## **Attachment A5**

Urban Design and Indicative Built Form Report - Part 2

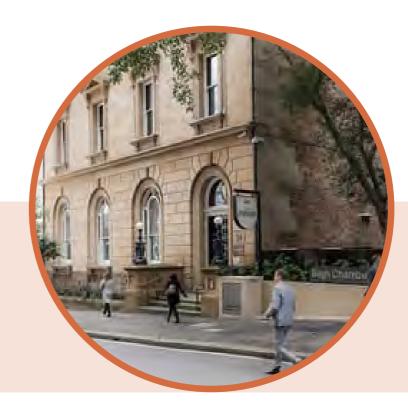
Design Principles

# **Urban Design Principles**

Six urban design principles have been established to guide the urban design framework for the Hunter Street Station (Sydney CBD) sites.







Principle 1 — Movement and Connectivity

Embrace the movement opportunities of Sydney Metro West and support customer amenity and experience through clear arrangement of circulation, built form and enhancement of the public domain.

Principle 2 — Connecting with Country

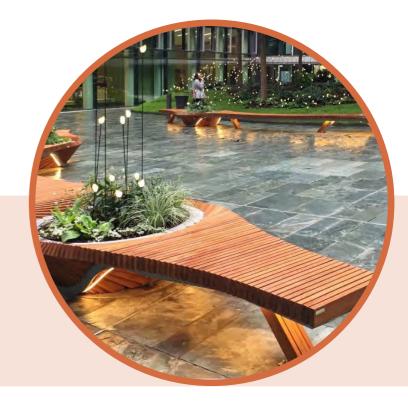
Follow the principles of the [draft] Connecting with Country framework to value and respect First Nations people and knowledge, and care for Country.

Principle 3 — Heritage and Place Character

Understand and reveal the heritage and place character of the unique Hunter Street Station (CBD North) sites. Reinforce key alignments with heritage items. Open up view lines to heritage façades.







Principle 4 — Public Space

Expand and enhance the public domain and subterranean pedestrian movement networks and create new places for gathering and enjoyment.

### Principle 5 — Streetwall Scale, Articulation and Tower Setbacks

Develop an appropriate streetwall scale, related to existing heritage items and built form. Articulate the streetwall to add rhythm to the street and identify through site pedestrian networks. Specific setbacks are driven by the core location defined by the station.

Principle 6 — Amenity and Landscape

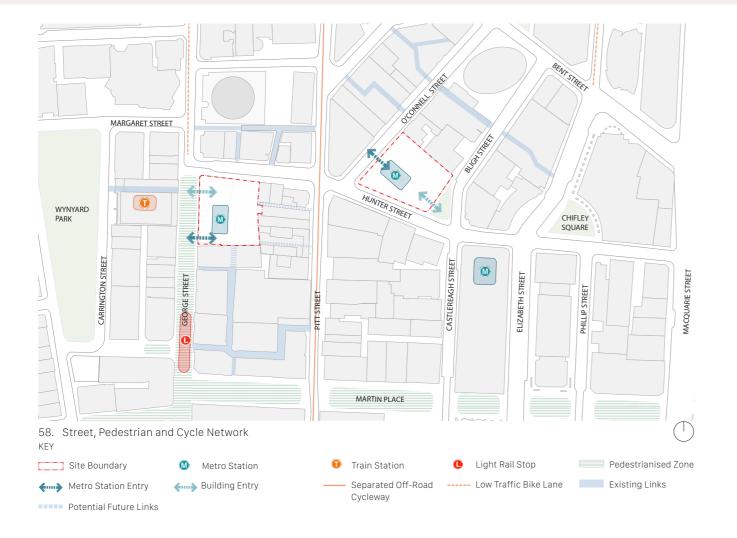
Work with topography, orientation and built form to create comfortable spaces with integrated soft landscape and street furniture.

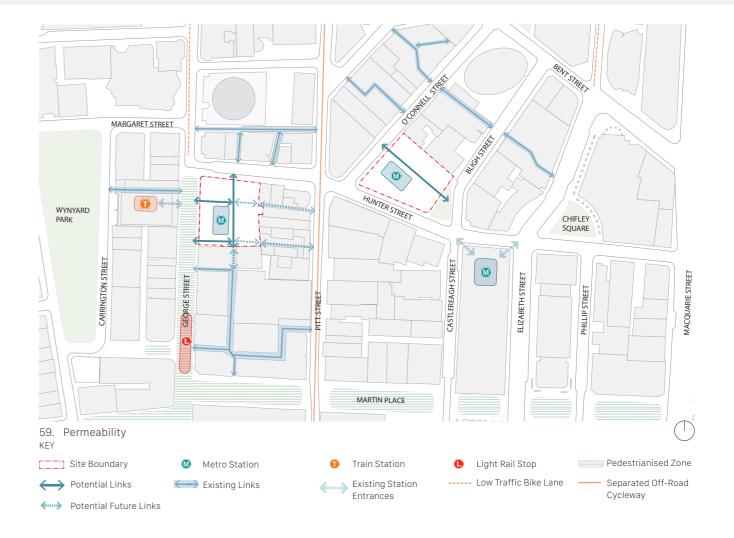
## Movement and Connectivity

Based on the analysis undertaken and the urban design principles established, opportunities to enhance the public domain, pedestrian environment and streetwall scale around the new station entries have been identified.

The proposal should contribute to the City's current and future pedestrian and cycle network and improve permeability of the site with the surrounding context. The design should allow for dispersement of pedestrian traffic around the stations to support the patronage of Sydney Metro and manage the pedestrian flow with a separation in entries for the Metro Station, commercial lobby and through site links.

To improve the pedestrian connectivity to the surrounding area, through site links should be provided within each site. These links will assist with way finding for the Metro patrons and also contribute to the City's current pedestrian network. Additionally, the location of the links and access points should enhance connectivity to the other modes of transport. The access points for pedestrians and cyclists are designed to be clear and legible.





## Connecting with Country

"The Gadigal people were a harbour dwelling clan, inhabiting the area from South Head through to Eastern Suburbs to Sydney Cove (Warrrane) and ending at Darling Harbour (Gomora). Their clan name is derived from 'gadi', the name of the grass tree found in the area and 'gal' which means man or people."

Source: Murawin Sydney Metro West Cultural Stories August 2021

#### On Gadigal Country

Across Sydney Metro, the design and integration of stations and precincts should respect and respond to the culture and stories embedded within the land through which they pass.

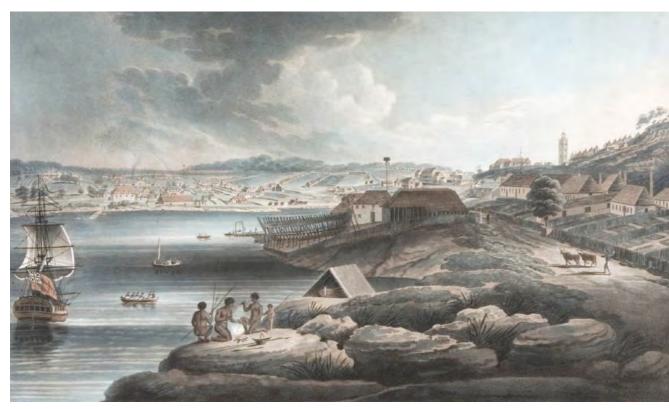
Sydney Metro is committed to develop a 'Designing with Country' strategy which can be implemented for the Hunter Street Metro Station sites. Murawin Consultants have been engaged to develop this Strategy in partnership with Sydney Metro. Through this process, the ancient spiritual significance of this site can be celebrated.

The Strategy will:

— Outline the policy, site and social context of the project. The strategy will respond to the Transport for NSW Reconciliation Action Plan 2019-2021 deliverables

— Inform the development and stewardship of appropriate Aboriginal Cultural Design Principles that will be incorporated into the design, public art and heritage interpretation of the project

Murawin and the design team have worked closely to develop a strategy whereby First Nations knowledge holders are connected with via a reconciliatory process of collaborative design. Through this process, the ancient spiritual significance of this site can be celebrated.



60. A view of Sydney Cove New South Wales



61. The town of Sydney developed into a city, the Gadigal were joined by other Aboriginal people from around NSW to live, forging relationships with the urban Aboriginal community

#### Tank Stream

The formerly fresh watercourse was the primary reason for settlement by the First Fleet at Sydney Cove and the name became attributed due to the tanks cut into bedrock by early settlers in attempts to modify the natural system to provide additional water storage.

The Tank Stream remains a significant heritage listed Sydney Water stormwater masonry asset built in the early nineteenth century, running approximately 1.5 metres below the existing ground level. The Tank Stream is currently functioning as a channel which carries stormwater from the lower CBD to the harbour. Refer to the Sydney Metro West - Hunter Street Planning Proposal Non-Aboriginal Heritage Impact Assessment

The best documented Aboriginal site along the Tank Stream was found during archaeological excavations in the late 1990s, ahead of the redevelopment of Angel Place, north of Martin Place between Pitt and George Streets.

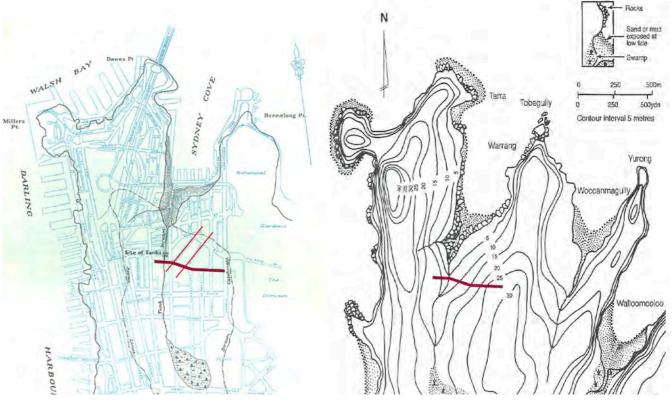
Source: Murawin Sydney Metro West Cultural Stories August 2021

#### **Early Mapping**

The historical street patterns were influenced by the topography, Tank Stream and the Governor's House. An overlay of the contemporary street pattern on an early map of the colony shows the Tank Stream catchment, the Tank Stream and the location of early water supply tanks serving the colony in relation to the site.



62. Tank Stream, Old Sydney - when a severe drought reduced the stream to a little trickle, three tanks were excavated from the sandstone, giving the stream its present name.

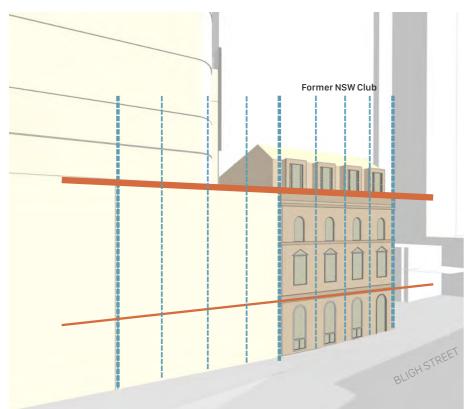


63. Overlay Map (left) Early Topographical Map (right)

The sites are surrounded by heritage items, with interfaces to these items across all boundaries. The scale of the proposed development should respond to the key datum lines of the heritage items and further enhances the character and heritage significance. The podium and facade elements should respond appropriately in terms of facade depth, modulation, proportion and articulation, to reinforce the character of the heritage building and the continuity of the streetscape.

The built form on the Hunter Street East site should consider align to the parapet and cornice of the Former NSW Club (31 Bligh Street), Former Wales House (64-66 Pitt Street) and the Former Bank of NSW (16 O'Connell Street). It should also respond to the vertical rhythms of the heritage item.

The Hunter Street West proposal is to retain and adaptively reuses the heritage item located within the site. The built form should align to the parapet and cornice of the Former Skinners Family Hotel, NSW Sports Club (10-14 Hunter Street) and other heritage/contributory items along George Street. It should respond to the vertical rhythms of the heritage items and other developments along George Street.



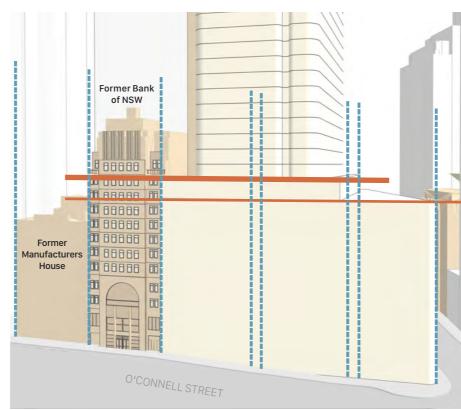
- 64. Bligh Street Heritage Interpretation(Hunter Street East)
- Respond to vertical and horizontal alignment of Former NSW Club

KEY

--- Vertical Alignment

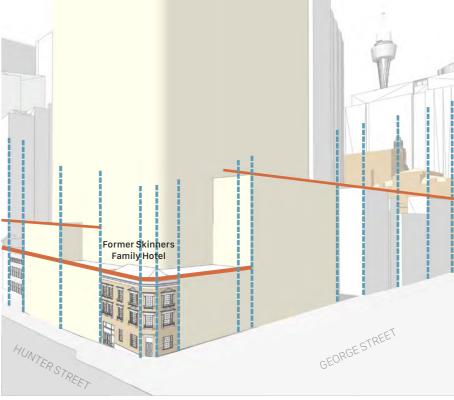
Horizontal Alignment

Heritage Items



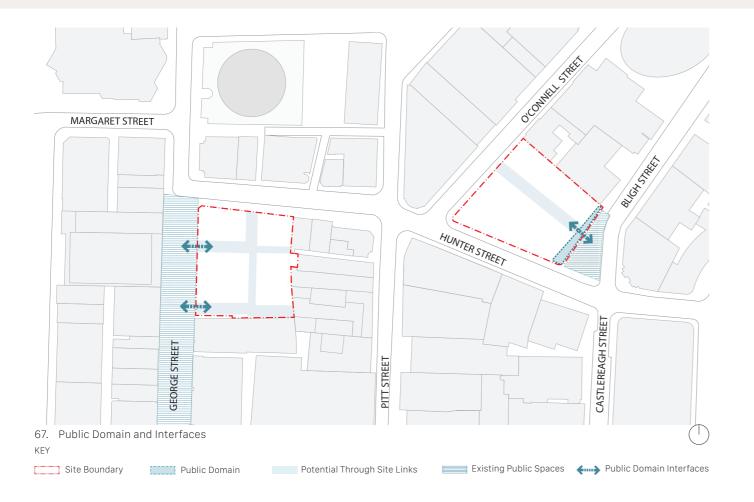
- 65. O'Connell Street Heritage Interpretation (Hunter Street East)
- Respond to vertical rhythm of Former Bank of NSW and horizontal alignment of Former Wales House and Former Bank of NSW

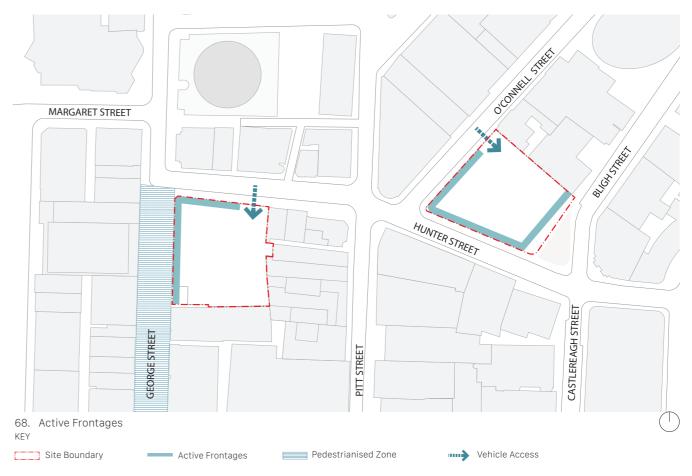
Indicative Built Form



- 66. Hunter Street Heritage Interpretation (Hunter Street West)
- Respond to vertical and horizontal alignment of Former Skinners Family
   Hotel and other heritage items and buildings along George Street

Additionally, the areas facing the street provide active use that contribute to the character of the public spaces within the surrounding context. The visual and physical prominence of ramps, vehicular/loading entry points and blank walls should be minimised.





51

## Streetwall Scale, Articulation and Tower Setbacks

The built form should respond to the key datum lines of the significant heritage items and rhythm of the surrounding buildings. The openings provided, should have a clear hierarchy emphasising the station entry followed by the commercial entry, public through site links, retail frontages and service access..

The Hunter Street East proposal should respond to the vertical rhythms of Former NSW Club (31 Blight Street), Former Bank of NSW (16 O'Connell Street) and the existing fine grain pattern along O'Connell and Pitt Street.

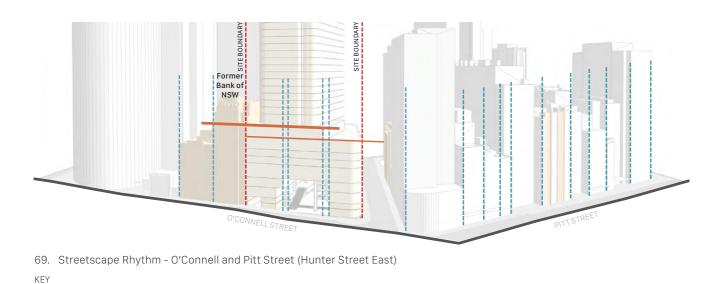
The Hunter Street West proposal should respond to the vertical rhythms of the Former Skinners Family Hotel and provide reinforcement in terms of the scale and facade relationship to this item. The fine grain pattern along George Street should also be taken into consideration.

The tower setbacks should respond to prevailing street alignment and emerging urban context by taking into consideration the alignment of the surrounding buildings.

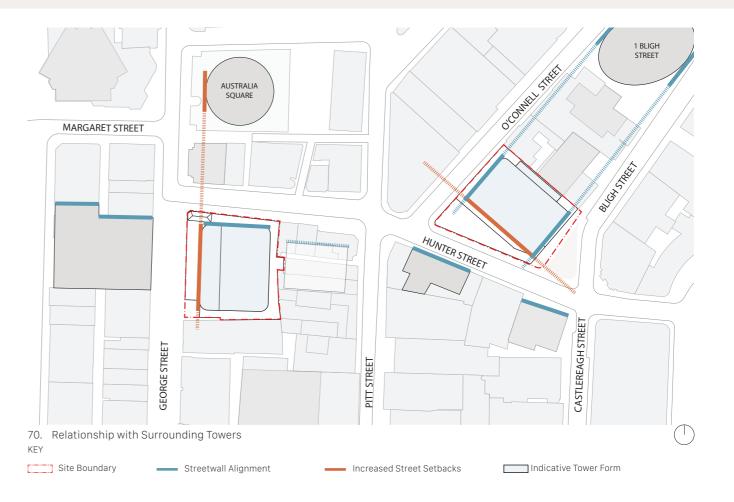
Hunter Street East should consider and respond to the alignment of 1 Bligh Street. It should also improve east-west visual connection with the sky and maintain the visibility to Australia Square.

Hunter Street West should consider and respond to the alignment of Australia Square. It should consider the setback of adjacent and future developments and also maintain views to the sky.

The setbacks of both the Eastern boundary of the West site and the Northern Boundary of the East site are defined by the proposed core locations. The cores are heavily constrained by the spatial requirements of the station below.



Horizontal Alignment



--- Vertical Alignment

The landscape design should be of high quality, create visual interest and be well integrated with the development. Public art, integrated interpretation of country and heritage and integrated wayfinding must be incorporated in the landscape design.

Whilst landscaping is predominant programmed for the ground plan and will be delivered with the station, there is potential for upper terraces and balconies within the podiums and OSD towers for landscaping

The landscape character should be enhanced with provision of native species in line with the City of Sydney's Landscape code.

#### PRECEDENT IMAGES











Hunter Street East

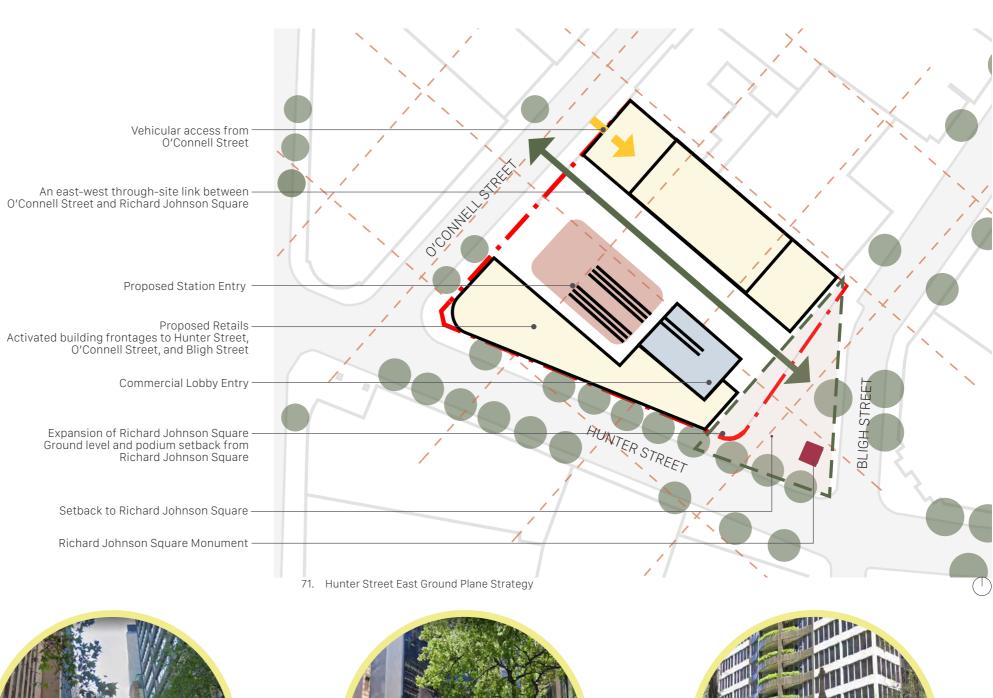
# **Ground Plane Strategy**

The following figure illustrate how the proposed ground level for the Hunter Street East site accommodates public access to the underground station concourse and station platforms, access to commercial office lobbies, provides activated retail frontages to both the streets and the through-site links, and vehicular access to the site for car parking and service vehicles. A Referencce Scheme has been prepared to demonstrate the site's capacity to accommodate a development guided by the Hunter Street Station Over Station Development Design Guidelines and potential new floor space. Not withstanding, the indicative design is subject to detailed design through a Sydney Metro's design excellence approach, including a competitive procurement process which includes assessment for alternative design proposals for both the station and over station development.





72. O'Connell Street









74. Bligh Street



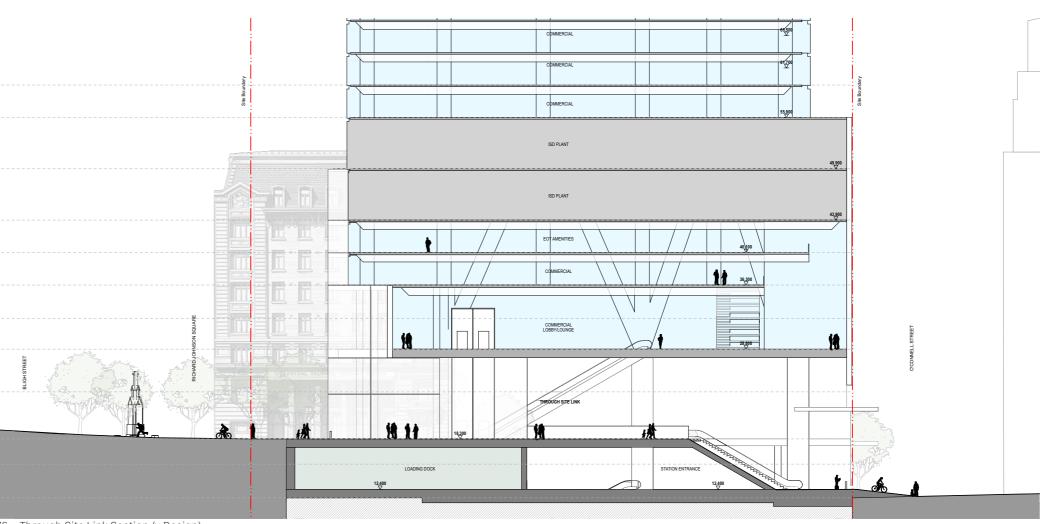
75. Richard Johnson Square

# Through Site Link

The Hunter Street East site faces O'Connell Street, Hunter Street and Bligh Street. Hunter Street which runs along the southern edge of the site has a steep gradient.

There is a 6-7m level difference between O'Connell and Bligh Street. The proposed through site link will provide equitable level-access between O'Connell and Bligh Streets via escalators and lifts, which improves accessibility between those two streets running in parallel with Hunter Street. It will also provide public access through the site, and activate the site with proposed retail and commercial entry along with the through site link.

The proposed through site link will be physically and visually well connected to Richard Johnson Square which is located at the corner of Bligh Street and Hunter Street.



76. Through Site Link Section (v Design)



77. 200 George Street



78. 200 George Street



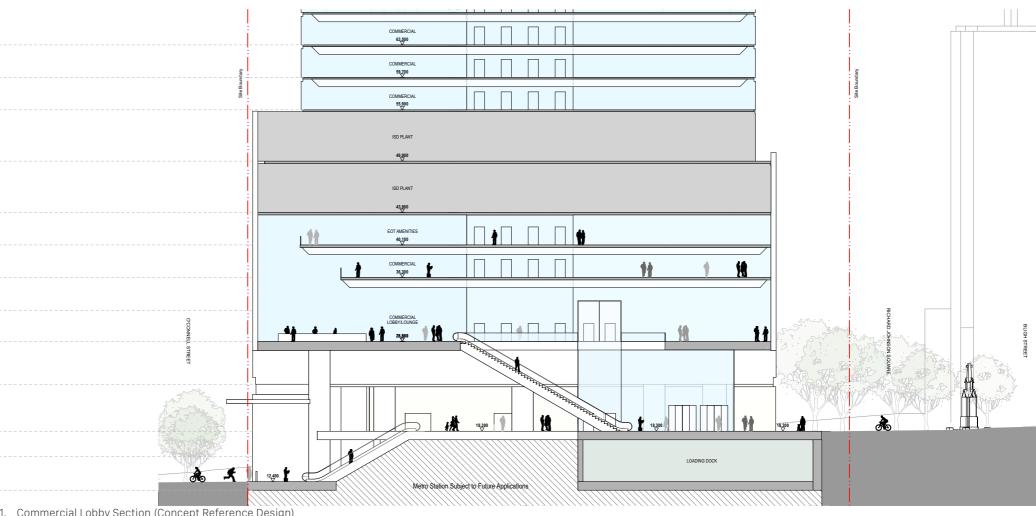
79. 151 Clarence Street - Barrack Place



80. 151 Clarence Street - Barrack Place

# **OSD Lobby**

The Hunter Street East OSD lobby is elevated above the station accessed via escalators and lifts from the entry located on the Bligh Street level. This entry is highly visible from Bligh Street and Richard Johnson Square located along the eastern boundary of the site. The commercial entry is accessed from the proposed through site link running in an east-west direction. The proposed OSD lobby is visually and physically well connected with above the coworking space and the EOT functions.







82. 200 George Street



83. 580 George Street



84. 161 Castlereagh Street



85. 388 George Street

## **Public Art Strategy**

A future over station development includes opportunities for the provision of public art in a variety of locations across the site. The public artwork is intended to be commissioned based on standards of excellence and innovation, integrity of the work, relevance and appropriateness of the work, public safety and public domain codes, and maintenance and durability in accordance with the requirements of Sydney Metro.

Future development applications for new buildings within the site are to be accompanied by a Public Art Strategy generally consistent with the City of Sydney's Public Art Strategy, Public Art Policy, Guidelines for Public Art in Private developments and Guidelines for Acquisitions and Deaccessions.

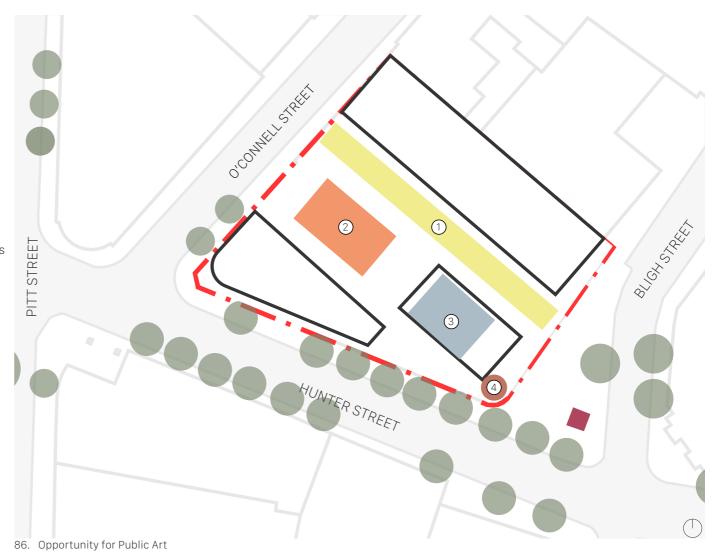
#### Public Art initiatives

- Fit art to the place
- Integrate art within built and landscape forms
- Make art a spectacle and worth repeat visits
- Appreciation of the origins and history of the precinct

Potential locations for public art opportunities have been identified as follows:

- Through-site link installations
- Ceiling/ soffit art at ground level retail and high frequency pedestrian zones
- Sculptural art in the south eastern setback area fronting Richard Johnson Square
- Commercial lobby art

Public art integrated with the over station development will be delivered over and above Sydney Metro's commitment to public art for the Station. Art within the Station will comply with the Sydney Metro Public Art Masterplan, which describes Sydney Metro's public art vision, objectives and principles as well as the commissioning process and important technical and functional parameters for public art in stations, and the specific Art Approach development for Sydney Metro West.



4





87. Through Site Link





88. Soffit/Ceiling Art



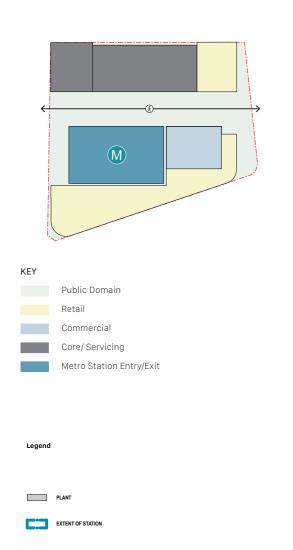


89. Commercial Lobby Art



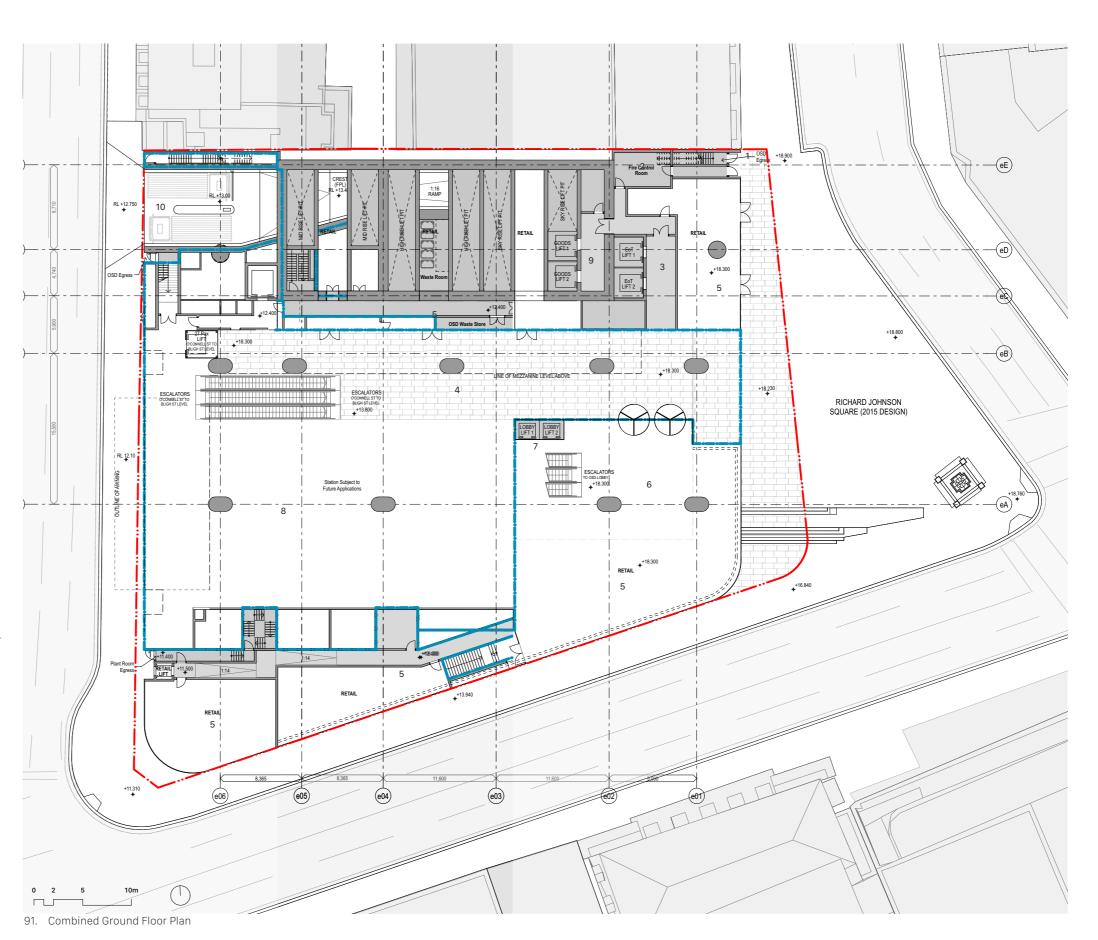
90. Sculptural Art

# Ground Plane Reference Design



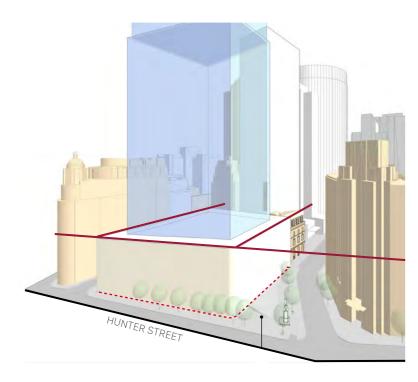
All security and pedestrian management devices associated with the Metro Station will be delivered through CSSI application for the construction of the Hunter Street Station (Sydney CBD)

- 1. OSD Egress
- 2. OSD Fire Control Room
- 3. End of Trip Lifts
- 4. Through Site Link
- 5. Retail
- 6. OSD Entry
- 7. OSD Lobby Access Lifts
- 8. Metro Station Entry
- 9. OSD Goods Lift
- 10. Loading Dock Entry



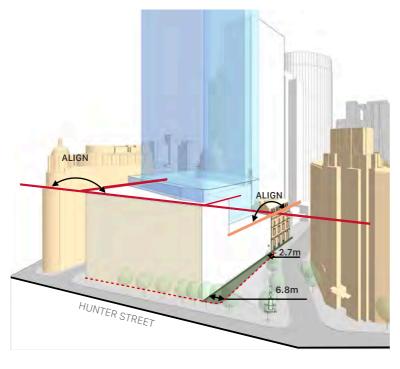
## **Podium Design Strategy**

The proposed massing responds to the existing streetwall and key datum lines of the surrounding heritage items. The built form at the ground plane supports the expansion of Richard Johnson Square and provides clear sight lines for the through site link. The massing also responds to the street grids of O'Connell and Hunter Street.



92. Hunter Street and Bligh Street - DCP Compliant Streetwall Height

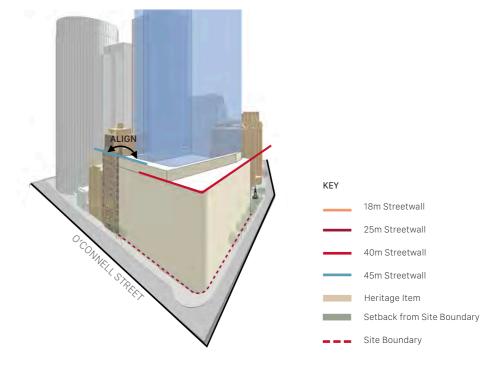
The Draft DCP controls outline a compliant podium street wall that is no greater than 25m above street level. However, the controls also offer the opportunity to vary street walls in response to context.



93. Hunter Street and Bligh Street - Proposed Responsive Streetwall Height

The proposed massing was developed as a response to the surrounding context.

- Hunter Street: The proposed massing steps up in scale to align with the streetwall height of the Former Wales House (64-66 Pitt Street) at 40m.
- Bligh Street: The proposed podium massing steps back from
  the property boundary along Bligh Street to align with the
  existing street wall of the Former NSW Club (31 Bligh Street).
  This approach is extended to the street wall height by aligning
  the street wall to the key datum line of the heritage item.



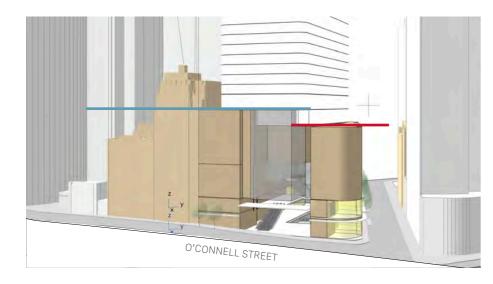
94. O`Connell Street and Hunter Street -Proposed Responsive Streetwall Height

 O'Connell Street: The scale of Hunter Street is continued around the corner to O'Connell Street and steps up to respond to the key datum lines of adjacent heritage item, Former Bank of NSW (16 O'Connell Street).

# Streetwall Strategy

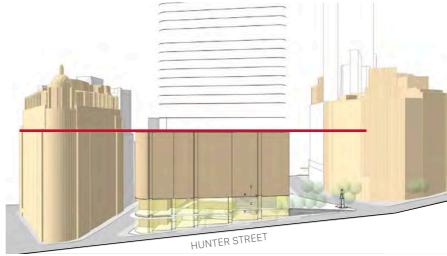
The proposed built form assists in capturing the fine-grain fragmented nature of buildings along Hunter, O'Connell and Bligh Street.

The built form provides a positive reinforcement in terms of rhythm, scale and façade relationship to the surrounding heritage items. At the corner of O'Connell and Hunter Street, the proposed form holds the corner as a response to the existing corner interfaces of the immediate context.

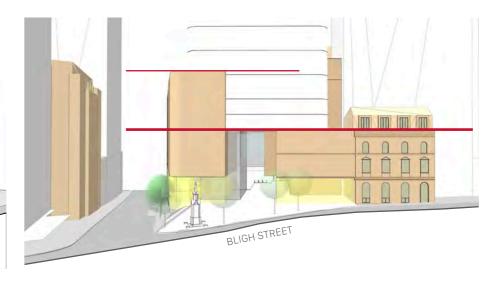


95. O'Connell Street - Proposed Responsive Streetwall Height

— Respond to horizontal alignment of Former NSW Club and Former Wales House — Respond to the horizontal alignment of Former Wales House



96. Hunter Street - Proposed Responsive Streetwall Height



97. Bligh Street - Proposed Responsive Streetwall Height

 Respond to the horizontal alignment of Former Wales House and Former NSW Club



# **Tower Design Strategy**

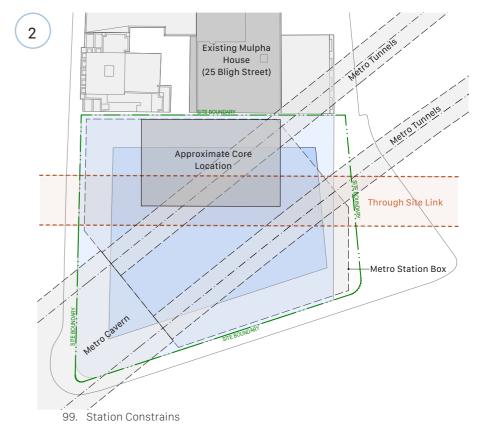
The building setback has been determined by environmental performances as well as urban design and Metro Station considerations, including:

- Heritage
- Heritage Alignment
- Streetwall Alignment
- Heritage Vistas
- Station Constraints
- Regularised Floor Plates

The proposed planning envelope responds to those requirements and achieves a regular and efficient floor plate within the urban context.







The default DCP setback is applied based on the height of the proposed planning envelope.

#### Street Setbacks :

(Building height greater than 120m)

- O`Connell Street Setback : 8m
- Hunter Street Setback : 8m
- Bligh Street Setback : 8m

#### Side and Rear Setbacks:

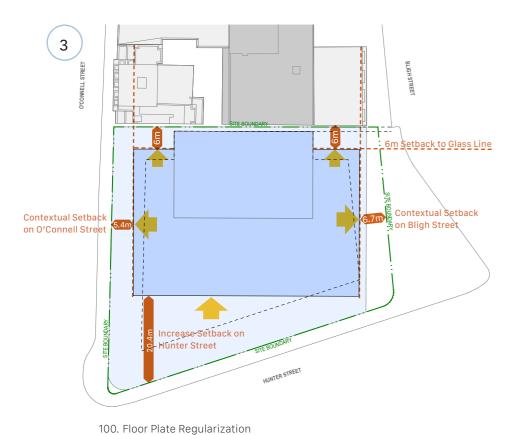
(Building height greater than 240m)

— Northern boundary : 8m

The metro station box and rail track passing through the middle of the site, which constrain the potential tower core and structure locations.

The building core location is pushed towards the northern boundary to accommodate the proposed metro station box and the rail track.

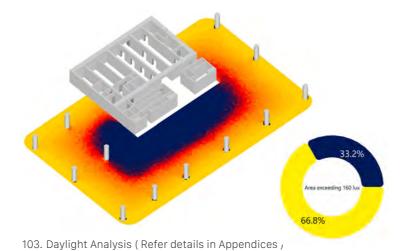
Setback Adjustment



Additional tower setback to Hunter Street allows for the view towards the Australian Square from the eastern Hunter Street. The floor plate is regularised with area balanced setbacks to O`Connell Street and Bligh Street sides. The northern boundary setback was adjusted to 6m to the potential glass facade line with considering the shading devices in front. The regularisation of the form improves the flexibility and access to natural daylight for the commercial floor plates



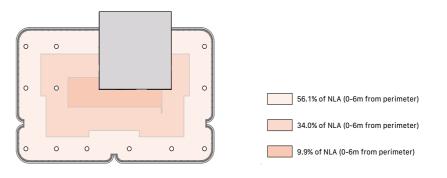
102. Showing increased view to the sky and Australia Square Tower (Local Heritage Item) visible in the round





101. Round Corners

The rounding corner reduces the diagonal dimension of the floor plate, increasing the slenderness of the tower and improving natural daylight access to the surrounding public domain.



104. Floor Plate Analysis (Refer details in Appendices)

# **Height Control**

Hunter Street East is located to the North of Martin Place and Pitt Street Mall, limited in height by sun and shadow controls defined by the Sydney LEP.

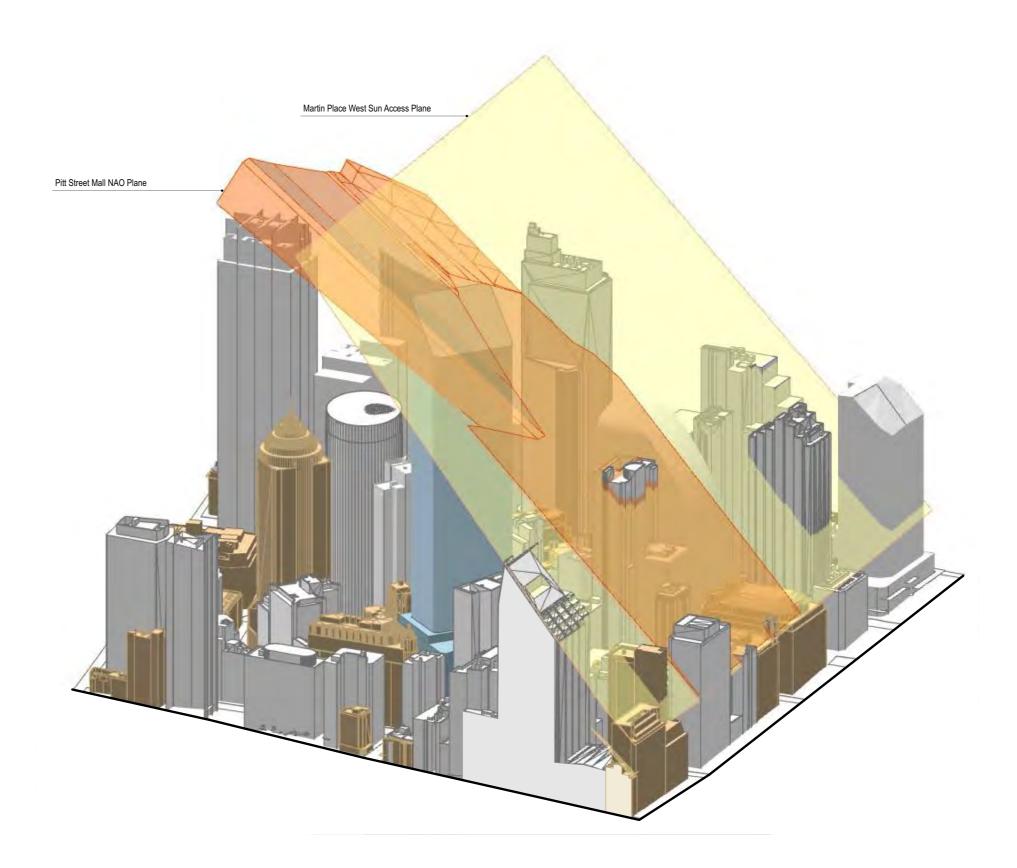
The height of the proposed planning envelope is RL269.1m (257.7m above ground), which is below the Martin Place Sun Access Plane and the Pitt Street Mall No Additional Overshadowing plane.

The proposed envelope was analysed against the daylight and wind requirements based on the Sydney DCP - Schedule 12. ( Refers to the appendices. )

The analysis demonstrates that the proposed envelope improves visual access to the sky by **0.018256%**, when compared to the Basecase envelope as outlined within Schedule 12 - \_'Procedures for demonstrating compliance with variation provisions for setbacks, separations and tapering in Central Sydney'.



105. Sky View Factor Analysis Plan - 75m Radius Analysis extent

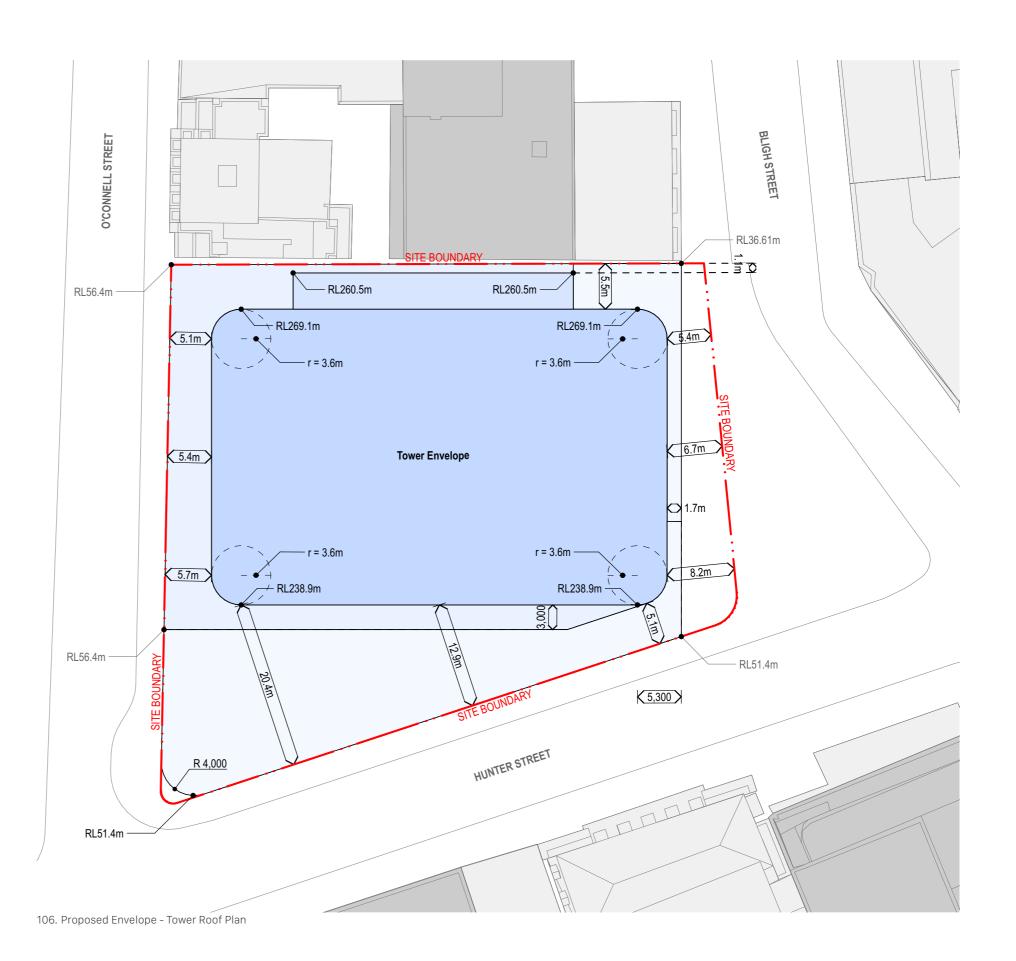


# **Proposed Planning Envelope**

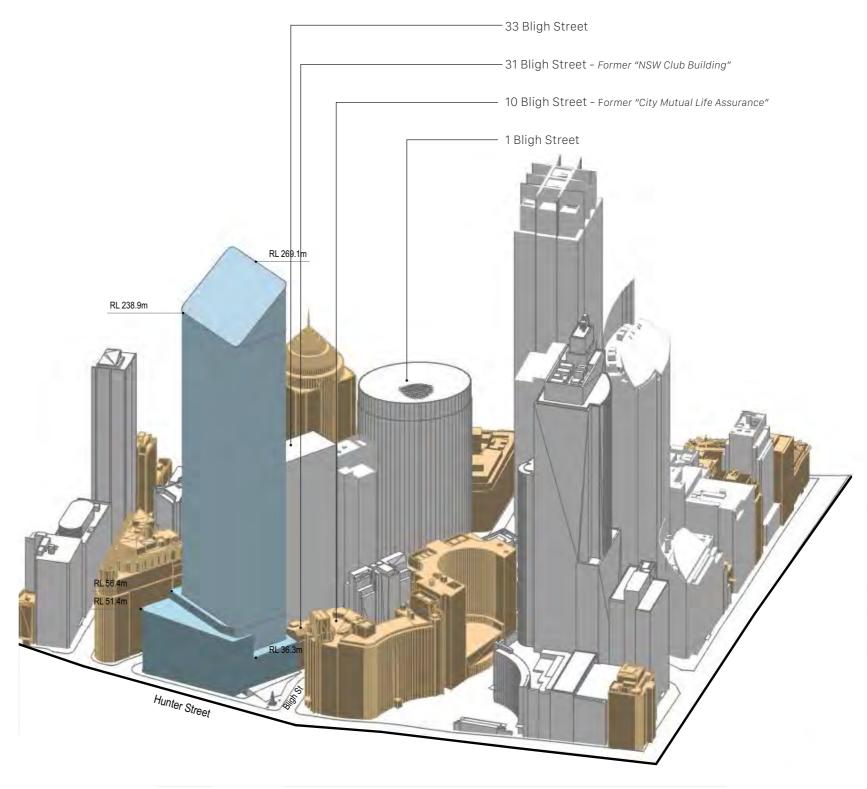
To realise the primary objective and intended outcome of the Planning Proposal request, a planning envelope has been outlined for the Hunter Street East site. The planning envelope establishes the built form parameters to guide future development on the site to be secured under a future SSDA process.

The proposed planning envelope has been defined by a careful analysis of the urban context including: the ground plane, street walls, setbacks, sun access, daylight access and wind conditions.

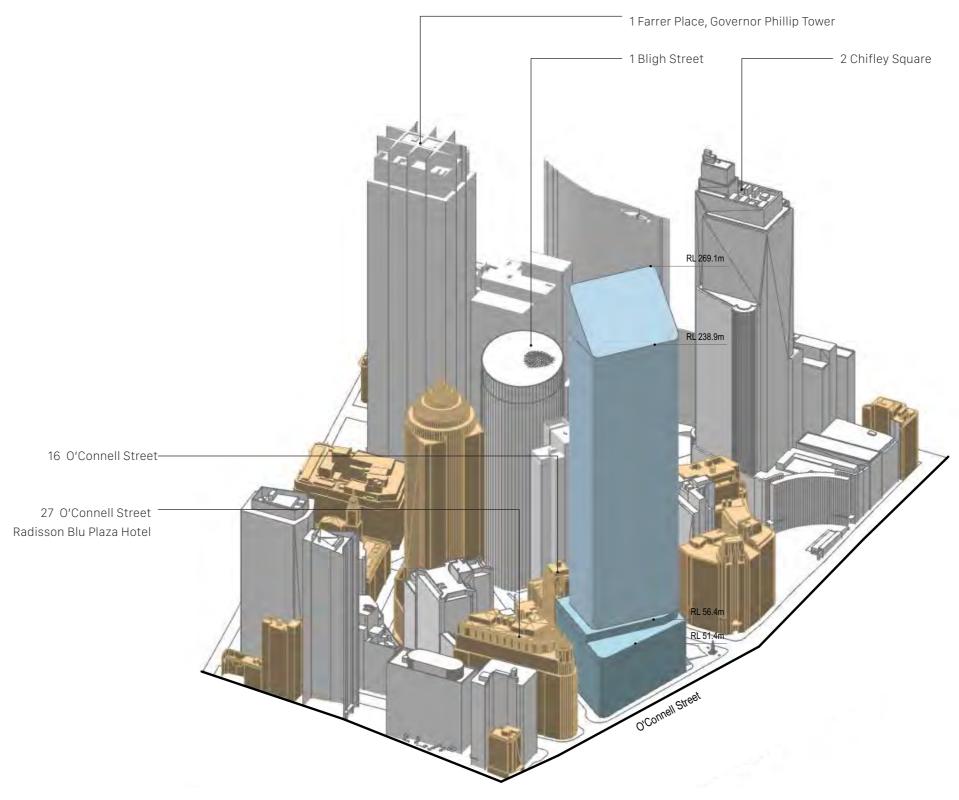
The envelope is consistent with the principles, objectives and controls of the Central Sydney Planning Strategy and associated draft DCP and LEP amendments.



# Proposed Envelope



107. Proposed Envelope - Southeast View



108. Proposed Envelope - Northwest View

## **Concept Reference Design Massing**

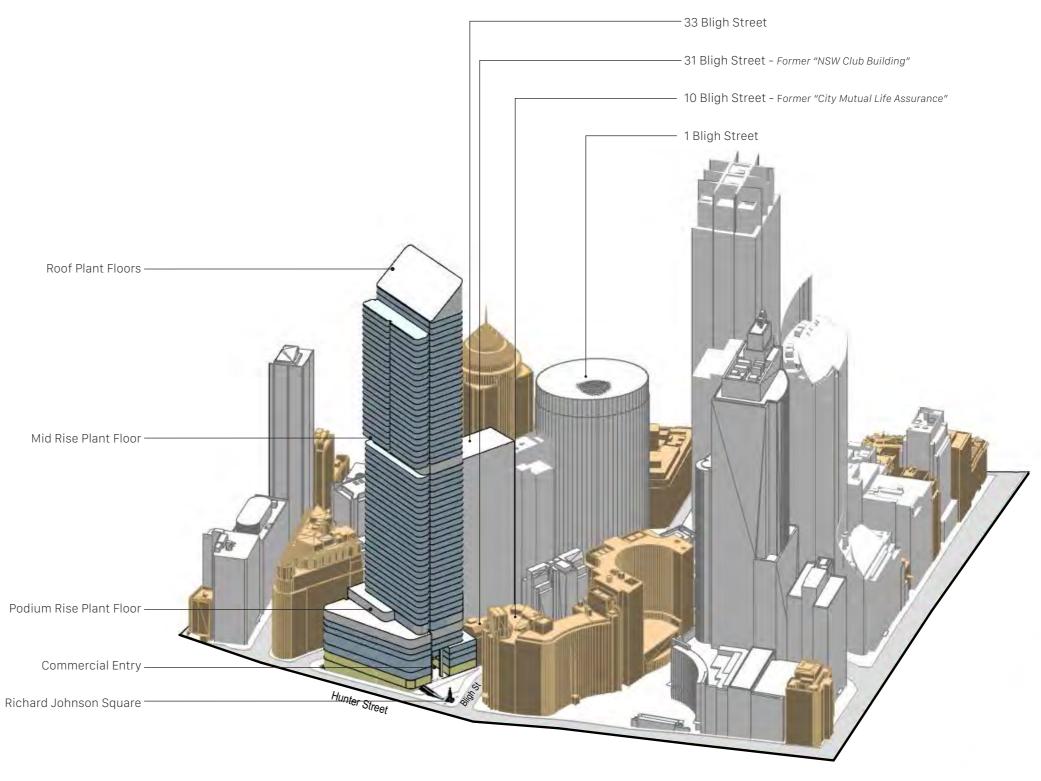
The concept reference design has been prepared for the Hunter Street East site and is indicative only. It has primarily been prepared to demonstrate and justify the proposed numerical amendments to the SLEP 2012 which are being sought under this Planning Proposal request. The final detailed design of the scheme will be the subject of a future Concept SSDA, competitive tendering process and a future Detailed SSDA.

The concept reference design for a commercial tower fits within the proposed planning envelope and contains the proposed amount of floor space including the Metro Station and through site link.

This concept reference design allows for building articulation, and external facade elements such as sun shading and roof features to fit within the envelope. The following massing diagrams illustrate this articulated form.

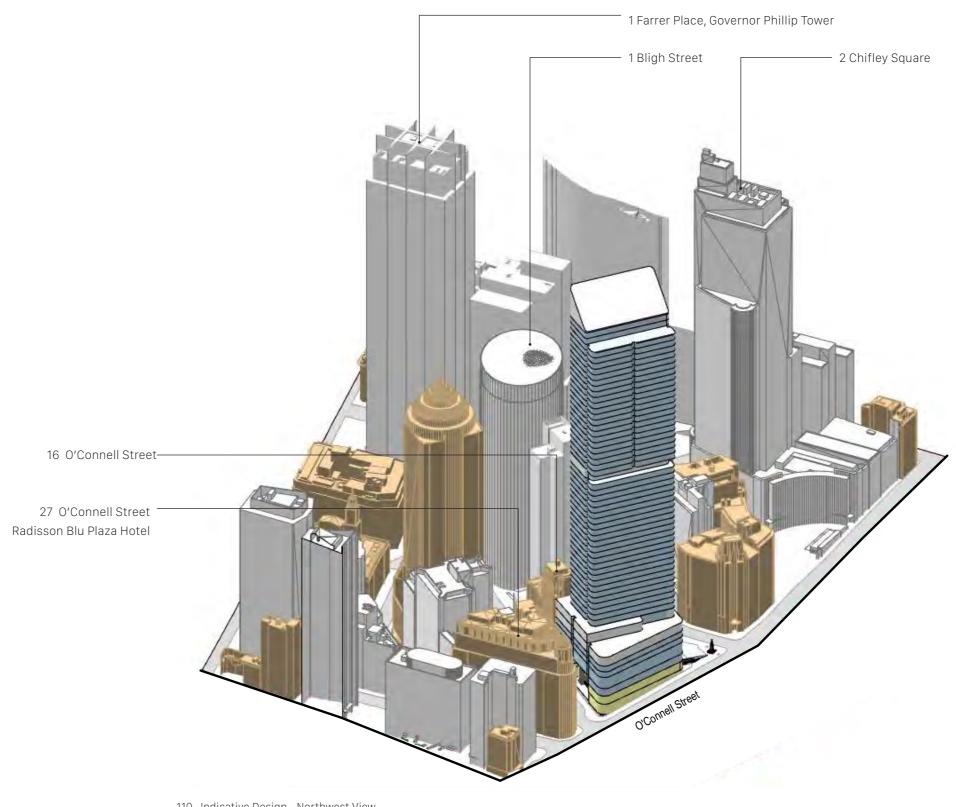
The proposal is consistent with the scale of development in the precinct and is in line with the objectives of the Central Sydney strategy in terms of creation of employment space, land efficiency and urban controls.

The articulation is 15% of the envelope outline measured on a floor by floor basis and the efficiency of the commercial tower is 78.4% GBA to GFA.



109. Indicative Design - Southeast View

Commercial
Retail
Plant



Commercial

Plant

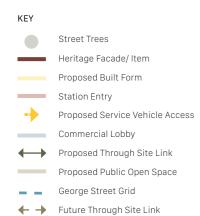
110. Indicative Design - Northwest View





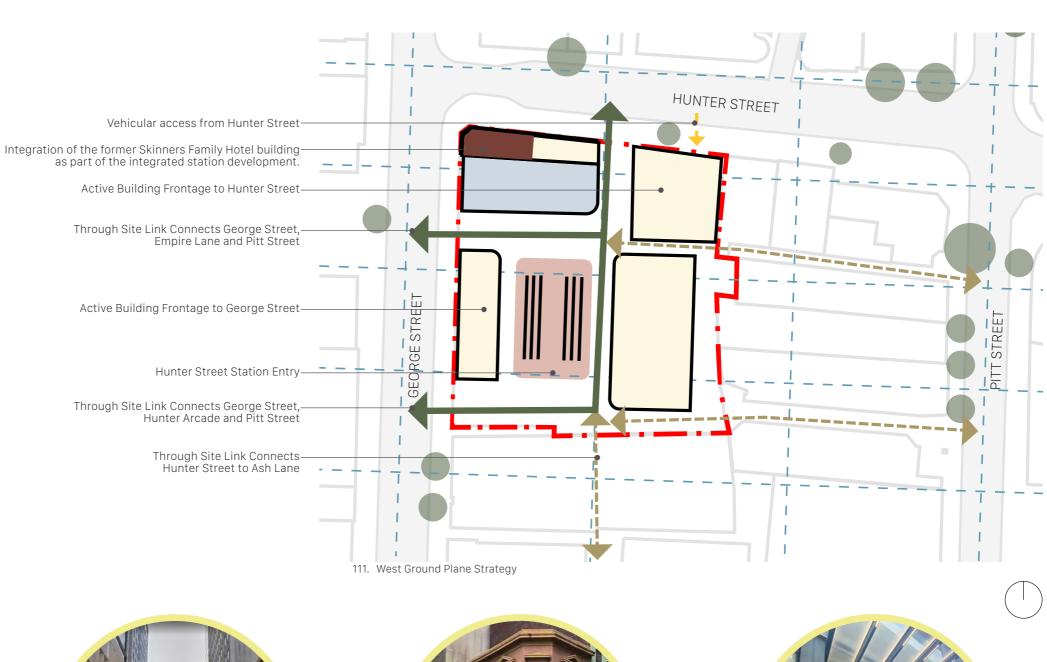
## **Ground Design Strategy**

The following figure illustrate how the proposed ground level for the Hunter Street West site accommodates public access to the underground station concourse and station platforms, access to commercial office lobbies, provides activated retail frontages to both George Street and the through-site links, and vehicular access to the site for car parking and service vehicles. Indicative design has been prepared to demonstrate the site's capacity to accommodate a development guided by the Hunter Street Station Over Station Development Design Guidelines and potential new floor space. Not withstanding, the reference concept design is subject to Sydney Metro's design excellence approach, including a competitive procurement process which includes assessment for alternative design proposals for both the station and over station development.





112. George Street





113. Hunter Street



114. Former Skinners Family Hotel

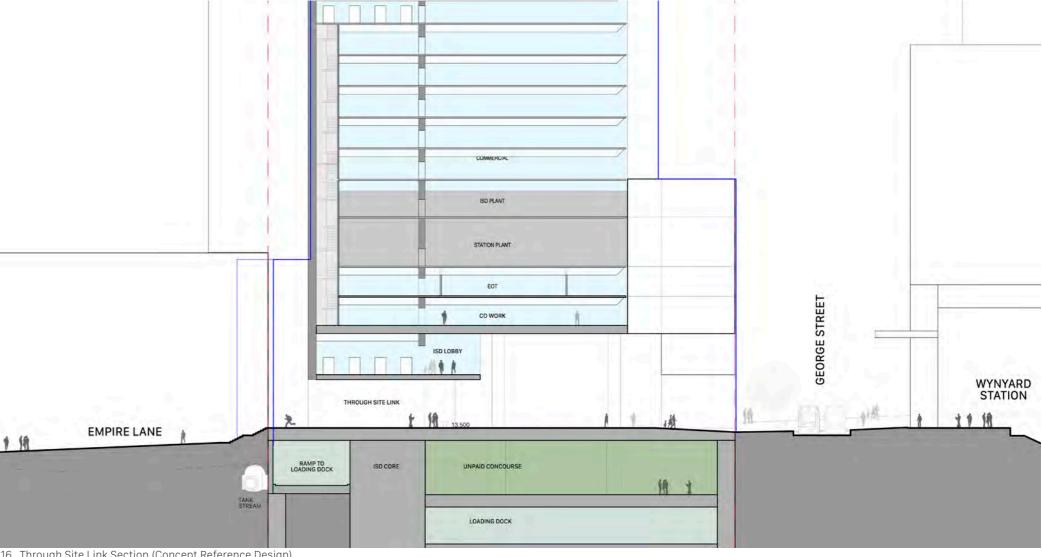


115. Wynyard Station

# Through Site Link

The Hunter Street West site faces George Street and Hunter Street. One north-south and two east-west through site links are proposed in conjunction with the metro station entry, which improves station customer distribution with the surrounding street network. These links will provide public access through the site and also be activated with the proposed commercial entry and retail.

Sydney Metro has provisioned for future through site links to deliver desirable pedestrian connections. The success of these links will rely on coordination with adjacent land owners. Sydney Metro will work collaboratively with adjacent land owners.



116. Through Site Link Section (Concept Reference Design)



117. 200 George Street



118. 200 George Street



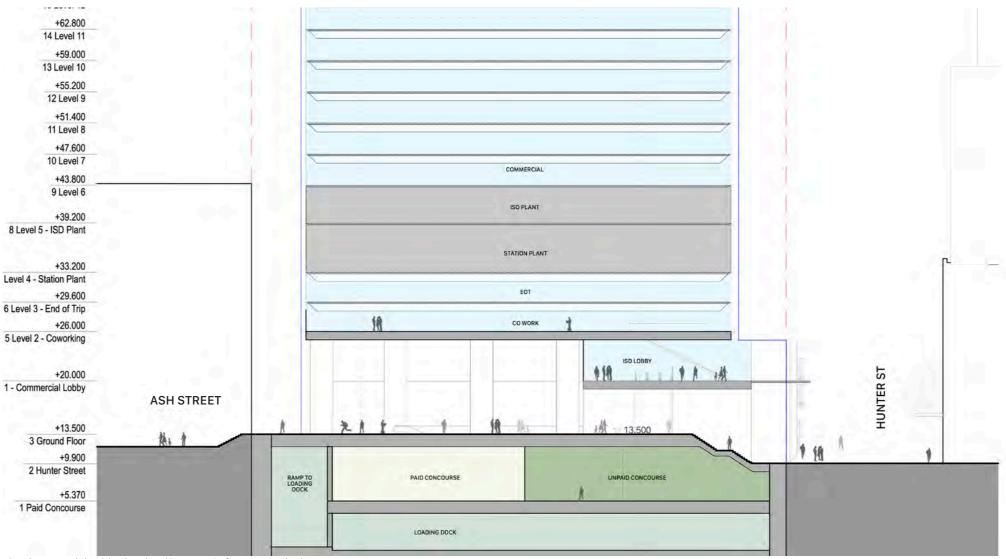
119. 151 Clarence Street - Barrack Place



120. 151 Clarence Street - Barrack Place

# **OSD Lobby**

The Hunter Street West OSD lobby is elevated above the station accessed via escalators and lifts from the ground level entry located on George Street. This entry is highly visible from George Street and the Wynyard Street Station entry located directly opposite the site on George Street. The commercial entry is accessed directly from George Street, which is attached to the on-site heritage item, the Former Skinners Family hotel which will be adaptively reused as a retail building. The Reference Scheme illustrates how the OSD Lobby can be visually and physically connected.



121. Commercial Lobby Section (Concept Reference Design)



122. 200 George Street



123. 580 George Street



124. 161 Castlereagh St



125. 388 George Street

## **Public Art Strategy**

A future over station development includes opportunities for the provision of public art in a variety of locations across the site. The public artwork is intended to be commissioned based on standards of excellence and innovation, integrity of the work, relevance and appropriateness of the work, public safety and public domain codes, and maintenance and durability in accordance with the requirements of Sydney Metro.

Future development applications for new buildings within the site are to be accompanied by a Public Art Strategy generally consistent with the City of Sydney's Public Art Strategy, Public Art Policy, Guidelines for Public Art in Private developments and Guidelines for Acquisitions and Deaccessions.

#### Public Art initiatives

- Fit art to the place
- Integrate art within built and landscape forms
- Make art a spectacle and worth repeat visits
- Appreciation of the origins and history of the precinct

Potential locations for public art opportunities have been identified as follows:

- Through-site link installations
- Heritage displays at the Former Skinner's Family Hotel
- Sculptural art within the southwestern setback area fronting George Street
- Ceiling/ soffit art above pedestrian entrances to the below ground concourses

Public art integrated with the over station development will be delivered over and above Sydney Metro's commitment to public art for the Station. Art within the Station will comply with the Sydney Metro Public Art Masterplan, which describes Sydney Metro's public art vision, objectives and principles as well as the commissioning process and important technical and functional parameters for public art in stations, and the specific Art Approach development for Sydney Metro West.



(4)



127. Through Site Link



128. Heritage Display

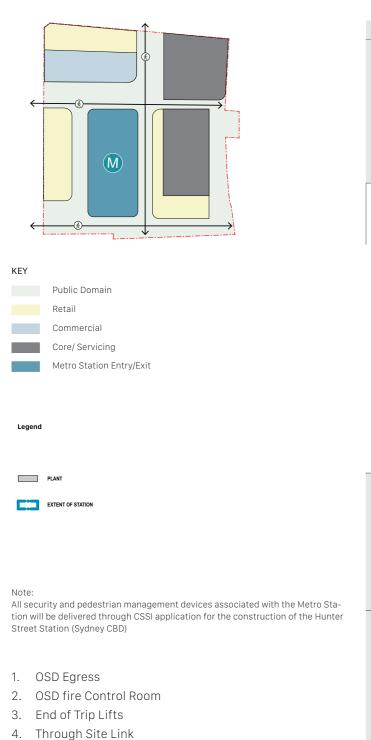


129. Sculptural Art

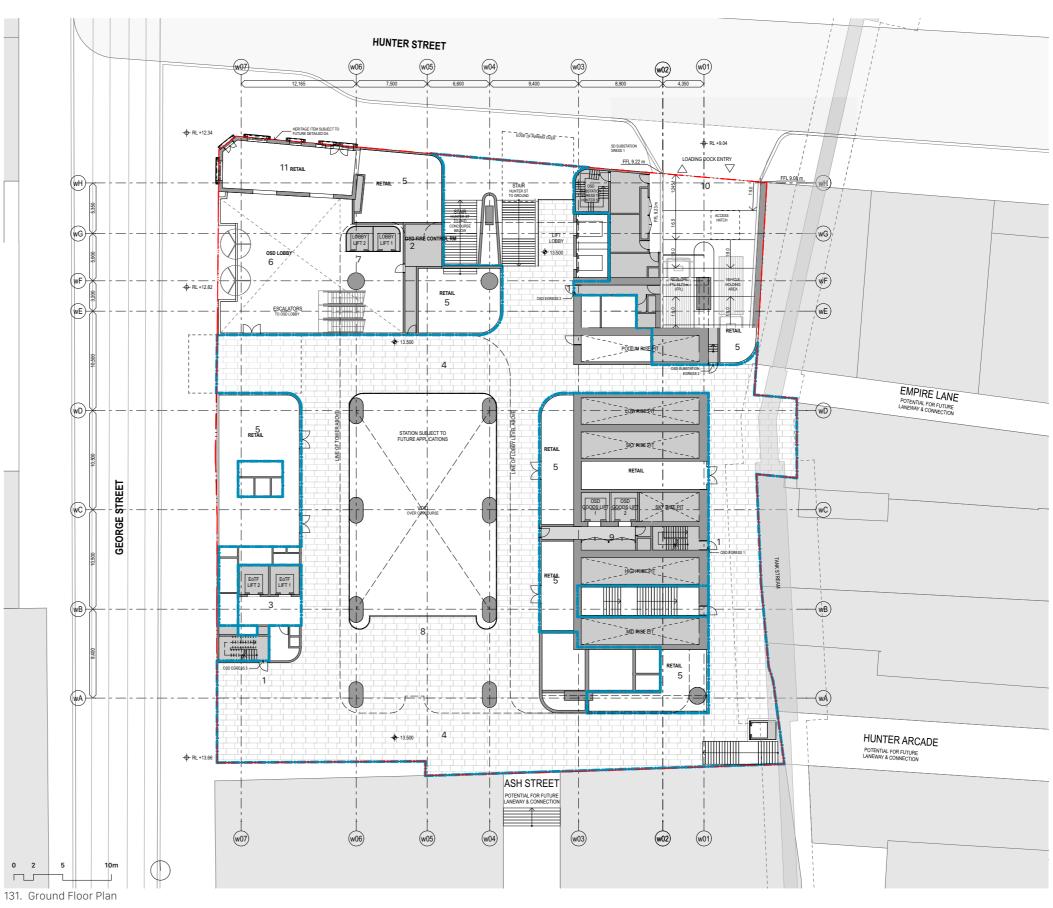


130. Ceiling/Soffit Art

# **Ground Plane Reference Design**



- 5. Retail
- 6. OSD Entry
- 7. OSD Lobby Access Lifts
- 8. Metro Station Entry
- 9. OSD Goods Lift
- 10. Loading Dock Entry
- 11. Heritage Item

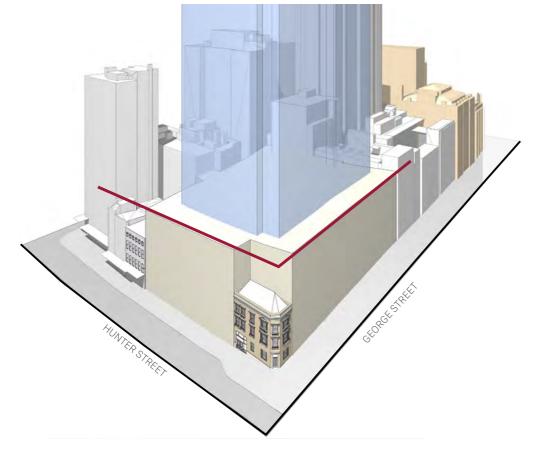


#### **Podium Design Strategy**

The proposed podium massing responds to the existing height and alignment of the surrounding context .The original scale and streetwall height of the Former Skinners Family Hotel is reflected through the massing strategy. The proposed massing reflects the George Street grid.

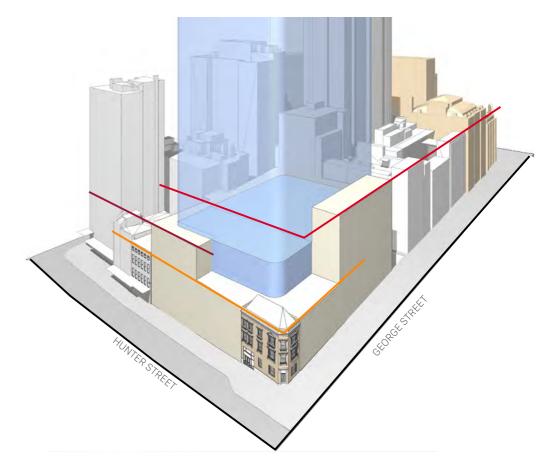
12.5m Streetwall

32m Streetwall



132. Hunter Street and George Street - DCP Compliant Streetwall Height

Draft DCP controls outline a compliant podium street wall that is no greater than 25m above street level. However, the controls also offer the opportunity to vary street walls in response to context.



133. Hunter Street and George Street - Proposed Responsive Streetwall Height

The proposed massing was developed as a response to the surrounding context.

**Former Skinners Family Hotel:** The proposed massing steps down to align with the existing parapet of the Former Skinners Family Hotel. The relationship to the heritage item is enhanced by maintaining a lower streetwall on either side.

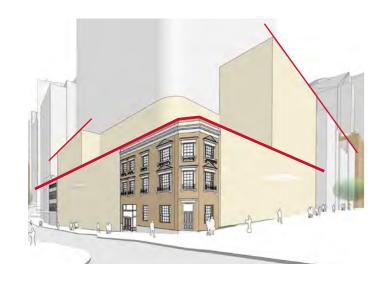
**George Street:** The streetwall aligns with the predominant streetwall height of heritage items and other buildings along George Street.

**Hunter Street:** The streetwall along Hunter Street is proposed to step up and increase in scale to the east of the Former Skinners Family Hotel to a typical compliant scale of 25m.

### Streetwall Strategy

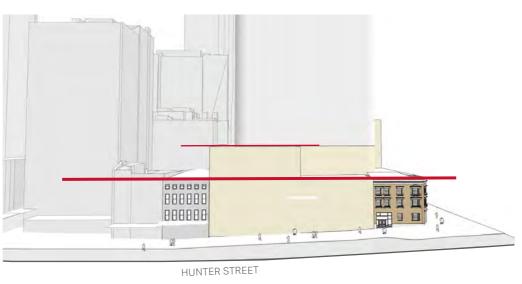
The proposed built form assists in capturing the fine-grain rhythm of the buildings along Hunter and George Street.

The built form provides a positive reinforcement in terms of scale and relationship to the heritage item on site and surrounding context. The heritage item is well integrated with the design and is proposed to be adaptively re-used.



134. Hunter and George Street - Proposed Responsive Streetwall Height

Respond to horizontal alignment of Former Skinners
 Family Hotel and other heritage items and buildings
 along George Street



135. Hunter Street - Proposed Responsive Streetwall Height



136. George Street - Proposed Responsive Street Wall Height

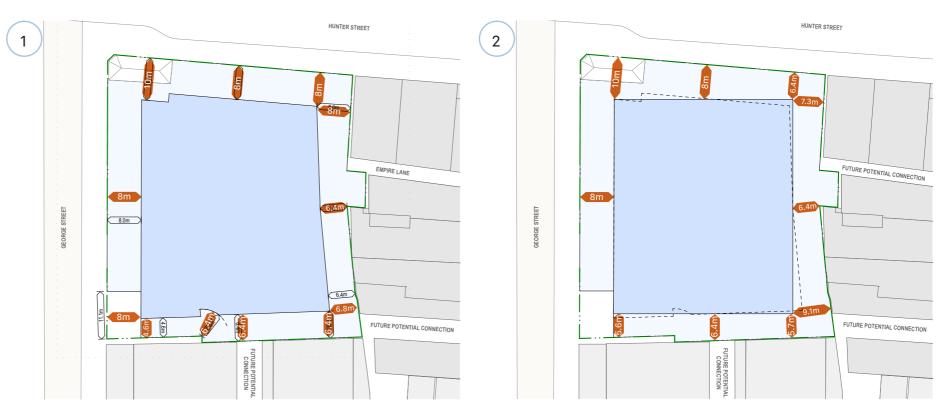


### **Tower Design Strategy**

The building setback has been determined by environmental performances as well as urban design and Metro Station considerations, including:

- Heritage
- Heritage Alignment
- Streetwall Alignment
- Heritage Vistas
- Station Constraints
- Regularised Floor Plates

The proposed planning envelope responds to those requirements and achieves a regular and efficient floor plate within the urban context.



137. DCP Setback

138. Floor Plate Regularization

The default DCP setback is applied based on the height of the proposed planning envelope.

#### Heritage Setbacks:

(from the Former Skinners Family Hotel)

— Hunter Street: 10m

#### Street Setbacks:

(Building height greater than 120m)

— Hunter Street Setback : 8m

— George Street Setback : 8m

#### Side and Rear Setbacks:

(Building height Greater than 120m up to 240m)

— Eastern and Southern boundary : 3.33% of the proposed total height of building

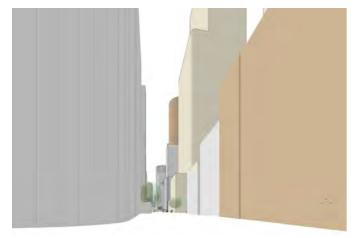
The floor plate is regularised with area balanced setbacks to Hunter Street, the eastern and the southern boundary.



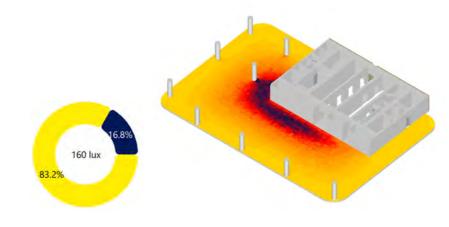
139. George Street Setback

Setback Adjustment

Additional setback to George Street allows for the view towards the Australian Square from the southern George Street. The floor plate is kept regular shape and further adjusted with Hunter Street setback, the eastern and the southern boundary setbacks.



140. Showing increasing view to the sky and Australia Square Tower (Local Heritage Item) from the southern side of George Street



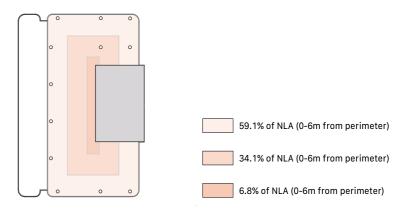
142. Daylight Analysis (Refer details in Appendices)



141. Round Corners

The rounding corner reduces the diagonal dimension of the floor plate, which improves the slenderness of the tower and increases natural daylight access for the surrounding public domain

The upper level of the tower steps back further from George Street to avoid additional overshadowing of Martin Place and further increase daylight access to George Street.



143. Floor Plate Analysis (Refer details in Appendices)

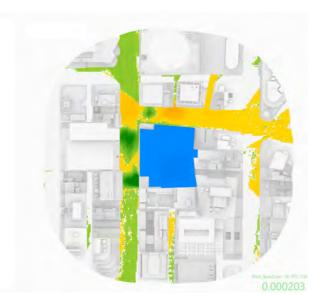
### **Height Control**

Hunter Street West is located to the North of Martin Place, limited in height by sun and shadow controls defined by the Sydney LEP.

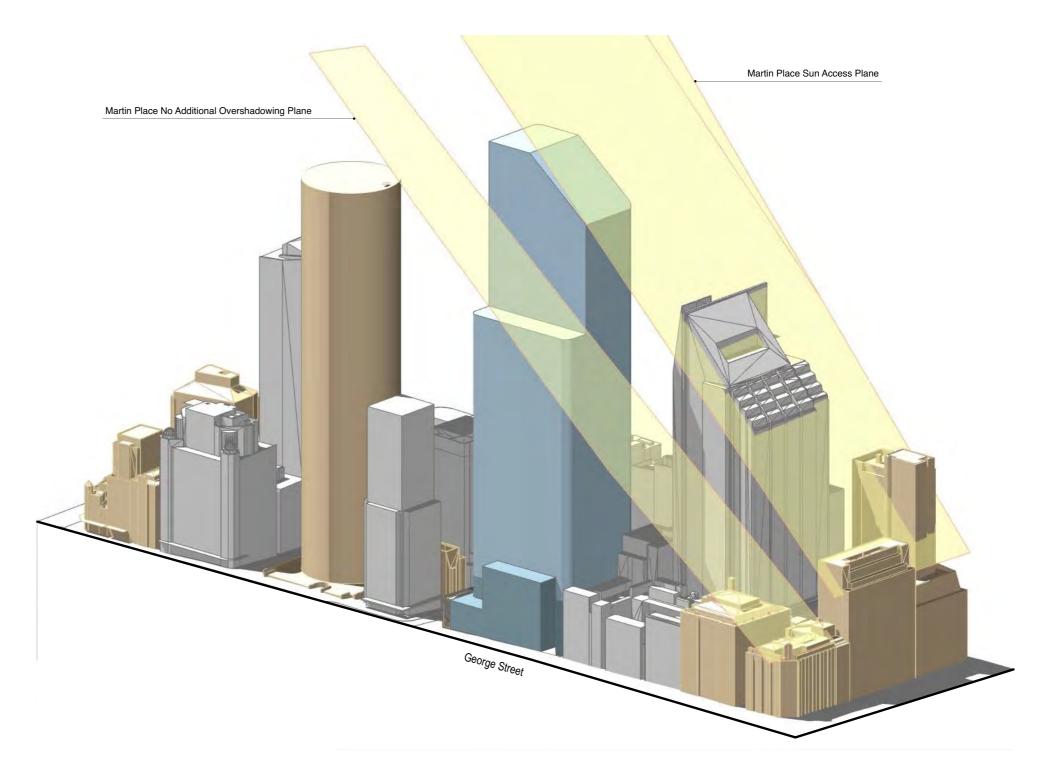
The height of the proposed envelope is RL220.0m (213.0m above ground), which is below the Martin Place Sun Access Plane and the Martin Place No Additional Overshadowing plane.

The proposed envelope was analysed against the daylight and wind requirements based on the Sydney DCP - Schedule 12. (Refers to the appendices.)

The analysis demonstrates that the proposed envelope improves visual access to the sky by **0.000203%**, when compared to the Basecase envelope as outlined within Schedule 12 - \_'Procedures for demonstrating compliance with variation provisions for setbacks, separations and tapering in Central Sydney'.



144. Sky View Factor Analysis Plan - 100m Radius Analysis extent

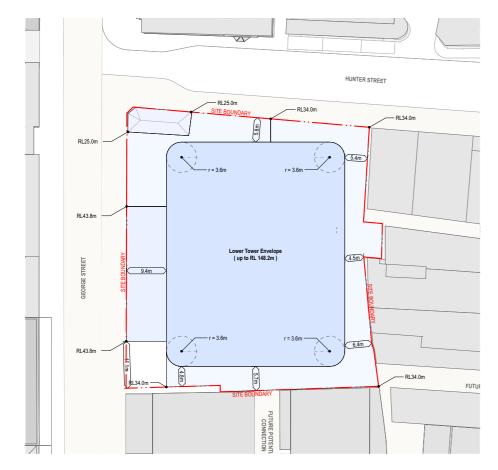


### **Proposed Planning Envelope**

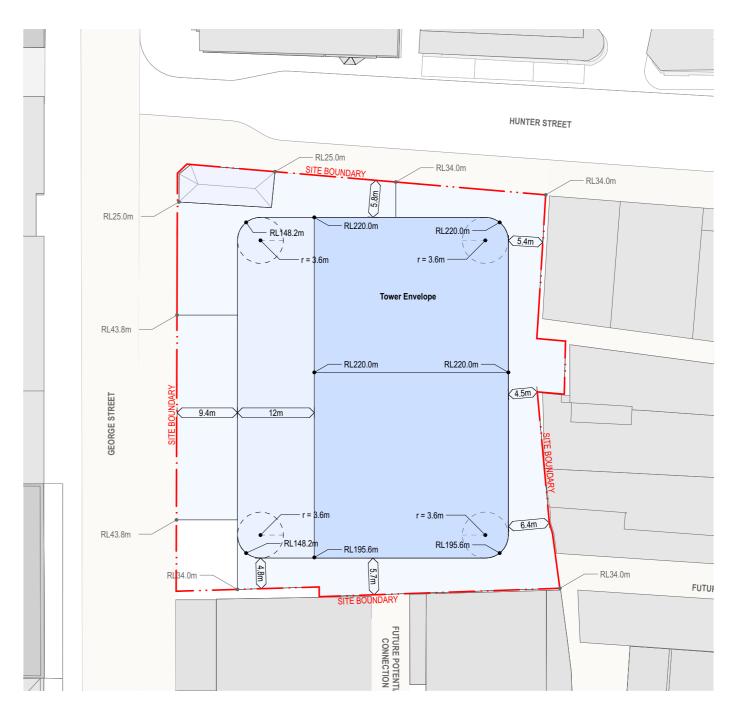
To realise the primary objective and intended outcome of the Planning Proposal request, a planning envelope has been outlined for the Hunter Street West site. The planning envelope establishes the built form parameters to guide future development on the site to be secured under a future SSDA process.

The proposed planning envelope has been defined by a careful analysis of the urban context including: the ground plane, street walls, setbacks, sun access, daylight access and wind conditions.

The envelope is consistent with the principles, objectives and controls of the Central Sydney Planning Strategy and associated draft DCP and LEP amendments.

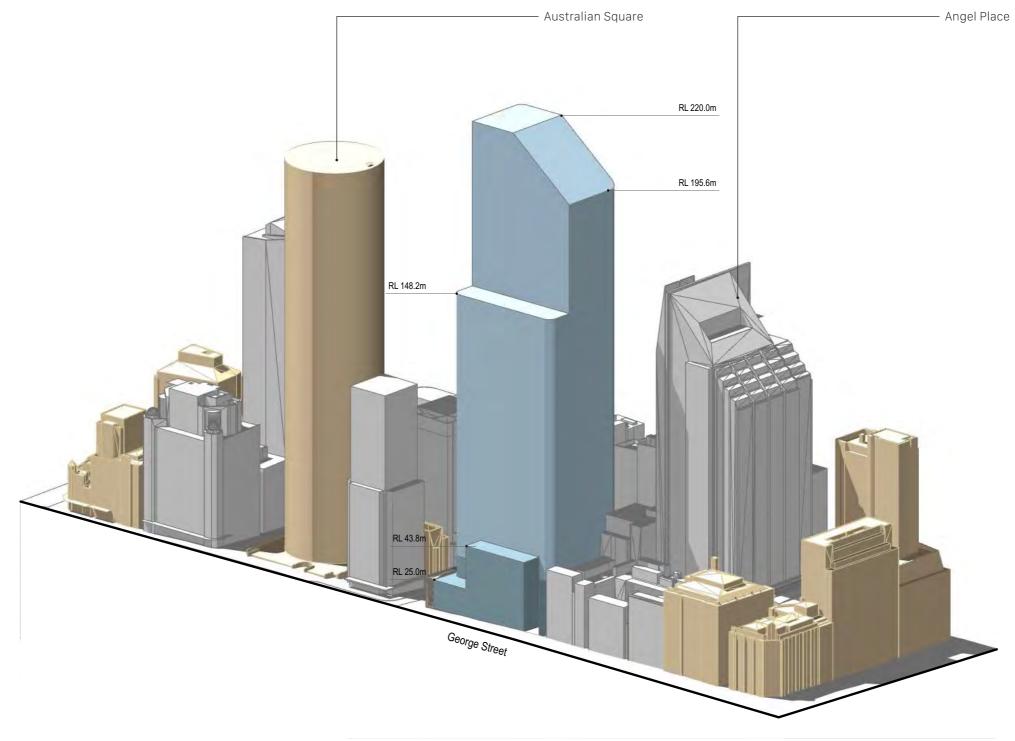


145. Proposed Envelope - Lower Tower Roof Plan

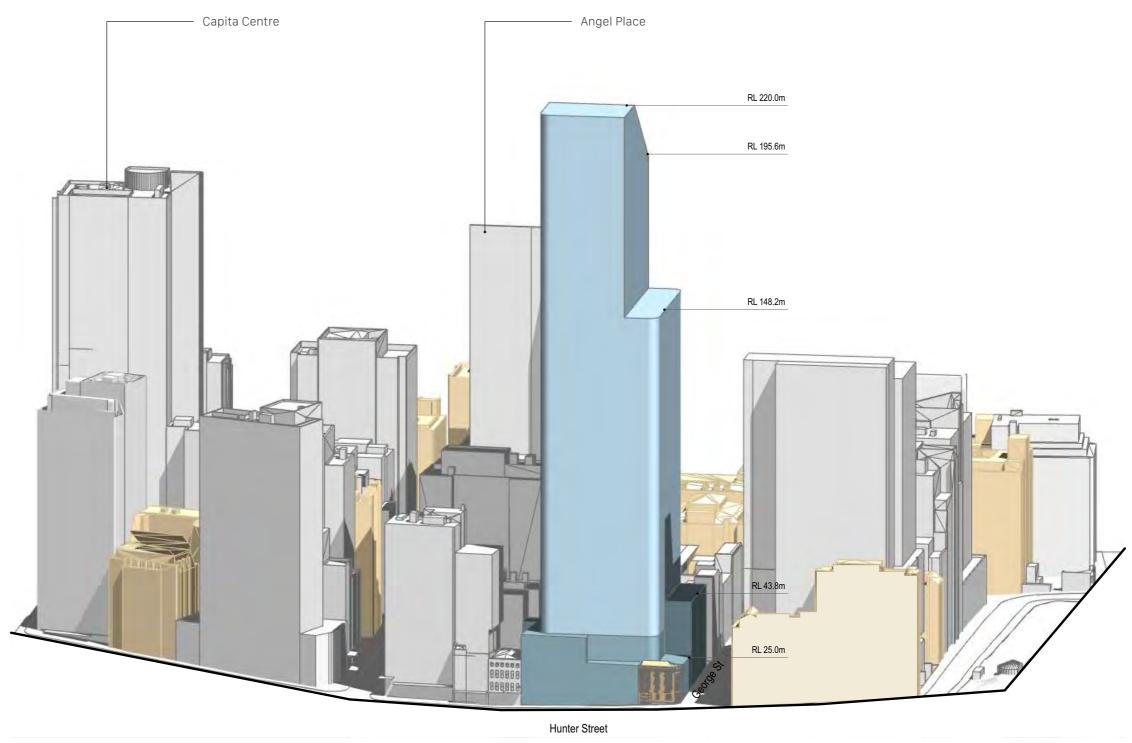


146. Proposed Envelope - Tower Roof Plan

## **Proposed Envelope**



147. Proposed Envelope - Southwest View



148. Proposed Envelope - Northwest View

#### **Concept Reference Design Massing**

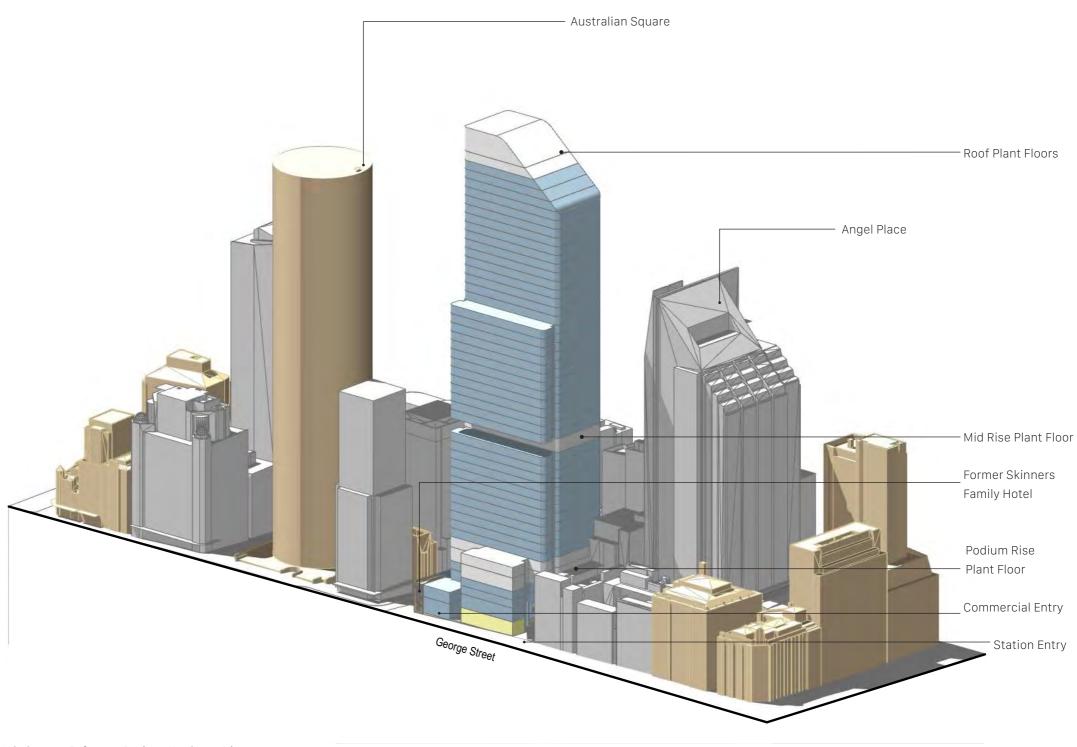
The concept reference design has been prepared for the Hunter Street West site and is indicative only. It has primarily been prepared to demonstrate and justify the proposed numerical amendments to the SLEP 2012 which are being sought under this Planning Proposal request. The final detailed design of the scheme will be the subject of a future Concept SSDA, competitive tendering process and a future Detailed SSDA.

The concept reference design for a commercial tower fits within the proposed planning envelope and contains the proposed amount of floor space including the metro station and through site link.

This concept reference design allows for building articulation, and external facade elements such as sun shading and roof features to fit within the envelope. The following massing diagrams illustrate this articulated form.

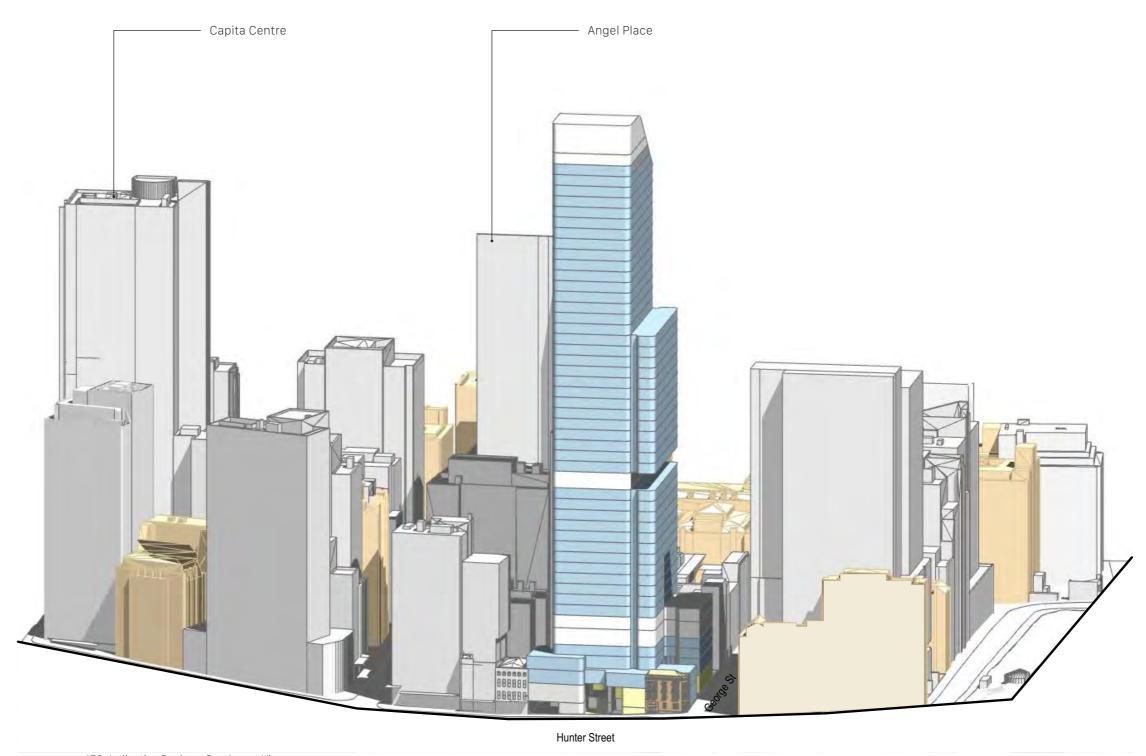
The proposal is consistent with the scale of development in the precinct and is in line with the objectives of the Central Sydney Strategy in terms of creation of employment space, land efficiency and urban controls.

The articulation is 12% of the envelope outline measured on a floor by floor basis and the efficiency of the commercial tower is 79.49% GBA to GFA.





149. Concept Reference Design - Northwest View



150. Indicative Design - Southwest View

Commercial
Retail
Plant





Residential Sun Access Analysis

### Residential Sun Access Analysis

The following sun-eye view analysis has been undertaken on June 21st between 9am and 3pm for the purpose of assessing potential overshadowing of residential buildings within the control times specified in SEPP 65 and the NSW Apartment Design Guide(ADG).

In the first step, hourly analysis has been undertaken to detect the potential overshadowing impact of the proposed envelopes. In the second step, 15 minute detailed analysis have been applied to the impacted times to measure their duration.

The results illustrate the following:

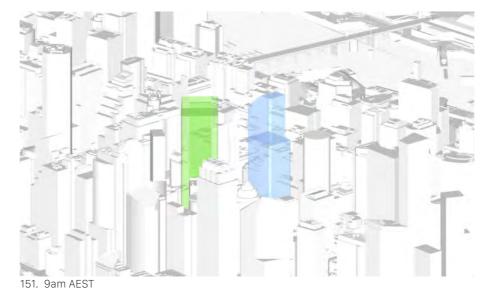
The proposed Hunter Street East building envelope will partially shade the western facade of 1 Hosking Place between 11:45pm and 12:15pm on 21 June (Figure. 160 & 161)

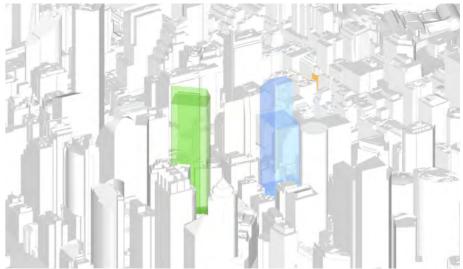
The proposed Hunter Street West building envelope partially shades the west facade of 1 Hosking Place between 2:45pm and 3pm on 21st June (Figure. 165 & 166).

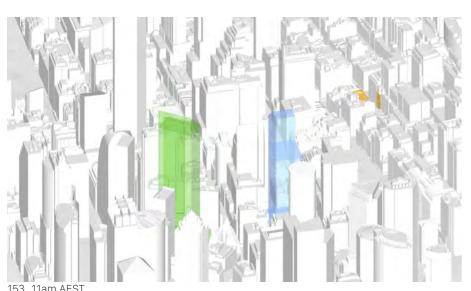
However, 1 Hosking Place still receives 2.5 hours of solar access between 12:15pm and 2:45pm on 21 June, which complies with the requirement of the NSW Apartment Design Guide (ADG).

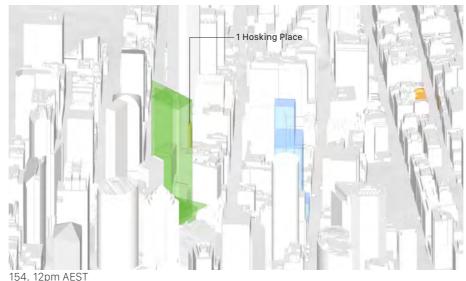
For a discussion on compliance with SEPP 65 please refer to the Urbis Planning Proposal report.

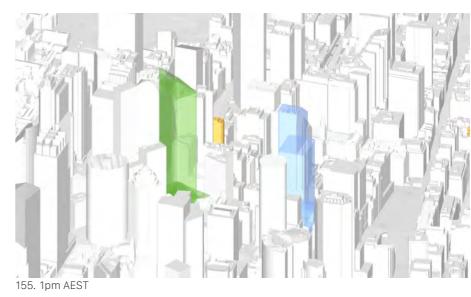
Winter Solstice - 21 June
Between 9am and 3pm
1 hour Intervals

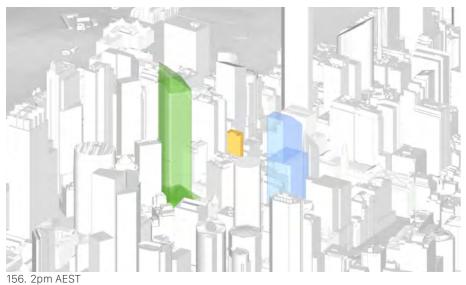


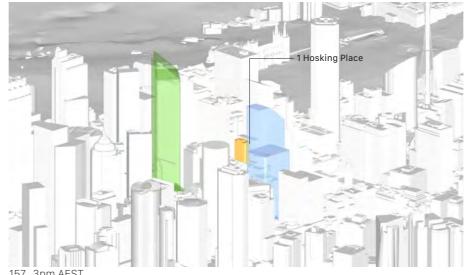










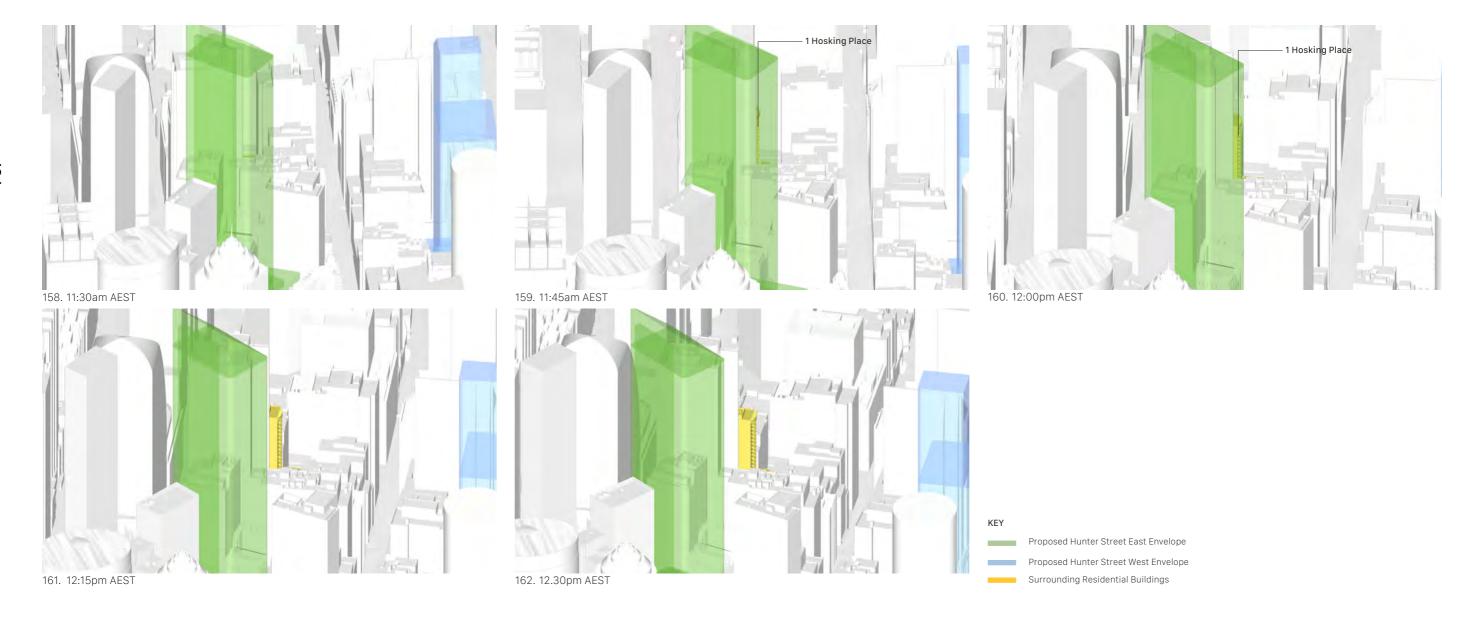


KEY

Proposed Hunter Street East Envelope
Proposed Hunter Street West Envelope
Surrounding Residential Buildings

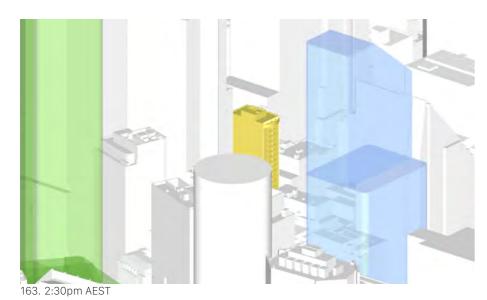
#### Winter Solstice - 21 June

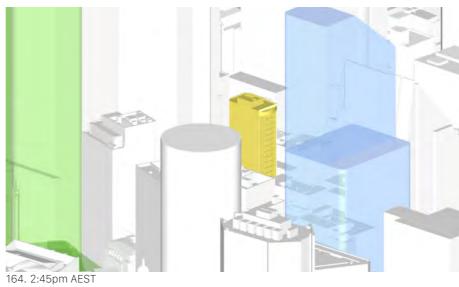
Between 11:30pm to 12:30 15 minutes Intervals

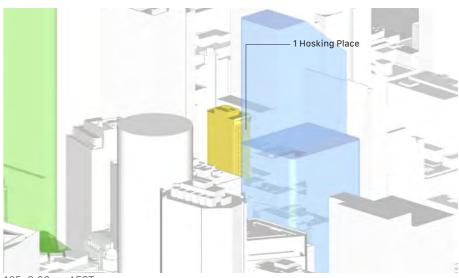


#### Winter Solstice - 21 June

Between 2:30pm to 3:00 15 minutes Intervals







165. 3:00pm AEST

#### KEY

Proposed Hunter Street East Envelope

Proposed Hunter Street West Envelope

Surrounding Residential Buildings

Appendix

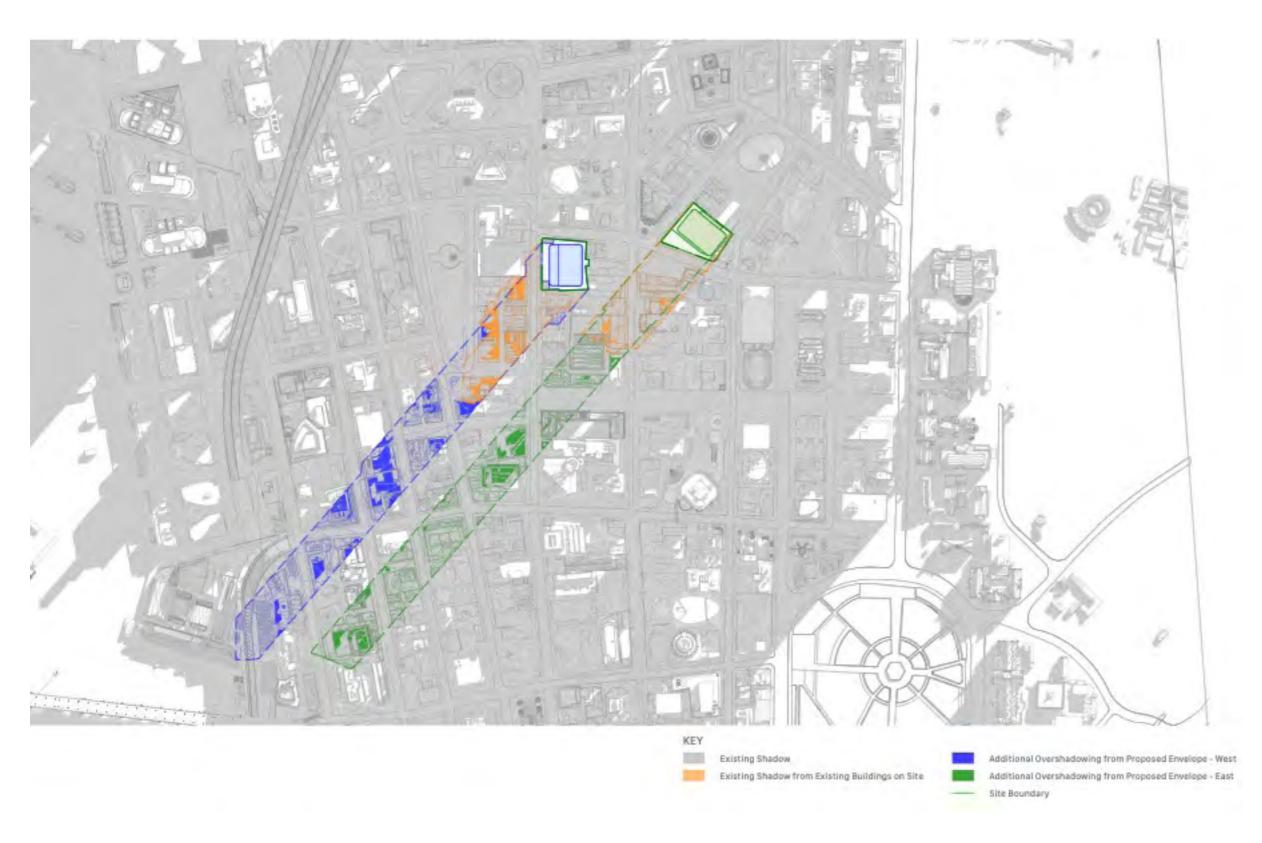
### **Shadow Diagrams**

The following shadow analysis has been undertaken on 21 June (winter solstice) and 21 December (summer solstice).

The Hunter Street East proposed envelope and its impacts have been illustrated in blue and the Hunter Street West proposed envelope and its impacts have been illustrated in green. A consistent colour (orange) has been used to demonstrate the existing shadows from the existing buildings on site.

43

Winter Solstice - 21 June



Winter Solstice - 21 June



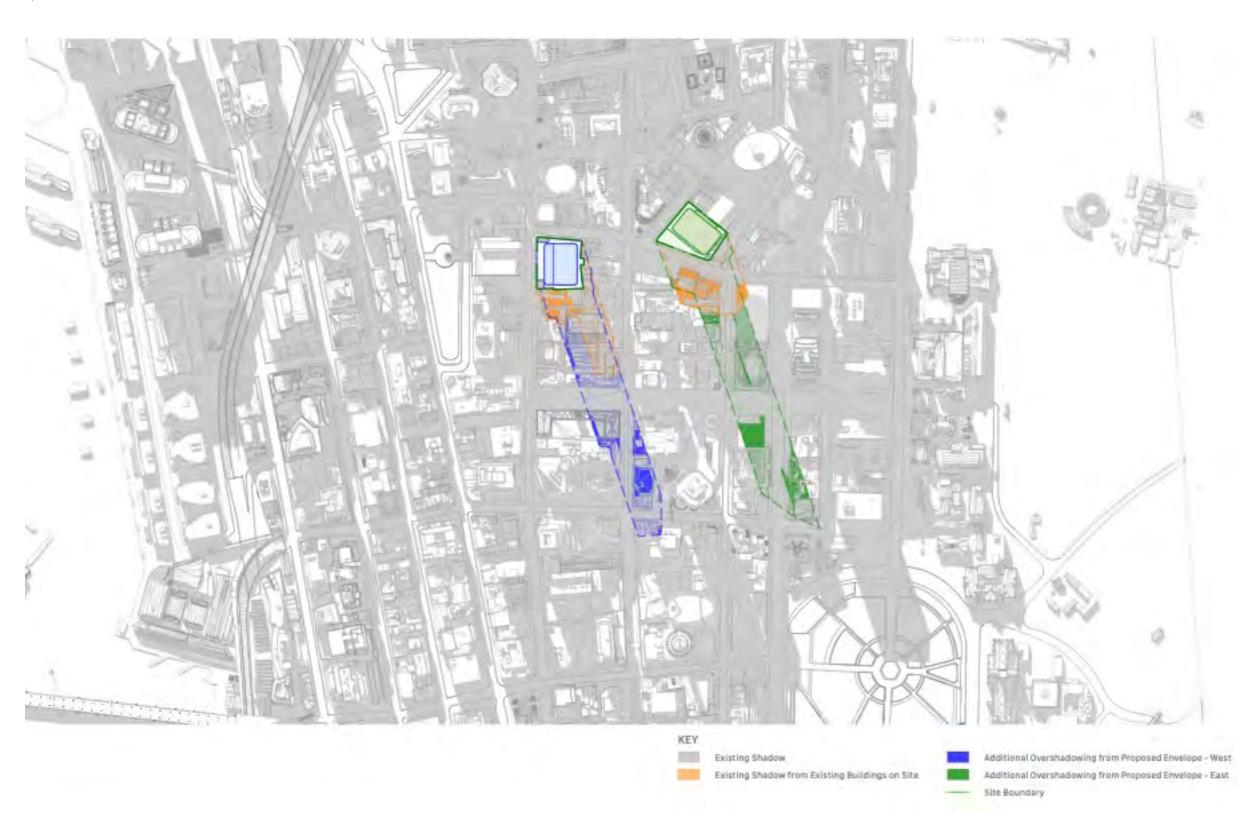
Winter Solstice - 21 June



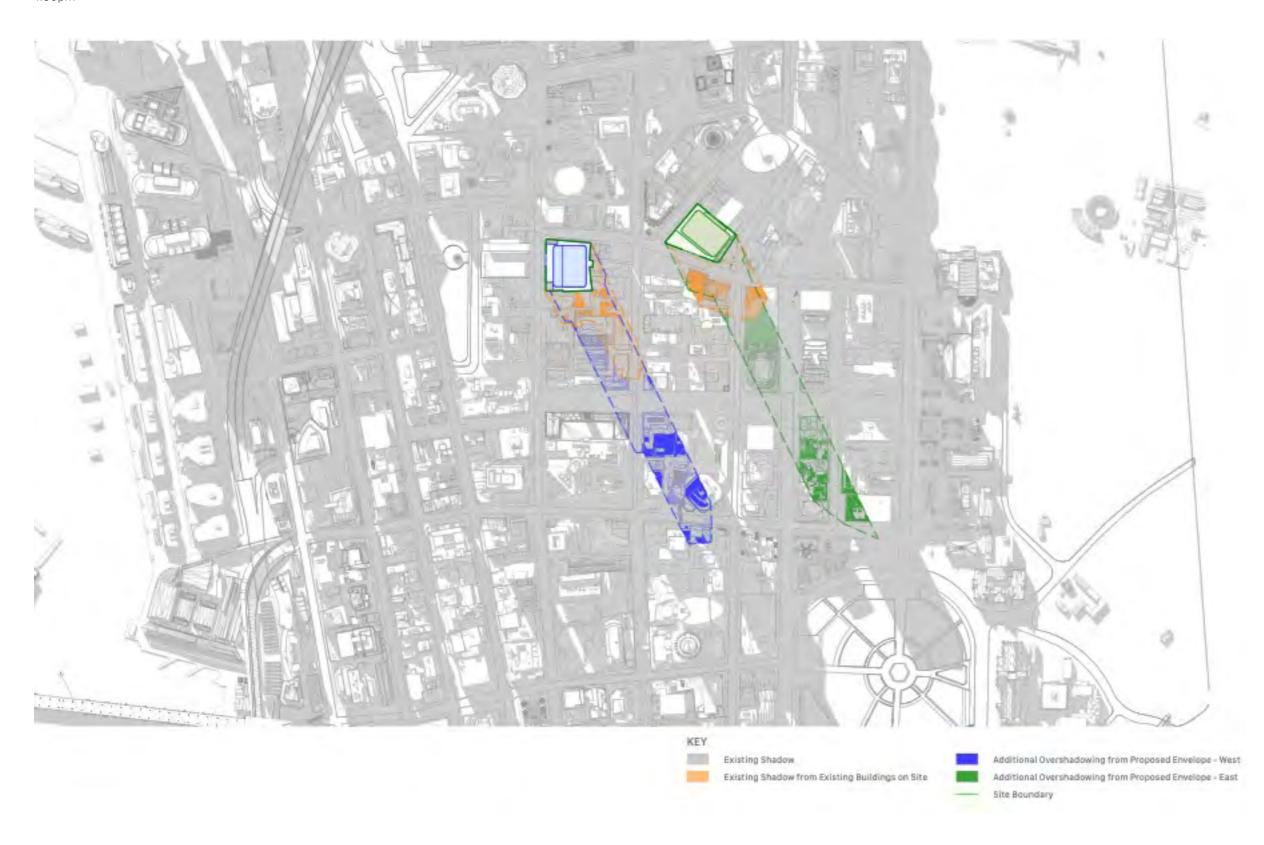
Winter Solstice - 21 June



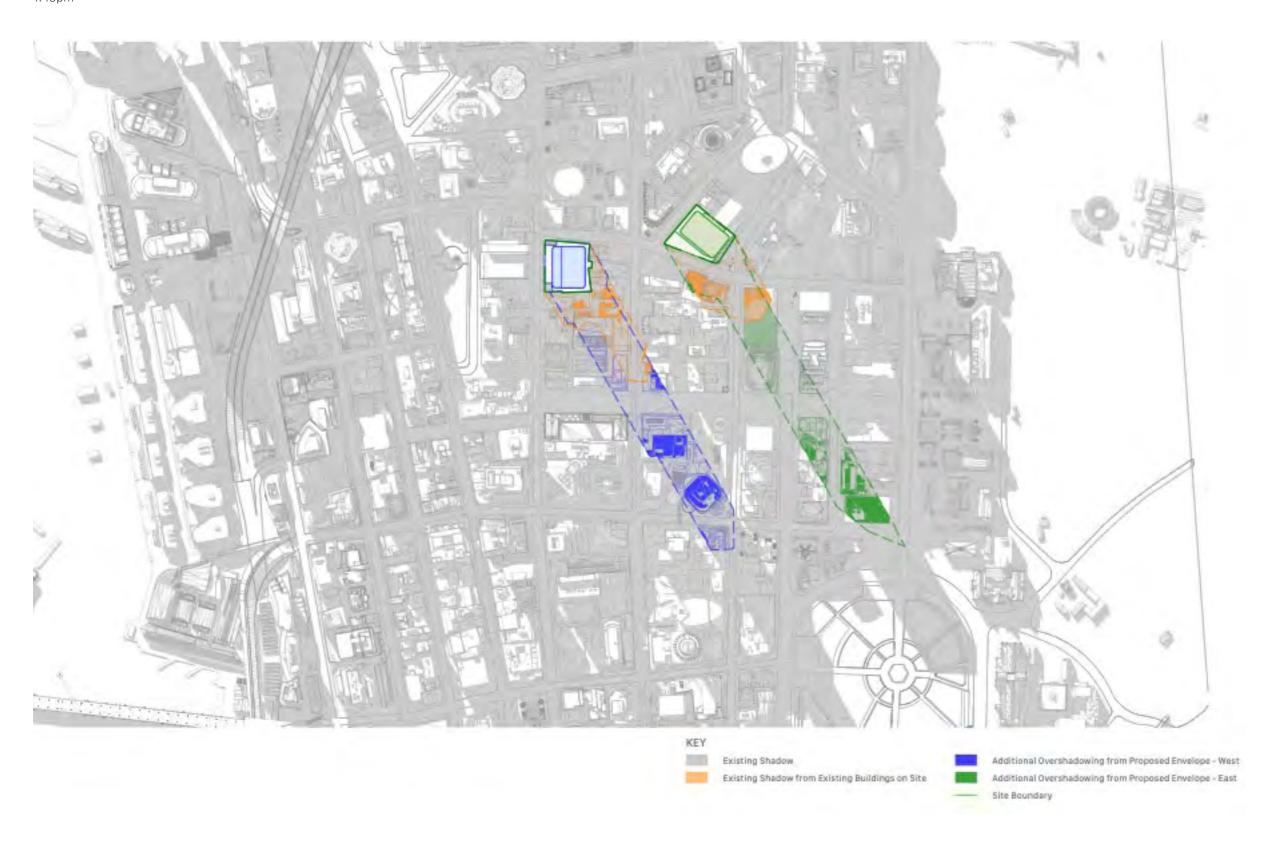
Winter Solstice - 21 June <sub>1pm</sub>



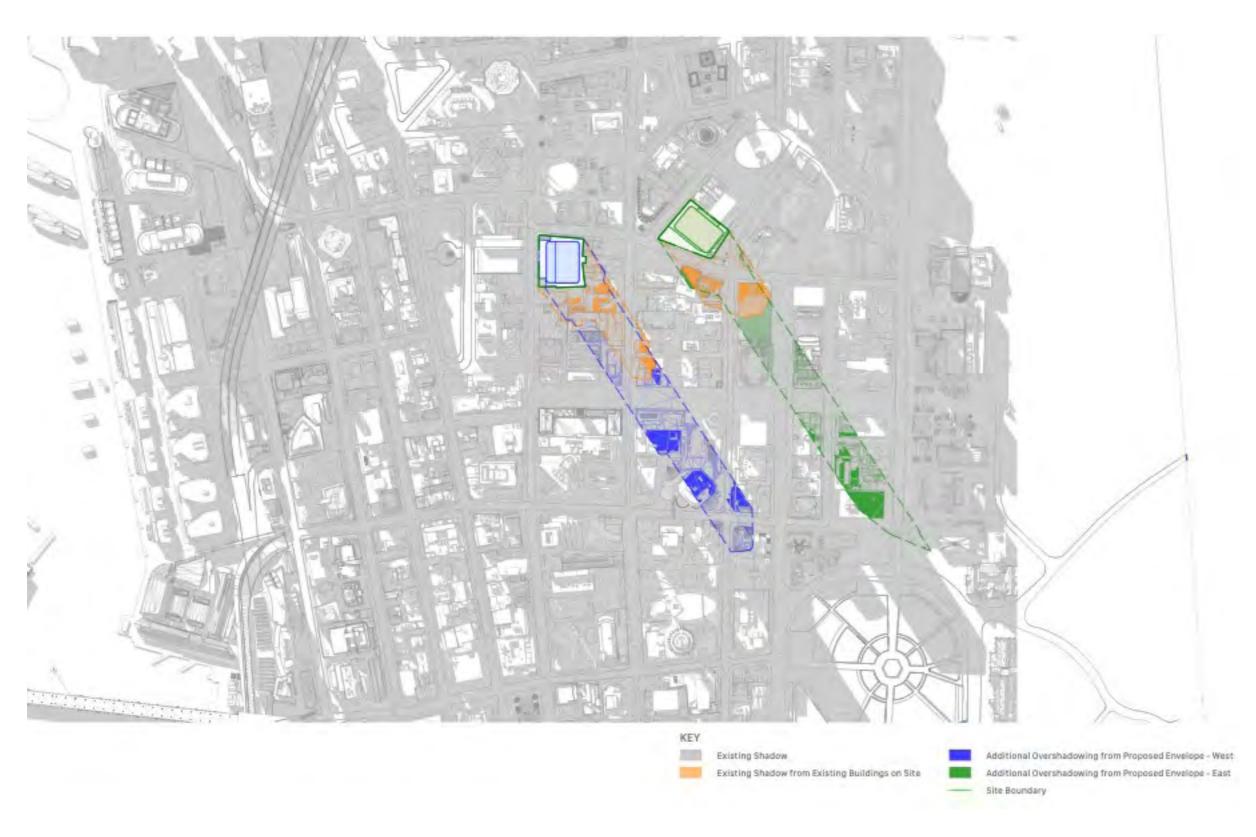
Winter Solstice - 21 June 1:30pm



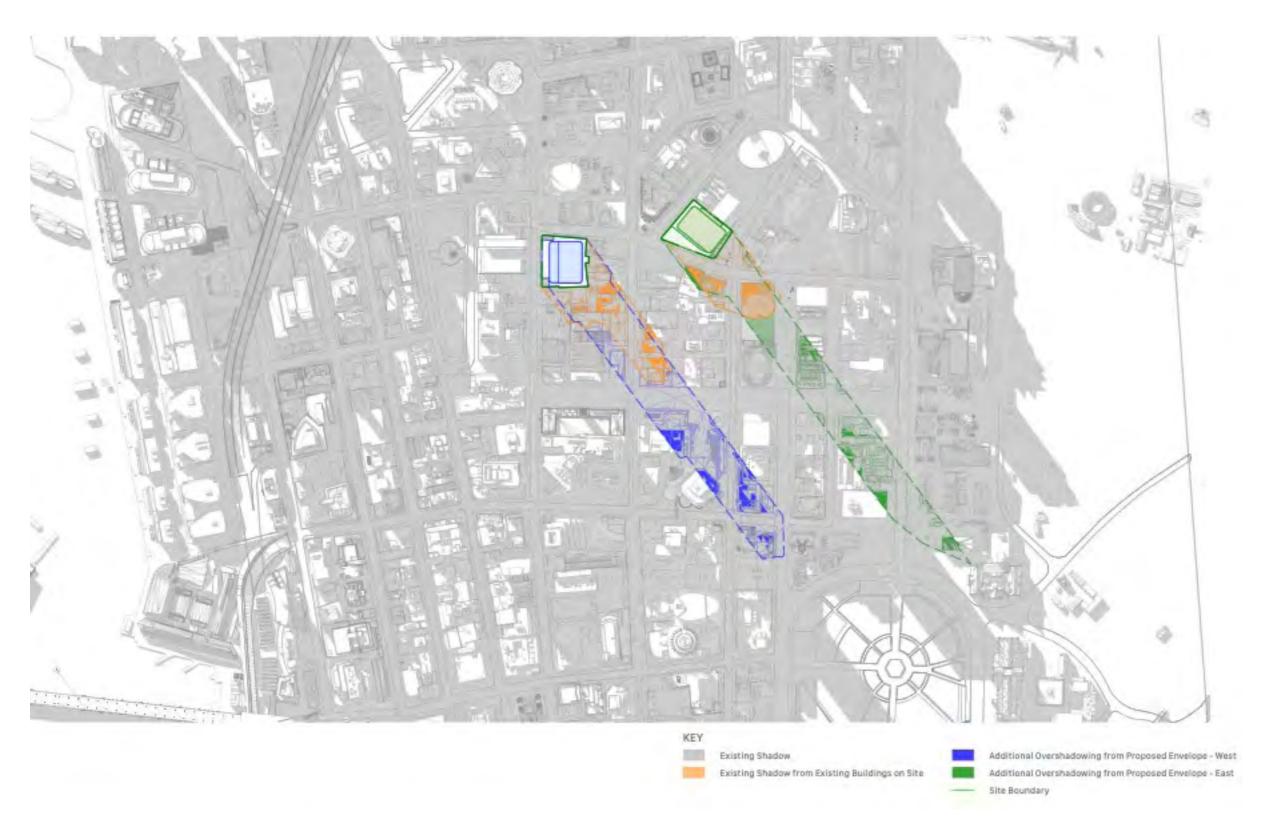
Winter Solstice - 21 June 1:45pm



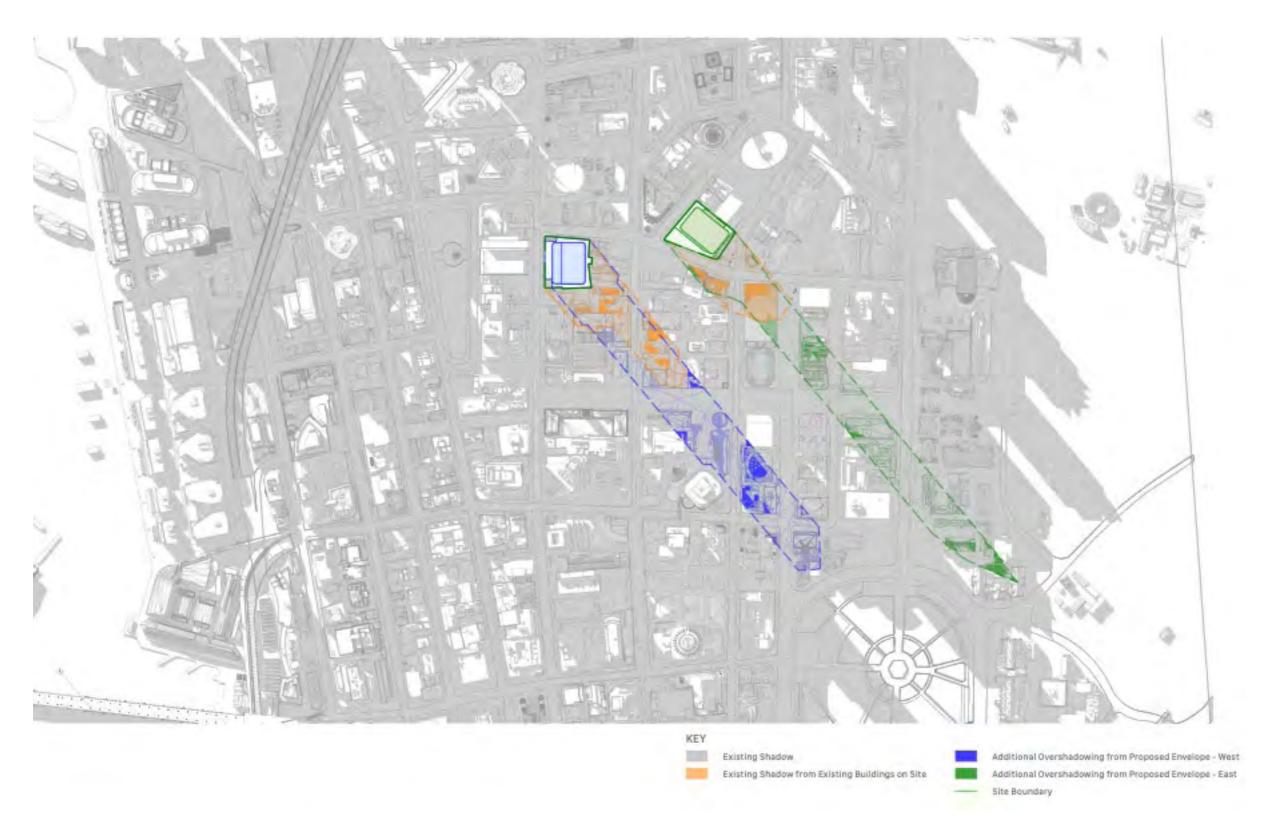
Winter Solstice - 21 June <sub>2pm</sub>



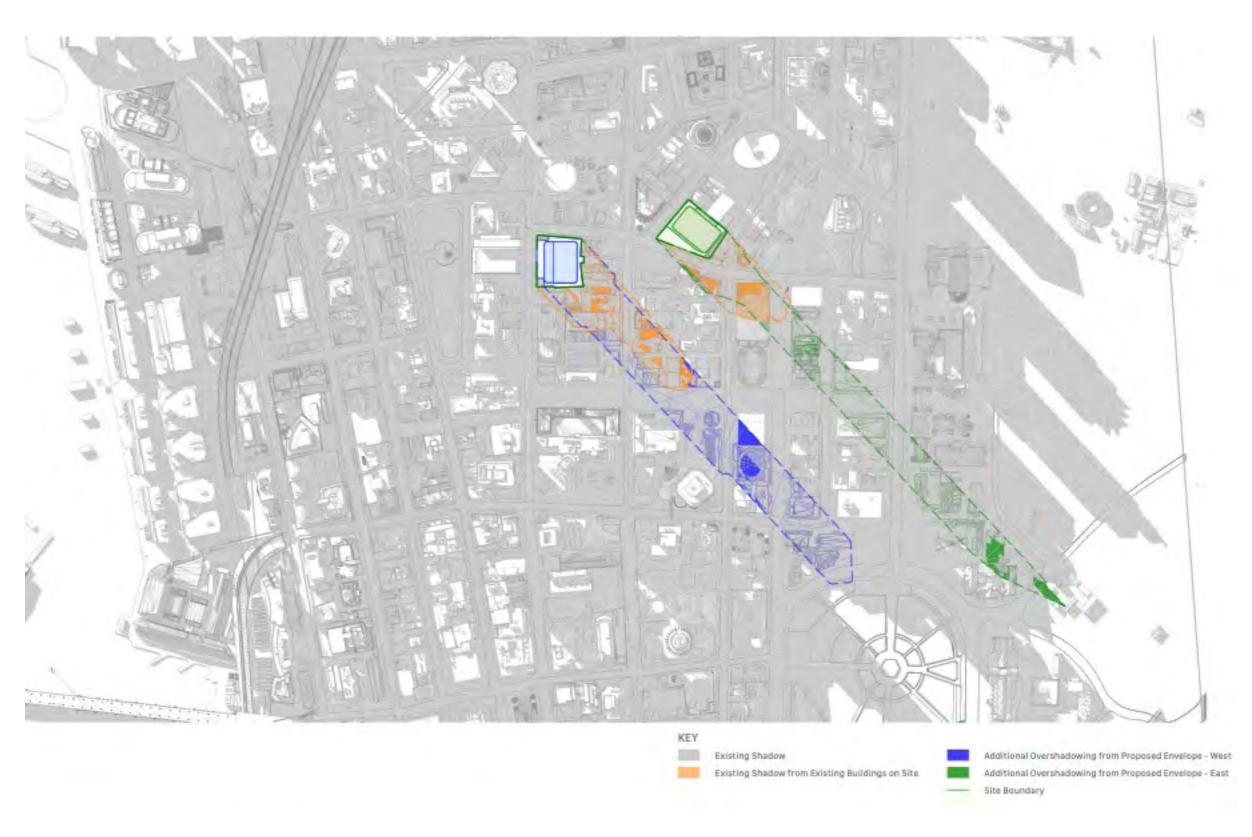
Winter Solstice - 21 June 2:15pm



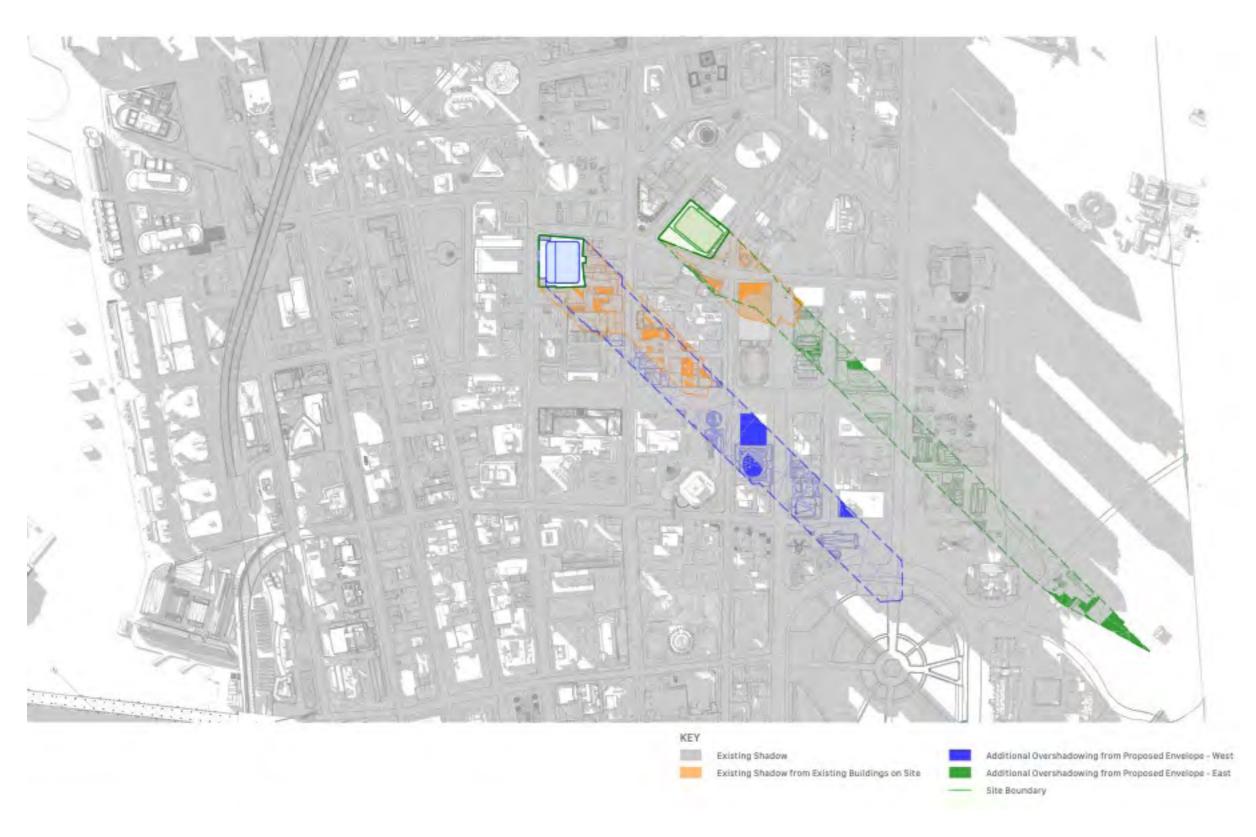
Winter Solstice - 21 June 2:30pm



Winter Solstice - 21 June 2:45pm



Winter Solstice - 21 June <sub>3pm</sub>



## Summer Solstice -21 December 9am



# Summer Solstice -21 December 12pm

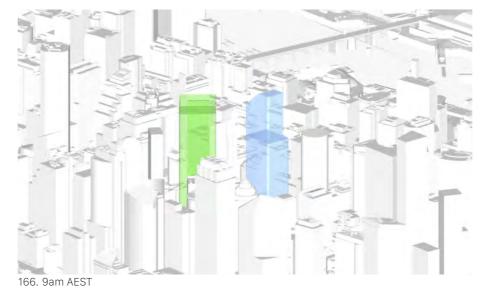


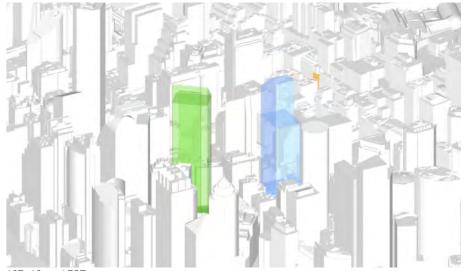
# Summer Solstice -21 December <sub>3pm</sub>

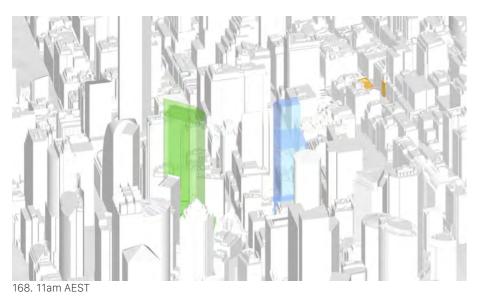


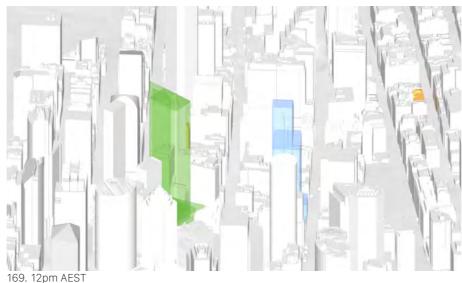
## Sun Eye View Diagrams

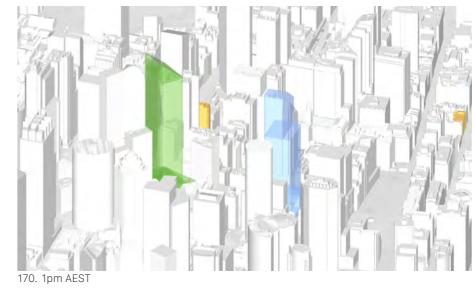
Winter Solstice - 21 June Between 9am and 3pm 1 hour Intervals

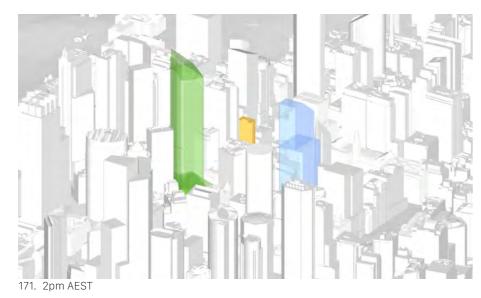


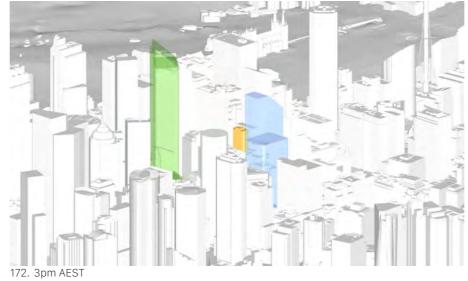


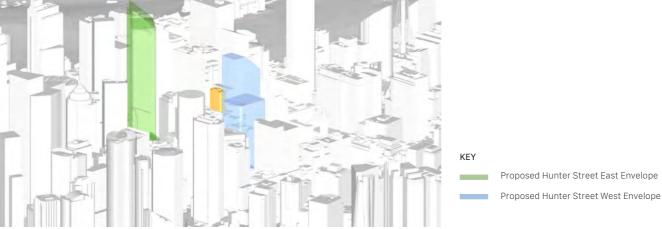












### Summer Solstice -21 December

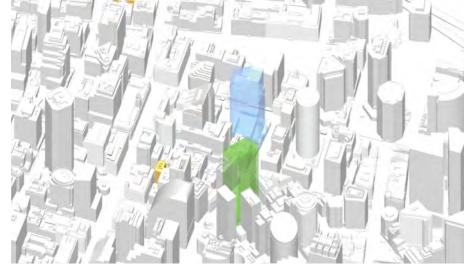
Between 9am and 3pm 1 hour Intervals



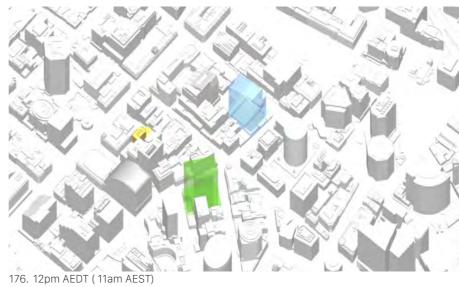


173. 9am AEDT (8am AEST)

174. 10am AEDT ( 9am AEST)



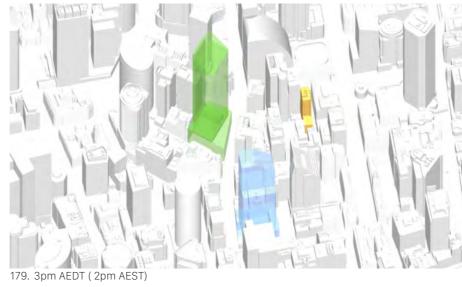
175. 11am AEDT (10am AEST)







178. 2pm AEDT (1pm AEST)



Proposed Hunter Street East Envelope Proposed Hunter Street West Envelope

## Sky View Analysis

Sky View Factor means the extent of sky observed above a point as a proportion of the total possible sky hemisphere above the point.

### **Hunter Street East**

The following analysis compares the impact on natural light levels in the public domain surrounding the site as a result of the proposed envelope against a base case massing as per Sydney DCP Schedule 12.

It follows the natural daylight analysis procedure set out in Procedure B, Schedule 12 of the Sydney DCP 2012.

### Methodology

This study identifies the potential impact of proposed envelope by determining the approximate average annual daylight level, sampled on the surrounding public spaces to a nominated distance from the development site.

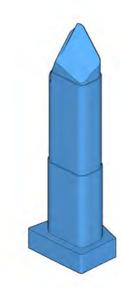
A 1m sampling grid is proposed up to an extent of 75m from the eastern development site, and up to an extent of 100m from the western development site.

Measures of daylight levels are established for a base case (schedule 12 base case as per Sydney DCP). These are expressed as a percentage and represent the average ratio of visible sky across the area.

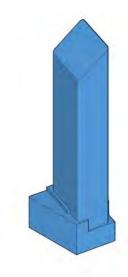
Measures of daylight levels are established for a envelope. These are expressed as a percentage and represent the average ratio of visible sky across the area.

The difference between daylight levels are established for the base case versus the envelope. The difference is also expressed as a percentage.

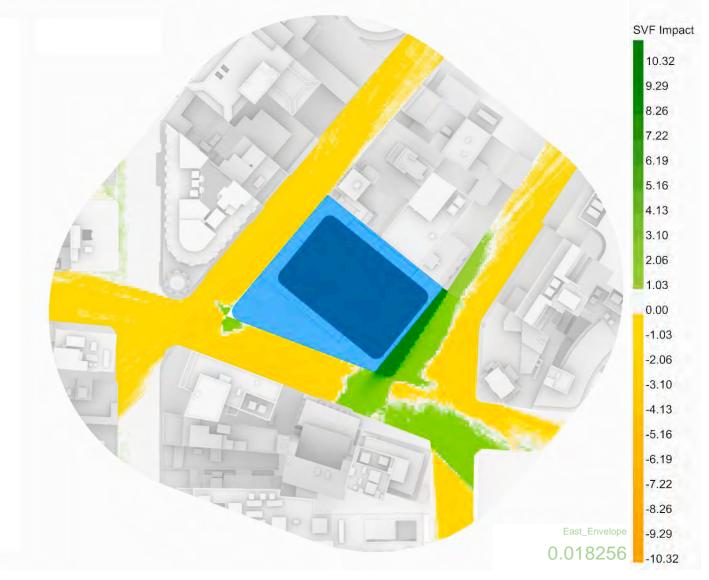
The intent of the study is for the proposed envelope average daylight percentage (Sky View Factor) compared to the base case Sky view Factor, to be a positive number.



180. Base Case Massing - 11.866542 (Schedule 12, Sydney DCP)

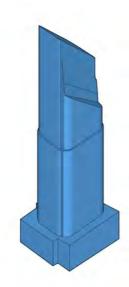


181. Proposed Envelope - 11.884798 (Varied setbacks)

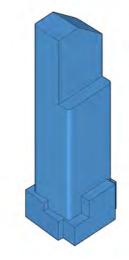


182. Sky View Factor Analysis Plan

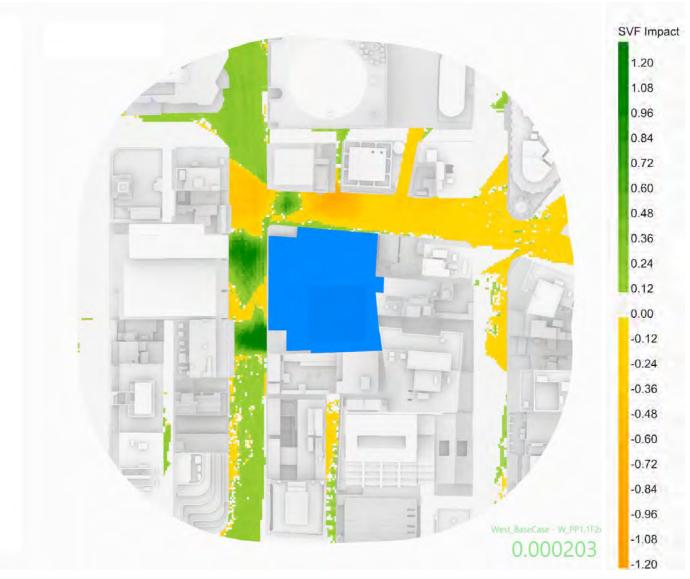
Skyview analysis has been completed for the Schedule 12 Base Case Massing and proposed envelope. There is an increase of 0.018256 of Visible Sky.



183. Base Case Massing - 15.517138 (Schedule 12, Sydney DCP)



185. Proposed Envelope - 15.517341 (Varied setbacks)



184. Sky View Factor Analysis Plan

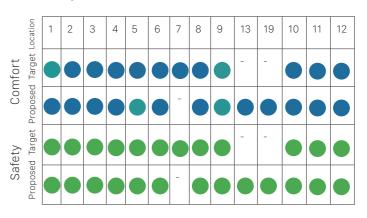
Skyview analysis has been completed for the Schedule 12 Base Case Massing and proposed envelope. There is an increase of 0.000203 of Visible Sky.

# Wind Analysis

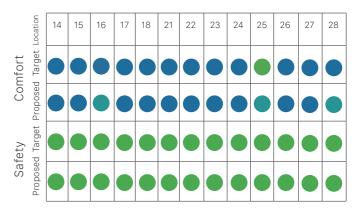
The pedestrian wind impact assessment investigates the potential wind impact on and from the proposed development. The wind conditions for comfort and safety around the two sites have also been assessed under the existing, base case scenario and proposed development. To determine the site-specific wind speeds for the proposed development, wind tunnel experiments were undertaken.

To ensure compliance, the wind speeds around the proposed developments were assessed against the SDCP wind criteria. A comparison of the base case to the proposed development was undertaken which showed that on average, the proposed development performed better than the base case. The results of the assessment also indicate that wind speeds are compliant with the intended usage of each area around the proposed development.

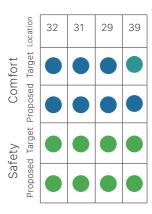
### George Street



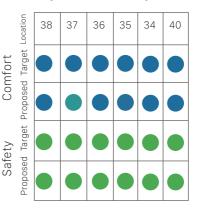
### Hunter Street



### O'Connell and Pitt Street



### Bligh and Castlereagh Street

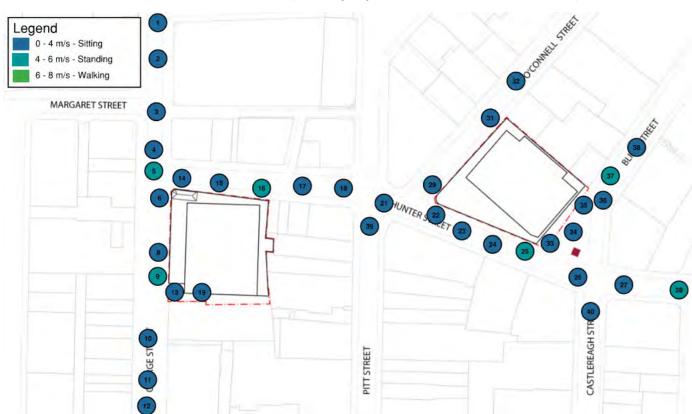


NOTE: Please refer to page 56 for the Key.

### Pedestrian Comfort

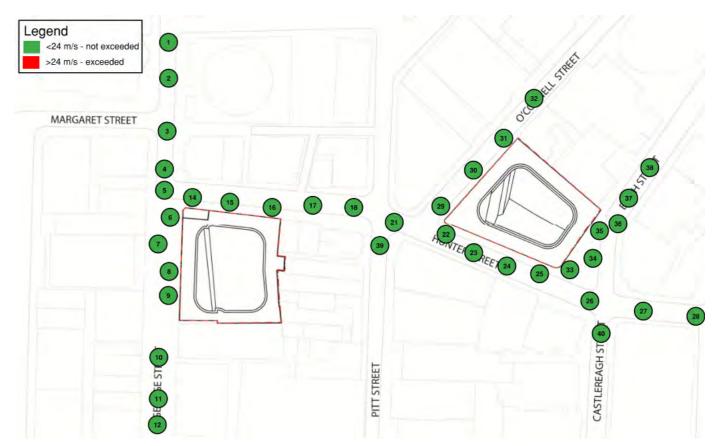
# Legend 0 - 4 m/s - Sitting 4 - 6 m/s - Standing 6 - 8 m/s - Walking MARGARET STREET MARG

186. Irwin Sensor Comfort Results for Basecase Scenario (Source: Sydney Metro Wes Pedestrian Wind Assessment)

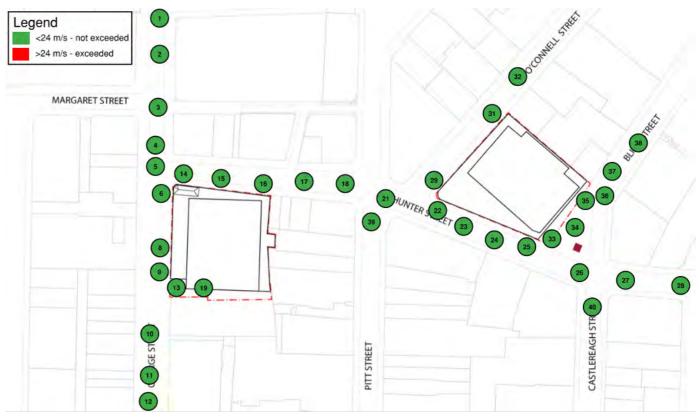


188. Irwin Sensor Comfort Results for Proposed Development (Source: Sydney Metro Wes Pedestrian Wind Assessment)

### Pedestrian Safety



187. Irwin Sensor Safety Results for Basecase Scenario (Source: Sydney Metro Wes Pedestrian Wind Assessment)



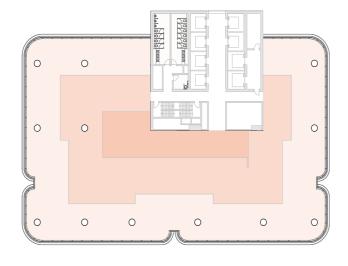
189. Irwin Sensor Safety Results for Proposed Development (Source: Sydney Metro Wes Pedestrian Wind Assessment)

# Floor Plate Analysis

### Hunter Street East

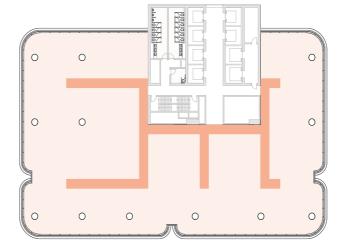
### Sky-rise

GBA: 1850m2 GFA:1659m2



56.1% of NLA (0-6m from perimeter)

Tenant Efficiency: 89.5% of NLA (within 7.5m)

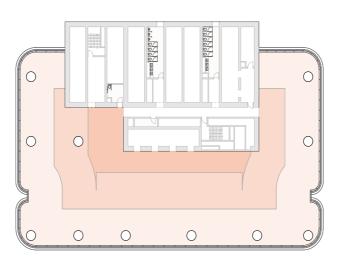


Circulation Area: 3.1% of NLA

45

### Low-rise

GBA: 1824m2 GFA: 1369m2



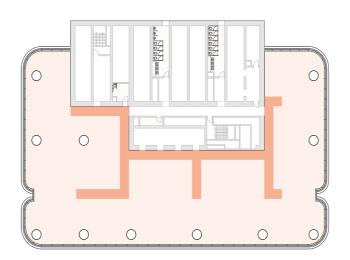
56.6% of NLA (0-6m from perimeter)

31.2% of NLA (0-6m from perimeter)

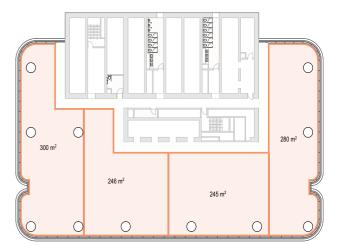
12.2% of NLA (0-6m from perimeter)

34.0% of NLA (0-6m from perimeter)

9.9% of NLA (0-6m from perimeter)



Tenant Efficiency: 89.1% of NLA (within 7.5m)



T4 358 m<sup>2</sup>

Circulation Area: 9.5% of NLA

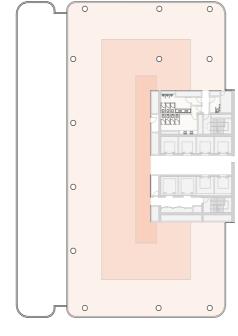
Low-rise

GBA: 1970m2 GFA: 1562m2

### **Hunter Street West**

### Sky-rise

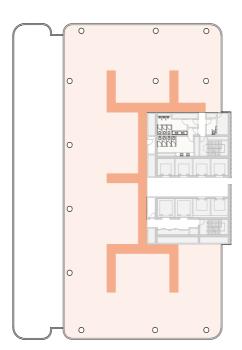
GBA: 1492m2 GFA: 1277m2



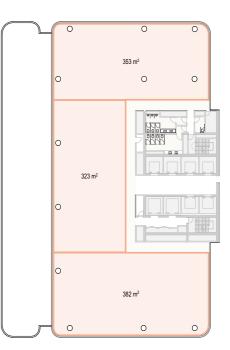
59.1% of NLA (0-6m from perimeter)

34.1% of NLA (0-6m from perimeter)

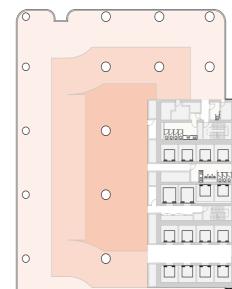
6.8% of NLA (0-6m from perimeter)



Tenant Efficiency: 88.7% of NLA (within 7.5m)



Circulation Area: 7.1% of NLA



0

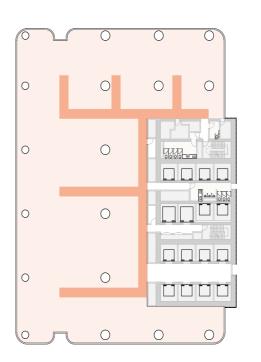
0

0

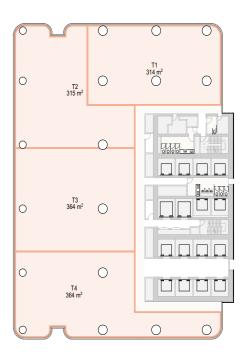
50.7% of NLA (0-6m from perimeter)

28.5% of NLA (0-6m from perimeter)

20.8% of NLA (0-6m from perimeter)



Tenant Efficiency: 89% of NLA (within 7.5m)



Circulation Area: 6.4% of NLA

# Work Quality Assessment

### Hunter Street East

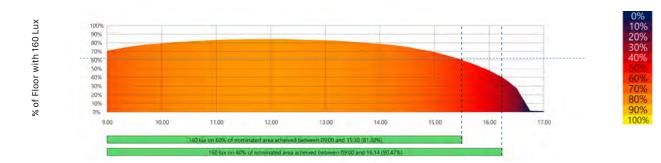
### Method of measure:

Daylight autonomy: High Levels of daylight are deemed to have at least 160 lux due to daylight during 80% of the nominated hours.

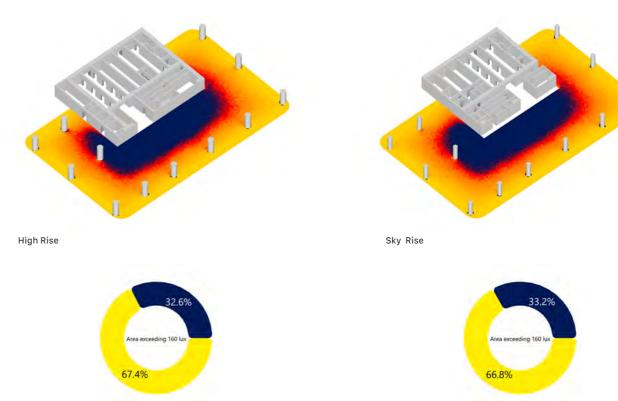
Analysed between the hours of 9:00 and 17:00 on 21st June (Winter Solstice)

Up to 2 points are available where a percentage of the nominated area receives high levels of daylight:

- For 40% of the nominated area 1 point;
- For 60% of the nominated area 2 points.



# Daylight Hours Low Rise Mid Rise Area exceeding 160 lux



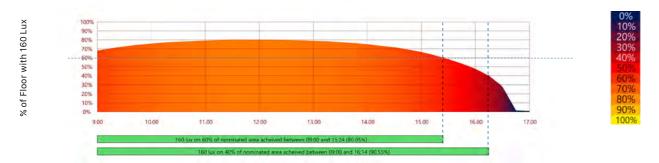
### Method of measure:

Daylight autonomy: High Levels of daylight are deemed to have at least 160 lux due to daylight during 80% of the nominated hours.

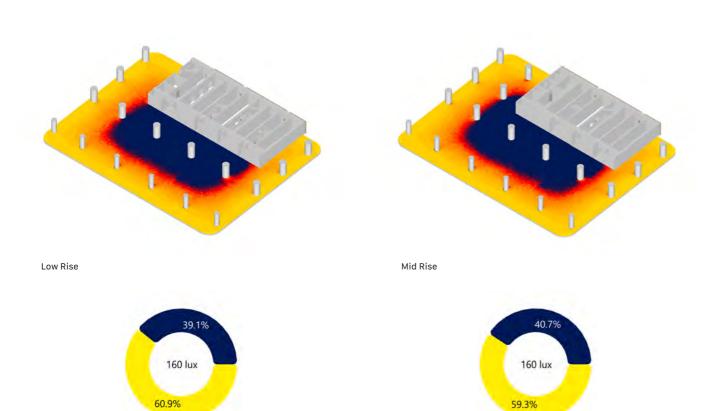
Analysed between the hours of 9:00 and 17:00 on 21st June (Winter Solstice)

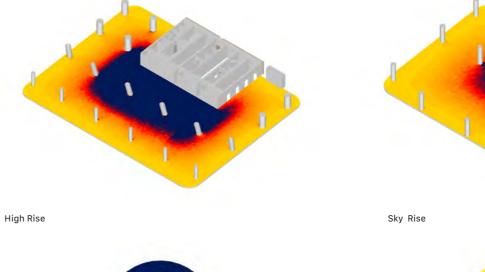
Up to 2 points are available where a percentage of the nominated area receives high levels of daylight:

- For 40% of the nominated area 1 point;
- For 60% of the nominated area 2 points.

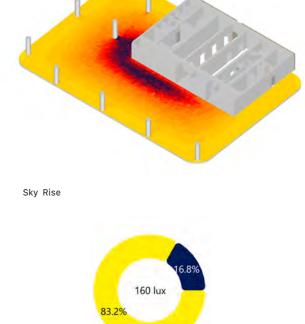


Daylight Hours



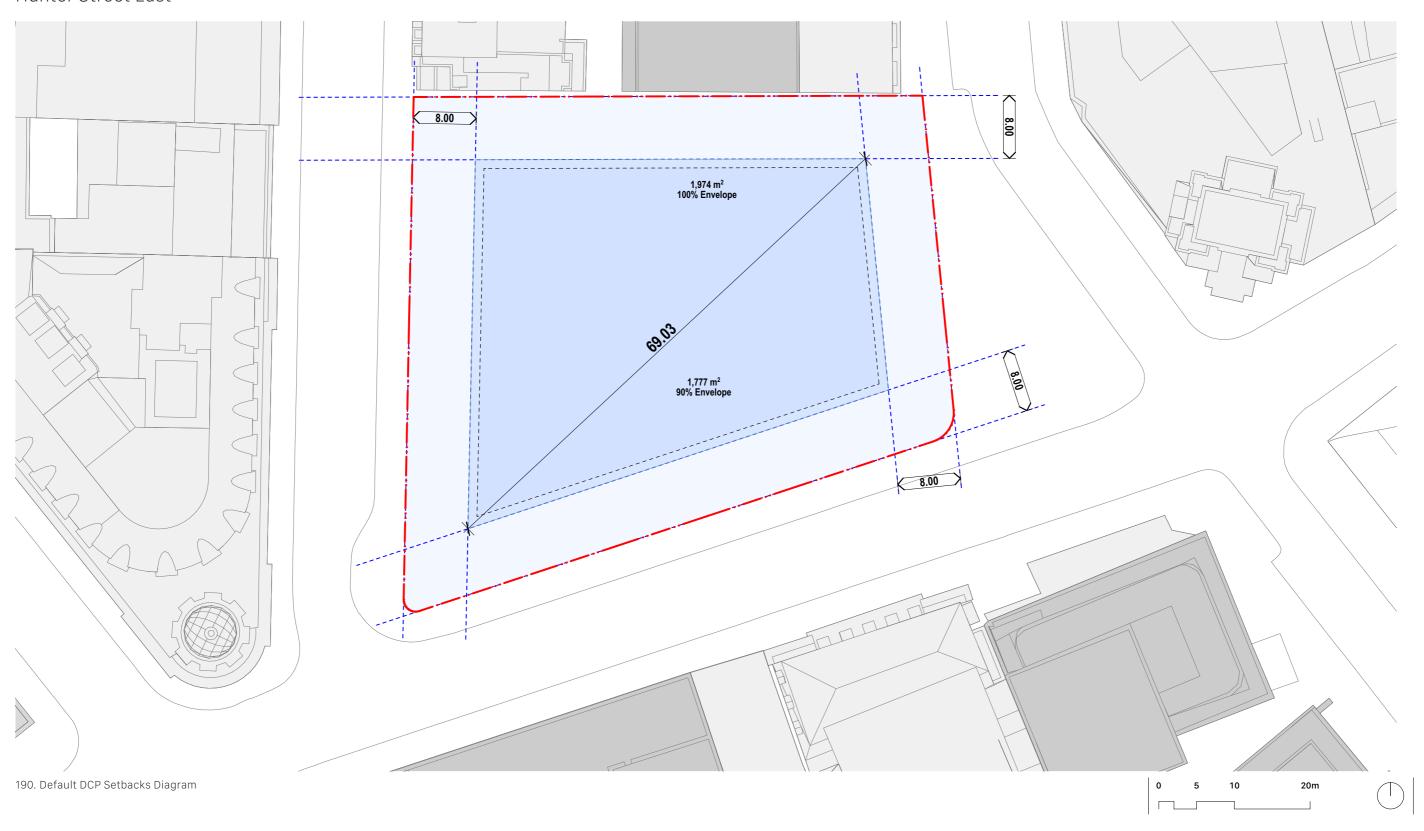


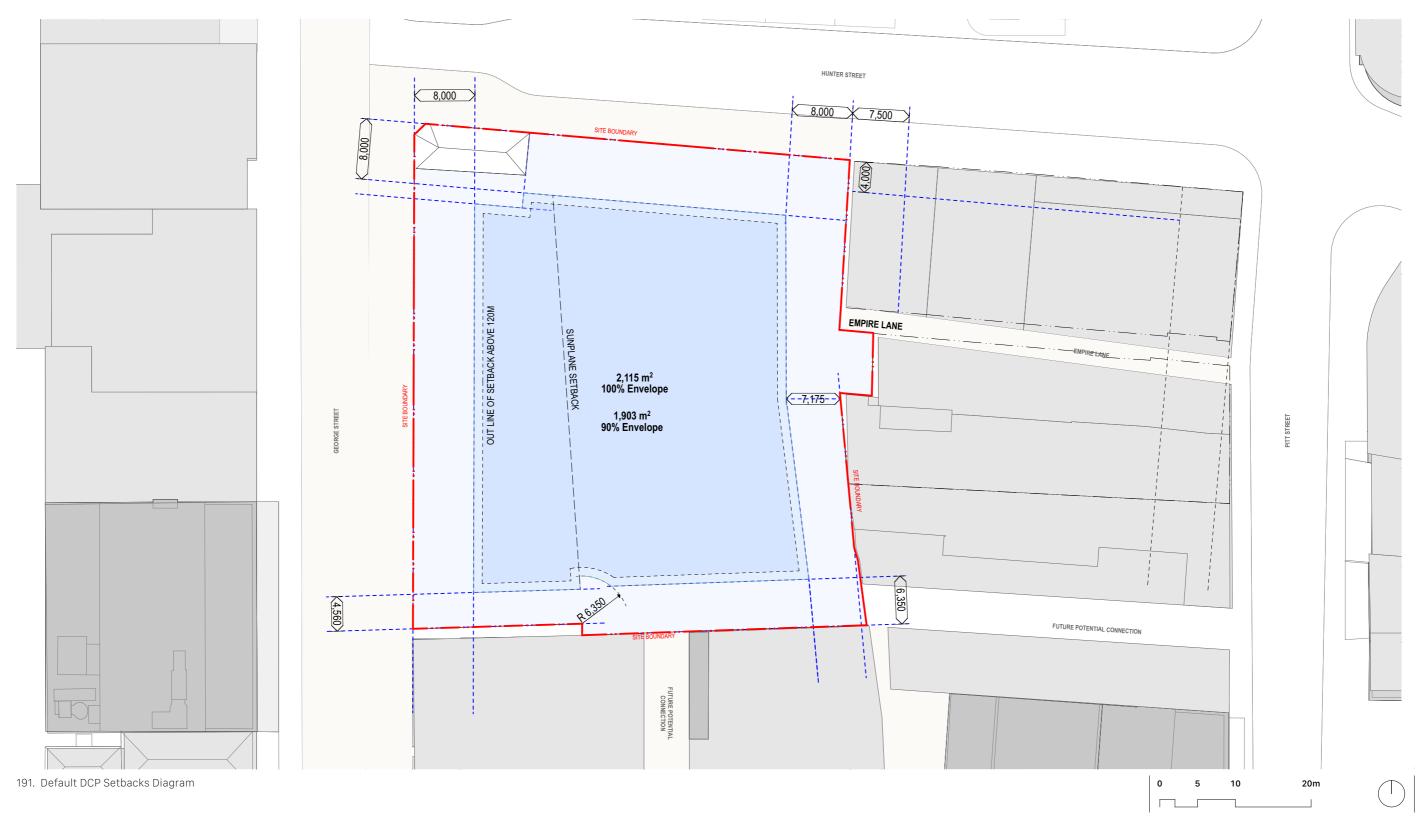
160 lux



### Hunter Street East

**Default DCP Setbacks** 





# **Vertical Transportation**

### Hunter Street East

24x Commercial Lifts

Low Rise: 4 Lifts Serving Level 2 to 3, 6 to 14 Mid Rise: 7 Lifts Serving Level 15 to 30 High Rise: 8 Lift Serving Level 32 to 44 Sky Rise: 5 Lifts Serving 45 to 55

— 2x OSD Good Lifts

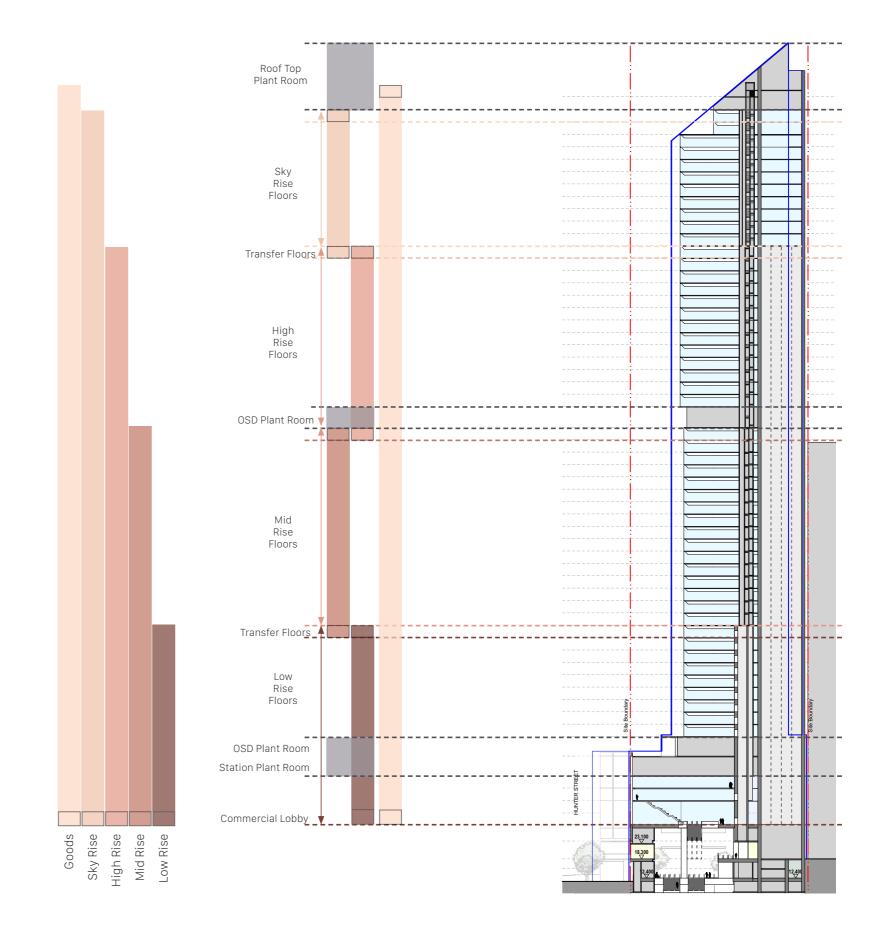
Goods: 2 Goods Lift Serving Ground Level to Level 57

2x DDA lobby Lifts

2x End of Trip Lifts

— 3x OSD lift lobby escalators

1x Metro Goods lift



21x Commercial Lifts

Podium Rise : 3 Lifts Serving Level 2 to 3, 6 to 10

Low Rise: 4 Lifts Serving Level 11 to 17 Mid Rise: 4 Lifts Serving Level 19 to 26 High Rise: 4 Lift Serving Level 27 to 34 Sky Rise: 6 Lifts Serving 35 to 48

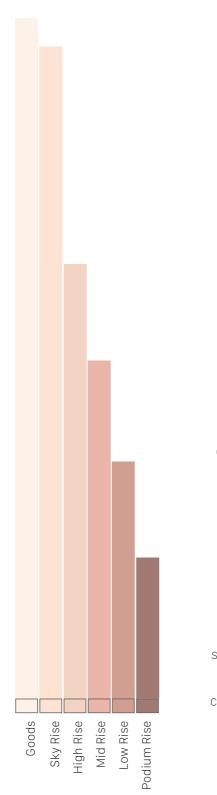
— 2x OSD Good Lifts

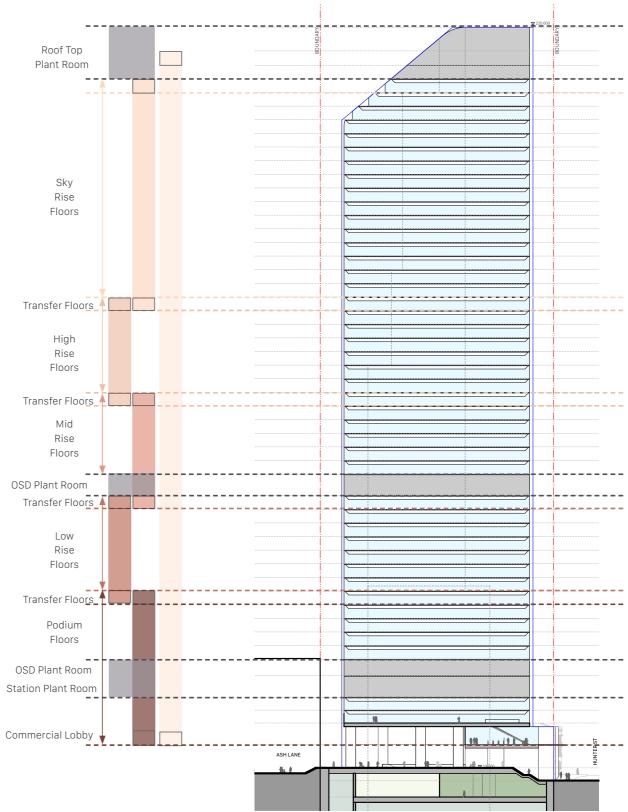
Goods: 2 Goods Lift Serving Ground Level to Level 50

— 2x DDA lobby Lifts

— 2x End of Trip Lifts

— 3x OSD lift lobby escalators





## Area Schedules

Hunter Street East

Articulation

Envelope to GBA (Articulation) 15%

### Efficiency Based GBA

IIICIEII	cy Da	3Cu	GDA		
	RL	Floors	Height	Envelope Outline	GBA
Top RL	269.10		257.70		
level 56 Mez	252.50	16.60	241.10	1000	850
level 56	248.50	4.00	237.10	1469	1249
level 55	244.70	3.80	233.30	1719	1461
level 54	240.90	3.80	229.50	2126	1807
level 53	237.10	3.80	225.70	2126	1807
level 52	233.30	3.80	221.90	2126	1807
level 51	229.50	3.80	218.10	2126	1807
level 50	225.70	3.80	214.30	2126	1807
level 49	221.90	3.80	210.50	2126	1807
level 48	218.10	3.80	206.70	2126	1807
level 47	214.30	3.80	202.90	2126	1807
level 46	210.50	3.80	199.10	2126	1807
level 45	206.70	3.80	195.30	2126	1807
level 44	202.90	3.80	191.50	2126	1807
level 43	199.10	3.80	187.70	2126	1807
level 42	195.30	3.80	183.90	2126	1807
level 41	191.50	3.80	180.10	2126	1807
level 40	187.70	3.80	176.30	2126	1807
level 39	183.90	3.80	172.50	2126	1807
level 38	180.10	3.80	168.70	2126	1807
level 37	176.30	3.80	164.90	2126	1807
level 36	172.50	3.80	161.10	2126	1807
level 35	168.70	3.80	157.30	2126	1807
level 34	164.90	3.80	153.50	2126	1807
level 33	161.10	3.80	149.70	2126	1807
	157.30	3.80	145.90		1807
level 32 level 31	150.90	6.40	139.50	2126 2126	1807
level 30	147.10	3.80	135.70	2126	1807
		3.80			
level 29	143.30		131.90	2126	1807
level 28	139.50	3.80	128.10	2126	1807
level 27	135.70	3.80	124.30	2126	1807
level 26	131.90	3.80	120.50	2126	1807
level 25	128.10	3.80	116.70	2126	1807
level 24	124.30	3.80	112.90	2126	1807
level 23	120.50	3.80	109.10	2126	1807
level 22	116.70	3.80	105.30	2126	1807
level 21	112.90	3.80	101.50	2126	1807
level 20	109.10	3.80	97.70	2126	1807
level 19	105.30	3.80	93.90	2126	1807
level 18	101.50	3.80	90.10	2126	1807
level 17	97.70	3.80	86.30	2126	1807
level 16	93.90	3.80	82.50	2126	1807
level 15	90.10	3.80	78.70	2126	1807
level 14	86.30	3.80	74.90	2126	1807
level 13	82.50	3.80	71.10	2126	1807
level 12	78.70	3.80	67.30	2126	1807
level 11	74.90	3.80	63.50	2126	1807
level 10	71.10	3.80	59.70	2126	1807
level 9	67.30	3.80	55.90	2126	1807
level 8	63.50	3.80	52.10	2126	1807
level 7	59.70	3.80	48.30	2126	1807
level 6	55.90	3.80	44.50	2126	1807
	To	tal Tow	/er	108,362	92,108

	RL	Floors	Height	Envelope Outline
level 5 - ISD	49.9	6	38.5	2601
level 4 - Station	43.9	6	32.5	3357
level 3	40.1	3.8	28.7	3357
level 2	36.3	3.8	24.9	3357
level 1 - Mez	32.4	3.9	21	3477
level 1	28.8	3.6	17.4	3477
Bligh St - Mez	23.8	5	12.4	3477
GL - Bligh St	18.3	5.5	6.9	3477
O'connell St - Mez	15.35	2.95	3.95	3694
O'connell St	11.4	3.95	0	3357 3357 3477 3477 3477 3477
		Total P	odium	33,968

Total Envelope 142,330

Reference Design

Top RL 269.10 level 56 Mez 252.50 level 56 248.50 level 54 249.90 level 54 249.90 level 52 233.30 level 52 233.30 level 50 225.70 level 49 221.90 level 49 221.90 level 47 214.30 level 48 202.90 level 49 3199.10 level 49 199.50 level 40 187.70 level 41 199.50 level 42 199.50 level 43 199.10 level 40 187.70 level 40 187.70 level 41 199.50 level 42 199.50 level 43 199.10 level 43 199.10 level 44 199.50 level 45 199.50 level 46 199.50 level 47 199.50 level 48 199.50 level 38 180.10 level 39 176.30 level 30 147.50 level 30 147.50 level 31 150.90 level 30 147.90 level 31 150.90 level 31 150.90 level 31 150.90 level 31 199.10 level 26 131.90 level 27 135.70 level 28 139.50 level 29 143.30 level 29 143.30 level 21 112.90 level 21 112.90 level 21 112.90 level 21 112.90 level 21 19 9.70 level 17 9.7.70 level 16 92.90 level 17 9.7.70 level 16 92.90 level 17 74.90 level 17 74.90 level 10 77.10 level 11 74.90 level 10 77.10 level 10 63.55	Floors	Height	Envelope Outline	Articulation	GBA	GFA	Efficiency
Ievel 56 Mez   252.50   Ievel 56   244.70   Ievel 56   244.70   Ievel 56   244.70   Ievel 55   244.70   Ievel 55   244.70   Ievel 54   249.90   Ievel 52   233.30   Ievel 52   233.30   Ievel 52   233.30   Ievel 50   225.70   Ievel 49   221.90   Ievel 49   221.90   Ievel 49   221.90   Ievel 49   221.90   Ievel 40   210.50   Ievel 40   200.70   Ievel 41   202.90   Ievel 42   195.30   Ievel 43   199.10   Ievel 44   199.10   Ievel 44   199.10   Ievel 45   199.10   Ievel 46   Ievel 47   199.10   Ievel 47   199.10   Ievel 48   Ievel 49   Ievel 49   Ievel 49   Ievel 49   Ievel 40   Ievel 41   Ievel 42   Ievel 43   Ievel 43   Ievel 43   Ievel 43   Ievel 44   Ievel 45   Ievel 45   Ievel 47   Ievel 47   Ievel 48   Ievel 48   Ievel 48   Ievel 49   Ievel 49   Ievel 49   Ievel 49   Ievel 49   Ievel 41	0	257.70					
Invest   55		241.10	1000	35%	650		
Invest   55		237.10	1469	37%	920		
Invest   54   24,00.00   Invest   53   237.10   Invest   51   229.50   Invest   51   229.50   Invest   64   221.50   Invest   64   221.50   Invest   64   210.50   Invest   65   25   25   25   25   25   25   25		233.30	1719	24%	1310	1074	82%
Invest   53   237,10   Invest   52   233,30   Invest   52   233,30   Invest   52   233,30   Invest   52   223,50   Invest   50   225,70   Invest   50   225,70   Invest   60   210,50   Invest   60   210,50   Invest   61   210,50   Invest   62   210,50   Invest   63   200,50   Invest   64   210,50   Invest   65   200,50   Invest   65   200,50		229.50	2126	38%	1310	1074	82%
Invest   2		225.70	2126	13%	1850	1659	90%
Invest   1		221.90	2126	13%	1850	1659	90%
Invest   50   225,70   Invest   50   225,70   Invest   48   218,10   Invest   48   218,10   Invest   48   218,10   Invest   48   218,10   Invest   47   214,30   Invest   45   206,70   Invest   45   206,70   Invest   42   195,30   Invest   41   191,50   Invest   42   195,30   Invest   40   187,70   Invest   40   I		218.10	2126	13%	1850	1659	90%
Invest   49		214.30	2126	13%	1850	1659	90%
Interest   Interest	0 3.80	210.50	2126	13%	1850	1659	90%
Invest   45   210,52   100,000   1	0 3.80	206.70	2126	13%	1850	1659	90%
Invest   45   206,70	3.80	202.90	2126	13%	1850	1659	90%
Invest   144   202   2	0 3.80	199.10	2126	13%	1850	1659	90%
Invest   44   202   20   20     Invest   43   199   10     Invest   43   199   10     Invest   42   195   30     Invest   41   191   50     Invest   41   191   50     Invest   39   183   30     Invest   37   176   30     Invest   38   177   50     Invest   38   168   70     Invest   32   157   30     Invest   34   157   30     Invest   35   157   30     Invest   37   39     Invest   37   39     Invest   37   37     Invest   37     Invest   37   37     Invest		195.30	2126	13%	1850	1659	90%
Invest   199,10   Invest   1		191.50	2126	13%	1860	1561	84%
level 42   195.30   level 41   195.30   level 41   191.50   level 41   191.50   level 40   187.70   level 39   183.90   level 37   176.30   level 37   176.30   level 37   176.30   level 36   172.50   level 36   164.70   level 31   157.30   level 27   135.70   level 28   147.10   level 29   143.30   level 28   128.10   level 28   128.10   level 29   143.30   level 28   128.10   level 29   143.30   level 29   120.50   level 21   120.50   level 21   112.90   level 30   109.10   level 40   109.10   level 40   109.10   level 40   109.10   level 41   96.30   level 15   90.10   level 15   90.10   level 16   82.50   level 17   78.70   level 17   79.90   level 17   79.90   level 18   82.50   level 17   74.90   level 19   67.30   level 10   71.10   level 9   67.30   level 9   67.50   level 9   67.50   level 9   67.50   level 9   63.50   level 8.50   level 8.50   level 8.50   level 8.50   level 9   63.50   level 9   63.50   level 18   63.50   level 8.50   level 8.50		187.70	2126	13%	1860	1561	84%
Invest   187.70   Invest   187.70   Invest   183.90   Invest   39   Invest   31   Invest   31   Invest   31   Invest   31   Invest   32   Invest   34   Invest   34   Invest   34   Invest   32   Invest   32   Invest   32   Invest   32   Invest   33   Invest   33   Invest   33   Invest   34   In		183.90	2126	13%	1860	1561	84%
Interest   183   183   183   183   180	0 3.80	180.10	2126	13%	1860	1561	84%
Interest   Interest		176.30	2126	13%	1860	1561	84%
Ievel 37		172.50	2126	13%	1860	1561	84%
Invest   26   172   175   17	0 3.80	168.70	2126	13%	1860	1561	84%
Invel 35   168.70   Invel 34   164.90   Invel 34   164.90   Invel 32   157.30   Invel 32   157.30   Invel 32   157.30   Invel 31   159.90   Invel 30   147.10   Invel 39   143.30   Invel 27   135.70   Invel 27   135.70   Invel 27   135.70   Invel 28   128.10   Invel 28   128.10   Invel 29   129.50   Invel 29   116.70   Invel 21   Invel 30   Invel 30	3.80	164.90	2126	13%	1860	1561	84%
Invest   24	0 3.80	161.10	2126	13%	1860	1561	84%
Invest   24	0 3.80	157.30	2126	13%	1860	1561	84%
Interest   Interest		153.50	2126	13%	1860	1561	84%
Invest   22   157.30   Invest   23   157.30   Invest   23   Invest   24   Invest   24   Invest   25   Invest   2		149.70	2126	13%	1860	1561	84%
Invest   150,90   Invest   150,90   Invest   147,10   Invest   28   In		145.90	2126	13%	1860	1561	84%
Ievel 20		139.50	2126	29%	1500		
Ievel 29		135.70	2126	14%	1824	1409	77%
Invest   28   139.50   Invest   27   135.70   Invest   27   135.70   Invest   25   128.10   Invest   25   128.10   Invest   25   128.10   Invest   23   120.50   Invest   23   120.50   Invest   23   110.50   Invest   20   109.10   Invest   20   Invest   20		131.90	2126	14%	1824	1409	77%
Invest   26   131.90   Invest   26   131.90   Invest   26   128.10   Invest   27   I	0 3.80	128.10	2126	14%	1824	1409	77%
Invest   26   131.90   Invest   26   131.90   Invest   26   128.10   Invest   27   I	0 3.80	124.30	2126	14%	1824	1409	77%
Ievel 24   124.30	0 3.80	120.50	2126	14%	1824	1409	77%
Ievel 24	0 3.80	116.70	2126	14%	1824	1409	77%
Ievel 22   116,70   Ievel 21   112,90   Ievel 21   112,90   Ievel 19   105,30   Ievel 19   105,30   Ievel 17   97,70   Ievel 16   99,10   Ievel 15   90,10   Ievel 16   86,30   Ievel 17   78,70   Ievel 17   74,90   Ievel 19   74,90   Ievel 10   71,10   Ievel 9   67,30   Ievel 9   67,30   Ievel 9   63,50   Ievel 9   63,50   Ievel 8,50   Ievel 8,50   Ievel 9   63,50   Ievel 10   10,90   Ievel 10   10,90   Ievel 10		112.90	2126	14%	1824	1409	77%
Ievel 21	0 3.80	109.10	2126	14%	1824	1409	77%
Ievel 20	0 3.80	105.30	2126	14%	1824	1409	77%
Ievel 19   105.30   Ievel 18   101.50   Ievel 18   101.50   Ievel 17   97.70   Ievel 16   93.90   Ievel 15   90.10   Ievel 15   86.30   Ievel 13   82.50   Ievel 12   78.70   Ievel 17   74.90   Ievel 10   71.10   Ievel 9   67.30   Ievel 9   63.50   Ievel 8   101.57   Ievel 9   67.30   Ievel 8   63.50   Ievel 8   63.50   Ievel 8   63.50   Ievel 8   63.50   Ievel 8   101.57   Ievel 9   Ieve	0 3.80	101.50	2126	14%	1824	1409	77%
Ievel 18	0 3.80	97.70	2126	14%	1824	1409	77%
level 17   97.70   level 16   93.90   level 15   90.10   level 14   86.30   level 13   82.50   level 17   74.90   level 10   71.10   level 9   67.30   level 9   67.30   level 8   63.50	3.80	93.90	2126	14%	1824	1409	77%
level 16 93.90   level 15 90.10   level 14 86.30   level 12 78.70   level 11 74.90   level 10 71.10   level 8 63.50   level 8 63.50	08.8	90.10	2126	14%	1824	1409	77%
level 15   90.10   level 14   86.30   level 13   82.50   level 12   78.70   level 11   74.90   level 10   71.10   level 9   67.30   level 8   63.50	0 3.80	86.30	2126	14%	1824	1409	77%
level 14 86.30 level 13 82.50 level 12 78.70 level 11 74.90 level 10 71.10 level 9 67.30 level 8 63.50	0 3.80	82.50	2126	14%	1824	1409	77%
level 13 82.50 level 12 78.70 level 11 74.90 level 10 71.10 level 9 67.30 level 8 63.50	0 3.80	78.70	2126	14%	1824	1409	77%
level 12 78.70 level 11 74.90 level 10 71.10 level 9 67.30 level 8 63.50	0 3.80	74.90	2126	14%	1824	1369	75%
level 10 74.90 level 10 71.10 level 9 67.30 level 8 63.50	0 3.80	71.10	2126	14%	1824	1369	75%
level 10 71.10 level 9 67.30 level 8 63.50	0 3.80	67.30	2126	14%	1824	1369	75%
level 9 67.30 level 8 63.50	0 3.80	63.50	2126	14%	1824	1369	75%
level 9 67.30 level 8 63.50		59.70	2126	14%	1824	1369	75%
		55.90	2126	14%	1824	1369	75%
	0 3.80	52.10	2126	14%	1824	1369	75%
level 7 59.70		48.30	2126	14%	1824	1369	75%
level 6 55.90	0 3.80	44.50	2126	14%	1824	1369	75%
-	Total Tov	-	108,362	15%	92,120	72,237	78.4%

### Reference Design

Site Area	3,694 m2	
	GFA	FRS
Tower - Reference Design		
GFA	72,237 m2	19.56 :1
Podium		
GFA - Commercial GFA - Retail	9,532 m2	2.58 :1
GFA - Retail GFA - Station	1,454 m2 1,064 m2	0.39 :1 0.29 :1
GFA - Station		
	40.0500	
Podium Total	12,050 m2	3.26 :1

	RL	Floors	Height	Envelope Outline	GBA Station	Potential GBA Station	GBA OSD	Potential GBA OSD	Void Station	Void Commercial	Articulation	GFA Commercial	Potential GFA Commercial	GFA Retail	GFA Station	Potential GFA Station
level 5 - ISD	49.9	6	38.5	2601	15		2276				310					
level 4 - Station	43.9	6	32.5	3357	1836		1242				279					
level 3	40.1	3.8	28.7	3357	307		2781				269	2244				
level 2	36.3	3.8	24.9	3357	292		2792				273	2185				
level 1 - Mez	32.4	3.9	21	3477	321		795	1603		407	351		1603			
level 1	28.8	3.6	17.4	3477	178		2660			292	347	2024				
Bligh St - Mez	23.8	5	12.4	3477	488		1157	978		457	397		730	122		
GL - Bligh St	18.3	5.5	6.9	3477	764	45	1674		735		259	205		1033	449	45
O'connell St - Mez	15.35	2.95	3.95	3694	212		343	605	941	1262	331		541			
O'connell St	11.4	3.95	0	3694	1045		2107		343		199			299	570	
Basement 1	8.2	3.2					278									
		Total P	odium	33,968	5,458	45	18,105	3,186	2,019	2,418	3,015	6,658	2,874	1,454	1,019	45

Total Envelope 142,330

Total GBA 118,914

Total GFA 84,287

ticulation velope to GBA (Articulation)

### **Efficiency Based GBA**

EIIICI	ency	Das	eu G	DA	
	RL	Floor	Height	Envelope Outline	GBA Articulation Zone
	220.00		213.00		
level 49	209.60	10.40	202.60	1069	941
level 48	205.60	4.00	198.60	1206	1061
level 47	201.80	3.80	194.80	1343	1182
level 46	198.00	3.80	191.00	1480	1302
level 45	194.20	3.80	187.20	1617	1423
level 44	190.40	3.80	183.40	1617	1423
level 43	186.60	3.80	179.60	1617	1423
level 42	182.80	3.80	175.80	1617	1423
level 41	179.00	3.80	172.00	1617	1423
level 40	175.20	3.80	168.20	1617	1423
level 39	171.40	3.80	164.40	1617	1423
level 38	167.60	3.80	160.60	1617	1423
level 37	163.80	3.80	156.80	1617	1423
level 36	160.00	3.80	153.00	1617	1423
level 35	156.20	3.80	149.20	1617	1423
level 34	152.40	3.80	145.40	1617	1423
level 33	148.60	3.80	141.60	1617	1423
level 32	144.80	3.80	137.80	1617	1423
level 31	141.00	3.80	134.00	2257	1986
level 30	137.20	3.80	130.20	2257	1986
level 29	133.40	3.80	126.40	2257	1986
level 28	129.60	3.80	122.60	2257	1986
level 27	125.80	3.80	118.80	2257	1986
level 26	122.00	3.80	115.00	2257	1986
level 25	118.20	3.80	111.20	2257	1986
level 24	114.40	3.80	107.40	2257	1986
level 23	110.60	3.80	103.60	2257	1986
level 22	106.80	3.80	99.80	2257	1986
level 21	103.00	3.80	96.00	2257	1986
level 20	99.20	3.80	92.20	2257	1986
level 19	95.40	3.80	88.40	2257	1986
level 18	89.40	6.00	82.40	2257	1986
level 17	85.60	3.80	78.60	2257	1986
level 16	81.80	3.80	74.80	2257	1986
level 15	78.00	3.80	71.00	2257	1986
level 14	74.20	3.80	67.20	2257	1986
level 13	70.40	3.80	63.40	2257	1986
level 12	66.60	3.80	59.60	2257	1986
level 11	62.80	3.80	55.80	2257	1986
level 10	59.00	3.80	52.00	2257	1986
level 9	55.20	3.80	48.20	2257	1986
level 8	51.40	3.80	44.40	2257	1986
level 7	47.60	3.80	40.60	2257	1986
level 6	43.80	3.80	36.80	2257	1986
Tower Tot	al			86,418	76,048
-					

# level 5 - Station 39.20 4.60 32.20 level 4 33.20 6.00 26.20 level 3 29.60 3.60 22.60 Level 2 26.00 3.60 19.00 level 1 20.00 6.00 13.00 Ground 13.5 6.50 6.50 Level 2 6.00 6.50 6.50

### Reference Design

	RL	Floor	Height	Envelope Outline	GBA Articulation Zone	GBA	GFA	Efficienc
	220.00		213.00					
level 49	209.60	10.40	202.60	1069	9%	977		0%
level 48	205.60	4.00	198.60	1206	8%	1108		0%
level 47	201.80	3.80	194.80	1343	1796	1121	989	88%
level 46	198.00	3.80	191.00	1480	15%	1254	1059	84%
level 45	194.20	3.80	187.20	1617	14%	1385	1188	86%
level 44	190.40	3.80	183.40	1617	8%	1492	1296	87%
level 43	186.60	3.80	179.60	1617	8%	1492	1296	87%
level 42	182.80	3.80	175.80	1617	8%	1492	1296	87%
level 41	179.00	3.80	172.00	1617	8%	1492	1296	87%
level 40	175.20	3.80	168.20	1617	8%	1492	1296	87%
level 39	171.40	3.80	164.40	1617	8%	1492	1296	87%
level 38	167.60	3.80	160.60	1617	8%	1492	1296	87%
level 37	163.80	3.80	156.80	1617	8%	1492	1296	87%
level 36	160.00	3.80	153.00	1617	8%	1492	1296	87%
level 35	156.20	3.80	149.20	1617	8%	1492	1296	87%
level 34	152.40	3.80	145.40	1617	8%	1492	1296	87%
level 33	148.60	3.80	141.60	1617	8%	1492	1296	87%
level 32	144.80	3.80	137.80	1617	8%	1492	1296	87%
level 31	141.00	3.80	134.00	2257	13%	1970	1683	85%
level 30	137.20	3.80	130.20	2257	13%	1970	1683	85%
level 29	133.40	3.80	126.40	2257	13%	1970	1683	85%
level 28	129.60	3.80	122.60	2257	13%	1970	1683	85%
level 27	125.80	3.80	118.80	2257	13%	1970	1683	85%
level 26	122.00	3.80	115.00	2257	13%	1970	1683	85%
level 25	118.20	3.80	111.20	2257	13%	1970	1683	85%
level 24	114.40	3.80	107.40	2257	13%	1970	1619	82%
level 23	110.60	3.80	103.60	2257	13%	1970	1619	82%
level 22	106.80	3.80	99.80	2257	13%	1970	1619	82%
level 21	103.00	3.80	96.00	2257	13%	1970	1619	82%
level 20	99.20	3.80	92.20	2257	13%	1970	1619	82%
level 19	95.40	3.80	88.40	2257	13%	1970	1619	82%
level 18	89.40	6.00	82.40	2257	31%	1560		096
level 17	85.60	3.80	78.60	2257	13%	1970	1581	80%
level 16	81.80	3.80	74.80	2257	13%	1970	1581	80%
level 15	78.00	3.80	71.00	2257	13%	1970	1581	80%
level 14	74.20	3.80	67.20	2257	13%	1970	1581	80%
level 13	70.40	3.80	63.40	2257	13%	1970	1581	80%
level 12	66.60	3.80	59.60	2257	13%	1970	1581	80%
level 11	62.80	3.80	55.80	2257	13%	1970	1581	80%
level 10	59.00	3.80	52.00	2257	13%	1970	1561	79%
level 9	55.20	3.80	48.20	2257	13%	1970	1561	79%
level 8	51.40	3.80	44.40	2257	13%	1970	1561	79%
level 7	47.60	3.80	40.60	2257	13%	1970	1561	79%
1 10	43.80	3.80	36.80	2257	13%	1970	1561	79%
level 6								

### Reference Design Measure

3 736 m2	
CEA	FRS
60.451 m2	16.18
5.463 m2	1.4
	0.2
3,065 m2	0.82
9,461 m2	2.5
<b>69,912</b> m2	18.71
	GFA 60,451 m2 5,463 m2 933 m2 3,065 m2 9,461 m2 69,912 m2

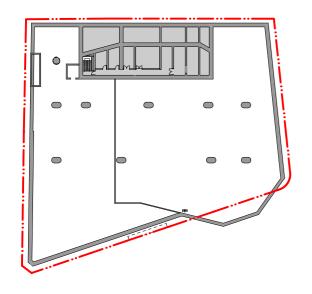
	RL	Floor	Height	Envelope Outline	GBA Station	Potential GBA Station	GBA OSD	Potential GBA OSD	Void Station	Void Commercial	Articulation	GFA Commercial	Potential GFA Commercial	GFA Retail	GFA Station	Potential GFA Station
level 5- Station	39.20	4.60	32.20	2550	374		1947				229					
level 4	33.20	6.00	26.20	2550	1011		1310				229					
level 3	29.60	3.60	22.60	3244	197		2124				923	1628				
level 2	26.00	3.60	19.00	3244	163		2363				718	1575				
level 1	20.00	6.00	13.00	3628	302	597	1658	872		185	14	878	872	67		598
Ground	13.5	6.50	6.50	3628	1651		1514		373		90	253		543	1395	
Lower Ground	7.0	6.50	0		1495		1430	257	373				257	323	1072	
Total Podiur	m			18,844	5,193	597	12,346	1,129	746	185	2,203	4,334	1,129	933	2,467	598

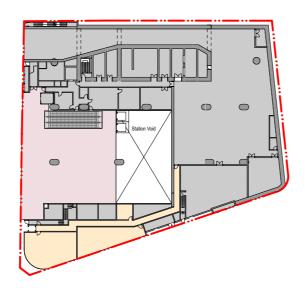
Total Envelope 105,262 Total GBA 95,316

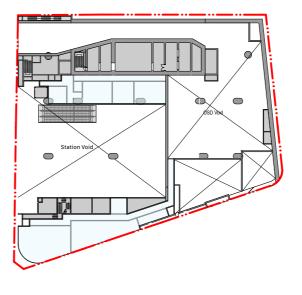
Total GFA 69,912

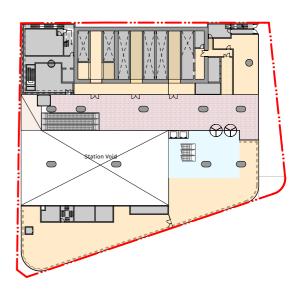
# **GFA Diagrams**

Hunter Street East









GFA Basement 1 1:500

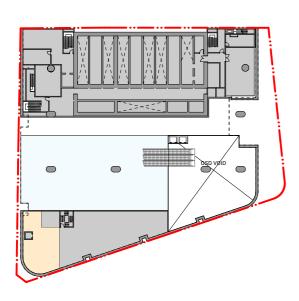
469

GFA: NIL

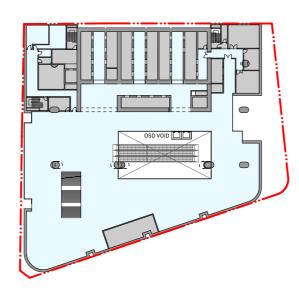




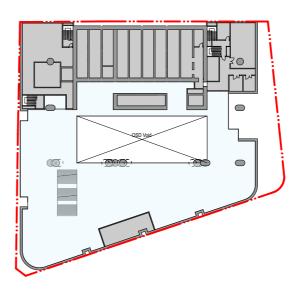




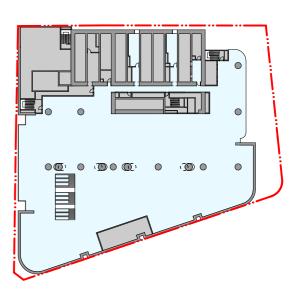




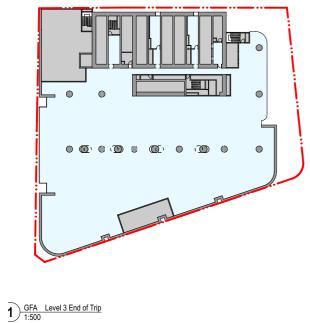
GFA Level 1 Commercial lobby 1:500

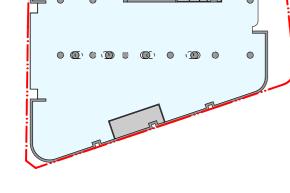


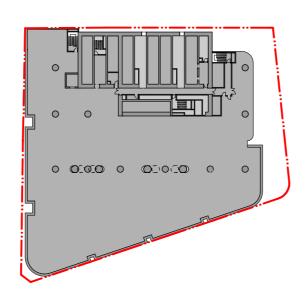
7 GFA Level 1 Commercial Lobby Mezzanine 1:500



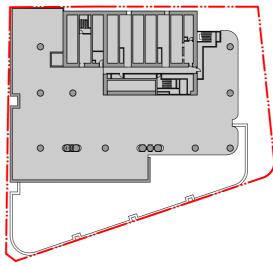
8 GFA Level 2 Commercial 1:500



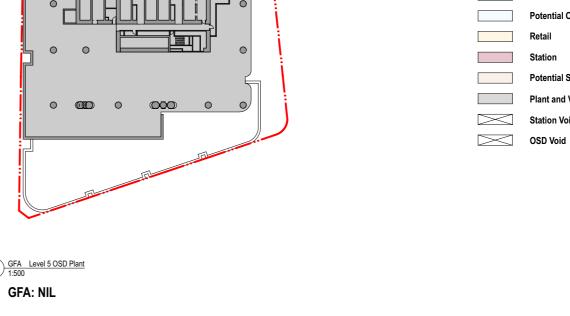


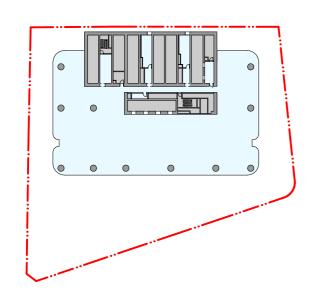


GFA Level 4 Station Plant & OSD Plant 1:500 GFA: NIL



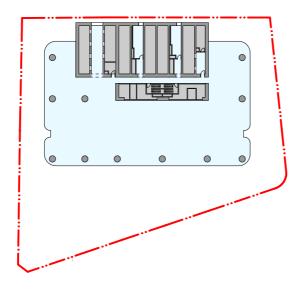
GFA Level 5 OSD Plant 1:500

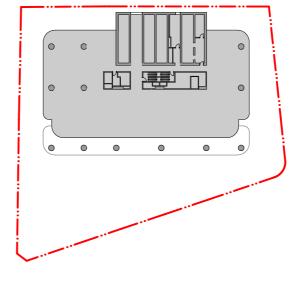


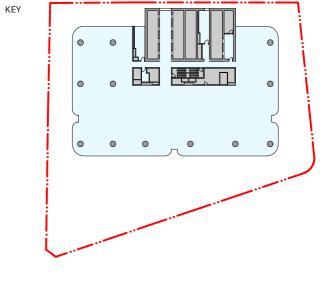


GFA Low Rise 1:500

136







KEY

OSD GFA

Retail

Station Void

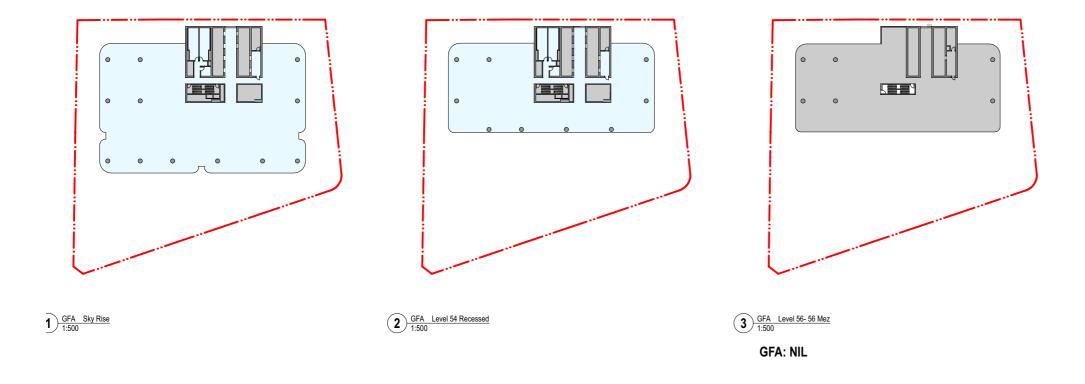
Potential OSD GFA

Potential Station GFA Plant and Vertical Circulation

**5** GFA Mid Riee 1:500

GFA Level 31 OSD Plant 1:500

GFA High rise 1:500



137

KEY

OSD GFA

Retail

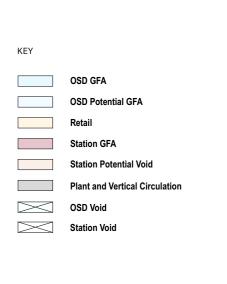
Station Void

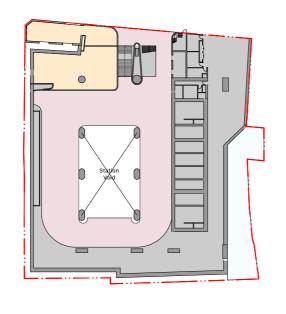
OSD Void

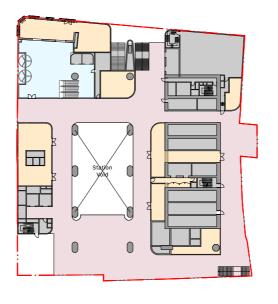
Potential OSD GFA

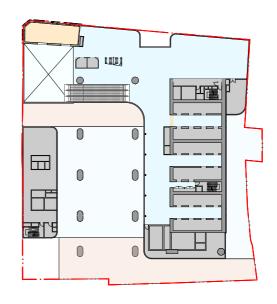
Potential Station GFA

Plant and Vertical Circulation



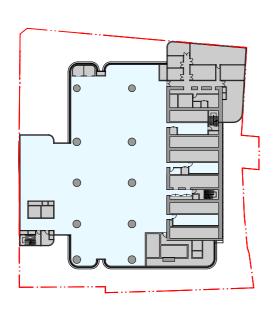


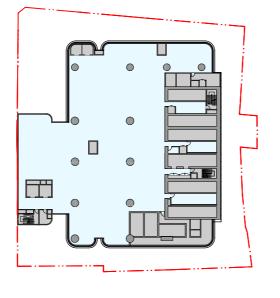


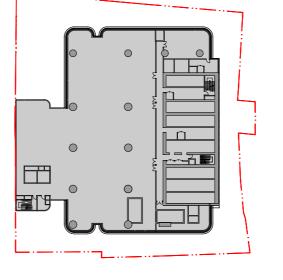


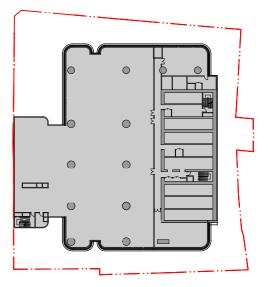
1 PLAN Hunter Street - Ground Floor 1:500 PLAN George Street - Ground Floor 1:500

PLAN Level 1 - Commercial Lobby 1:500



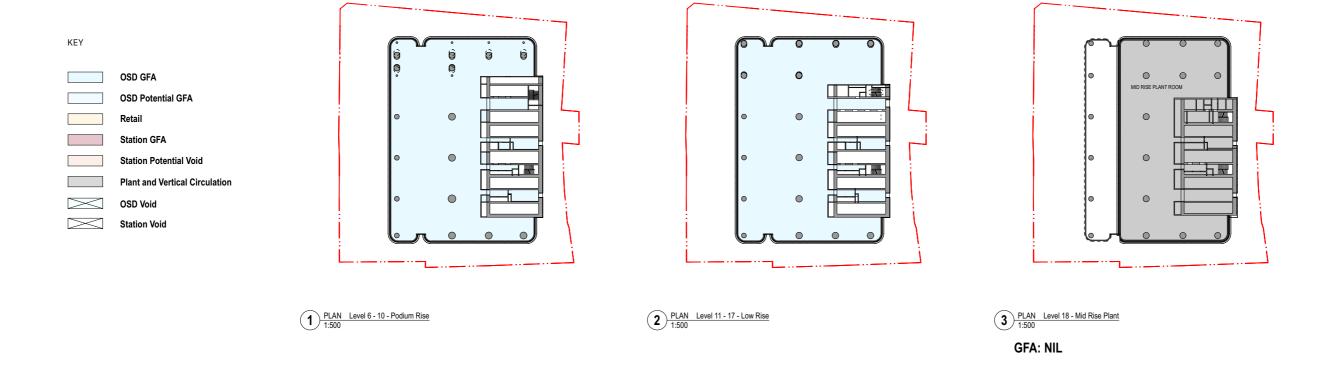


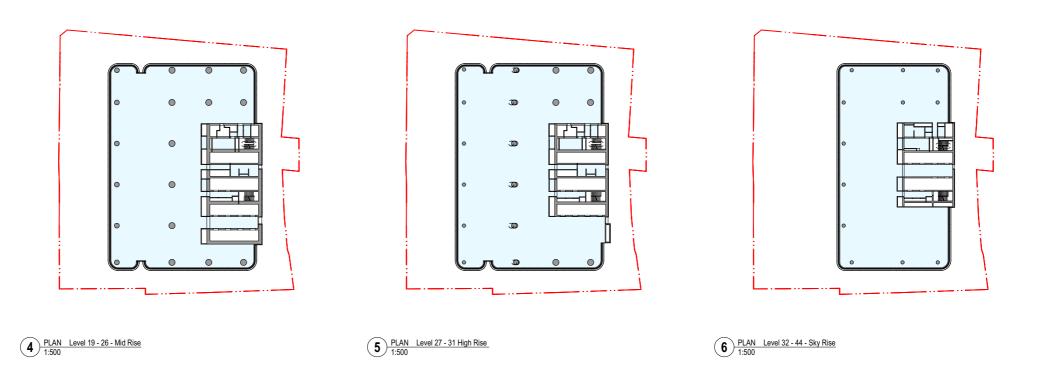


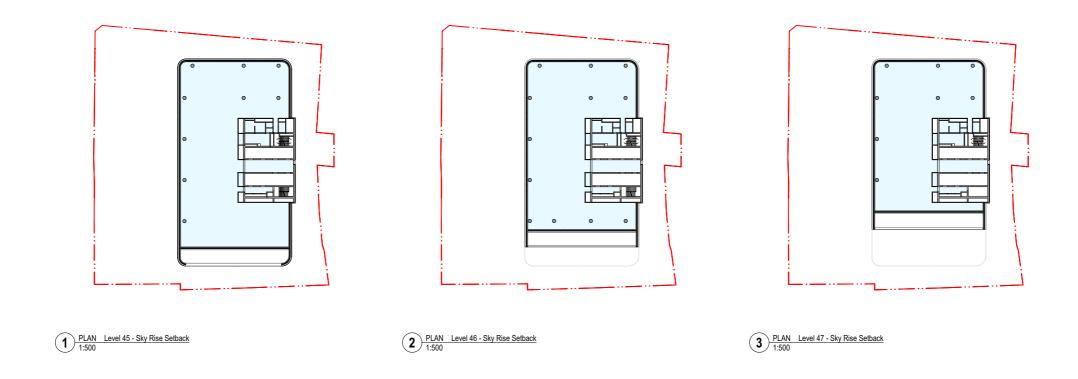


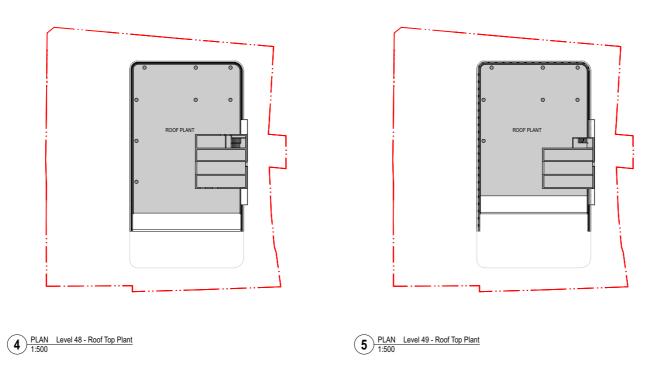
PLAN Level 2 - Coworking 1:500

PLAN Level 3 - End of Trip 1:500 6 PLAN Level 4 - Station / OSD Podium P 1:500 PLAN Level 5 - Station / OSD Podium Plant 1:500









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