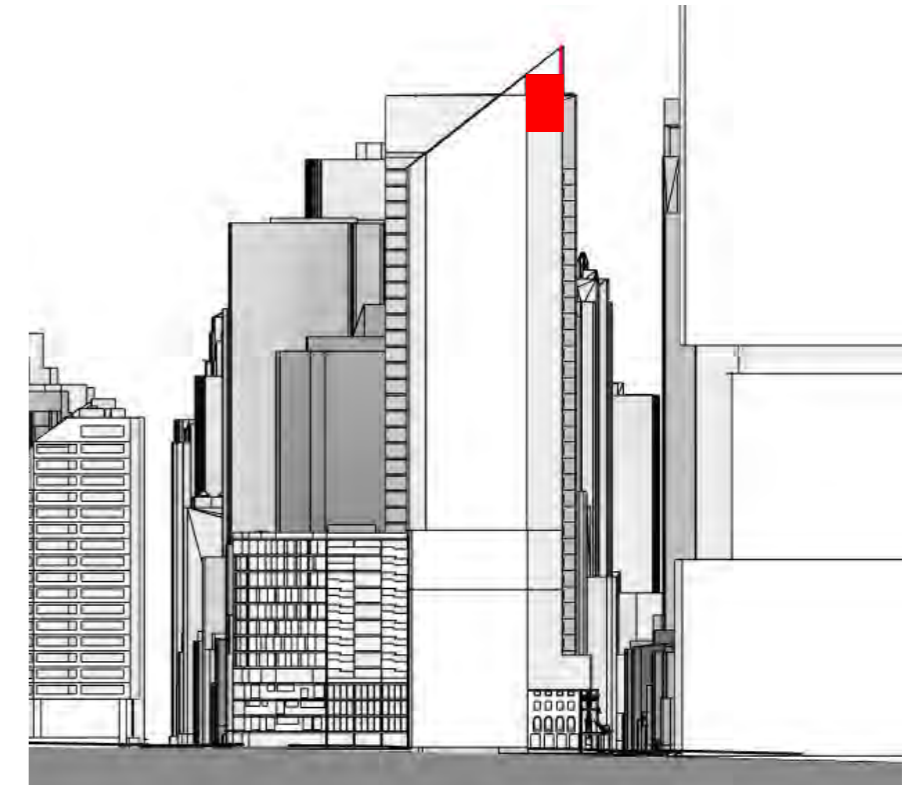


Diagram 3.32
Indicative Skyline Signage Zone - North Elevation

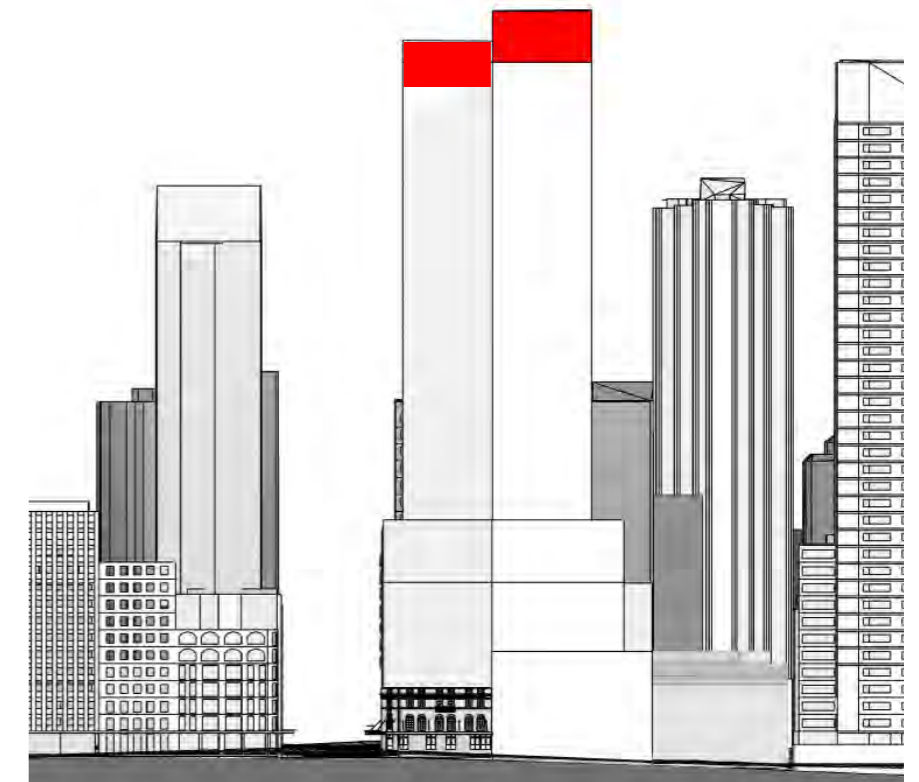


Diagram 3.33
Indicative Skyline Signage Zone - West Elevation

04





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04

Appendices
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4.1 SEPP 65 and ADG Compliance

The concept proposal demonstrates compliance with the ADGs and the provision of a high level of amenity for residents.

Introduction

The indicative design for the residential scheme has been reviewed for compliance with key SEPP 65 Apartment Design Guidelines in order to validate the suitability of the use to the envelope.

Listed below are the key ADG sections that require consideration for high rise residential apartment planning;

- Visual Privacy
- Solar and daylight analysis
- Natural Ventilation
- Ceiling heights
- Apartment size and layout
- Private open space and balconies
- Communal Open Space
- Common circulation and spaces
- Storage

Visual Privacy

Objective 3F-1. Adequate building separation distances are to be shared equitably between neighbouring sites, to achieve reasonable levels of external and internal visual privacy.

Design Criteria

1. Separation between windows and balconies is provided to ensure visual privacy is achieved. Minimum required separation distances from buildings to the side and rear boundaries are as follows:

Building height	Habitable rooms and balconies	Non-habitable rooms
Up to 12m (4 storeys)	6m	3m
Up to 25m (5-8 storeys)	9m	4.5m
Over 25m (9+ storeys)	12m	6m

The indicative design achieves a 12m separation to the southern boundary, albeit the adjacent building does not comply. The indicative design demonstrates that habitable rooms on the southern façade can be designed to prevent overlooking of the existing adjacent building on levels 9-30. Separation from other buildings fully complies.

- CAN PROVIDE HIGH LEVEL OF COMPLIANCE

Solar Access

The Apartment Design Guide 2015, Part 4A-1, stipulates the minimum amount of sunlight that should be received in habitable rooms and private open space.

The minimum amount of light acceptable to be included in calculations is 1sq.m of direct sunlight, measured at 1m above floor level, for a minimum of 15 minutes. The calculation needs to be made with the building in the correct global location and orientation, but also within its known surrounding context – topological and built-form.

In the calculations below and accompanying Diagrams 4.02, the Pitt Street South OSD Indicative Design has been correctly oriented and located within the current built form surrounding the site (using data from the City of Sydney Model) as well as completed versions of any significant nearby buildings under construction or planning approved. Diagrams 4.01 and 4.02 demonstrate the periods within which apartments, including living areas, receive a minimum of 2 hours of direct sunlight in Mid Winter – 21st June. Diagrams 4.02 also provide valuable information for the subsequent detailed design with respect to areas where some design adjustments can further improve performance.

Objective 4A-1

Design Criteria (dense urban context)	Demonstrated Performance
Living rooms and private open spaces of at least 70% of apartments in a building receive a minimum of 2 hours direct sunlight between 9 am and 3 pm at mid winter in the Sydney Metropolitan Area and in the Newcastle and Wollongong local government area.	Approximately 74% of apartments received 2 hours or more of direct sunlight. Indicative Design achieves the requirement (Refer Diagrams 4.01 and 4.02)
A maximum of 15% of apartments in a building receive no direct sunlight between 9 am and 3 pm at mid winter	Approximately 11% of apartments receive no direct sunlight Indicative Design achieves the requirement

- COMPLIES

Natural ventilation

Objective 4B-3. The number of apartments with natural cross ventilation is maximised to create a comfortable indoor environment for residents.

Design Criteria

1. At least 71% of apartments are naturally cross ventilated in the first nine storeys of the building. Apartments at ten storeys or greater are deemed to be cross ventilated only if any enclosure of the balconies at these levels allow adequate natural ventilation and cannot be fully enclosed

The indicative design demonstrates that, as there are only 35 of 159 apartments not cross ventilated (>77% compliance), this standard will be satisfied. The permanently open wind affected balcony concept meets the non-enclosure criterion.

- COMPLIES

Ceiling heights

Objective 4C-1. Ceiling height achieve sufficient natural ventilation and daylight access.

Design Criteria

1. Measured from finishes floor level to finishes ceiling level, minimum ceiling heights are:

Habitable rooms	2.7m
Non-habitable	2.4m
For 2 storey apartments	2.7m for main living area floor, 2.4m for second floor, where its area does not exceed 50% of the apartment area
Attic spaces	1.8m at edge of room with a 30-degree minimum ceiling slope
If located in mixed used areas	3.3m for ground and first floor to promote future flexibility of use

Ceiling heights can be between 2.7 and 2.8m in all habitable rooms - COMPLIES

Apartment size and layout

Objective 4D-1. The layout of rooms within an apartment is functional, well organised and provides a high standard of amenity.

Design Criteria

1. Apartments are required to have the following minimum internal areas:

Apartment type	Minimum internal area
Studio	35m ²
1 bedroom	50m ²
2 bedroom	70m ²
3 bedroom	90m ²

The minimum internal areas include only one bathroom. Additional bathrooms increase the minimum internal area by 5m² each.

4.1 SEPP 65 and ADG Compliance

The indicative design achieves the minimum internal areas, refer schedule below.

Apartment Type	Description	Internal Area (m ²)	SEPP 65 Required Minimum
A	Studio	47	35
B	2 bed/2 bath	83	75
C	1 bed /1 bath	64	50
D	1 bed/1 bath	62	50
E	Studio	41	35
F	1 bed/1 bath	54	50
G	2 bed /2 bath	78	75
H	2 bed/2 bath	75	75
I	2 bed/2 bath	92	75
J	2 bed/2 bath	88	75
K	3 bed /2 bath	118	95
L	2 bed/ 2 bath	76	75
M	3 bed/ 3 bath	134	100
N	3 bed /3 bath	135	100
O	1 bed/ 1 bath	59	50
P	2 bed /2 bath	75	75
Q	1 bed /1 bath	50	50
R	2 bed /1 bath	76	70
S	3 Bed/2 bath	133	95
T	2 Bed /2 bath	98	75

Every habitable room must have a window in an external wall with a total minimum glass area of not less than 10% of the floor area of the room. Daylight and air may not be borrowed from other rooms. - COMPLIES -

Objective 4D-2. Environmental performance of the apartment is maximised.

Design Criteria

- Habitable room depths are limited to a maximum of 2.5 x the ceiling height.
- In open plan layouts (where the living, dining and kitchen are combined) the maximum habitable room depth is 8m from a window. - COMPLIES

Objective 4D-3. Apartment layouts are designed to accommodate a variety of household activities and needs.

Design Criteria

- Master bedrooms have a minimum area of 10m² and other bedrooms 9m² (excluding wardrobe space).
- Bedrooms have a minimum dimension of 3m (excluding wardrobe space).
- Living rooms or combined living/dining rooms have a minimum width of:
 - 3.6m for studio and 1 bedroom apartments
 - 4m for 2 and 3 bedroom apartments
- The width of cross-over or cross-through apartments are at least 4m internally to avoid deep narrow apartment layouts.

The indicative design test layouts demonstrate more than adequate opportunity to meet this objective.

- COMPLIES

Private open space and balconies

Objective 4E-1. Apartments provide appropriately sized private open space and balconies to enhance residential amenity.

Design Criteria

- Apartments are required to have primary balconies as follows:

Dwelling type	Minimum area	Minimum depth
Studio apartments	4m ²	-
1 bedroom apartments	8m ²	2m
2 bedroom apartments	10m ²	2m
3 bedroom apartments	12m ²	2.4m

The minimum balcony depth to be counted as contributing to the balcony area is 1m.

The indicative design illustrates a small number of apartments (<10%) where introduction of a balcony would interrupt excellent spatial and outlook amenity. This can be appropriate with the adoption of a Juliet balcony version of the wind affected balcony strategy in order to effectively make the entire living/dining room a balcony in these apartments. This would also enhance sun access to the living areas of southwest one bedroom apartments above level 32.

This is in full compliance with the City of Sydney DCP 2012 Clause 4.2.3.7 Private Open Space and Balconies which allows up to 25% of apartments to include Juliet balconies or floor to ceiling glazing in lieu of balconies.

- COMPLIES

Communal Open Space

Objective 3D-1. An adequate area of communal open space is provided to enhance residential amenity and to provide opportunities for landscaping

Design criteria

- Communal open space has a minimum area equal to 25% of the site
- Developments achieve a minimum of 50% direct sunlight to the principal usable part of the communal open space for a minimum of 2 hours between 9 am and 3 pm on 21 June (mid winter)

While the lower communal open space levels receive just over an hour of sun in mid-winter between 9am and 3pm, that sun access is obtained between 1.30 and 2.45pm approximately which is an ideal time for communal enjoyment of those areas.

In the spring, autumn and summer months, the pool deck and level 9 quiet garden will receive excellent sun access during the middle of the day.

LIMITED COMPLIANCE - GENERALLY HIGH AMENITY

Common circulation and spaces

Objective 4F-1. Common circulation spaces achieve good amenity and properly service the number of apartments.

Design Criteria

- The maximum number of apartments off a circulation core on a single level is eight. - COMPLIES
- For buildings of 10 storeys and over, the maximum number of apartments sharing a single lift is 40. - COMPLIES - (Luxury service target).

The indicative design has five lifts which can be accessed from each residential level and the lobbies provide visual access to external light (and views at the upper levels) from the lift lobbies in the Tower, providing the required level of amenity and orientation.

Level	Apartments per Floor
9	7
10 - 17	7
18-29	6
30-32	5
33	5
34	2
35	2

Storage

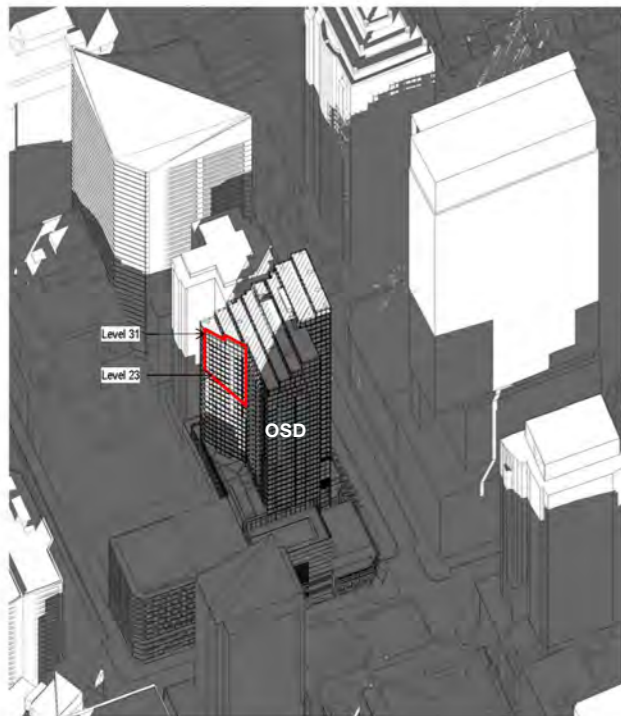
Objective 4G-1. Adequate, well designed storage is provided in each apartment.

Design Criteria

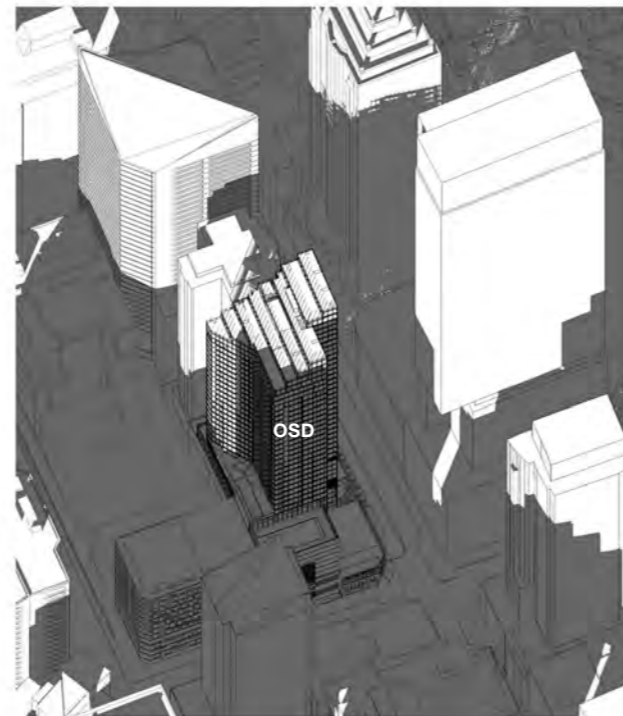
- In addition to storage in kitchens, bathrooms and bedrooms, the following storage is provided: Dwelling type Storage size volume:
 - Studio apartments 4m³
 - 1 bedroom apartments 6m³
 - 2 bedroom apartments 8m³
 - 3+ bedroom apartments 10m³

At least 50% of the required storage is to be located within the apartment. The indicative design test layouts demonstrate more than adequate opportunity to meet this objective. There is also very convenient access to further resident storage on Level 7, capable of providing up to 50% of the storage requirement.

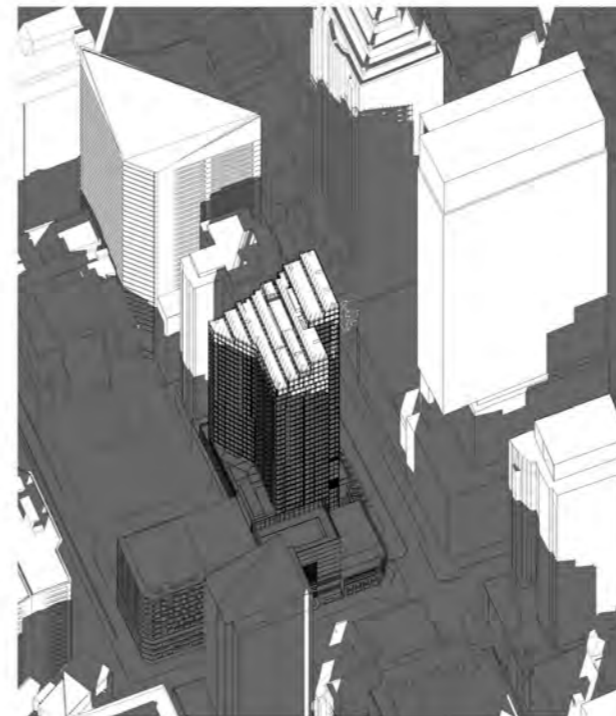
- CAN COMPLY



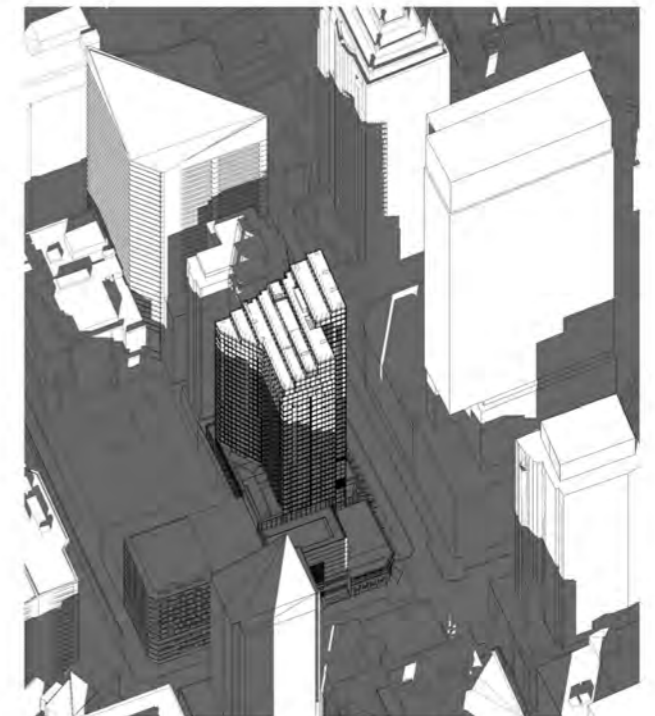
1 Facade shadow - 21st June 8.00am



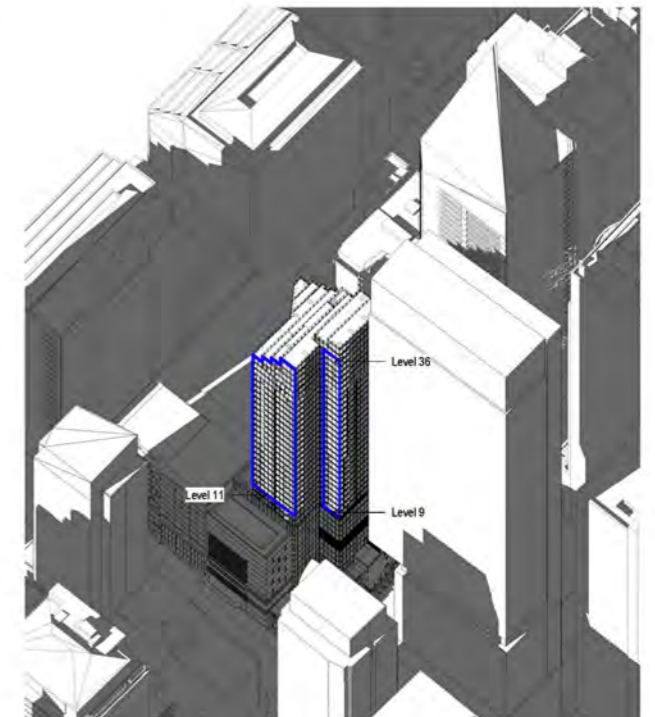
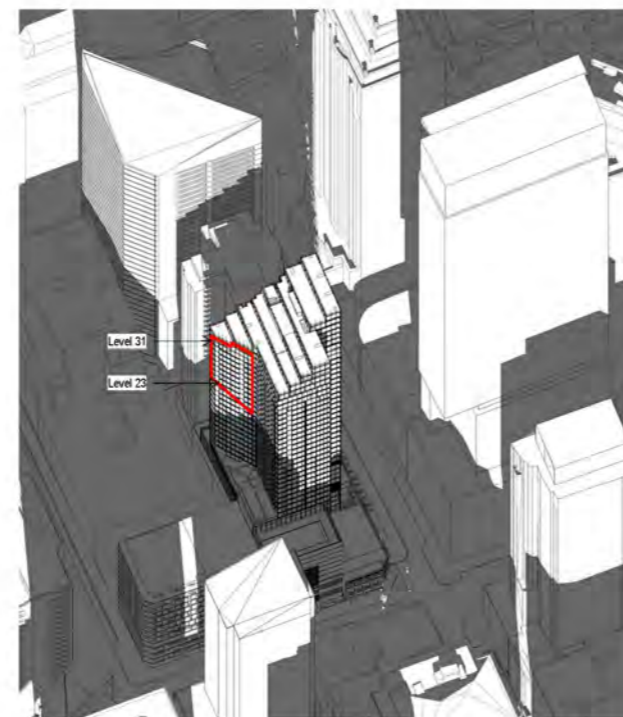
3 Facade shadow - 21st June 8.30am



2 Facade shadow - 21st June 9.00am



4 Facade shadow - 21st June 9.30am



WEST FACADE HAS 2 HOURS SUNLIGHT

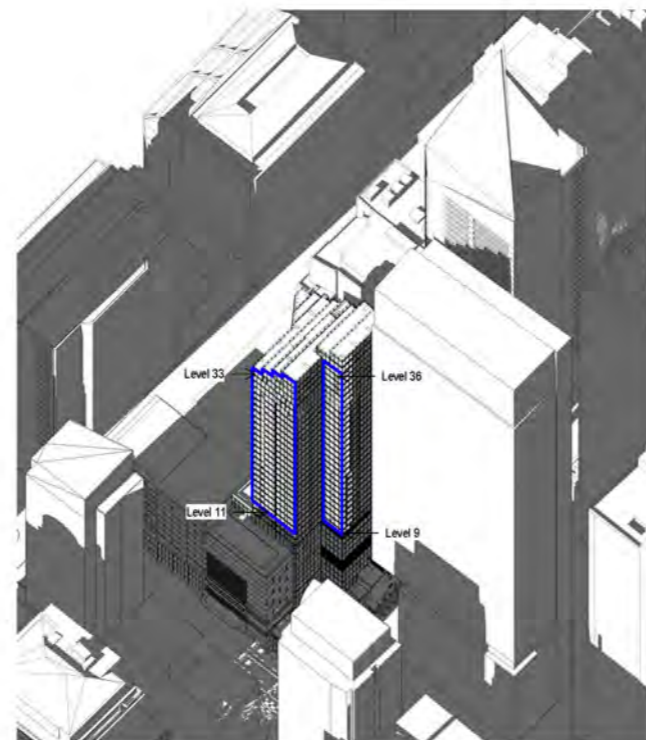
NORTH FACADE HAS 2 HOURS SUNLIGHT

NORTH-EAST FACADE HAS 2 HOURS SUNLIGHT

Diagrams 4.01
Sun Access Diagrams - 21 June



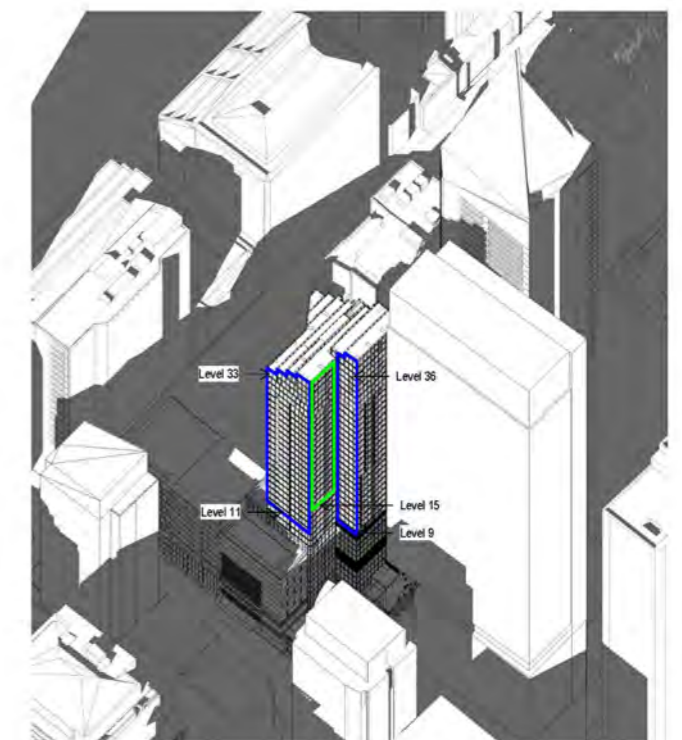
9 Facade shadow - 21st June 11.30am



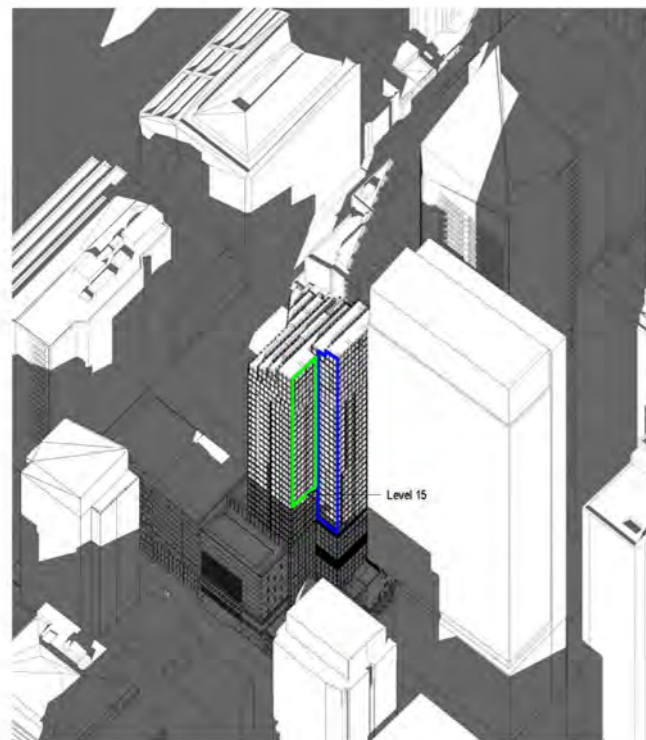
10 Facade shadow - 21st June 11.30am Copy



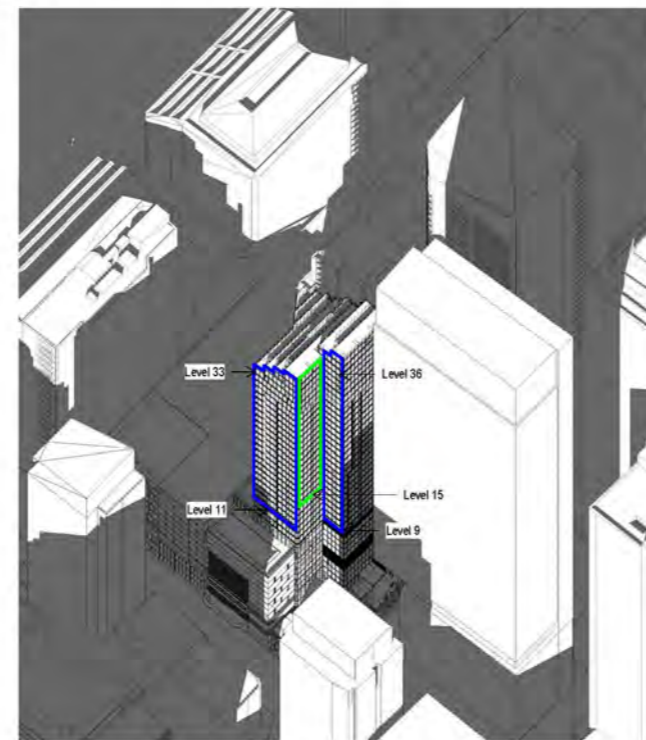
11 Facade shadow - 21st June 12.00pm



12 Facade shadow - 21st June 12.30pm



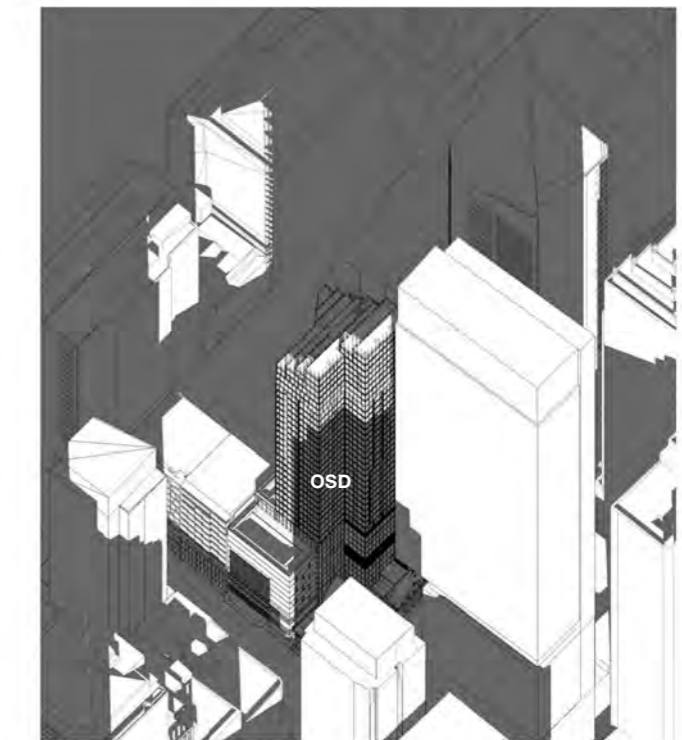
13 Facade shadow - 21st June 13.00pm



14 Facade shadow - 21st June 13.30pm



15 Facade shadow - 21st June 14.00pm



16 Facade shadow - 21st June 14.30pm

Diagrams 4.01
Sun Access Diagrams - 21 June

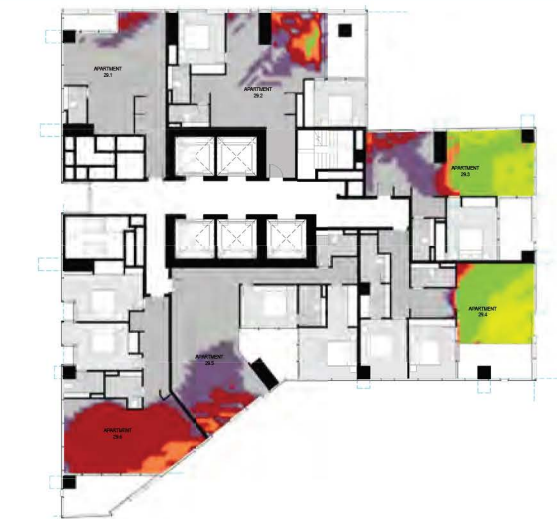
Detailed Solar Access Analysis

The Apartment Design Guide 2015, Part 4A-1, stipulates the minimum amount of sunlight that should be received in habitable rooms and private open space. In order to verify a high level of compliance with the standard and inform the detailed design, a detailed solar access study was performed with specialist software.

This Solar Access Study has been generated through Autodesk's Insight plugin for Revit 2017. Insight is a building performance analysis software which is able to perform Solar Access analysis through simulation, calculation and visualisation of key Solar Access metrics.

The following best practice methodology was used. Firstly, the geolocation of the building model and surrounding context model is verified. The date and time range is then specified which in this scenario was June 21 from 9AM to 3PM. Next the threshold parameters and analysis plane height is set. The threshold parameter was set at a minimum of 2 hours in accordance with SEPP65 requirements and an analysis plane height of 1m was used. Finally, once the raw data has been produced, it is then processed and the number instances passing the requirements can be determined.

Graphic representation of the results for one floor of each band and the detailed schedule of performance are presented at right. The results indicate an excellent level of performance exceeding 74%, with some potential for further performance improvement.



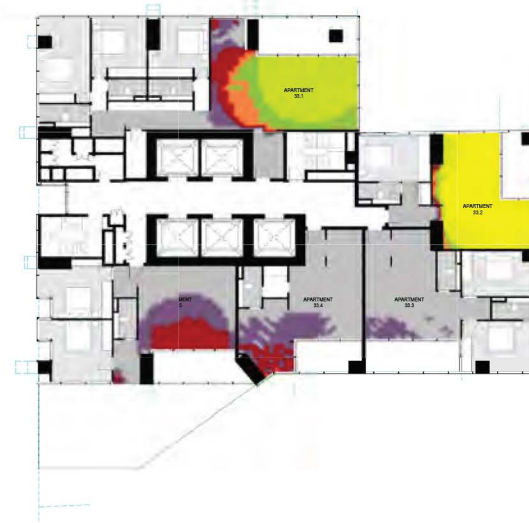
Level 29



Level 34



Level 17



Level 33



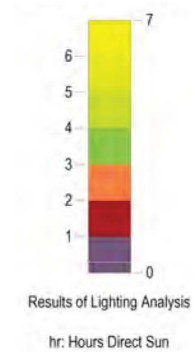
Level 35



Level 9



Level 32



Legend - Hours of Sun Access

Diagram 4.02
Sun Access Plans - 21 June

Principle 1 : Context and neighbourhood Character

Good design responds and contributes to its context. Context is the key natural and built features of an area, their relationship and the character they create when combined. It also includes social, economic, health and environmental conditions.

Responding to context involves identifying the desirable elements of an area's existing or future character. Well designed buildings respond to and enhance the qualities and identity of the area including the adjacent sites, streetscape and neighbourhood.

Consideration of local context is important for all sites, including sites in established areas, those undergoing change or identified for change.

The proposal responds directly to the adjacent Edinburgh Castle Hotel and the Greenland Tower opposite as well as the immediate surrounds. The placement of the mid level entertainment deck creates an alignment with a mid level break in the adjacent built context.

The scale reductions in the podium adjacent to the Edinburgh Castle Hotel intermediate between surrounding context and the hotel, also providing some variety and a new dynamic to the streetscape. The laneway being built as part of the Greenland development opposite provide the opportunity for the OSD entry to take on the character of an enclosed residual laneway, enhancing the urban grain.

Principle 2 : Built Form and Scale

Good design achieves a scale, bulk and height appropriate to the existing or desired future character of the street and surrounding buildings.

Good design also achieves an appropriate built form for a site and the building's purpose in terms of building alignments, proportions, building type, articulation and the manipulation of building elements.

Appropriate built form defines the public domain, contributes to the character of streetscapes and parks, including their views and vistas, and provides internal amenity and outlook.

The proposed built form embodies a classic tower/podium configuration, except on Pitt Street where the tower flows closer to the ground. Setbacks, articulation levels and parapet heights are carefully aligned consistent within the precinct, and reinforce a geometry that contributes and enhances the street frontages and city skyline articulation.

The proposed massing avoids overshadowing of Hyde Park between 12 and 2pm at any time of the year.

The positioning of the tower 12m north of Princeton apartments provides the best urban design outcome in terms of overshadowing, view sharing and commercial use.

Principle 3 : Density

Good design achieves a high level of amenity for residents and each apartment, resulting in a density appropriate to the site and its context. Appropriate densities are consistent with the area's existing or projected population. Appropriate densities can be sustained by existing or proposed infrastructure, public transport, access to jobs, community facilities and the environment.

As part of the Sydney CBD and acknowledgement of the anticipated population growth of the area, the proposed development seeks to accommodate the future density of the precinct with high quality housing supply and associated complementary uses. The proposed density is consistent with the floor space ratio for the subject site.

Principle 4 : Sustainability

Good design combines positive environmental, social and economic outcomes.

Good sustainable design includes use of natural cross ventilation and sunlight for the amenity and liveability of residents and passive thermal design for ventilation, heating and cooling reducing reliance on technology and operation costs. Other elements include recycling and reuse of materials and waste, use of sustainable materials and deep soil zones for groundwater recharge and vegetation.

The "Sustainability" opportunities will be carefully addressed during detailed design in accordance with the principles outlined in this report.

Principle 5 : Landscape

Good design combines positive environmental, social and economic outcomes.

Good sustainable design includes use of natural cross ventilation and sunlight for the amenity and liveability of residents and passive thermal design for ventilation, heating and cooling reducing reliance on technology and operation costs. Other elements include recycling and reuse of materials and waste, use of sustainable materials and deep soil zones for groundwater recharge and vegetation.

The "Landscape" issues will be carefully addressed in detailed design.

Principle 6 : Amenity

Good design positively influences internal and external amenity for residents and neighbours. Achieving good amenity contributes to positive living environments and resident well being.

Good amenity combines appropriate room dimensions and shapes, access to sunlight, natural ventilation, outlook, visual and acoustic privacy, storage, indoor and outdoor space, efficient layouts and service areas and ease of access for all age groups and degrees of mobility.

The carefully considered built form allows for positive living environments with excellent natural daylight access, natural ventilation and privacy.

Principle 7 : Safety

Good design optimises safety and security within the development and the public domain. It provides for quality public and private spaces that are clearly defined and fit for the intended purpose. Opportunities to maximise passive surveillance of public and communal areas promote safety. A positive relationship between public and private spaces is achieved through clearly defined secure access points and well lit and visible areas that are easily maintained and appropriate to the location and purpose.

The "Safety" issues will be carefully addressed in detailed design.

Principle 8 : Housing Diversity & Social Interaction

Good design achieves a mix of apartment sizes, providing housing choice for different demographics, living needs and household budgets. Well designed apartment developments respond to social context by providing housing and facilities to suit the existing and future social mix.

Good design involves practical and flexible features, including different types of communal spaces for a broad range of people and providing opportunities for social interaction among residents.

The "Housing diversity and social interaction" opportunities will be carefully addressed in the detailed design. The design incorporates innovative virtual office space in addition to a range of communal entertainment spaces to enhance productive social interaction within the facility.

Principle 9 : Aesthetics

Good design achieves a built form that has good proportions and a balanced composition of elements, reflecting the internal layout and structure. Good design uses a variety of materials, colours and textures.

The visual appearance of a well designed apartment development responds to the existing or future local context, particularly desirable elements and repetitions of the streetscape..

A central ambition for this development is to create the opportunity for a residential building that is supportive to the needs and aspirations of its future residents of the city of Sydney. Elegant buildings assist to define all great cities and every development should be seen as an opportunity to enhance the city.

This proposal represents a carefully sculpted form, articulated by its site constraints and orientated to this particular place to deliver great amenity, both its tower-podium dynamic and the laneway concept underpinning the entry address.

This proposed development can deliver an elegant, well articulated form that has the potential to extend the adjacent design by Greenland and positively contribute to the urban fabric of Sydney CBD.

4.2 Precinct Daylight Study

“The relative average daylight levels have been determined by use of the Ecotect modelling software, applied to a 3D model of the surrounding buildings that approximates the reflectivity of those buildings.”

4.2.1 Overview

The SEARs require a study of daylight in the public domain.

This study identifies a minimal impact of less than 2% on average daylight levels in the public domain adjacent to the proposal.

4.2.2 Methodology

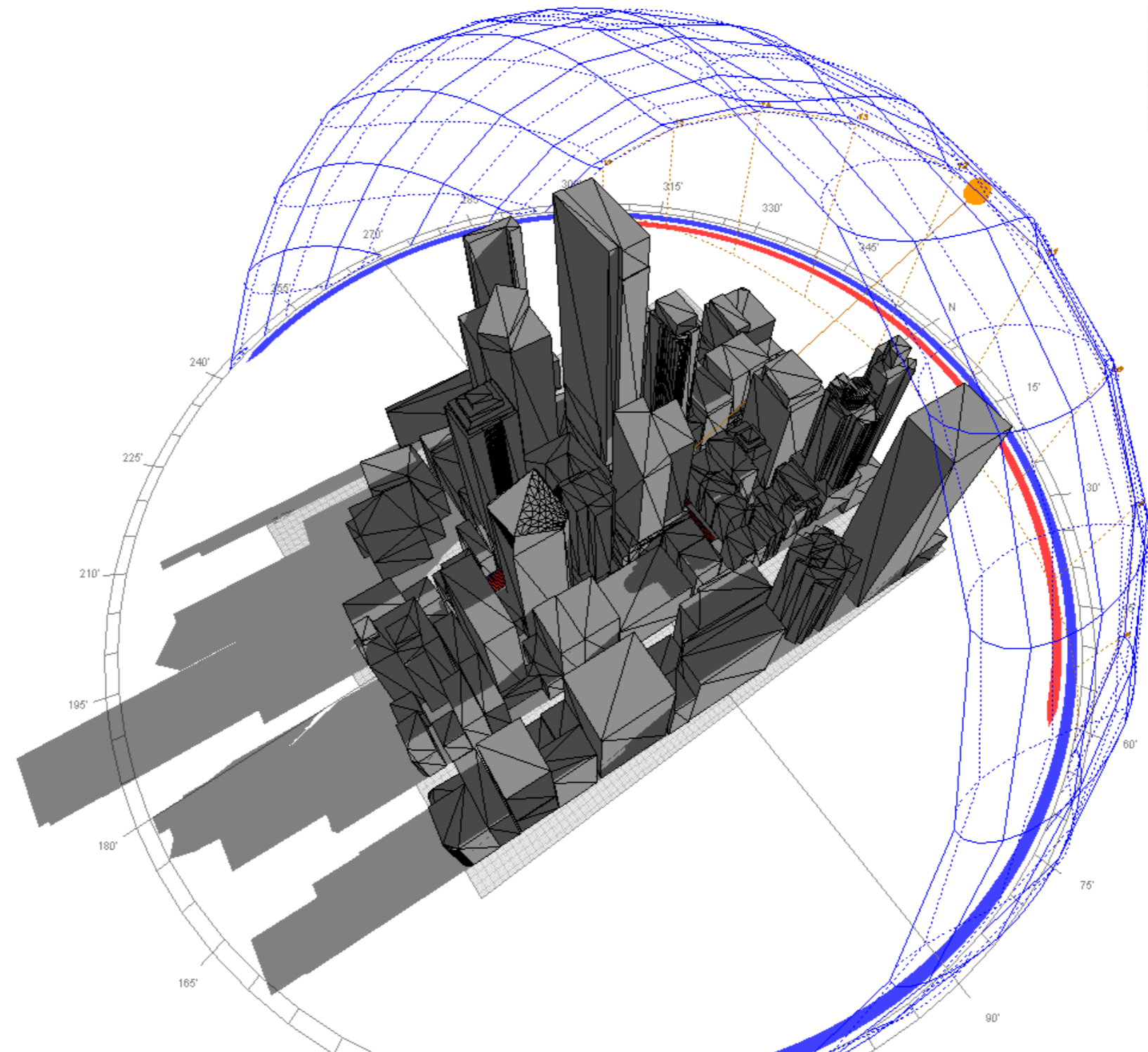
The relative average daylight levels have been determined by use of the EcoTect modelling software, applied to a 3D model of the surrounding buildings that approximates the reflectivity of those buildings.

This software was chosen because of its ability to take into account the surrounding buildings and their reflectivity using a CIE standard overcast sky with lux levels set as recommended for Sydney by the software.

The use of the CIE standard overcast sky was chosen following confirmation as to its validity, see 4.3.5 Reference Material. The reference material also confirms that use of the CIE standard overcast sky will show identical results over the course of the year.

On the basis of the software recommendation of an average overcast sky lux level of 8363 lux for Sydney, the software was run and the average daylight levels compared with and without the tower.

Daylight Analysis
Daylighting Levels
Value Range: 4800 - 8300 lux
(c) ECOTECT v5



Diagrams 4.03
Sun Access Plans - 21 June

Analysis Model illustration

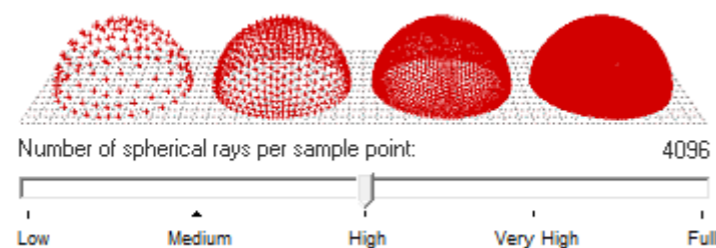
Daylight analysis on 21 June

Natural Light Levels

Calculates daylight factors using the sky, external and internally reflected components along with the design sky illuminance.

Over the Analysis Grid

Calculates values over visible nodes in the analysis grid (must be currently displayed for this to be available). For a full spatial distribution over all three dimensions of the grid, select the following option.



RAY-TRACING PRECISION

To calculate how much of the sky is visible, ECOTECT sprays spherical rays from each point or grid node and tracks them as they pass through windows, hit external objects or reflect off internal surfaces.

Design Sky Illuminance

If you know the design sky illuminance for your site, enter it in the text box immediately below. Otherwise, this value can be derived from the current latitude of your site (for more information, see the help file).

8363 Lux

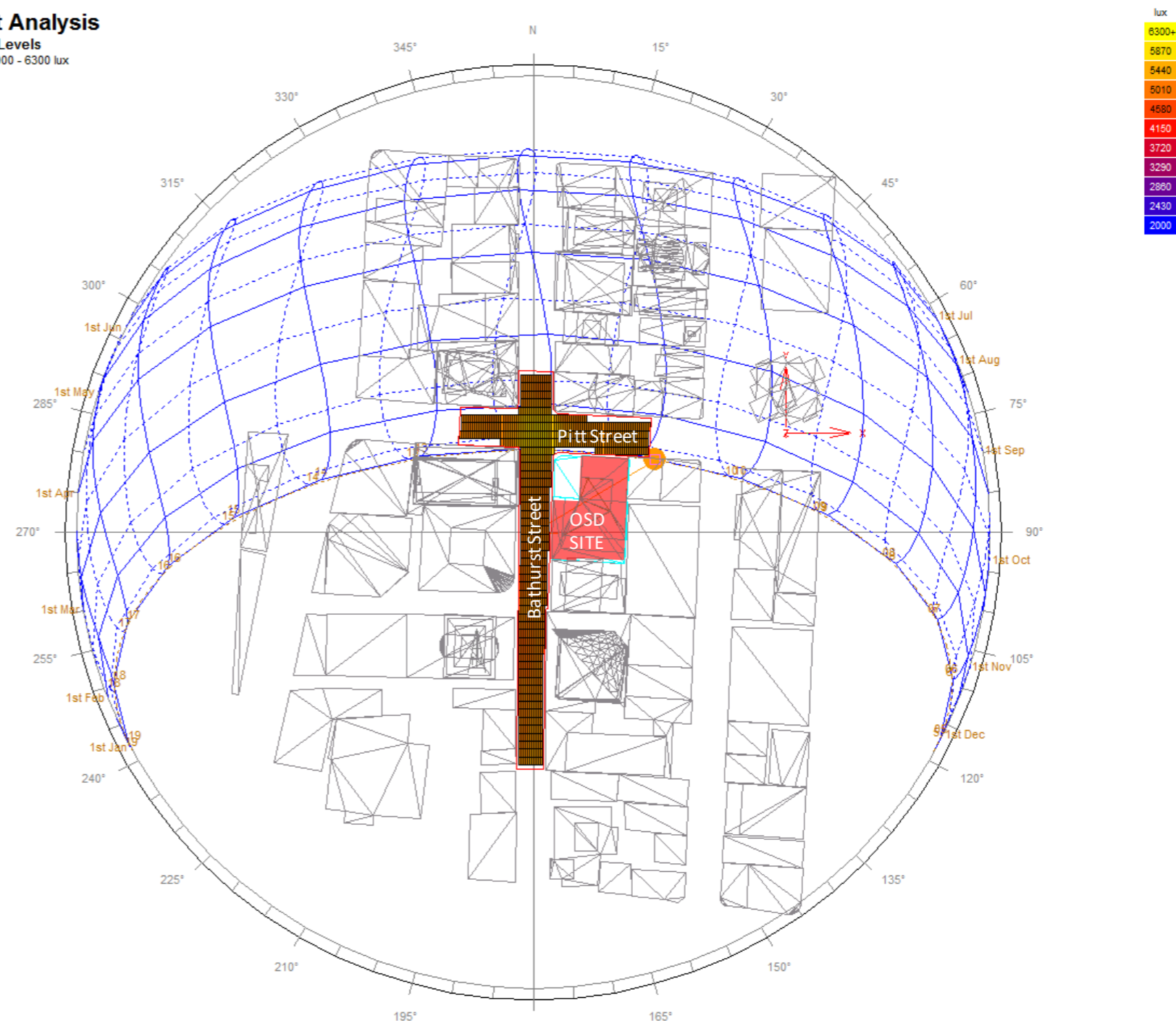
Sky Luminance Distribution Model

This setting determines how available natural light is distributed over the sky dome. Strictly speaking you should always use the CIE Overcast Sky option to obtain worst-case design values unless you are absolutely sure that the other is more appropriate.

- CIE Overcast Sky Condition (Recommended)

Daylight Analysis

Daylighting Levels
Value Range: 2000 - 6300 lux
© ECOTECT v5



4.2 Precinct Daylight Study

Daylight analysis without OSD tower
on 21 January, September, June

Average value: 5193.13 lux
Number of sensors: 1020

Daylight analysis with OSD tower
on 21 January, September, June

Average value: 5134.5 lux
Number of sensors: 1020

Daylight level Reduction: 58.63 lux ~ **1.12%**



Daylight Analysis Diagrams

4.2.3 Interpretation

This set of diagrams illustrates the relative impact of the proposed envelope on the average daylight level in the immediate precinct throughout the year.

The difference in average values expressed as a percentage is:

<1.2%

The above indicates that there will be a marginal loss of daylight in the public realm resulting from the addition of the OSD into the precinct, less than a 1.2% reduction in average lux level throughout the year.

4.2.4 Conclusion

The daylight study indicates that there will be a very minor loss of daylight in the public realm resulting from the addition of the OSD envelope into the precinct.

As this loss is predicted to be an average of less than 1.2% and the average lux level remains relatively high, it can be reasonably concluded that the impact on the current amenity of the public domain will be negligible.

4.2.5 Reference Material

“Nordic Light and Colours”

April 2012, NTNU

www.ntnu.no/trykk/publikasjoner/NordicLightAndColour_2012/files/assets/downloads/publication.pdf

The Daylight Factor

Design guidelines worldwide currently recommend daylight provision in terms of the longestablished daylight factor (DF) (Hopkinson, 1963). It appears that the daylight factor, or at least its precursor, was first proposed in 1895 by Alexander Pelham Trotter (1857-1947) (Love, 1992). The origins of the daylight factor are actually somewhat hazy since there does not appear to have been a seminal paper introducing the approach. The reference to its introduction in 1895 appears to be anecdotal and recalled a number of years later. The daylight factor was conceived as a means of rating daylighting performance *independently* of the actually occurring, instantaneous sky conditions. Hence it was defined as the ratio of the internal horizontal illuminance E_{in} to the unobstructed [external] horizontal illuminance E_{out} , usually expressed as a percentage, Figure 2:

$$DF = \frac{E_{in}}{E_{out}} 100\%$$

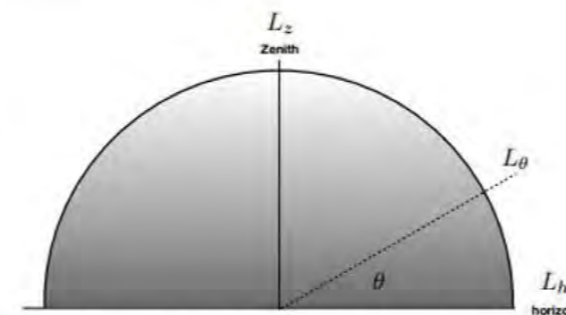
However, the external conditions still need to be defined since the luminance distribution of the sky will influence the value of the ratio. At the time that the daylight factor was first proposed it was assumed that heavily overcast skies exhibited only moderate variation in brightness across the sky dome, and so they could be considered to be of constant uniform luminance. Measurements revealed however that a densely overcast sky exhibits a relative gradation from darker horizon to brighter zenith; this was recorded in 1901. With improved, more sensitive measuring apparatus, it was shown that the zenith luminance is often three times greater than the horizon luminance for some of the most heavily overcast skies (Moon and Spencer, 1942). A new formulation for the luminance pattern of overcast skies was presented by Moon and Spencer in 1942, and it was adopted as a standard by the International Commission for Illumination (CIE) in 1955. Normalised to the zenith luminance L_z , the luminance distribution of the CIE standard overcast sky has the form:

$$L_{\theta} = L_z \frac{1 + 2 \sin \theta}{3}$$

where L_{θ} is the luminance at an angle θ from the horizon and L_z is the zenith luminance (Figure 2).

The luminance of the CIE standard overcast sky is rotationally symmetrical about the vertical axis, i.e. about the zenith. In other words, the illumination that the standard overcast sky delivers to an internal space will be same regardless of the compass orientation of the building. And, since the sky is fully overcast, there is no sun. Thus for a given building design, the

predicted DF is insensitive to either the building orientation (due to the symmetry of the sky) or the intended locale (since it is simply a ratio). Because the sun is not considered, any design strategies dependant on solar angle, solar intensity, or redirection of sunlight can have no influence on the daylight factor value.



CIE standard overcast sky pattern

4.3 Built Form Options Analysis

“The methodology to determine bulk involved application of a GFA/plate ratio typical for both residential and commercial towers (and verified on the indicative design), inclusion of allowances for an amenities deck within the podium zone and roof level plant rooms in the tower, as well as assuming commencement of the residential accommodation above the podium.”

4.3.1 Overview

This set of diagrams and photomontages summarises the built form options analysis undertaken in the development of the proposed planning envelope and indicative design to achieve a high amenity residential or commercial tower suited to its context.

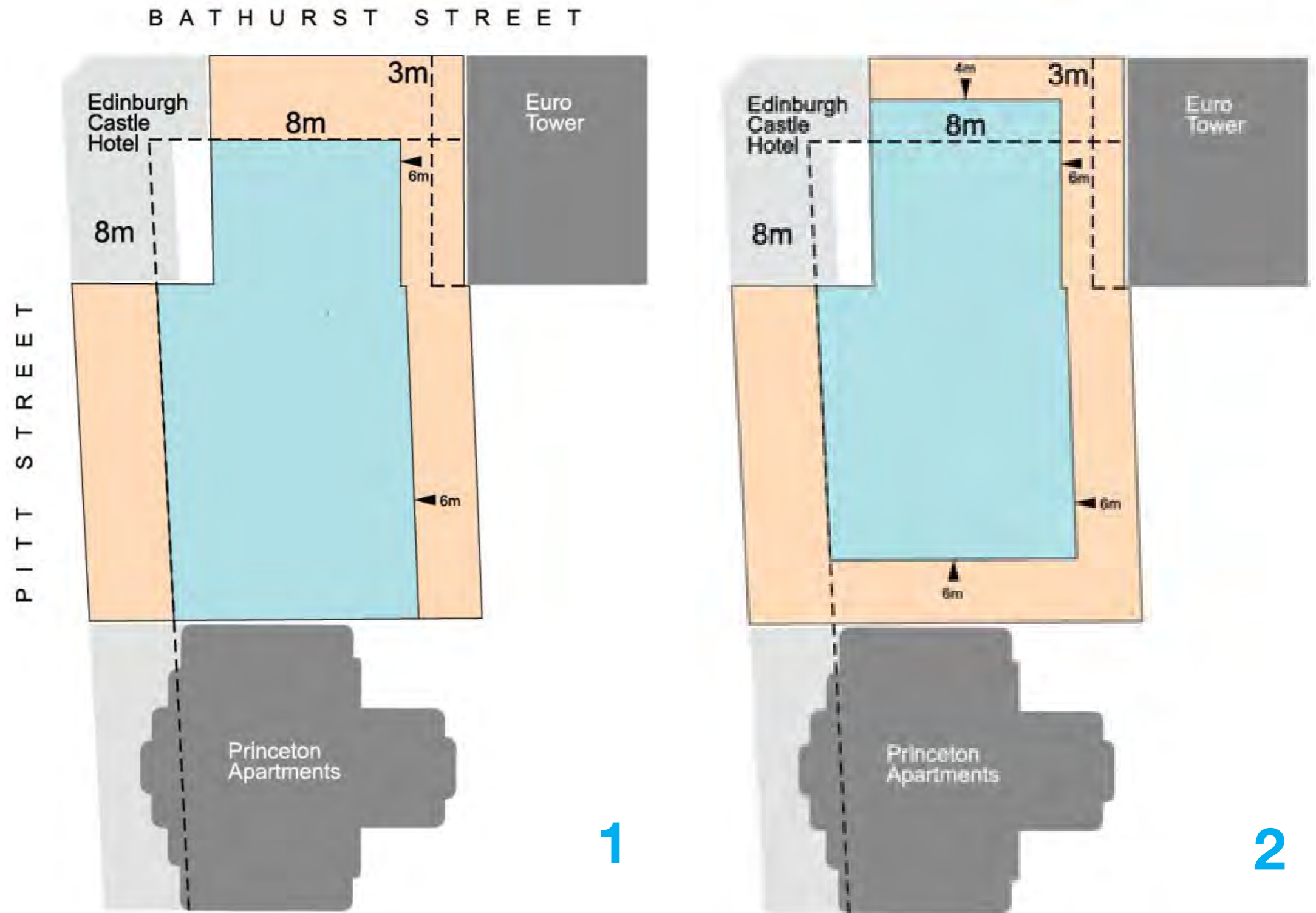
The methodology to determine bulk involved application of a GFA/plate ratio typical for residential towers (and verified on the indicative design), inclusion of allowances for an amenities deck within the podium zone and roof level plant rooms in the tower, as well as assuming commencement of the residential accommodation above the podium. This was then applied to a number of setback options within the control lines set by the Hyde Park Sun Access Plane.

The blue area in the diagrams represents the resultant shape of the tower envelope.

4.3.2 Envelope Options

The plans of Envelope Options 1 and 2 at right show the impact of complying 8m setbacks on Bathurst Street and Pitt Street as well as an assumed setback of 6m to the east.

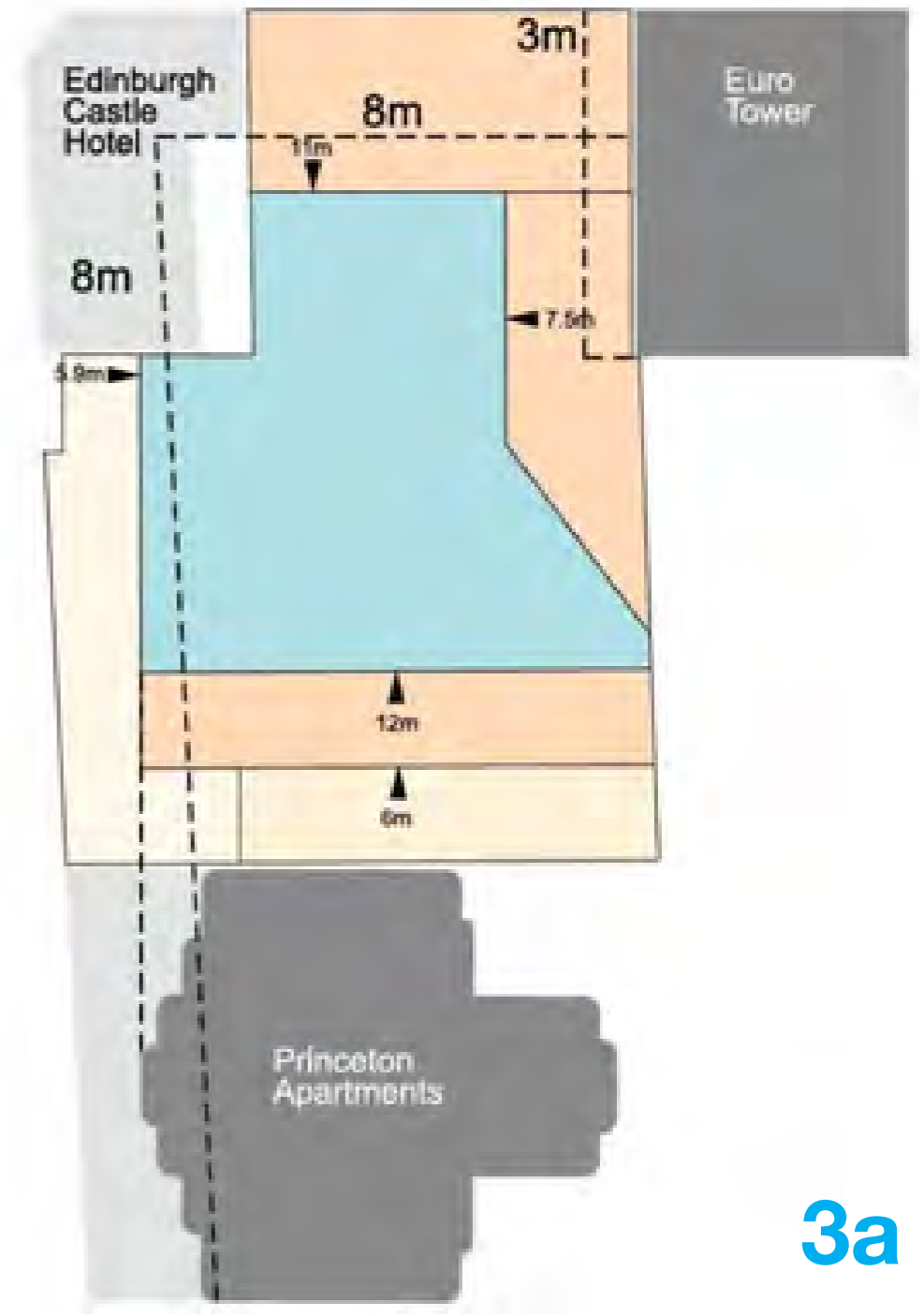
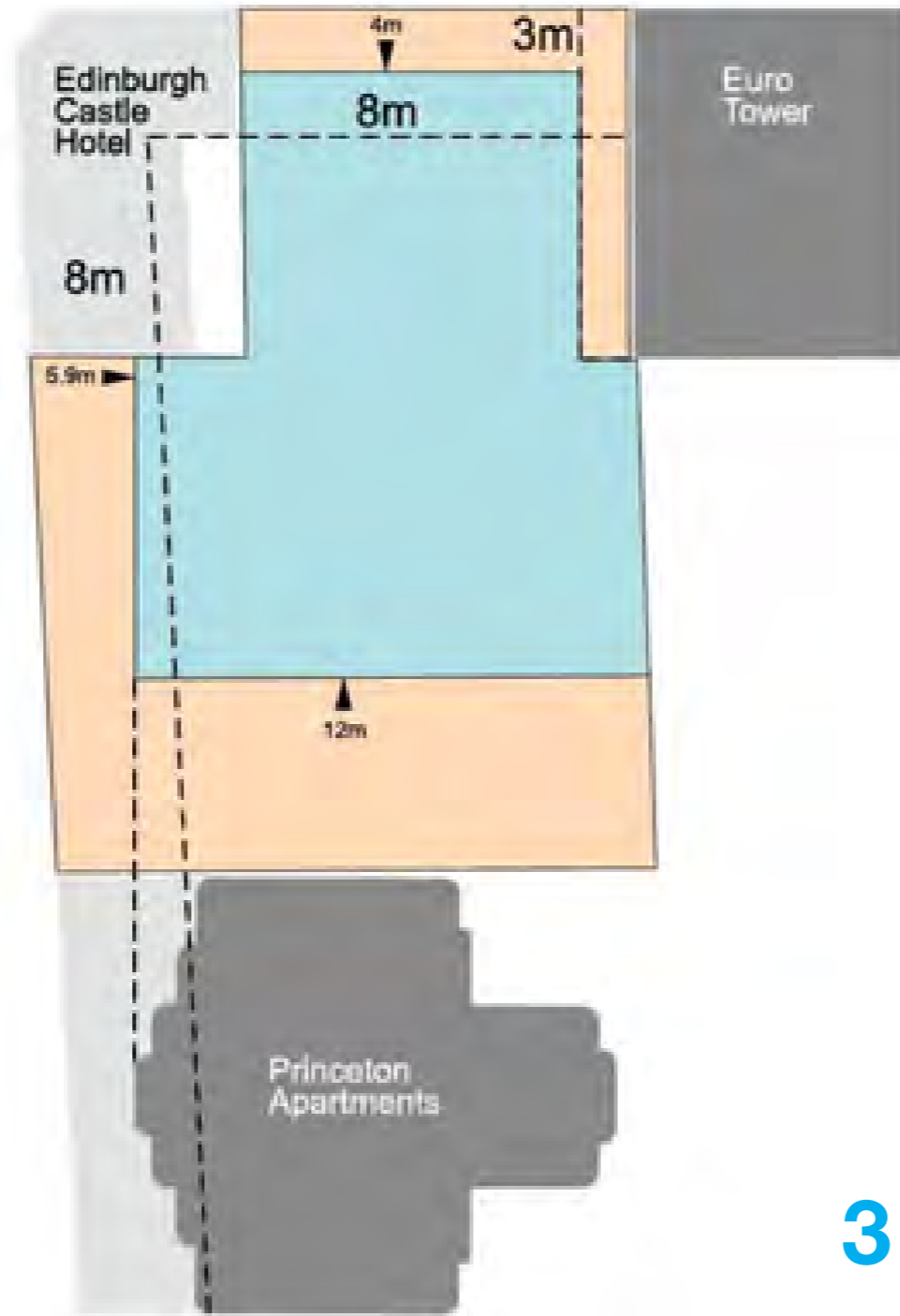
Option 1 shows zero setback to Princeton Tower. Option 2 shifts the envelope northwards to allow some separation from Princeton and to align better with Greenland on Bathurst Street. These options both present as larger masses in the streetscape, particularly in Pitt Street, and impact on north facing boundary windows in the Princeton Apartments.



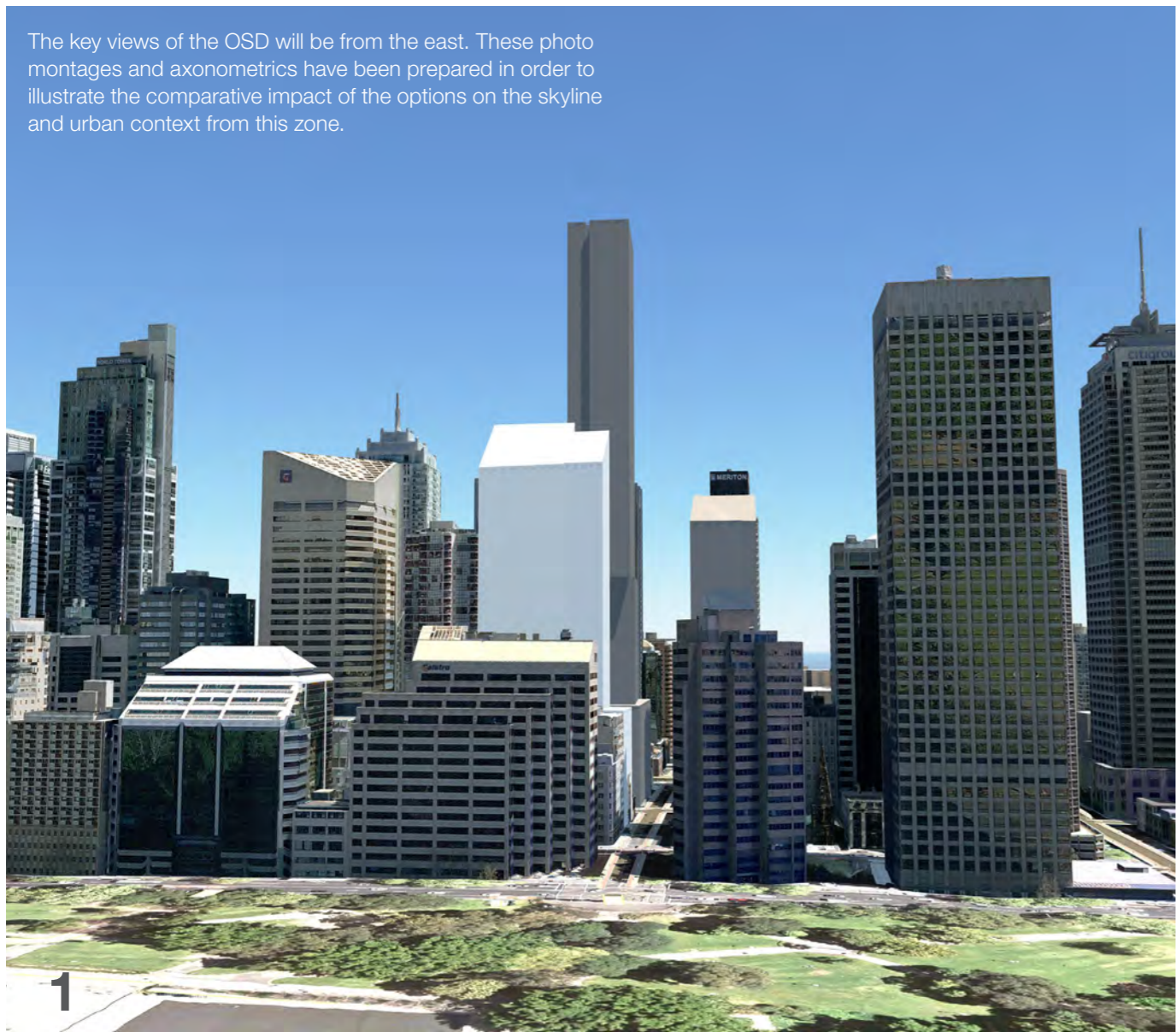
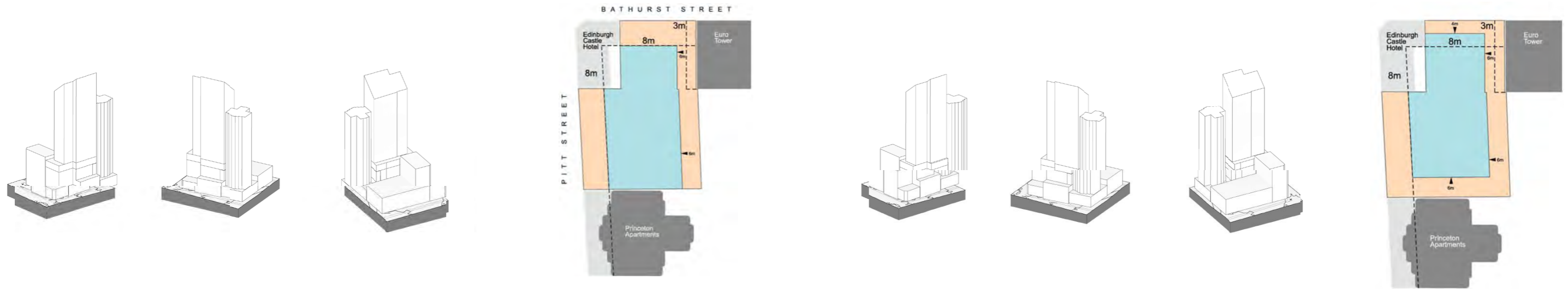
Envelope Option 3 looks at a 12m setback to the south with a reduced eastern boundary setback to 3m at Euro Tower and 0m at the heritage buildings. This provides a clear and distinct form in the streetscape.

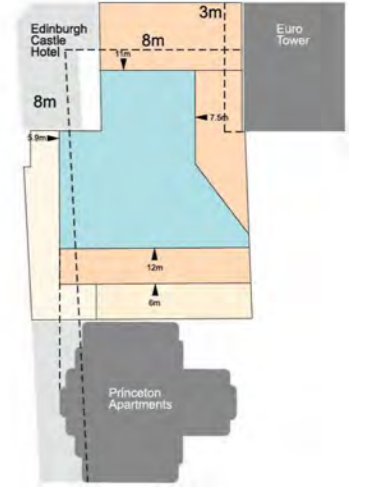
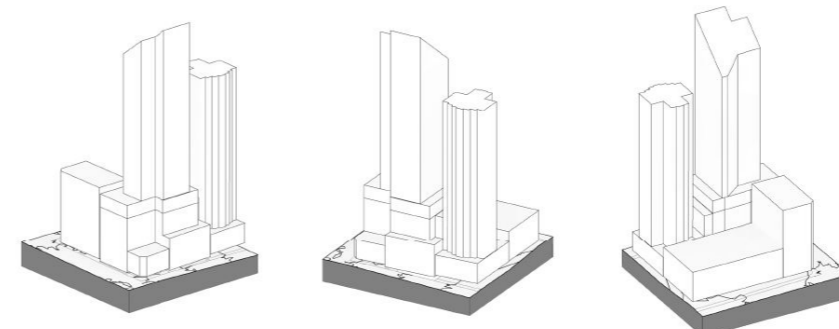
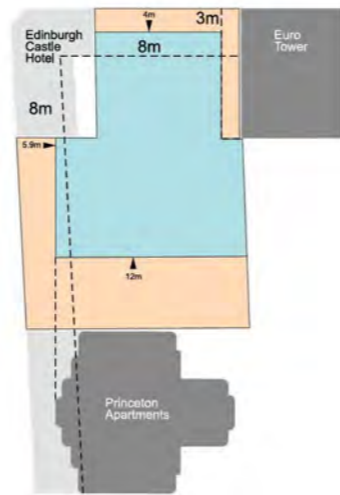
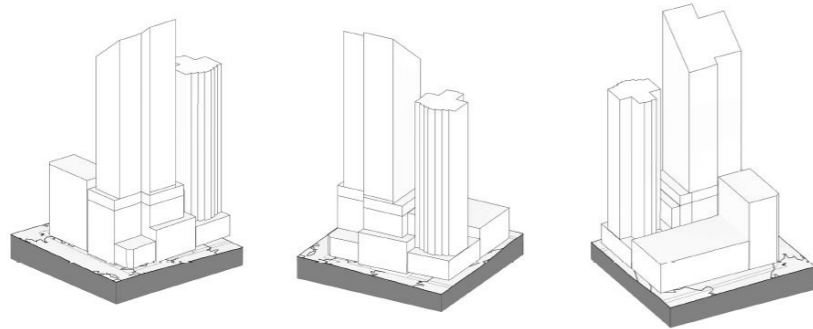
Option 3a represents the shape of the residential tower which fits within Option 3 in order to deliver very high sun access amenity. It retains the 12m setback at the south, increases the Bathurst Street setback to 11m and alters the eastern setbacks to reflect the best organisation for the lift core/high amenity residential accommodation given the station concourse below.

These two options refer to the approved podium organisation which allows the tower to flow down to the lower podium on the Pitt Street frontage.

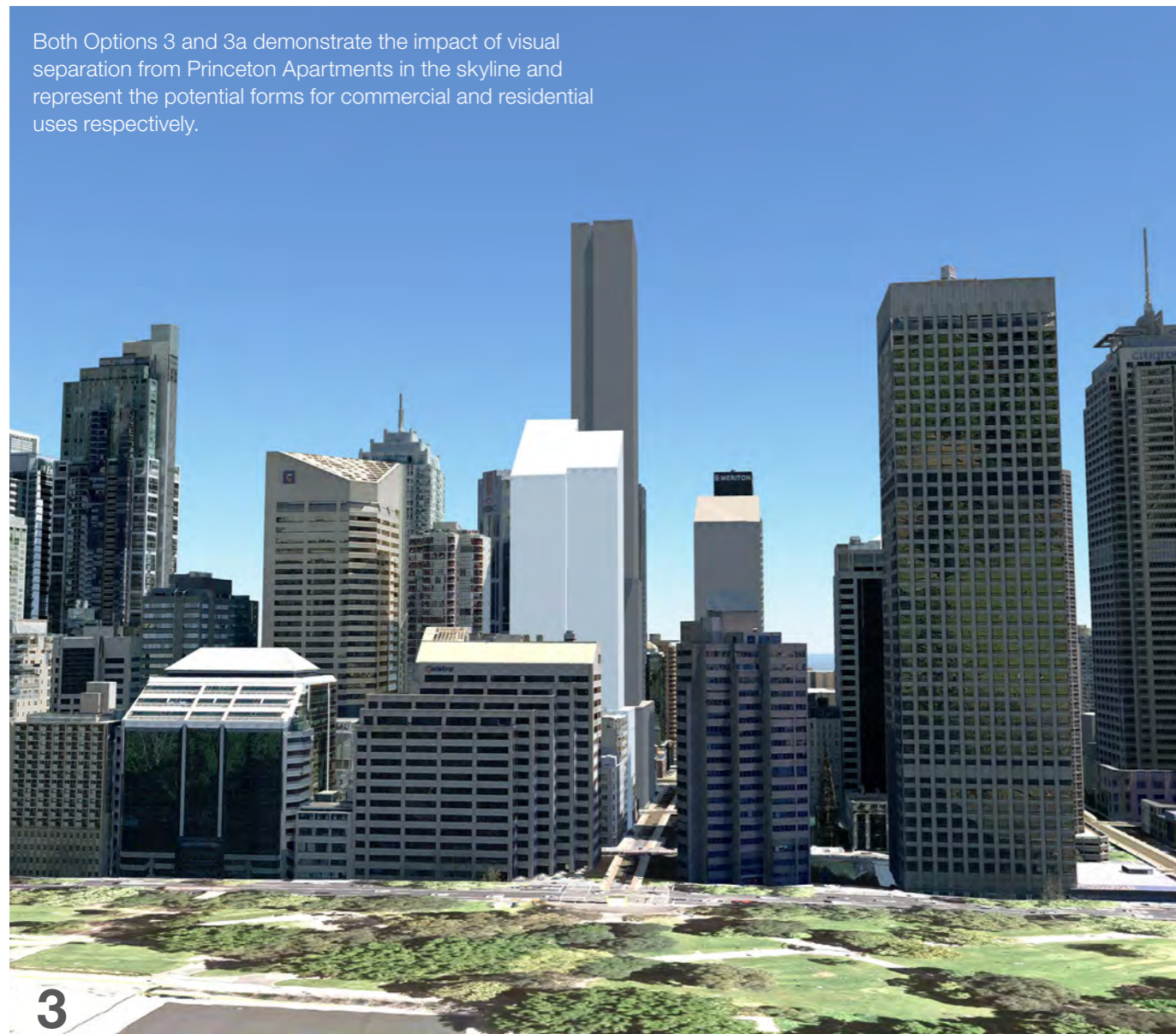


4.3 Built Form Options Analysis

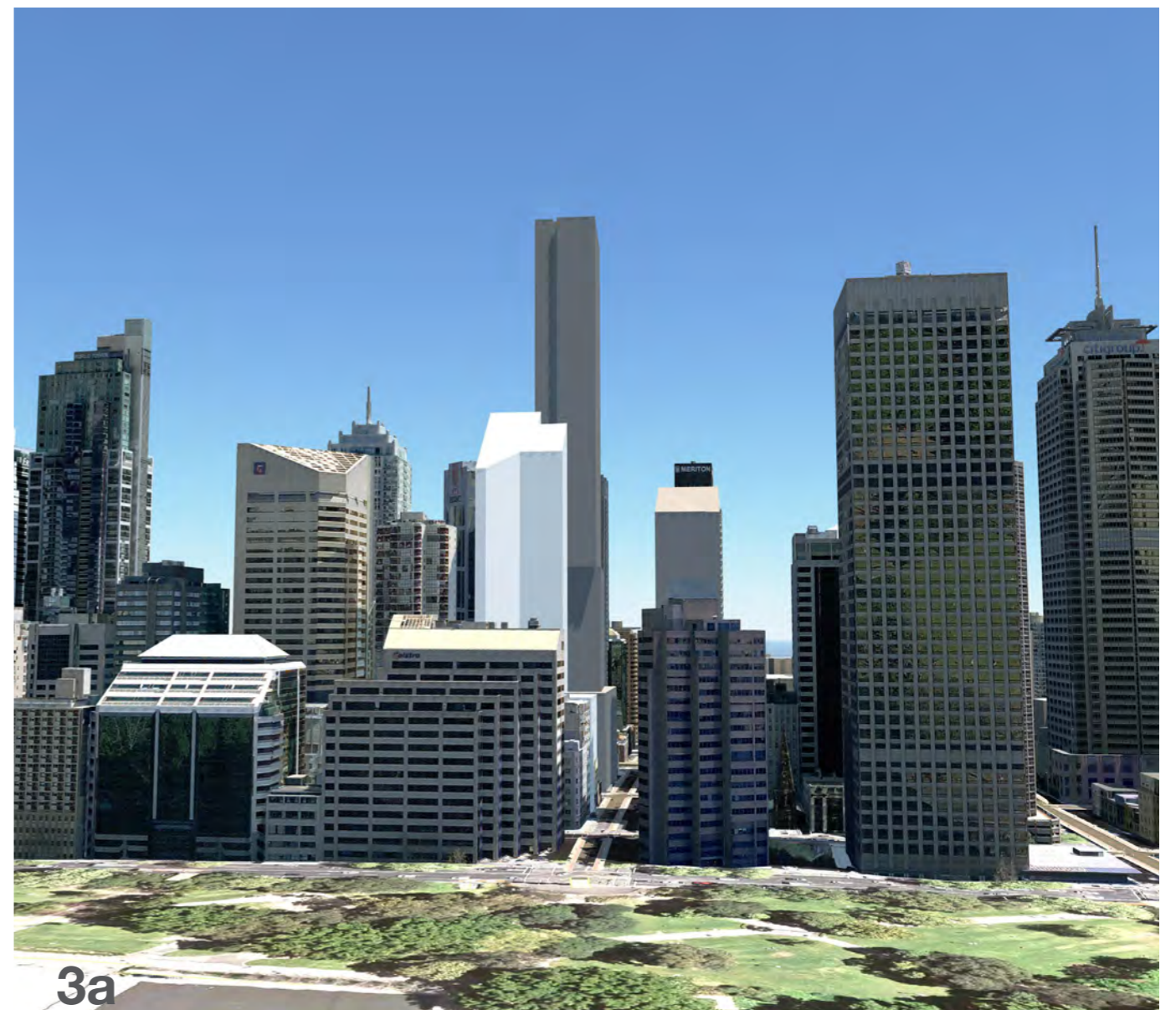




Both Options 3 and 3a demonstrate the impact of visual separation from Princeton Apartments in the skyline and represent the potential forms for commercial and residential uses respectively.



3



3a

4.4 Detailed Gross Floor Area (GFA) Schedule

INDICATIVE DESIGN DETAILED GROSS FLOOR AREA (GFA) SCHEDULE

Level	Floor Name	Floor Height	RL	Cars	GFA Station	GFA Car Park	GFA Storage	Stage 1 Application GFA
-3	Station Platform				224			
-1	Basement 1 Mezzanine	2.50			105			
0	Ground Floor Lobby / Loading	5.00	24.75		305			148
1	Waste / Plant	4.00	29.75					
2	Car Park 1	3.50	33.75	12		588		
3	Bicycle Storage / Car Park 2	3.50	37.25	11		560	233	
4	Virtual Office / Car Park 3	3.50	40.75	11		560		365
5	Metro Plant	7.00	44.25					
6	Metro Plant	7.00	51.25					
7	Resident Storage / Transfer	7.00	58.25				691	
8	Pool Gym / Plant	6.00	65.25					405
9	Apartments	3.18	71.25					546
10	Apartments	3.18	74.43					546
11	Apartments	3.18	77.61					546
12	Apartments	3.18	80.78					546
13	Apartments	3.18	83.96					546
14	Apartments	3.18	87.14					546
15	Apartments	3.18	90.32					546
16	Apartments	3.18	93.50					546
17	Apartments	3.18	96.67					546
18	Apartments	3.18	99.85					552
19	Apartments	3.18	103.03					552
20	Apartments	3.18	106.21					552
21	Apartments	3.18	109.39					552
22	Apartments	3.18	112.56					552
23	Apartments	3.18	115.74					552
24	Apartments	3.18	118.92					552
25	Apartments	3.18	122.10					552
26	Apartments	3.18	125.28					552
27	Apartments	3.18	128.45					552
28	Apartments	3.18	131.63					552
29	Apartments	3.18	134.81					552
30	Apartments	3.18	137.99					548
31	Apartments	3.19	141.17					548
32	Apartments	3.24	144.36					548
33	Apartments	3.24	147.60					486
34	Apartments	3.24	150.84					399
35	Apartments	3.24	154.08					297
36	Plant	3.50	157.32					
37	Plant	3.50	160.82					
TOTALS				34	634	1,708	924	15,282

OSD GFA	15,282
GFA Deductions	
Station	634
Bicycle Storage	233
Resident Storage	691
TOTAL DESIGN GFA (excluding car parking)	16,840
Floor Space Ratio (site area 1,708 sq.m)	9.86 : 1

Residential GFA Schedule

INDICATIVE DESIGN - COMMERCIAL DETAILED GROSS FLOOR AREA (GFA) SCHEDULE

Level	Floor Name	Floor Height	GFA Station	GFA Car/Bicycle	STAGE 1 DA APPLICATION GFA	NETT
-3	Station Platform		224			
-1	Basement 1 Mezzanine		105			
0	Ground Lobby/Loading	5	305		162	
1	Waste/Plant	4				
2	Loading/Bicycle Storage	6.5		244		
3	NOT USED					
4	End of Trip/Bicycle/Car Park	3.5		697	184	
5	Metro Plant	7				
6	Metro Plant	7				
7	Sky Lobby	8			512	
8	Office	3.85			813	751
9	Office	3.85			813	751
10	Office	3.85			813	751
11	Office	3.85			813	751
12	Office	3.85			813	751
13	Office	3.85			813	751
14	Office	3.85			813	751
15	Office	3.85			813	751
16	Office	3.85			813	751
17	Office	3.85			813	751
18	Office	3.85			813	751
19	Office	3.85			813	751
20	Office	3.85			813	751
21	Office	3.85			813	751
22	Office	3.85			813	751
23	Office	3.85			813	751
24	Office	3.85			813	751
25	Office	3.85			813	751
26	Office	3.85			813	751
27	Office	3.85			813	751
28	Office	3.85			813	751
29	Office	3.85			646	583
30	Office	3.85			454	392
TOTALS			634	941	19031	16746

Station	634
Car Parking/Bicycle Storage	941
TOTAL GFA (including car parking)	20606

Commercial GFA Schedule

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Contact:

Tony Thorp
Director of Design Architecture

T +61 2 9239 7404

GHDWOODHEAD

ghdwoodhead.com