



# Harbourside Stage 1 DA

## Supplementary Architectural Design Report

Mirvac

**fjmt studio** architecture interiors urban landscape community  
Sept 2020 – SSDA1 SADR – Rev 05



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# 1.0 Introduction

## Introduction

This report provides a response to submissions (as relevant) and assessment of the proposed amended Concept Proposal in relation to the State Significant Development (SSD) Development Application (DA) for the redevelopment of the Harbourside Shopping Centre (SSD 7874).

The SSD DA was publicly exhibited for a second time from 2 April to 29 April 2020. During this time, six (6) submissions were received from government agencies and City of Sydney Council and 57 submissions were received from the general public and organisations.

This report should be read in conjunction with the original report prepared by fjmt dated November 2016 to support the Harbourside Concept Proposal Square (SSD 7874).

Architectural proposals as included in this document are illustrative only and are provided to demonstrate how a future design could work within the SSDA1 envelope. The future design will be subject to a future Design Excellence process and a SSDA2.

## Proposed Amended Development

Following the second exhibition of the proposal in April 2020 and given the nature and range of submissions made from agencies and the public, Mirvac has again reviewed the overall approach and elements of the Concept Proposal. This has accordingly led to developing a Further Amended Concept Proposal. This further and final Concept Proposal therefore includes amendments made by Mirvac pursuant to Clause 55 of the Environmental Planning & Assessment Regulation, in the main to address matters raised in the submissions and deliver an overall significantly improved outcome on the site and for the broader Darling Harbour precinct and Pyrmont Peninsula.

In addition to the further amendments made to the Concept Proposal, Mirvac are also now including detailed Stage 1 Early Works, comprising demolition of existing site improvements down to ground slab level (no ground disturbance). Revised SEARs were accordingly issued by the Department on 12 May 2020.

The following further key amendments have been made to the Concept Proposal since its April 2020 public exhibition:

### Increase in Height of Tower

The height of the tower has been increased to be consistent with the height originally proposed (from RL 153.75 to RL 166.95). The tower height has been increased in order to better align with the place outcomes identified within the Draft Pyrmont Place Strategy for Harbourside. This opportunity for additional height is supported with the provision of additional public benefit through the creation of a new significant public accessible area of open space on the northern podium rooftop.

### Reduction in Height of the Podium

A portion of the podium height at its northern extent has been partly reduced from RL30.50 to RL 13.75. The reduction in height provides for improved view sharing from 50 Murray Street and a provision of a generous plaza space adjacent to Pyrmont Bridge.

### Gross Floor Area / Land Use Mix

The amended proposal retains the same overall 87,000sqm of GFA, however there is a minor adjustment in the split between non-residential and residential. The final proposal now includes:

- Non-residential uses floor space – 45,000sqm; and
- Residential uses floor space – 42,000sqm

In response to market demand and the focus of local and regional strategic planning policies, it is proposed for the podium to now include predominantly commercial land uses along with supporting retail. Indicatively, comprising ~28,000sqm net lettable area of commercial office and ~8,500sqm gross lettable area of retail.

The podium enables large campus sized commercial floor plates that are favoured by large multinational tech, media, finance and professional services companies.

### Apartment numbers

No change is proposed to the indicative number of apartments (357), with the minor increase in the tower height resulting in a review of the mix and sizing of apartments. Note, this yield is on the 'Indicative Design' only and will be subject to future design development and a Stage 2 DA. This Stage 1 DA only seeks approval for land uses and the building envelope comprising a total of 87,000sqm GFA.

### Car Parking Spaces

The overall footprint of the basement has been reduced, but there is proposed to be an additional basement level of parking (increase from 3 levels to 4 levels). There is no change to proposed indicative parking spaces, remaining at 306 spaces. As above, this is based on the 'Indicative Design' only.

A more detailed and comprehensive description of the amended proposal is contained in the Response to Submissions and Amended Concept Proposal prepared by Ethos Urban.

### Landscaped Open Space and Public Domain

The key concepts and public benefits as originally proposed are retained under the amended Concept Proposal, with the addition of a new significant area of publicly accessible open space created on the rooftop of the northern podium (referred to as "Guardian Square").

## Final Description of Development

The Harbourside Shopping Centre Redevelopment application will include a Concept Proposal and detailed Stage 1 Early Works.

The final Concept Proposal seeks approval for the following key components and development parameters:

- A network of open space areas and links generally as shown within the Public Domain Concept Proposal, to facilitate re-integration of the site into the wider urban context;
- Building envelopes;
- Land uses across the site, non-residential and residential uses;
- A maximum total Gross Floor Area (GFA) across the Harbourside site of 87,000sqm for mixed use development (45,000sqm non-residential and 42,000sqm residential development);
- Basement car parking;
- Car parking rates to be utilised in subsequent detailed (Stage 2) Development Applications);
- Urban Design and Public Realm Guidelines to guide future development and the public domain; and
- Strategies for utilities and services provision, drainage and flooding, and ecological sustainable development.

The Stage 1 Early Works comprises:

- Demolition of the existing site improvements, including the Harbourside Shopping Centre, obsolete monorail infrastructure, and associated tree removal.

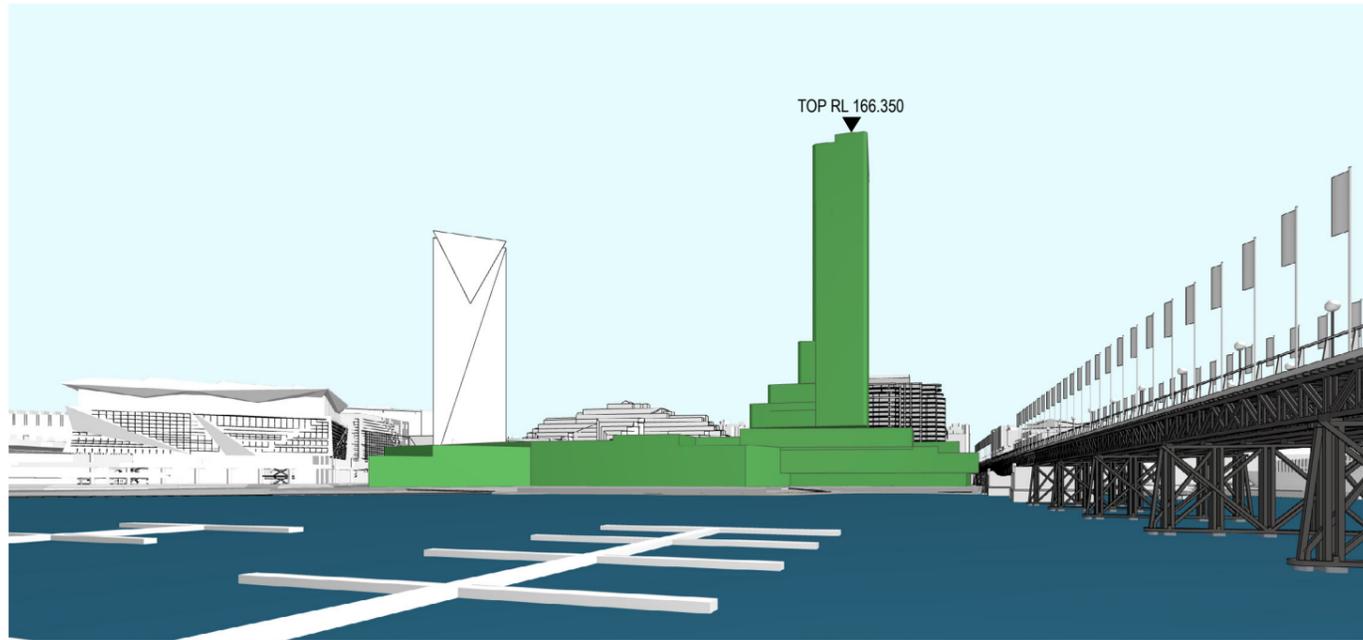


Image 1 Original submitted Concept Proposal

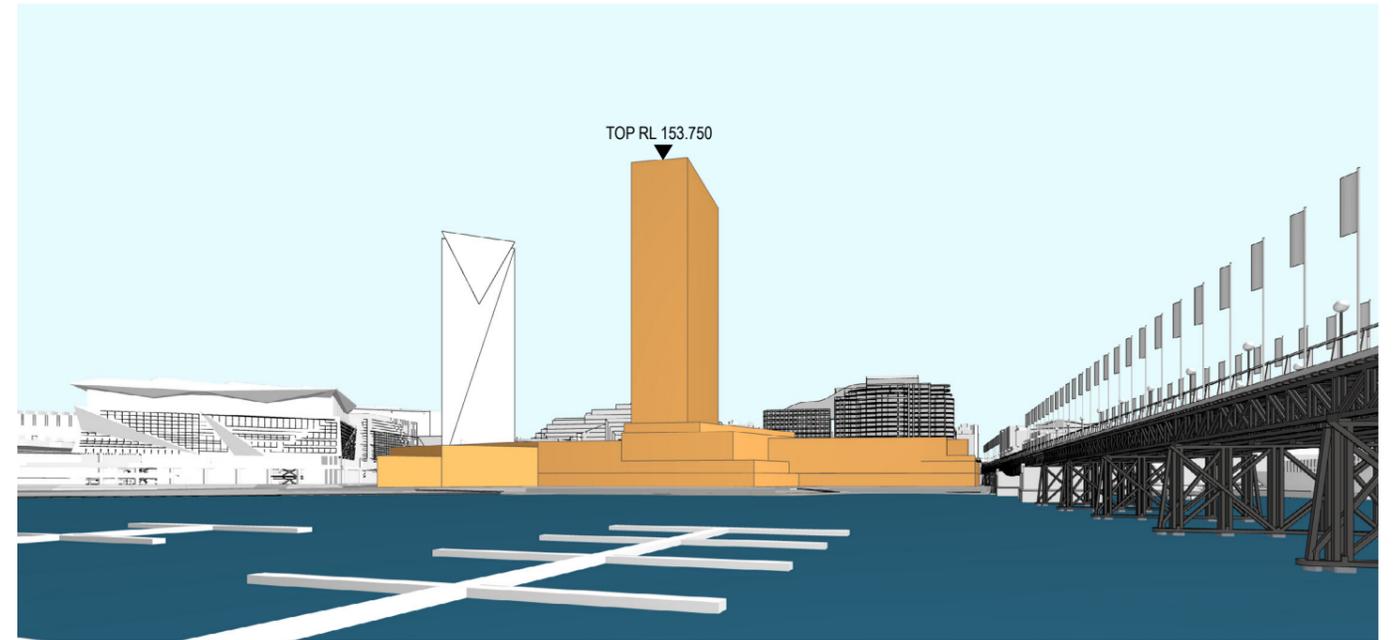


Image 2 Submitted Amended Concept Proposal (March 2020)

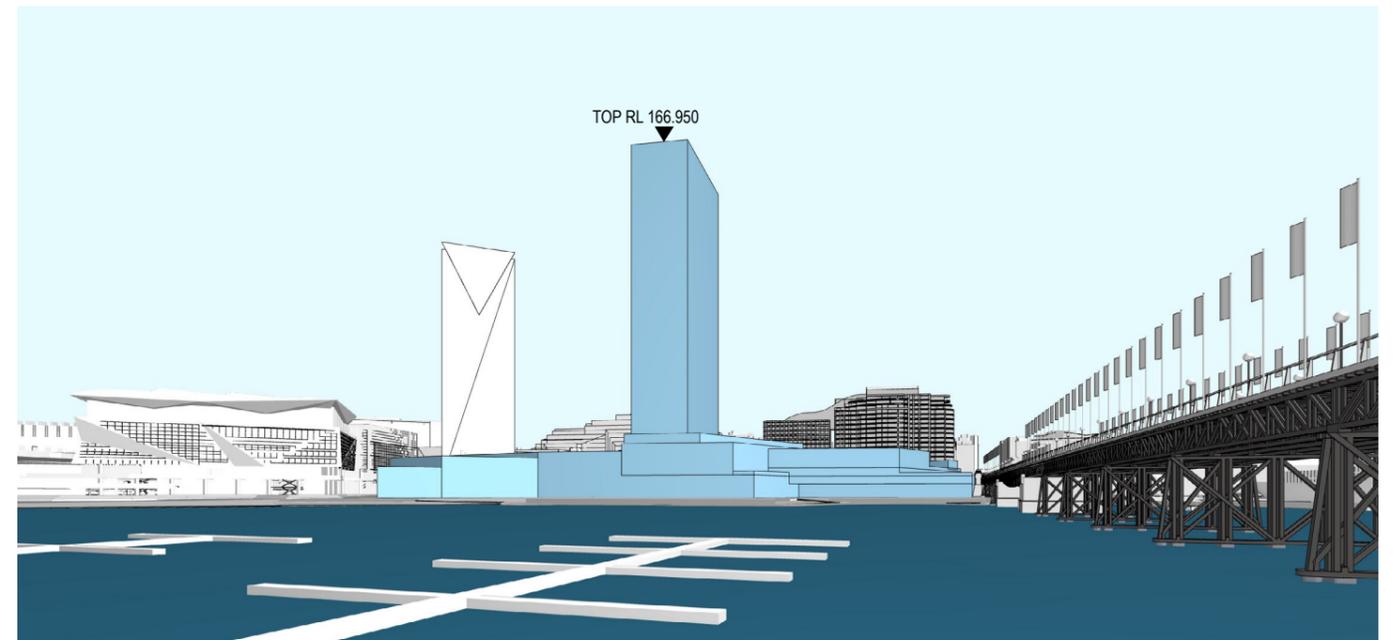


Image 3 Response to Submission Proposal

**Previous Scheme (March 2020) vs Proposed Scheme (September 2020)**

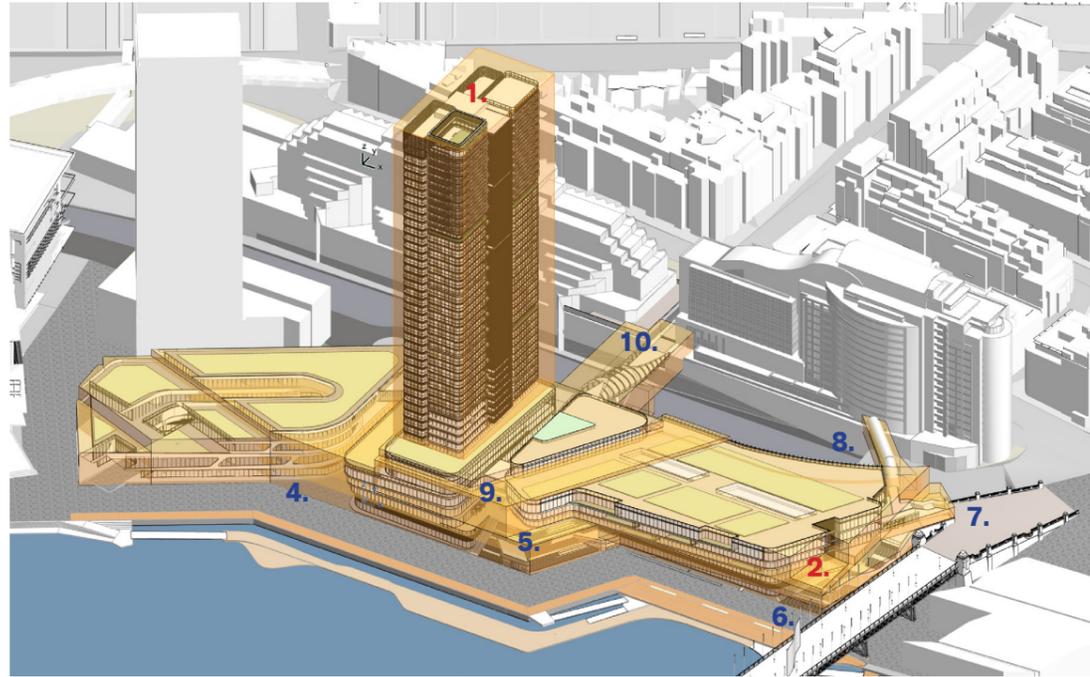


Image 4 Submitted Amended Concept Proposal (March 2020)

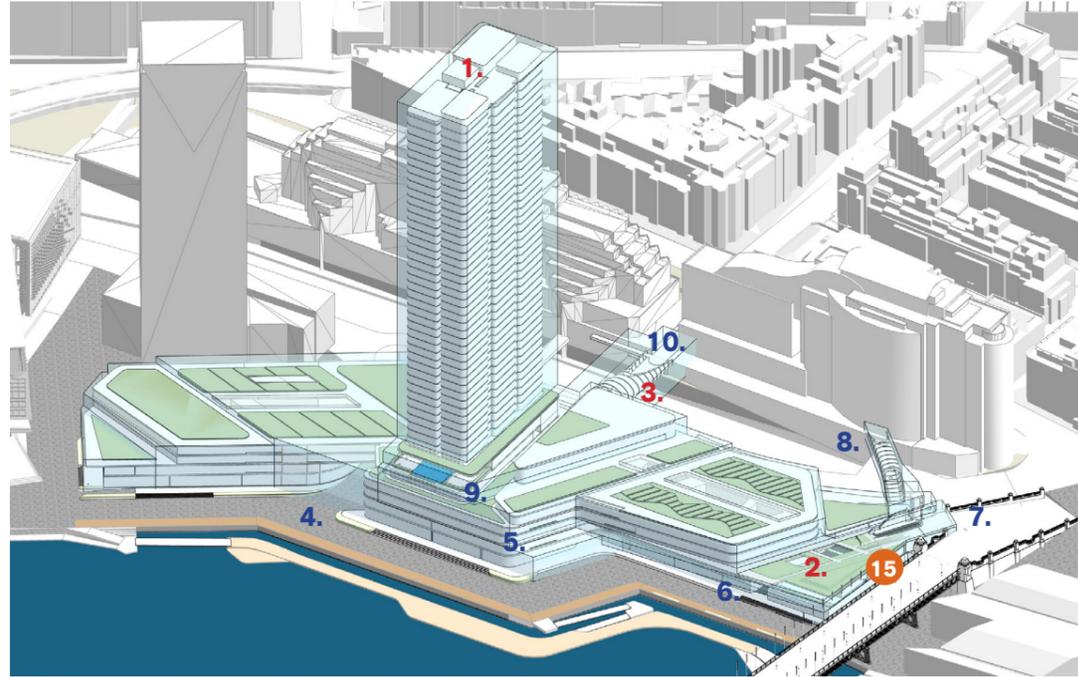


Image 5 Response to Submission Proposal (September 2020)

**Envelope (March 2020)**

Tower Envelope Height RL 153.75

North podium envelope RL 25.00

Recess in west podium envelope adjacent to Bunn St

**Envelope (September 2020)**

Tower Envelope Height increased to RL 166.95m

North podium envelope height reduced to RL 13.75

Recess in west podium envelope adjacent to Bunn St removed - No impact on views and shadows (See envelope plan)

**Indicative Design (March 2020)**

The Waterfront Boulevard

Event Steps

Ribbon Stairs

Pyrmont Bridge - New Paving

50 Murray Street bridge upgrade - existing bridge to be maintained and upgraded

Central through site link

Bunn Street pedestrian bridge

Total GFA: 87,000m<sup>2</sup>

Residential GFA: 38,000m<sup>2</sup>

Non-Residential GFA: 49,000m<sup>2</sup>

Total Public Domain: 7,904m<sup>2</sup>

**Indicative Design (September 2020)**

The Waterfront Boulevard at 4,800m<sup>2</sup>

Event Steps

Ribbon Stairs

Pyrmont Bridge - New Paving

50 Murray Street bridge upgrade - existing bridge to be maintained and upgraded

Central through site link

Bunn Street pedestrian bridge

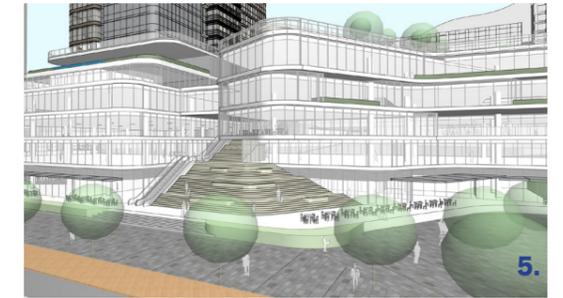
Total GFA: 87,000m<sup>2</sup> - No change

Residential GFA: 42,000m<sup>2</sup>

Non-Residential GFA: 45,000m<sup>2</sup>

Total Public Domain increased to 8,200m<sup>2</sup>

**15. Guardian Square 1,500m<sup>2</sup>**



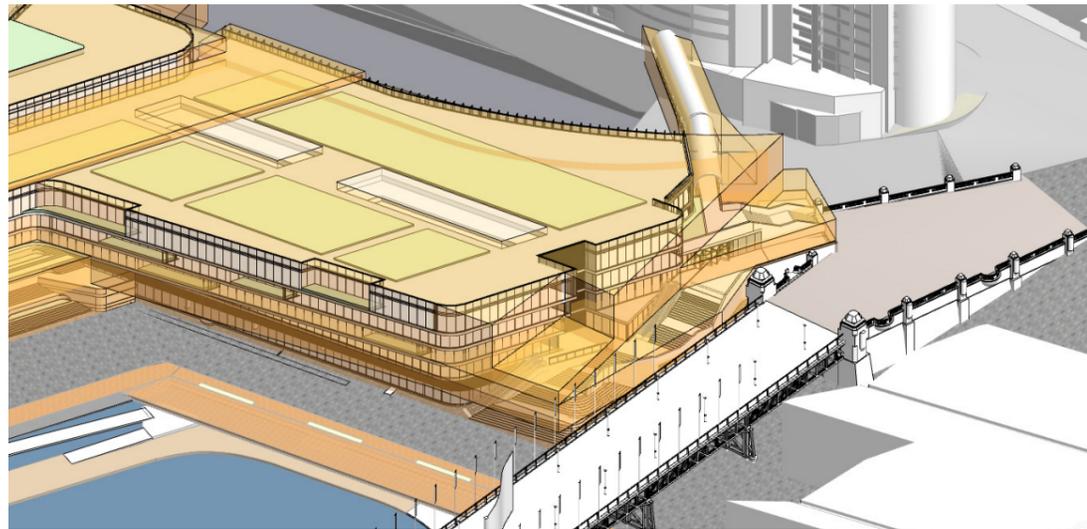


Image 6 Submitted Amended Concept Proposal (March 2020)

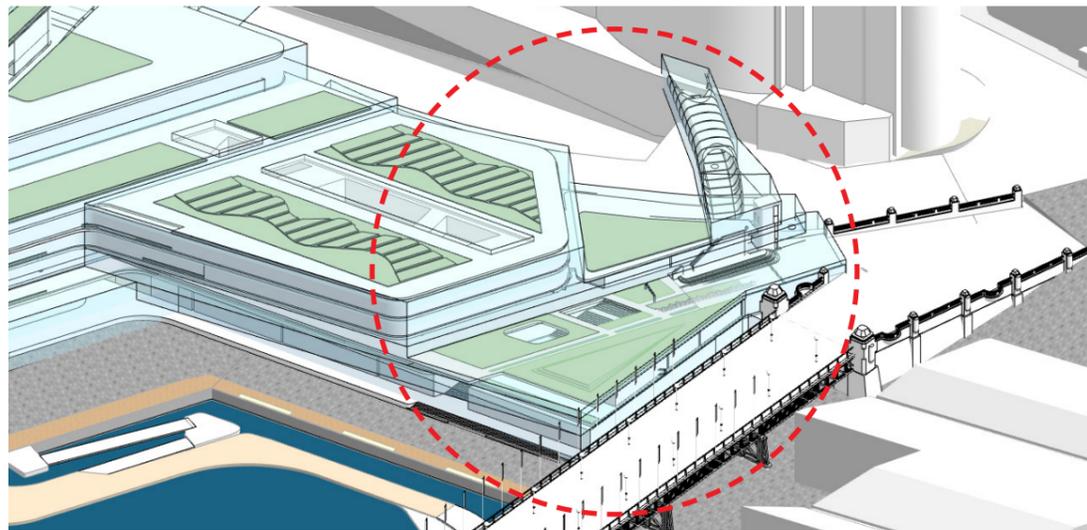


Image 7 Envelope reduced to form Guardian Square (level with Pymont Bridge)



Image 8 Indicative design - Envelope reduced to form Guardian Square (level with Pymont Bridge) as pictured above

## 2.0 Urban Context



Future Developments west of Darling Harbour:



Image 9 The Bays Market District Masterplan



Image 10 Fish Market Development (Approved)



Image 11 The Star (Indicative)



Image 12 Recent and current developments



Image 14 The ICC Hotel (Sofitel)

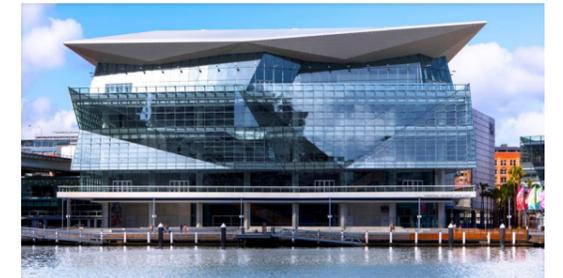


Image 15 ICC, Sydney



Image 16 The Exhibition Centre



Image 17 The Four Points by Sheraton



Image 18 The Ribbon



Image 19 Darling Square



Image 13 Cockle Bay Wharf



Image 20 Barangaroo

## Local Context

Sitting at the junction to one of Sydney's premier entertainment and leisure districts, the surrounding area is currently under large scale rejuvenation and redevelopment.

This site is the gateway site into Darling Harbour from western approach. It is highlighted as a key site in the Pyrmont Peninsula Place Strategy and even more important now with the potential Metro station at Pyrmont.

### North

To the north of the site is the Maritime Museum, Jones Bay and Johnston Harbour. With proximity to ferries and light rail services from Pyrmont Bay, The Star and Casino Wharf. The area directly north of the development is located on the fringe of Cockle Bay with commanding views of Barangaroo and the city CBD, Goat Island, Balmain and across to Berry Bay.

The northern area is predominately medium rise mixed use zoning, interspersed with several key sites and important heritage items. North west lies The Star Casino, Pyrmont Bay Park, Metcalfe Park, Wharf 7, Jones Bay Wharf and Pirrama Park.

Immediately North of the site is the interface with Pyrmont Bridge. Acting as an important city link and heritage item. The celebration of this structure is an important site characteristic.

Access into Pyrmont is through the Murray Street Intersection and associated plaza space surrounding the National Maritime Museum and Pyrmont Bridge.

### East

To the far East of the site across Cockle Bay is Cockle Bay Wharf and the edge of the city CBD.

The site's primary address is on the Eastern lot boundary being 'The Boulevard' and Cockle Bay waterfront. This area is predominately a spill out space for existing retail tenants within the Harbourside Centre.

Acting as an important plaza space for events and displays within and on Cockle Bay, this area contains predominately hard landscape and urban furniture. Also functioning as an important site link to the wider SICEEP development and by extension the rest of the city, this 'boulevard' space has been highlighted as an area for public domain works and rejuvenation.

### South

To the South of the site is the SICEEP development. With an area of approximately 20 hectares, the SICEEP site has been divided into three redevelopment areas – Bayside, Darling Central and The Haymarket.

Key features of the SICEEP precinct include delivering world-class convention, exhibition and entertainment facilities with 40,000m<sup>2</sup> exhibition space, over 8,000m<sup>2</sup> of meeting rooms space, across 40 rooms, overall convention space capacity for more than 12,000 people and a hotel complex at the northern end of the precinct, immediately adjacent to the new International Convention Centre.

As well as new function and entertainment facilities this SICEEP precinct delivers increased and improved pedestrian connections, public domain works and links to Ultimo, Central, Chinatown and Cockle Bay Wharf.

Directly South of the Harbourside site is the Bayside precinct including the ICC Hotel (ICC Tower, Sydney, Darling Harbour), Harbourside Place and the new Convention Centre - currently under construction. The top of the hotel sits at RL 133.55, below that the original submission, ie: RL 142.70.

With increased pedestrian and vehicle visitation to Harbourside Place and the Convention Centre this southern boundary of the site is an important urban and contextual link.

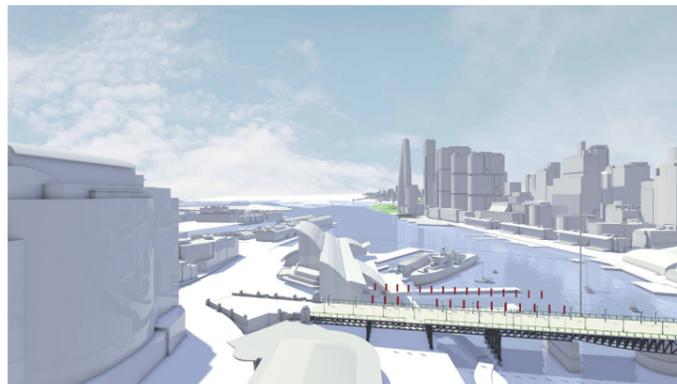
### West

The west of the site is Pyrmont - predominately low rise residential and mixed use zoning with higher density high-rise developments towards the North West around John Street Square. The main arterial road within Pyrmont is Harris Street running in a North-South direction. The nearest East West cross street is Pyrmont Bridge Road leading to the Fish Markets, Blackwattle Bay, Wentworth Park and Glebe. To the west also lies the Western Distributor and Anzac Bridge.

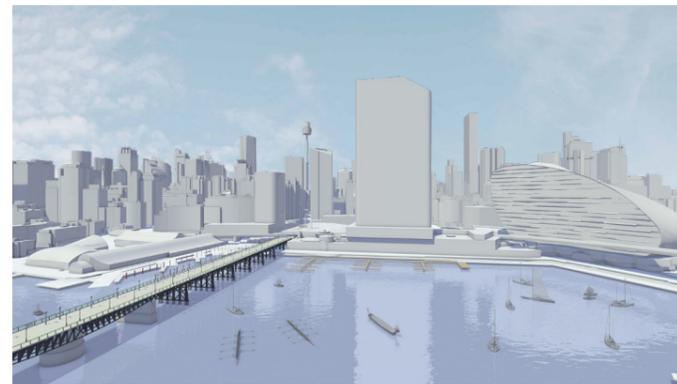
Immediately west of the site is the Novotel and IBIS Darling Harbour hotels as well as a 16 storey apartment building at 50 Murray Street linked by a public carpark podium. This immediate context is separated from Harbourside by Darling Drive and the Light Rail tracks. Two connections span over Darling Drive between these buildings and the existing Harbourside centre.

The first is an existing monorail link at the north edge of the site. This connects a public access way from Bunn Street, the IBIS Hotel and 50 Murray Street Apartments to the disused monorail station above Harbourside, and down onto the Western side of Pyrmont Bridge.

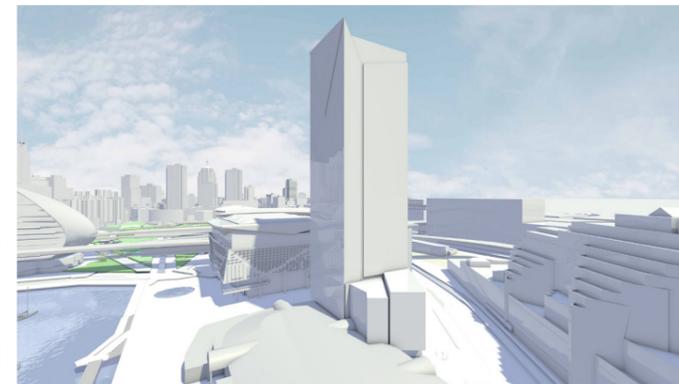
The second is a pedestrian walkway from the Bunn Street public carpark under both the IBIS and Novotel Hotels and links directly into the centre of the development site.



North



East



South



West



Image 21 Existing Context



Image 22 Neighbouring Context



Image 23 Existing Context

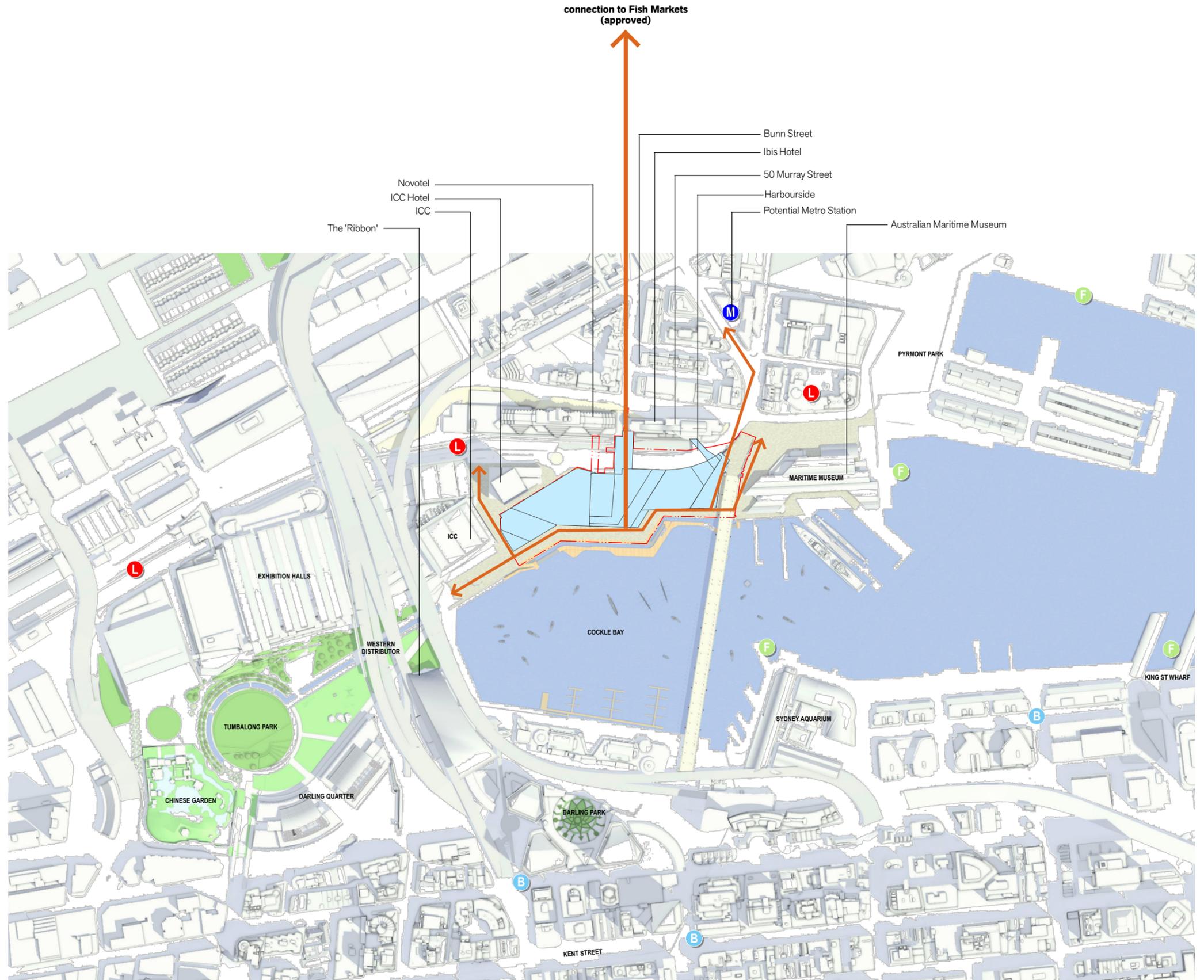
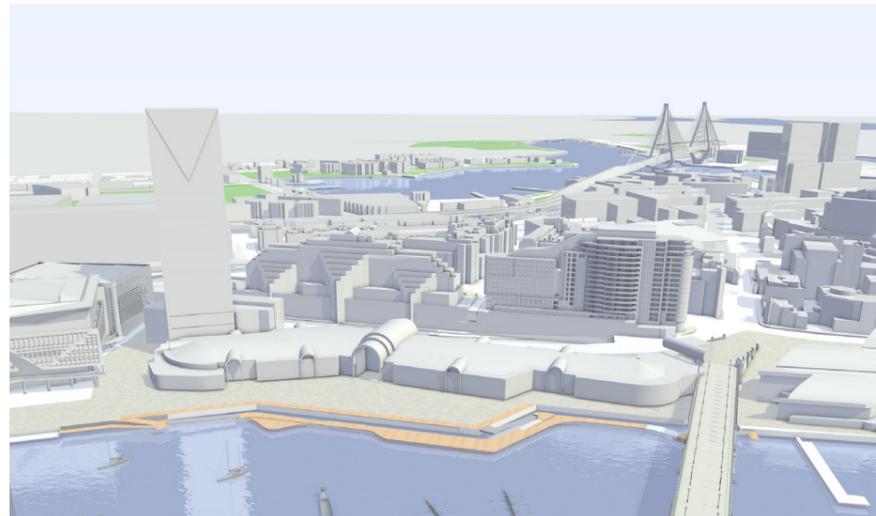


Image 24 Location Plan

# 3.0 Design Principles

The indicative proposals contained within the report have been shaped with consideration of a number of Design Principles. These principles have informed the placement, shaping, activation and permeability of the built form and has been further refined as part of the amended concept proposal. The following series of diagrams illustrate the key Design Principles. The top image illustrates the broad principle while the lower image illustrates how this can be incorporated into the built form.

**\* Note: Lower row of diagrams based on indicative design only. Detailed design to occur at a later stage**



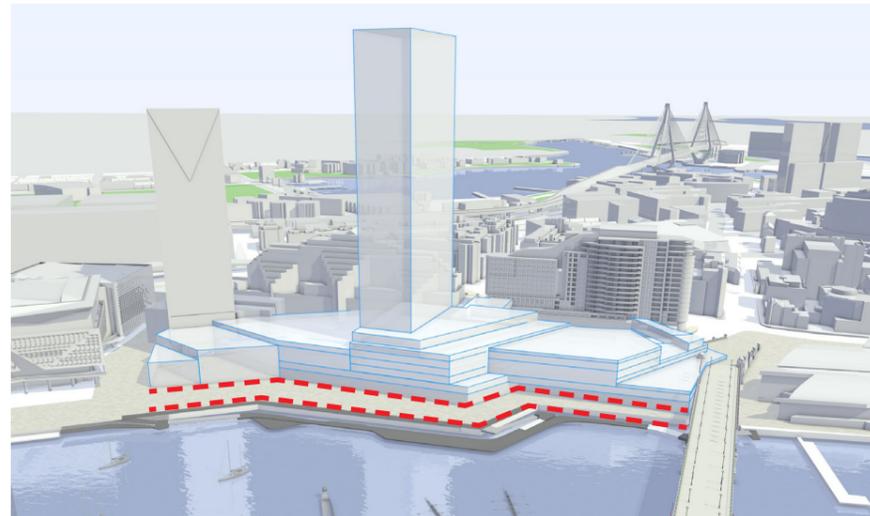
## Existing Building

Originally conceived as Harbourside Festival Market Place, the existing centre opened in 1988. It was designed by Clark Perry Blackmore (later Architecture Oceania) in association with RTKL Associates, "in an idiom superficially recalling Joseph Paxton's famous Crystal Palace (1851)\*." The existing centre provides 3 levels of retail (with a partial level 4) within a low rise centre characterised by a central glazed Galleria. The retail offering is constructed around central malls, with food and beverage outlets providing activation along the eastern edge.

\* Sydney Architecture, by John Haskell, John Callanan



Image 26 Existing condition



## Regularised Waterfront Setback

The existing Harbourside Shopping Centre occupies a key site on the western edge of Cockle Bay with a water frontage stretching approximately 270m from the ICC to the south to Pyrmont Bridge to the north. The central position of the centre sits 29m back from the waters edge. At the southern end this contracts to 10.8m while adjacent to Pyrmont Bridge the set back is 11.2m. The proposals contained within this submission seek to adopt a regularised 20m set back for the southern and central portion of the site, and 14m for the northern end ground floor. The proposal also achieves an overall increase in waterfront public domain.

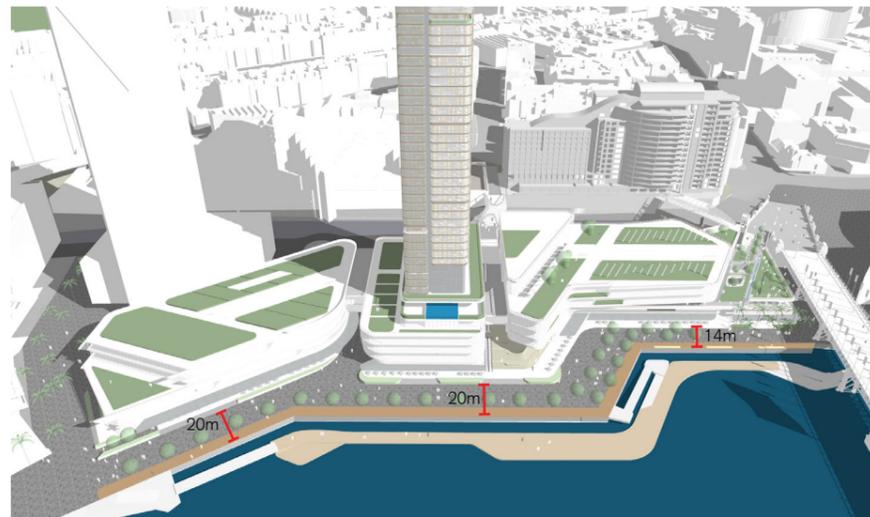
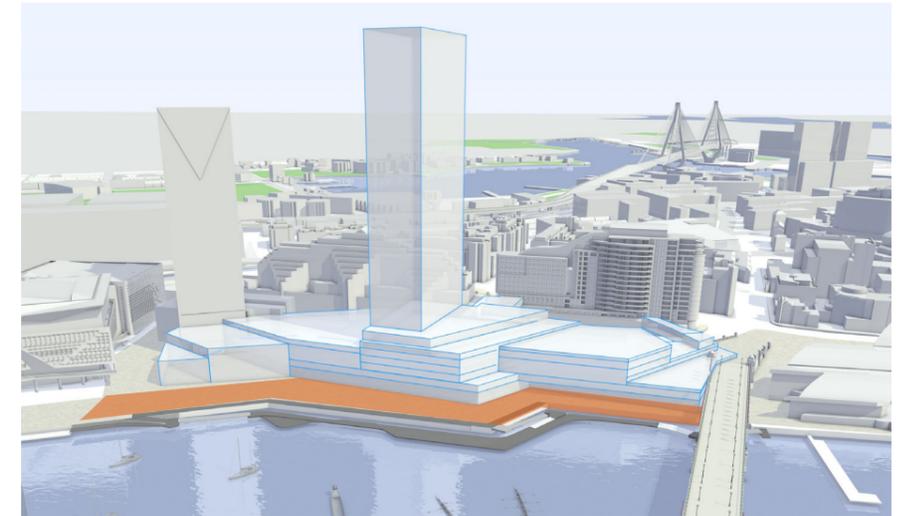


Image 27 Illustrative Scheme: Regularised Waterfront Setback



## Activation to Waterfront and Harbourside Place

The proposals seek to create highly activated edges to the waterfront and Harbourside Place via the integration of porous retail frontages, external licenced areas, generous publicly accessible stairs, escalators and lifts. The public domain infrastructure and furniture will create the additional smaller scale for everyday use to compliment the larger event scale of space within the site. These edges adopt a lower built form for human scale with consistent materiality and levels.

Refer to Aspect Studio's Design Report for greater detail on activation strategies.

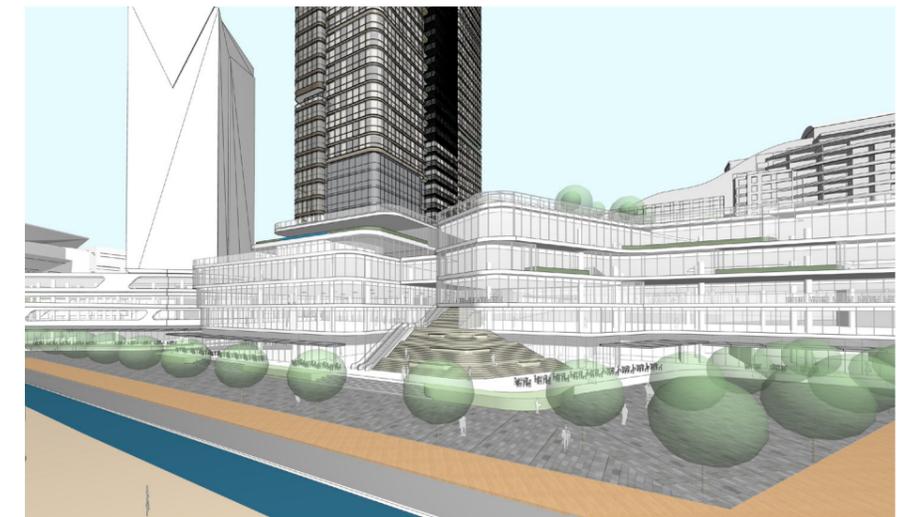
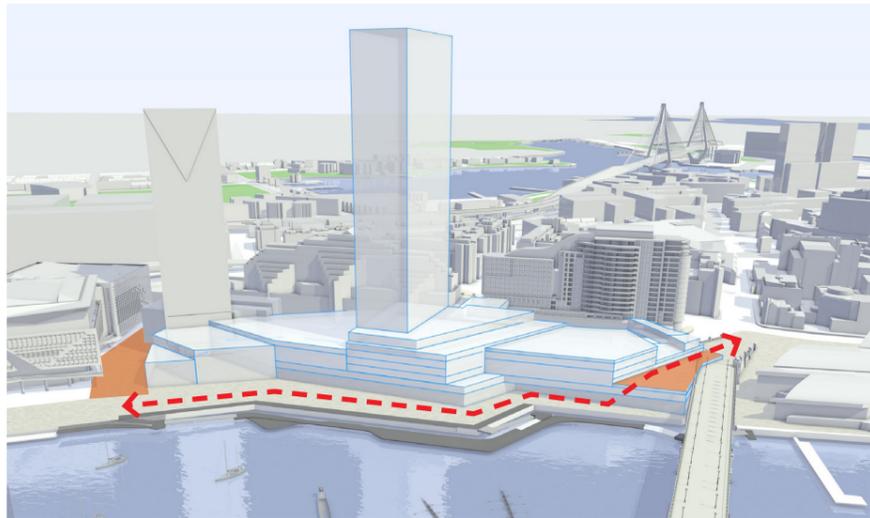


Image 28 Illustrative Scheme: Active Waterfront Edges

\* Note: Lower row of diagrams based on indicative design only. Detailed design to occur at a later stage

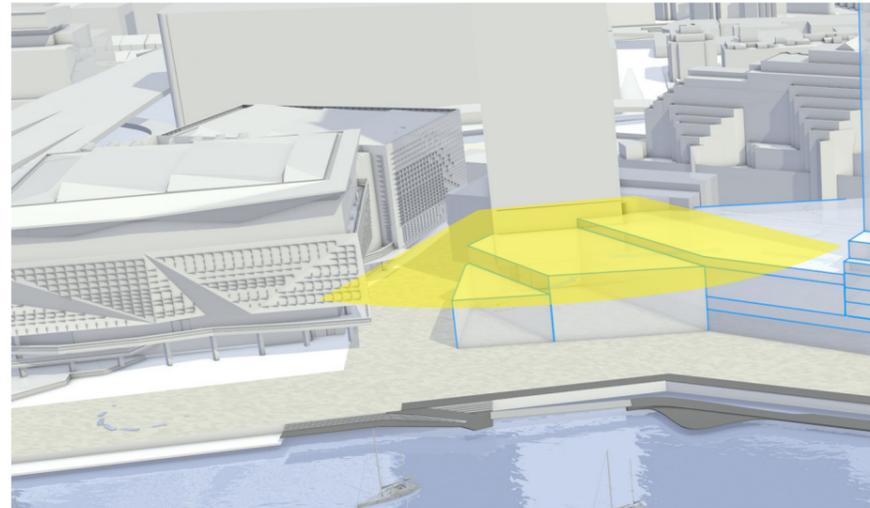


### ICC & Pyrmont Bridge

The ICC and ICC Hotel form the edges to a new east / west orientated public space known as Harbourside Place. The proposal contained in this submission seek to enhance views into and out of this public space, with careful consideration of scale, function and materiality. The proposal will open up access to numerous new views and vistas of the harbour and Pyrmont Bridge from all levels of the development and is an extension of the 'Boulevard' in the SICEEP precinct towards the Pyrmont Bridge.



Image 29 Illustrative Scheme: Setback -ICC & Pyrmont Bridge



### Relationship to ICC and ICC Hotel

The massing of the proposed southern podium steps down towards the south. This reduced scale assists with view sharing from the ICC pool deck and foyer spaces within the ICC, encouraging openness on approach from the south via 'The Boulevard'.

\* as referenced in SICEEP Public Domain report. The Boulevard provides a strong north /south pedestrian connection through the SICEEP precinct linking the hotel, the ICC and the Waterfront in the north to Tumbalong Park and the Haymarket in the south

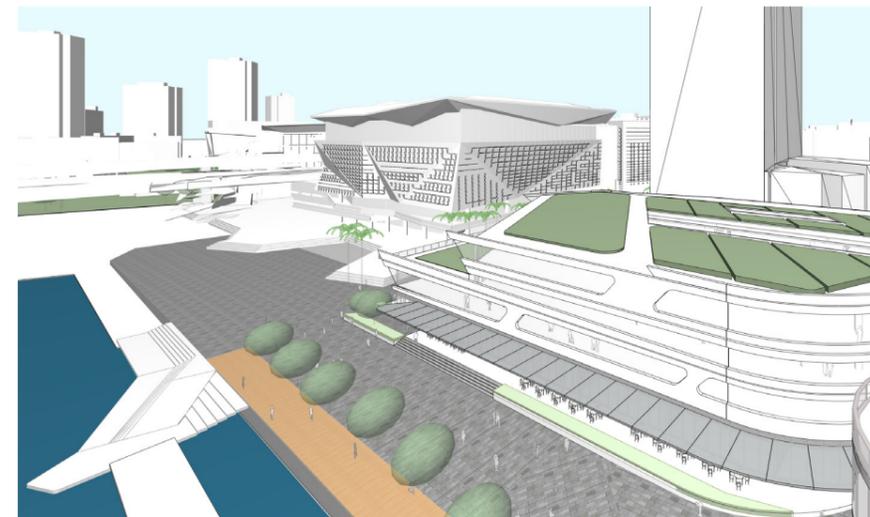
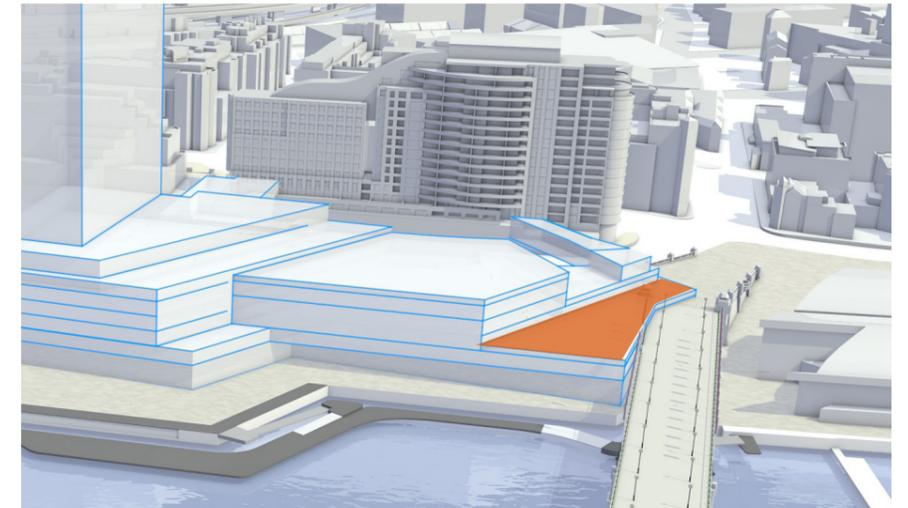


Image 30 Illustrative Scheme: Relationship to ICC and Hotel



### Guardian Square - New Plaza adjacent to Pyrmont Bridge

A key amendment to the design proposal is the introduction of a new plaza that is adjacent to Pyrmont Bridge. The reduction in envelope on the northern podium not only improves view sharing to 50 Murray St, it also provides the opportunity for a significant area of publicly accessible and usable open space at the same level as Pyrmont Bridge. Through the plaza, an east-west pedestrian connection encourages neighbouring communities to utilise both the public domain and new retail amenities.

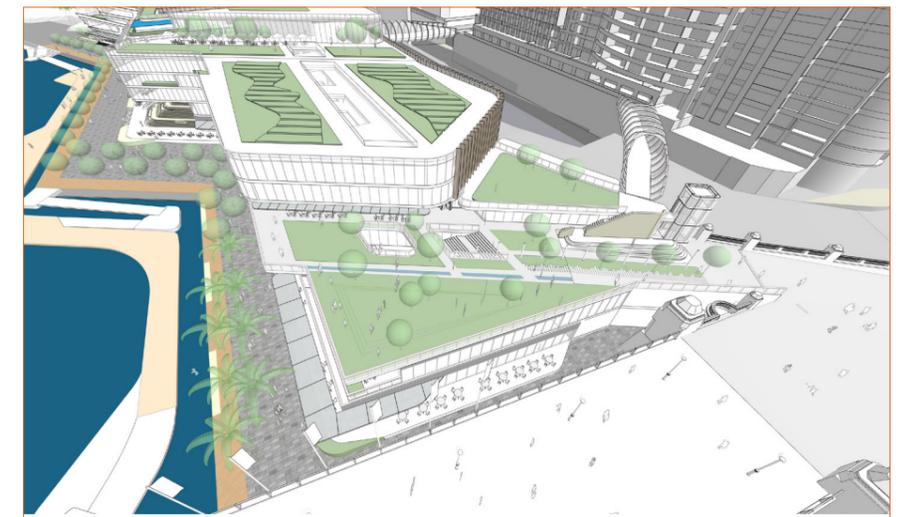
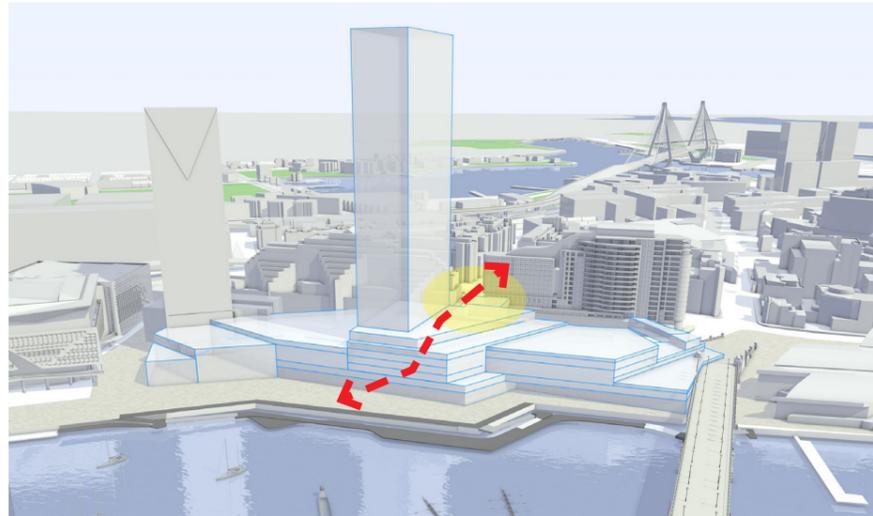


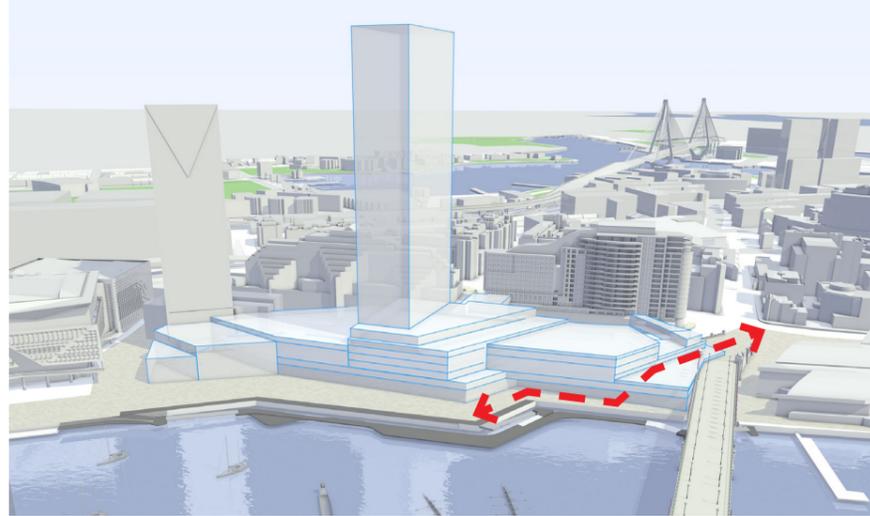
Image 31 Illustrative Scheme: Guardian Square

\* Note: Lower row of diagrams based on indicative design only. Detailed design to occur at a later stage



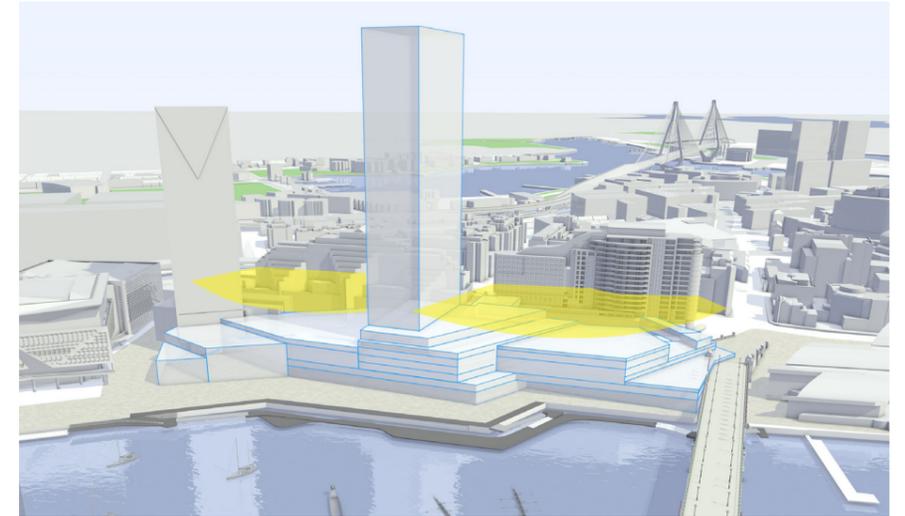
### East West Site Link - Bunn St Bridge Link

A key component of the illustrative design proposal is the introduction of an east / west pedestrian connection from L03 of the proposed centre to Bunn Street. This is an all access bridge gateway spanning Darling Drive into the precinct creating a clear visual and physical pedestrian access between Pyrmont and the Harbour. This link through Bunn St encourages neighbouring communities to utilise both the public domain and new retail amenities. The Bunn Street bridge lands on the east-west through-site link offering an opportunity for locals to have access to waterfront views and public seating within a green setting, which in turn connects down to the waterfront via the Event Steps.



### Pedestrian Connection to/from Harris St

The existing stair linking the waterfront to the Pyrmont Bay approach will be replaced with a new public stairs weaving through a new plaza adjacent to the Pyrmont Bridge. Currently, this area of the public domain is restricted, uninviting, underutilised and does not provide a suitable place for pedestrians to gather and sit as illustrated below.



### View Sharing

The proposal responds to view sharing principles from adjacent buildings, i.e. 50 Murray (one Darling Harbour) and Novotel. The form of the northern podium has been adjusted such that the previous larger floorplates of upper 3 levels have been pulled back. The visual presence of the proposed podium is also minimised by the provision of an excellent and generous green space against the background of the Harbour.

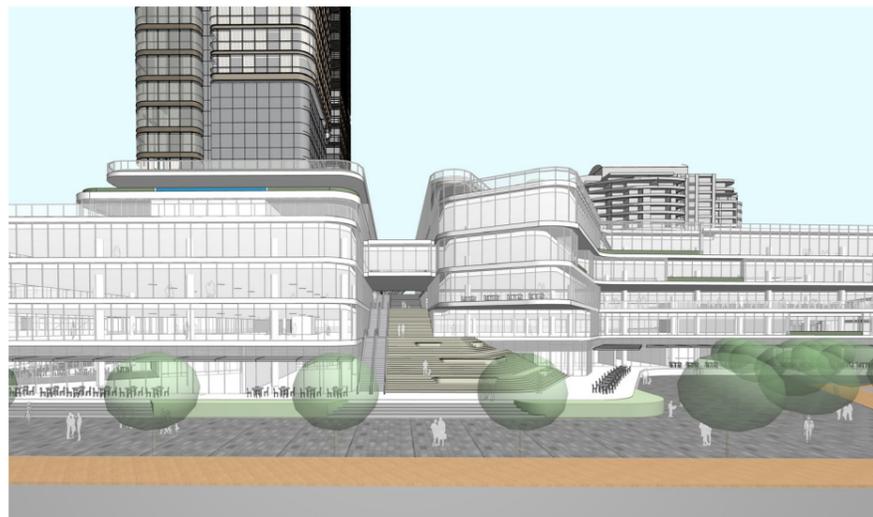


Image 32 Illustrative Scheme: Events Stairs



Image 33 Illustrative Scheme: Pyrmont Stair Link

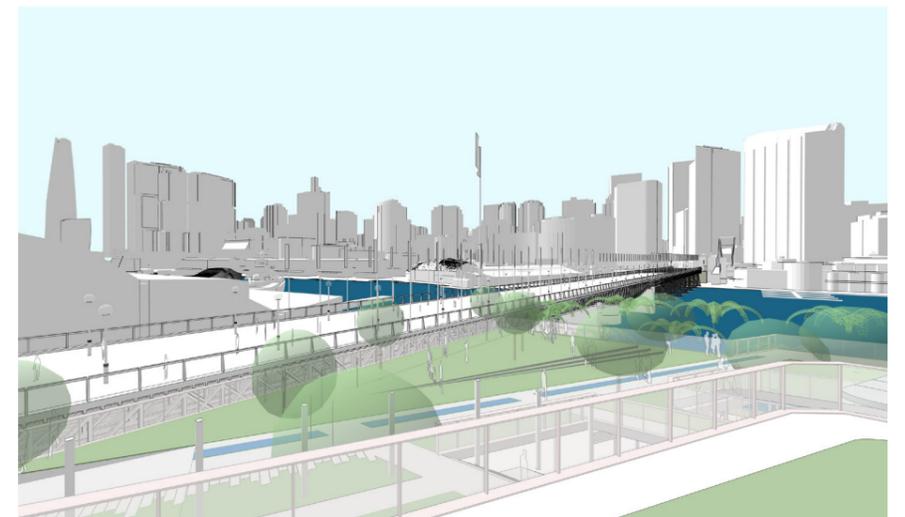
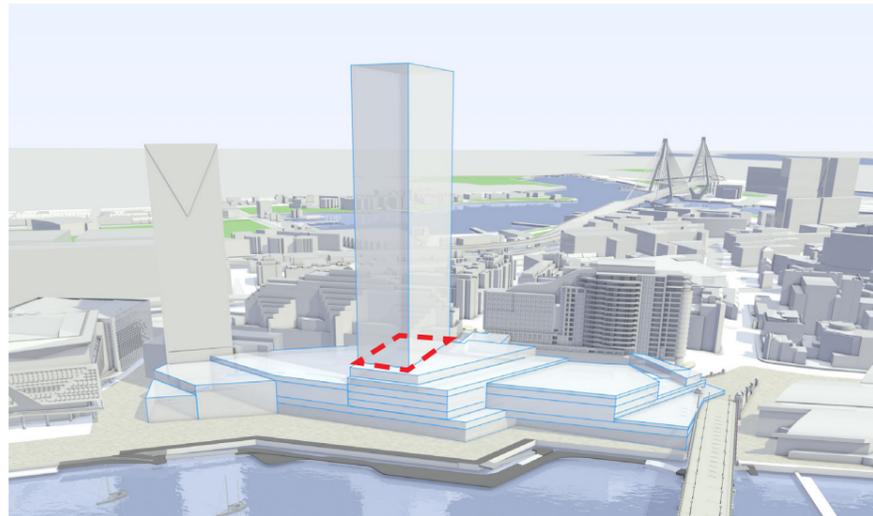


Image 34 Illustrative Scheme: View Sharing with 50 Murray St

\* Note: Lower row of diagrams based on indicative design only. Detailed design to occur at a later stage

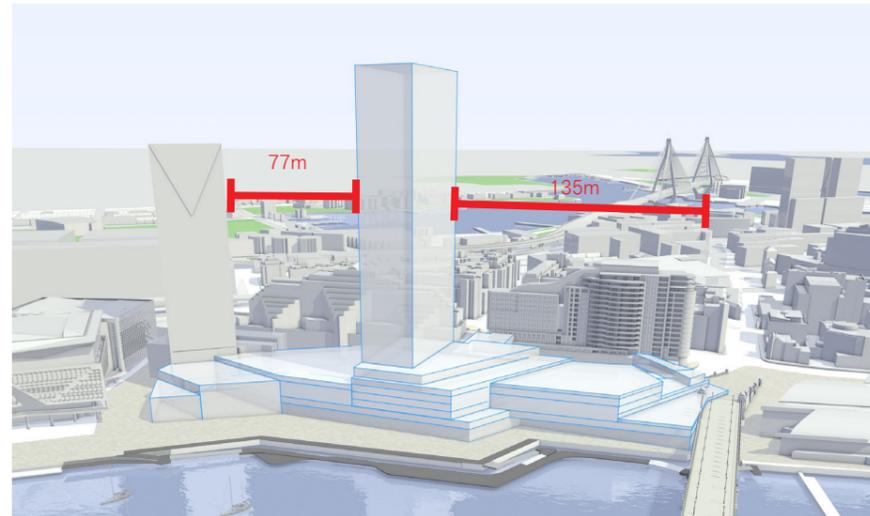


### Tower Location - Access

The central tower position allows a vehicle drop off to be facilitated off Darling Drive towards the north and west of the site. The central north tower position also facilitates direct pedestrian access to Bunn Street at Level 03. Main lobby provided at Ground Level to allow direct access to the waterfront and residential porte cochere.



Image 35 Illustrative Scheme: Opportunity for new drop offs along Darling Drive



### Tower Separation

The tower maintains a generous 77m separation (135m to Pyrmont Bridge). The tower is positioned as far south as is permissible under the iNSW agreement, ie: in line with the southern edge of the existing galleria. The western edge of Cockle Bay (as viewed from the east) has a notably different character to the city side of the bay. The eastern, city side is characterised by greater density and height, with a higher concentration of commercial buildings. This distinction in character can be maintained if the development of the western side of Cockle Bay is based upon a reduced number of well proportioned, taller towers which are well spaced apart.

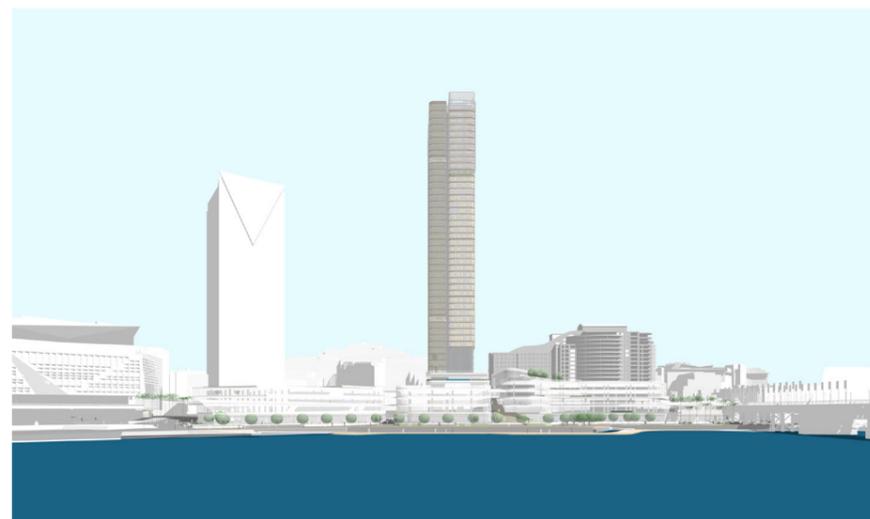
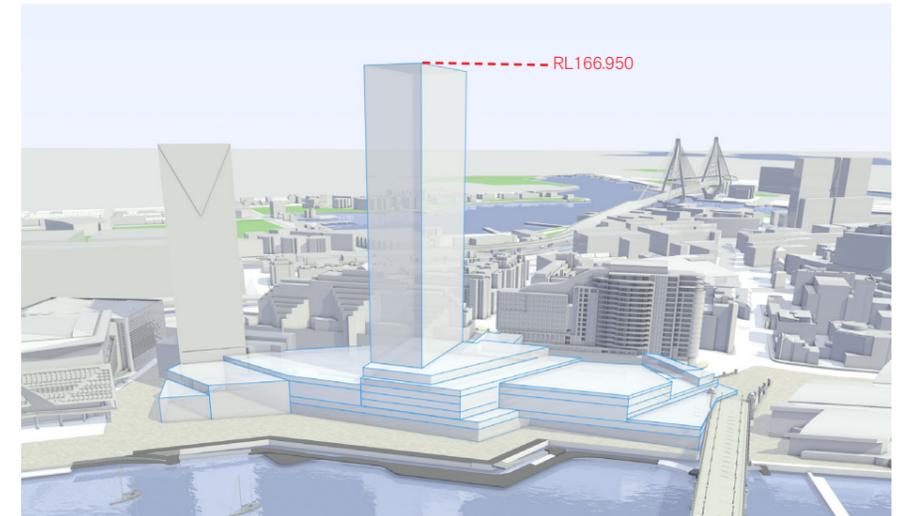


Image 36 Illustrative Scheme: Tower Separation



### Tower Height

The proposed tower height is consistent with the Draft Pyrmont Peninsula Place Strategy (DPPPS), which recommends a maximum height of RL 170 for this site. It is also consistent with the urban context, forming a contiguous with its immediate built form, the ICC hotel, and also the surrounding developments at Cockle Bay, the Star, Blackwattle Bay. This opportunity for additional height is supported with the provision of additional public benefit through the creation of a new significant public accessible area of open space on the northern podium rooftop.

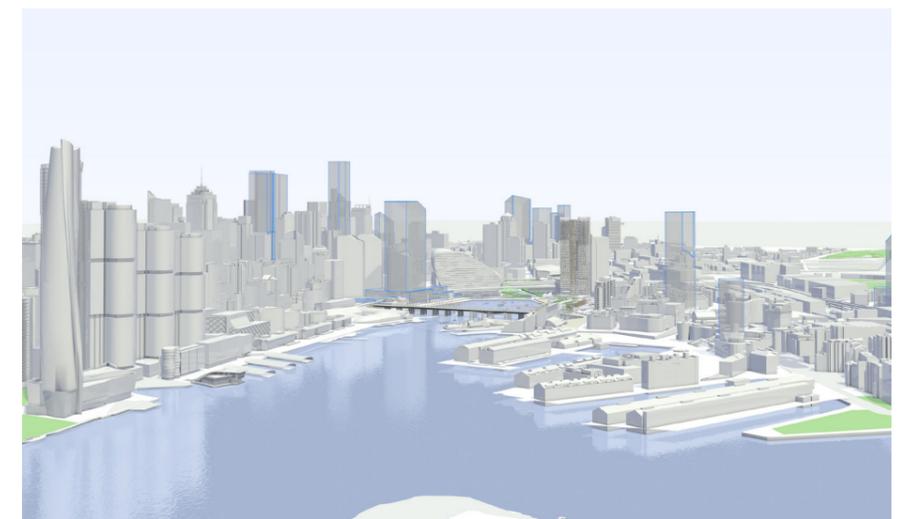


Image 37 Illustrative Scheme: Darling Harbour Tower Heights

## Links + Connections

The SICEEP redevelopment is organised around a central spine known as 'the Boulevard' which provides a strong north/south pedestrian connection through the SICEEP precinct linking the hotel, the ICC and the Waterfront in the north to Tumbalong Park and Haymarket in the south. 'The Boulevard' terminates at the southern edge of Cockle Bay, conceptually extending over the water.

The redevelopment of Harbourside offers opportunity for this key north / south spine to be extended and linked to Pyrmont Bridge and the upper levels of Pyrmont. Three key urban links have been identified:

- from the waterfront to Bunn Street, via a new porous and accessible Harbourside.
- from the waterfront to the city via an improved and generous access to Pyrmont Bridge. (note: Ribbon Stairs from the March 2020 concept has been replaced with a pedestrian connection through a new plaza.)
- improved access to the Pyrmont Bridge approach, and Pyrmont beyond via a new porous and accessible Harbourside.

The waterfront boulevard width adjacent to Harbourside has been increased to 20m to provide a more generous and inviting public experience along the waterfront at its southern and mid areas. The width has been increased from 11m to 14 at the northern end of the boulevard, providing an additional 352 sqm of additional public domain.

A new pedestrian bridge is proposed to align with Bunn Street. This is an all access bridge gateway into the precinct creating a clear physical pedestrian access between Pyrmont and the harbour, and reconnecting the site to its local surroundings. While not issued in final form, this connection was identified as an opportunity in Woods Bagot's Western Harbour Precinct Design Guidelines dated November 2014. The Bunn Street bridge lands on an upper level connection, offering an opportunity for locals to have direct access to the new plaza with public seatings and waterfront views, and a string of exciting retail offerings. This upper level connection in turn connects down to the waterfront.

A fine-grained network of east-west connections integrates the SICEEP precinct with the immediately surrounding areas. The northern most connection is Harbourside Place. The redevelopment of Harbourside offers an opportunity for Harbourside Place to be significantly enhanced, with a redeveloped Harbourside completing the perimeter of this key public space. The proposals contained in this submission seek to enhance views into and out of this space, with careful consideration of scale, function and materiality.

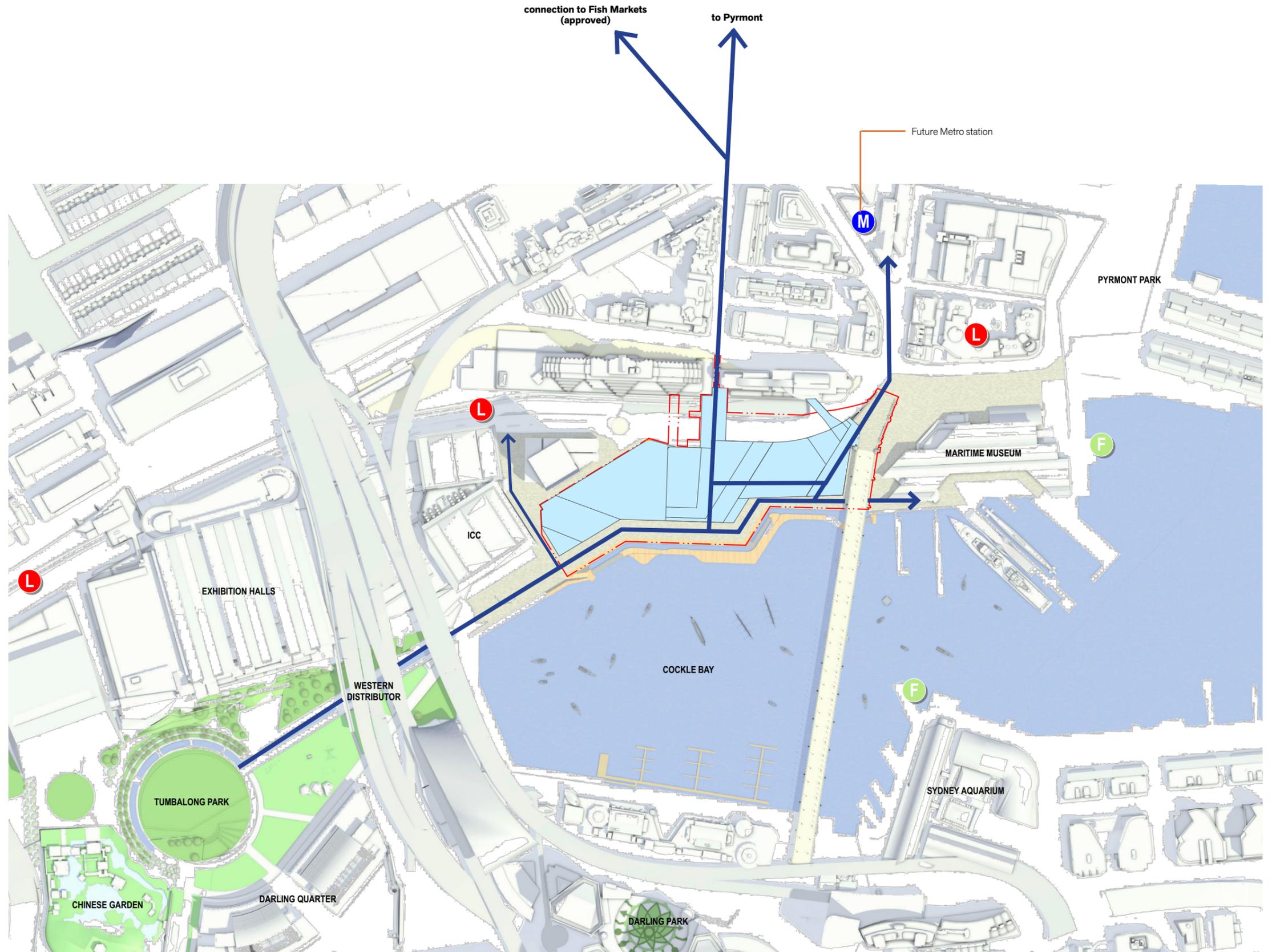


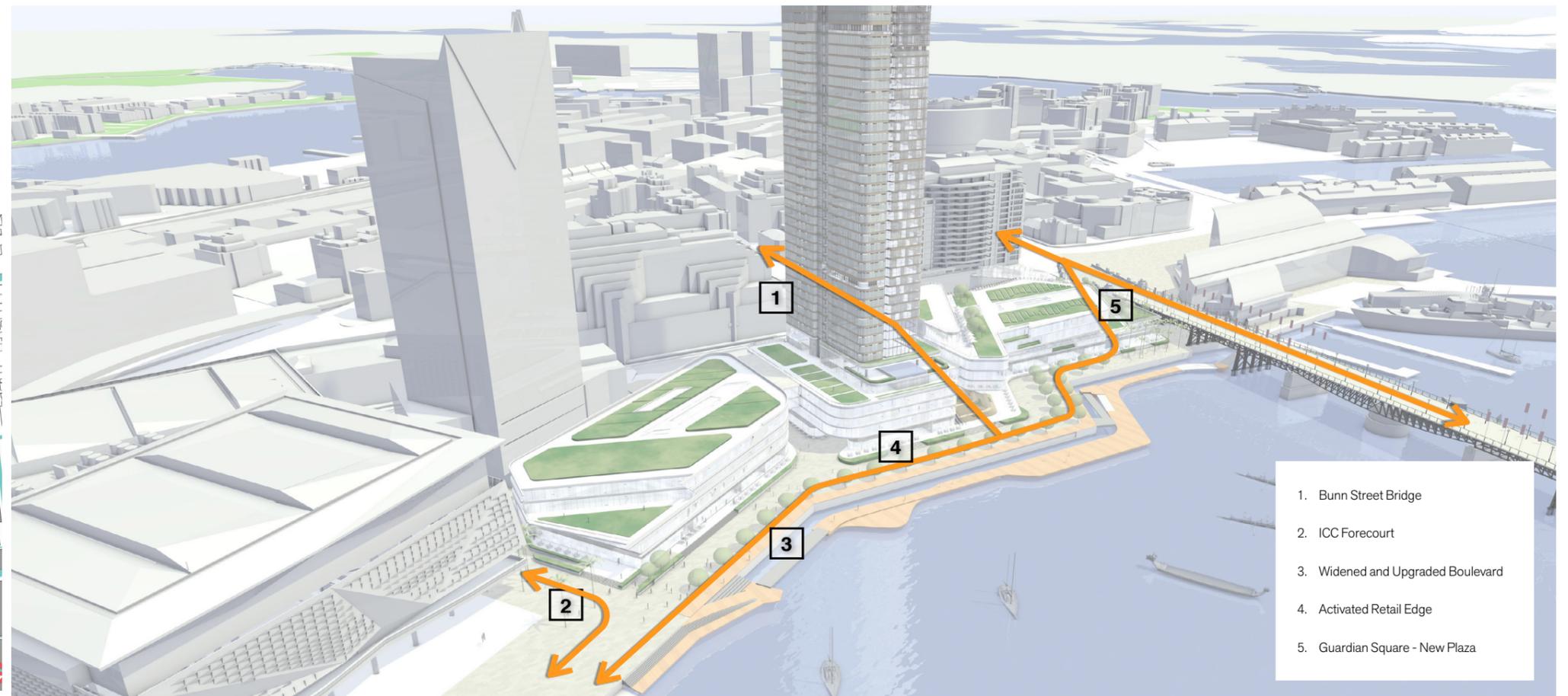
Image 38 Site and wider urban connections

The proposed development improves the pedestrian movement enabling porosity through the building and an ease of pedestrian movement and permeability through the precinct.



- Legend**
- - - Redline Site Boundary
  - Primary Street
  - "Special" Pedestrian Street / Boulevard
  - Secondary Street
  - Tertiary Street
  - Elevated Vehicular Streets
  - New / Improved Public Open Space
  - Urban renewal Opportunity sites
  - ↔ Opportunity for New/Improved Connection

Image 40 above: Extract from Woods Bagot's Western Harbour Precinct Design Guidelines dated November 2014, showing opportunity for Bunn Street Connection. Note: this document has not been issued in a final form.



1. Bunn Street Bridge
2. ICC Forecourt
3. Widened and Upgraded Boulevard
4. Activated Retail Edge
5. Guardian Square - New Plaza



Image 39 Site wide connections and Waterfront Boulevard concept images

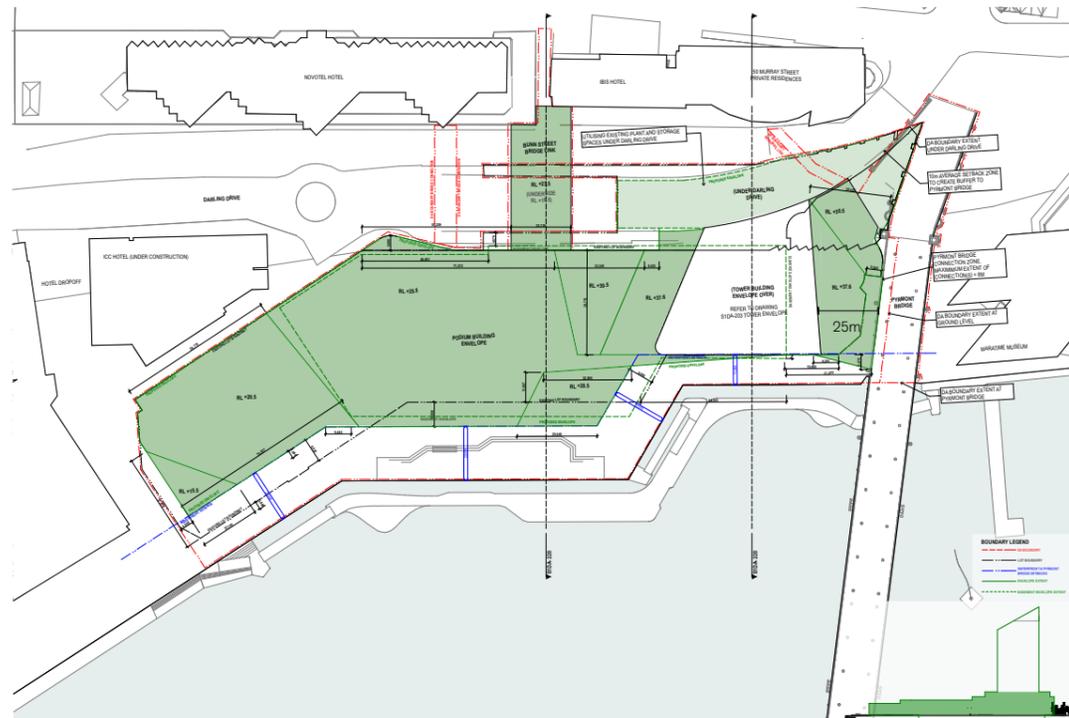
# 4.0 Envelope Evolution

## Envelope Evolution

This submission seeks approval of a SSDA Stage 1 envelope. The envelope has been informed by the development of the illustrative scheme as included in this submission. The envelope has been interrogated and refined with detail consideration of the following:

- view sharing with adjacent development
- overshadowing impacts
- visual impact from the public domain
- visual privacy
- provision of functional publicly accessible space

The diagrams to the right and on the following pages record the development of the SSDA Stage 1.



**Commercial SSDA Envelope (25m Pyrmont Bridge Separation)**

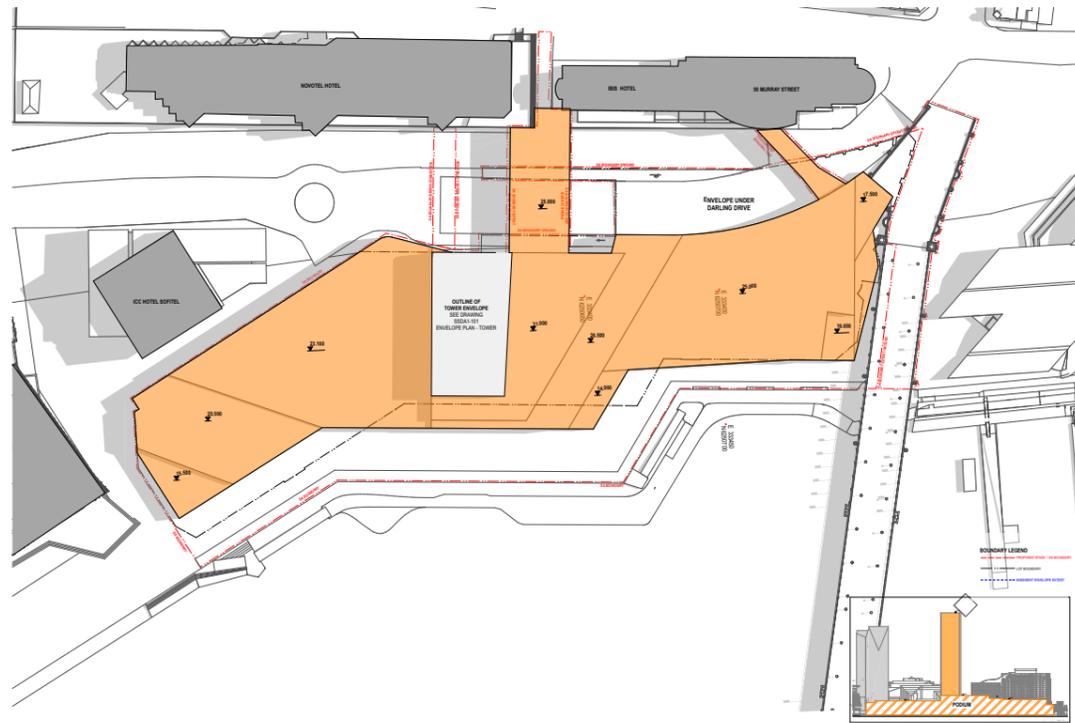
March 2016



**Residential SSDA Envelope**

September 2016

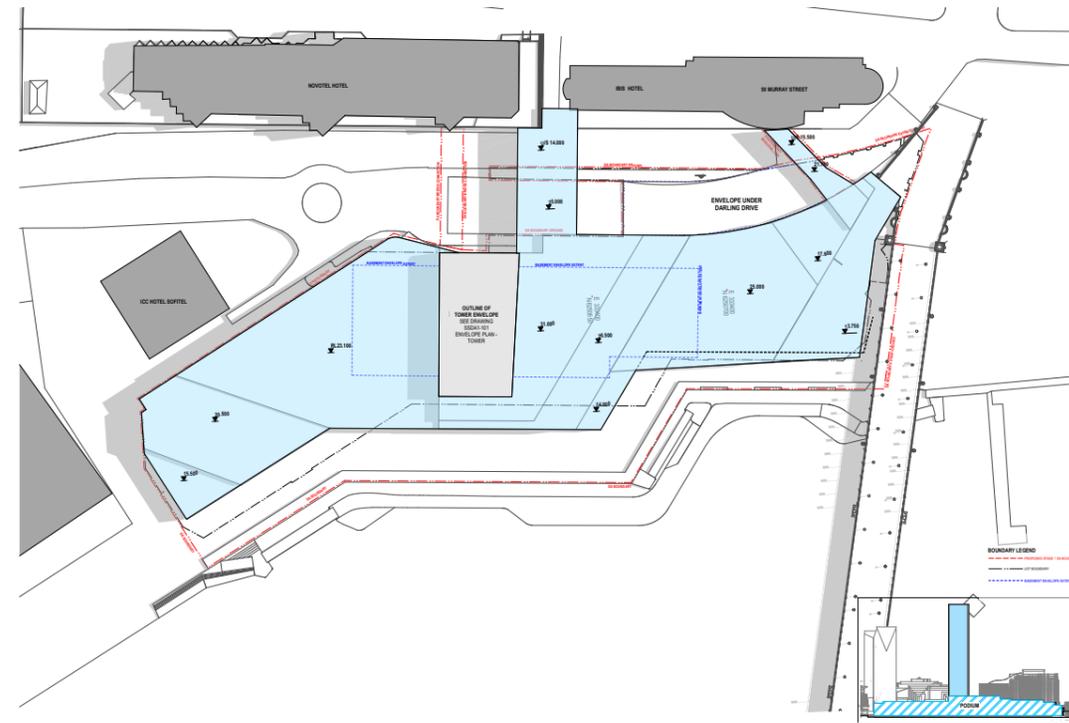
- Northern bridge link over Darling Drive reinstated following review with representatives from 50 Murray Street
- Northern podium refined to improve view sharing from 50 Murray Street and included lowering the envelope and sculpting to improve view sharing.
- Envelope lowered at the southern end to improve view sharing to ICC and ICC hotel - gym, restaurant, bar and L4 pool deck.
- Southern podium heights and form adjusted following review with ICC and ICC Hotel representatives



### Residential SSDA Envelope (as an amendment)

March 2020

- Tower relocated to increase setback from the heritage Pymont Bridge
- Northern podium heights and form adjusted to improve view sharing to 50 Murray Street
- Envelope reduced to the area identified for the "Event Steps"
- Deleted 'tail', doesn't overshadow north and centre of boulevard / Tumbalong Park



### Residential SSDA Envelope (Response to Submission)

September 2020

- Northern podium heights and form adjusted to improve view sharing to 50 Murray Street
- Provision of a generous and usable plaza on the northern podium roof, ie: Guardian Square
- Height of tower envelope adjusted from RL 153.75 to RL 166.95 to compensate for reduce GFA in the podium to form Guardian Square

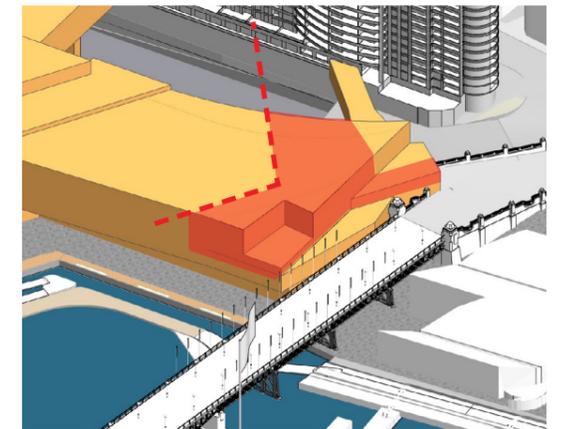


Image 42 March 2020 with building form reduction highlighted in red

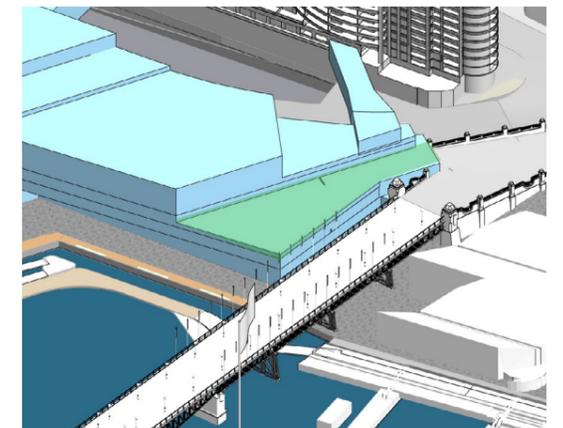
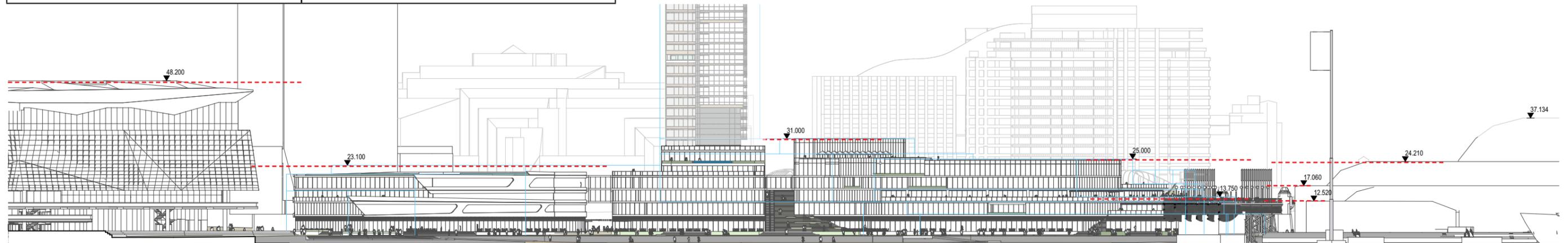


Image 43 Envelope reduced to form Guardian Square (level with Pymont Bridge) and improve private view sharing

# 5.0 Response to Department of Planning, Infrastructure & Environment: Key Issue 1, 10

Key Issues as nominated in DPIE letter ref:SSD 7874

Key Issue 1: Northern Podium	Response to Issue
<p>The Department supports lowering the height and increasing the setbacks of the northern podium as presented to the Department at the meeting of 28 July 2020 to:</p> <ul style="list-style-type: none"> <li>— improve its relationship with Pyrmont Bridge</li> <li>— provide the opportunity for a significant area of publicly accessible and usable open space on the podium roof</li> <li>— reduce view impacts to 50 Murray Street.</li> </ul> <p>The Department notes this space is set out over a number of levels and includes stairs, ramps and the like which may limit its function as quality public open space. The Department requests that you demonstrate that a sufficient area of functional and usable public open space can be delivered on the lowered northern podium.</p> <p>The Department also requests that you demonstrate that view impacts to 50 Murray Street are equivalent to that shown at the second meeting on 7 July 2020.</p>	<p>The proposal seeks to further refine the northern podium built form to respond to the issues identified by the Department. Key improvements relative to the previous submission include:</p> <ul style="list-style-type: none"> <li>— Reduction of the height of the northern end of the podium adjacent to the Pyrmont Bridge</li> <li>— Provision of a generous and functional public open space</li> <li>— Increase setback of the built form above Pyrmont Bridge level up to 41m.</li> <li>— Retail envelope setback 7m below bridge level (currently 4m)</li> <li>— Improved view sharing to Pyrmont Bridge from adjacent residences</li> <li>— Upgrading of paving to entry to bridge</li> </ul> <p>These key improvements are addressed in detail in the pages to follow.</p>



## Podium Height

The podium height is consistent with and responds to the prevailing built forms.

The southern podium height assists with view sharing from the ICC pool deck and foyer spaces within the ICC, encouraging openness on approach from the south via 'The Boulevard'.

The northern podium height is considered sympathetic to the adjacent Pyrmont Bridge and its built form is consistent with the Maritime Museum to the north of the Pyrmont Bridge.

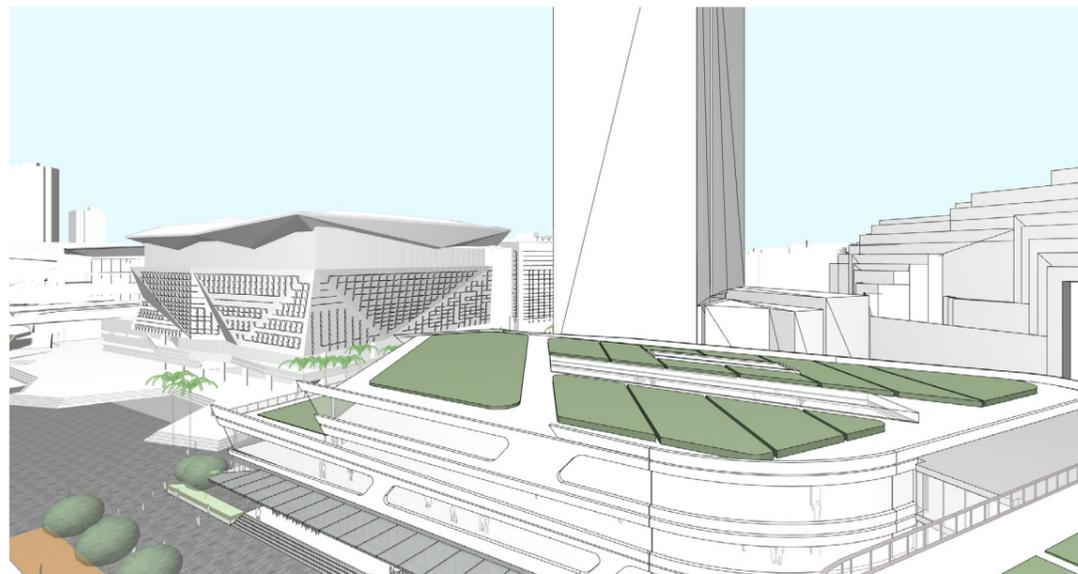


Image 44 Illustrative Scheme: South Podium height assists with viewing sharing from the ICC pool deck and create a coherent visual relationship with existing built forms (No change to south podium from previous submission)

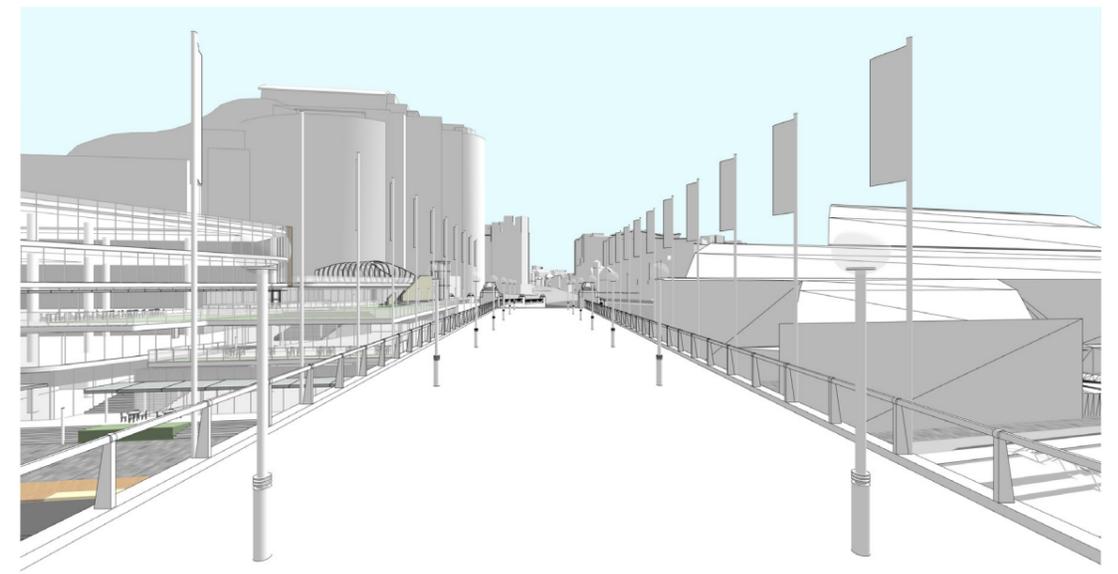


Image 45 Looking East from Pyrmont Bridge: Relationship of proposed built form with Pyrmont Bridge is consistent with the Maritime Museum. The reduction in north podium height also allows for Guardian Square to be on the same level as Pyrmont Bridge.

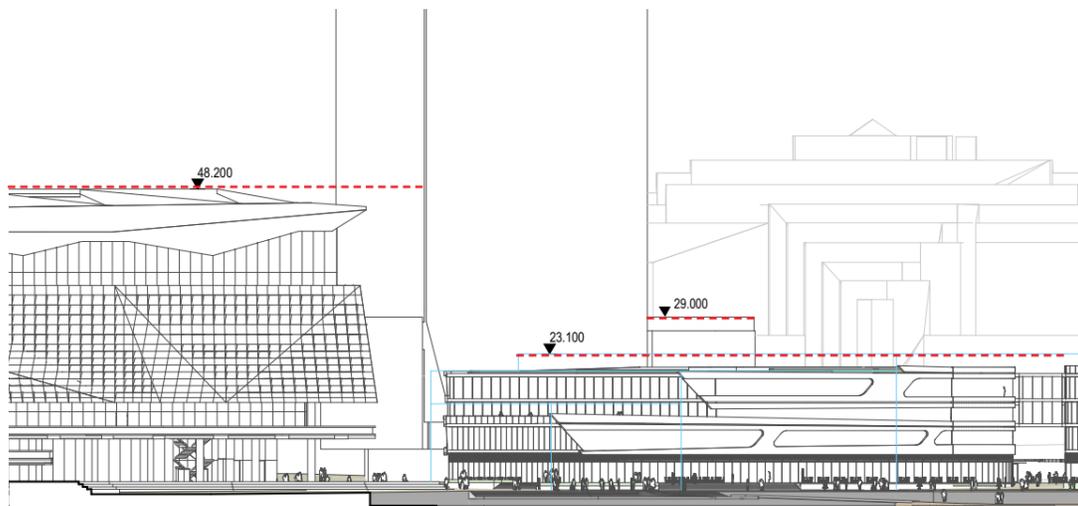


Image 46 East Elevation showing the proposed podium height creating a coherent visual relationship with the existing built forms along the waterfront, i.e. ICC and ICC Hotel

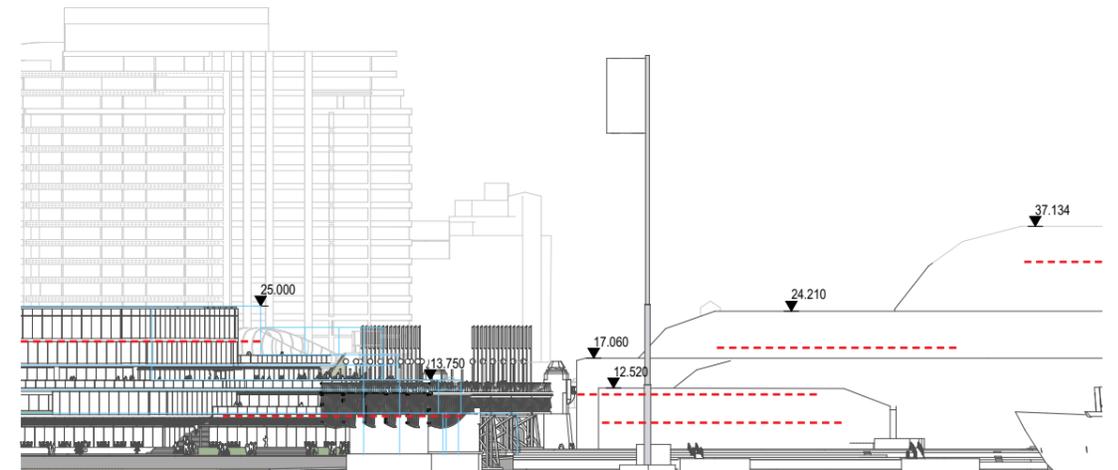


Image 47 East Elevation showing the proposed podium height creating a coherent and consistent visual relationship with the Pyrmont Bridge and Maritime museum

## Relationship with Pymont Bridge

The amended design addresses the key issues raised regarding the relationship of the built form with Pymont Bridge, and provides an outcome that improves the setting of the Bridge within the proposed design.

The reduced podium height is considered sympathetic to the adjacent Pymont Bridge. The visual prominence of the built form as viewed from the Bridge is significantly improved.

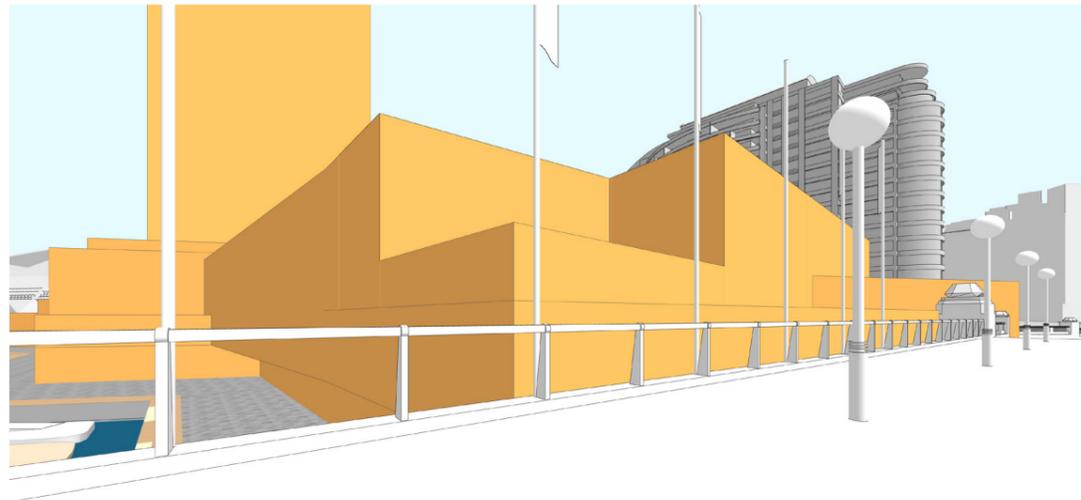


Image 48 March 2020 Envelope

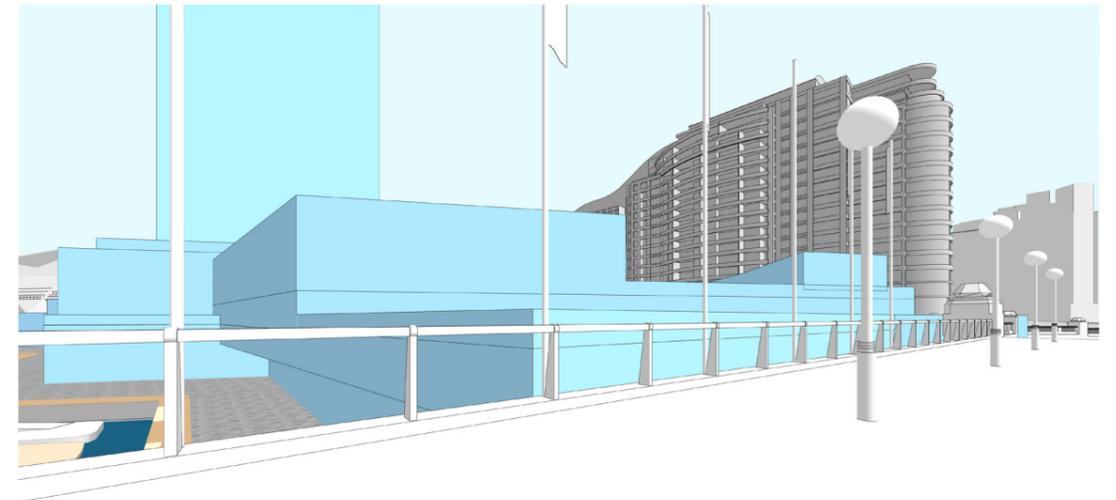


Image 49 Amended Envelope

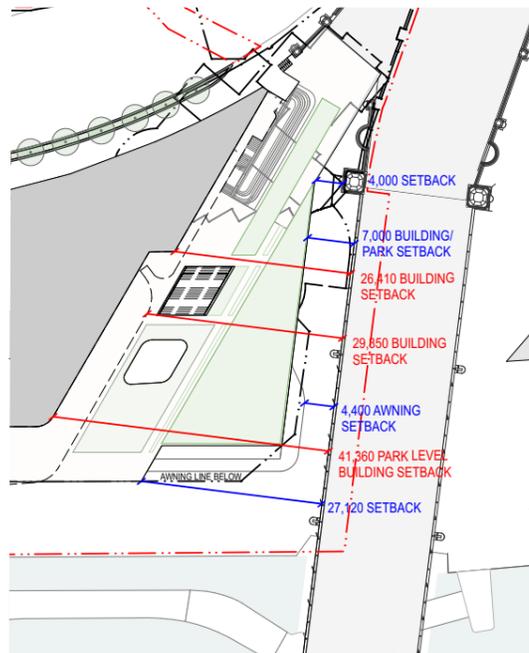


Image 50 Activated edges along Pymont Bridge on ground level

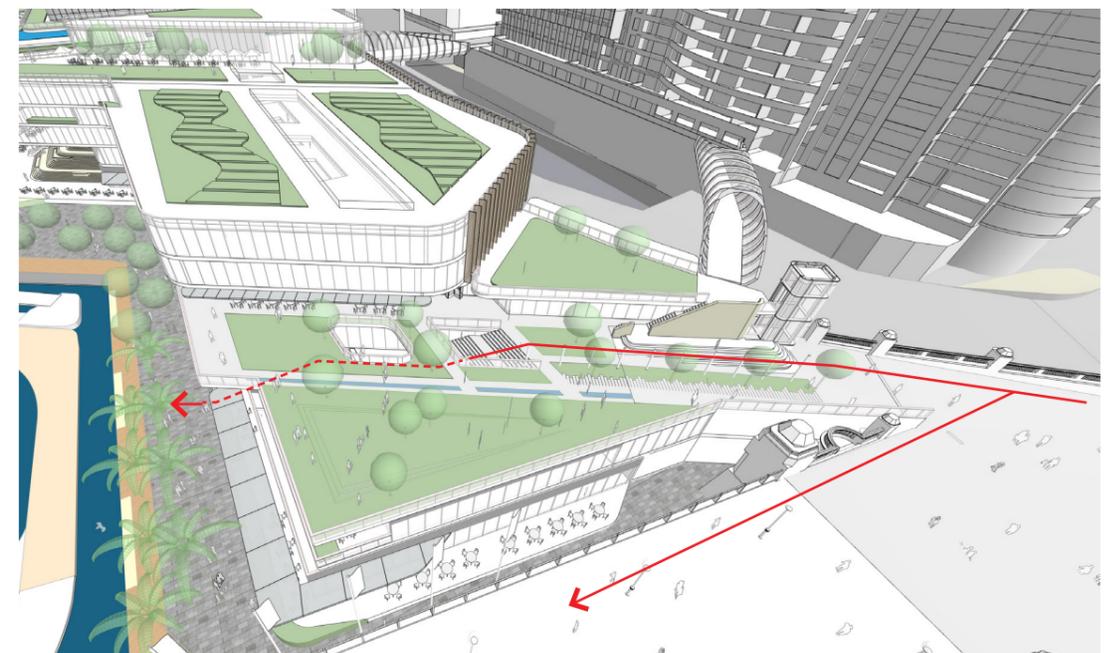


Image 51 Guardian Square; New Plaza on the same level as Pymont Bridge

## Publicly accessible open space

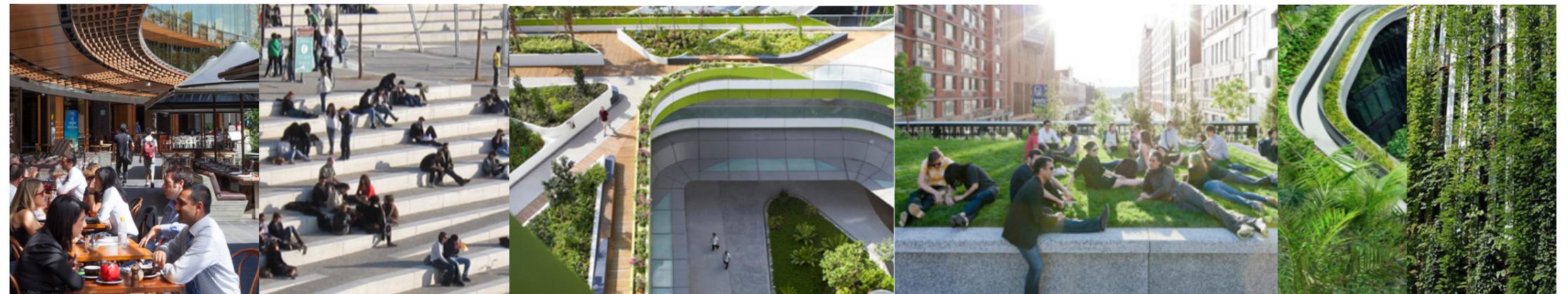
The amended envelope and reference scheme improves pedestrian movement enabling porosity through the building, and an ease of permeability through the precinct.

A key improvement in this response is the introduction of a large and functional plaza and stairs connection between the waterfront and Pyrmont Bridge. Through a series of workshop with the Department of Planning, the northern podium is cut back to improve view sharing and lowered to provide for a generous plaza space on the same level as the Pyrmont Bridge, ie 'Guardian Square.' The retail offerings along the upper level connections spills out into Guardian Square, conceived as highly porous with a blending of inside and outside to facilitate shaded, green spaces, encouraging informal meetings and gatherings for the public and visitors.

The proposal sees the Waterfront completely upgraded and is described in detail within Aspect Studio's SSDA Design Report which forms part of this submission.



Image 52 Illustrative scheme showing the key improvement in this submission; Guardian Square in the foreground and the residential tower in context



## Improved View Sharing

In the March 2020 submission, the tower element of the Concept Proposal was relocated from the north of the site (the widest part of the site - 85m) to the centre of the site (the widest part of the site - 85m) to allow for an increased setback from the heritage listed Pymont Bridge, improved relationship to the waterfront and ICC Hotel, to minimise view impacts from 50 Murray Street, together with reducing overshadowing impacts on the public domain and improved solar amenity to the northern end of the retail centre. A portion of the podium height at its northern extent was also partly reduced from 30.5 RL to RL 25. The reduction in height provides for improved view sharing from 50 Murray Street. As part of the relocation of the tower and refinement of the podium, the stepped form of the lower tower element was removed, in order to again improve views from adjacent buildings from the west.

In this submission, the podium height at its northern extent is further reduced to part RL13.75 and part RL17.5 (representing a reduction of 1-3 storeys) from previous submission to provide a public plaza, i.e. Guardian Square on the same level as Pymont Bridge. The envelope refinement improves the opportunity for a quality public plaza and further improves views from adjacent buildings from the west.

The height of the tower has increased to accommodate the floor space from the reduction in height of the podium.

The diagrams below compare the view impacts to 50 Murray Street against previous proposals including the initial SSDA submission. Apartments have been colour coded based on impacts upon views. The assessment has been carried out using a digital model with views assessed from 50 Murray Street towards the Harbour. Whilst individual apartment classifications

are subject to interpretation, the diagrams seek to establish an overall assessment of view impacts relative to the proposed envelope. This analysis shows that the relocation of the tower results in a very significant reduction in view impact to 50 Murray Street.

The diagrams on the following pages compare the before and after views for a selection of viewpoints from units with varying impacts within 50 Murray St.

A more detailed view impact study has been included as part of this submission.

March 2016



June 2016



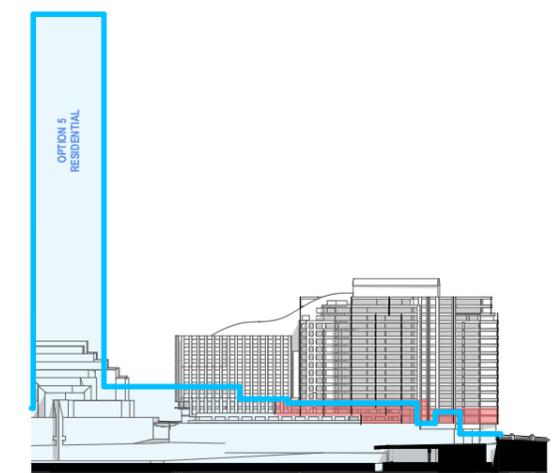
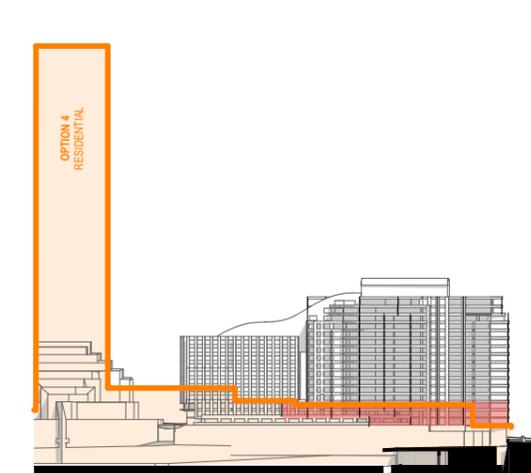
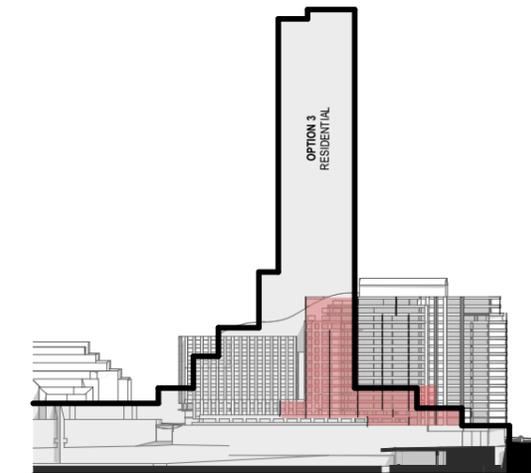
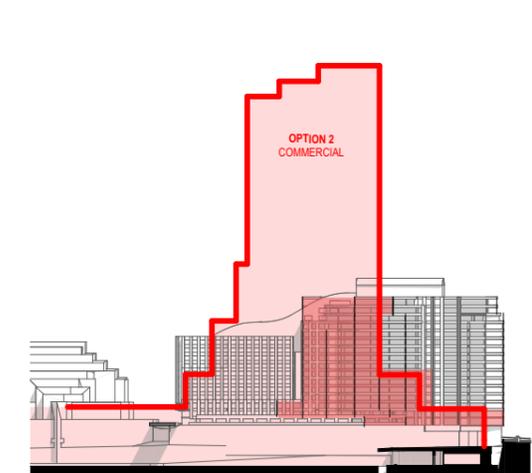
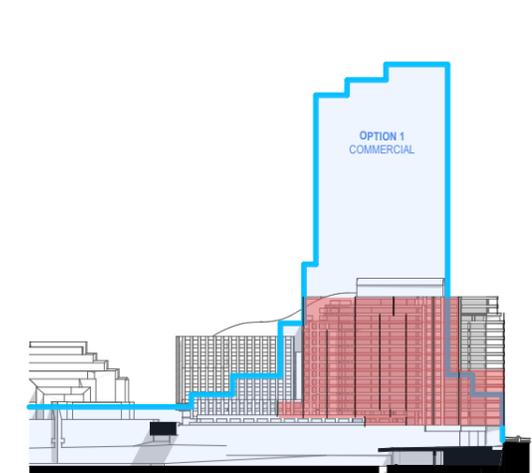
Dec 2016



March 2020



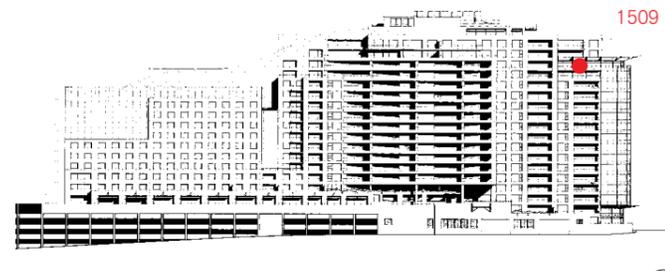
Sept 2020



## Private View Impacts to 50 Murray

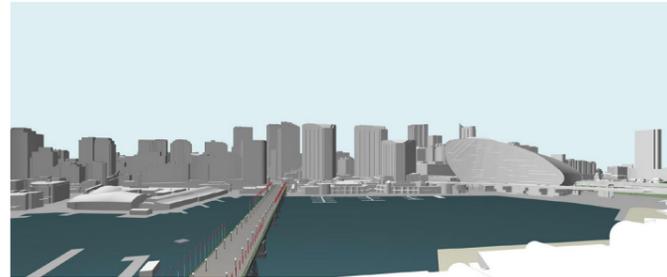
The following diagrams seek to summarise the view impacts to 50 Murray Street. The diagrams compare the March 2020 envelope against the amended proposal. The impacts are deemed equivalent to those presented at the meeting with the Department of Planning on the 7 July 2020. Refer to Visual Impact Study for further detail and commentary.

Note: Diagrams show envelope only



1509

existing



March 2020 - envelope only



Revised submission - envelope only

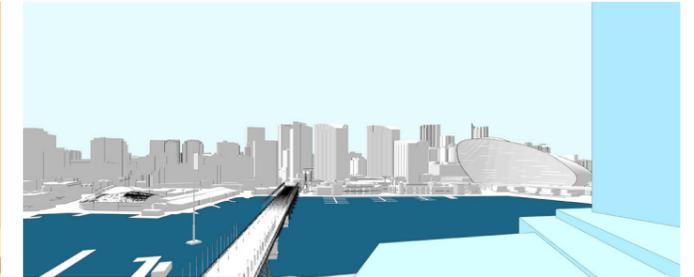


Image 53 View Impact Comparison: 50 Murray Street, Apt 1509 (envelope only)



1302



Image 54 View Impact Comparison: 50 Murray Street, Apt 1302 (envelope only)



701

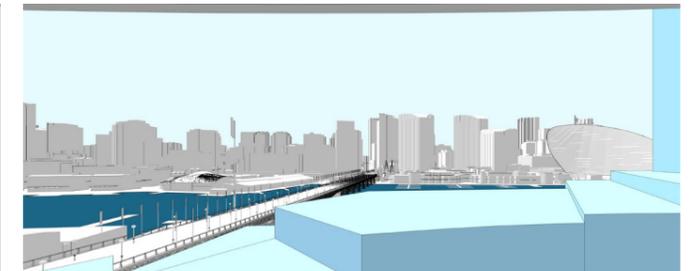
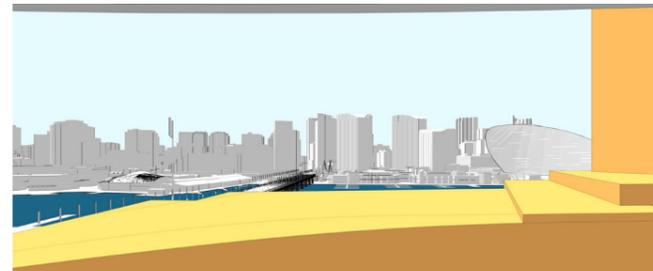
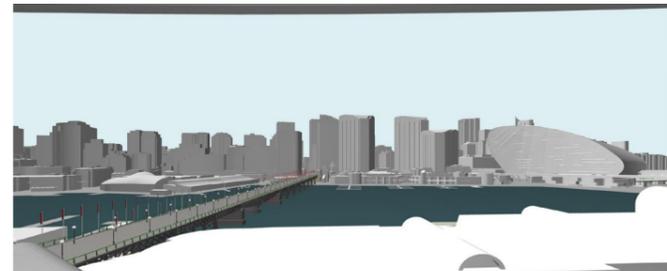


Image 55 View Impact Comparison: 50 Murray Street, Apt 701 (envelope only)



504

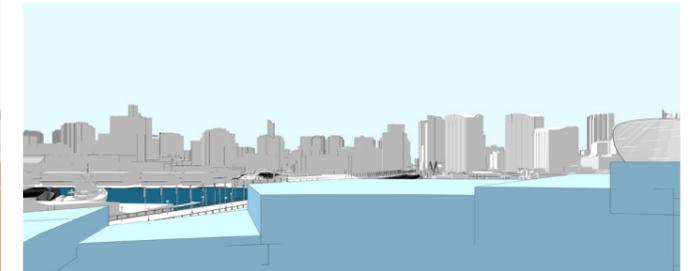
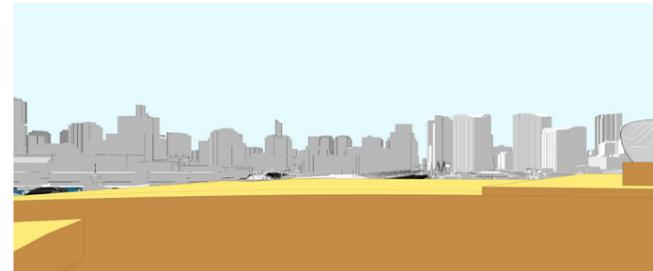
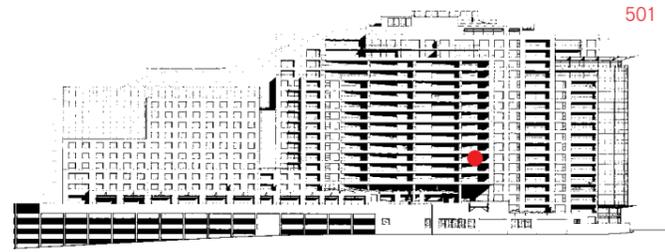
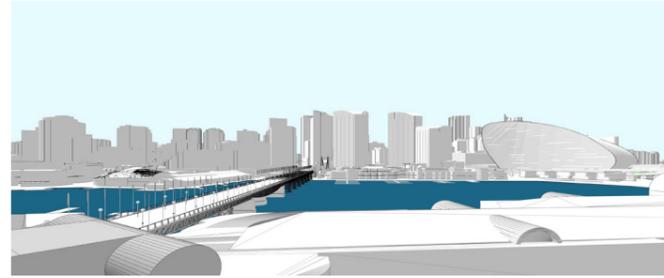


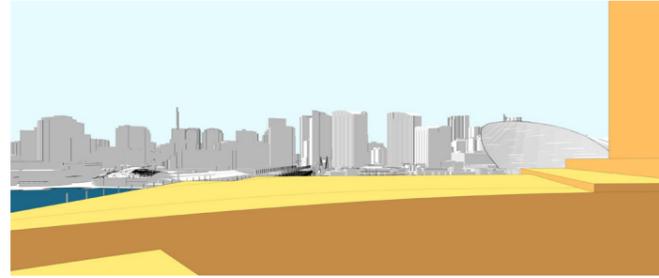
Image 56 View Impact Comparison: 50 Murray Street, Apt 504 (envelope only)



existing



March 2020 - envelope only



Revised submission - envelope only

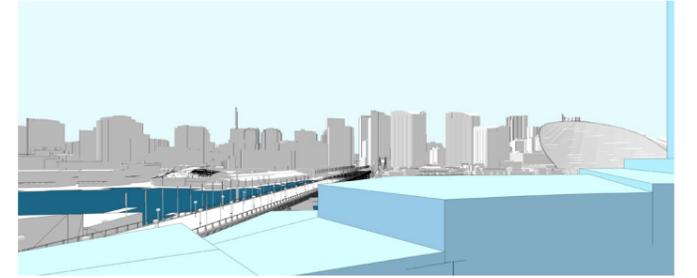


Image 57 View Impact Comparison: 50 Murray Street, Apt 501 (envelope only)

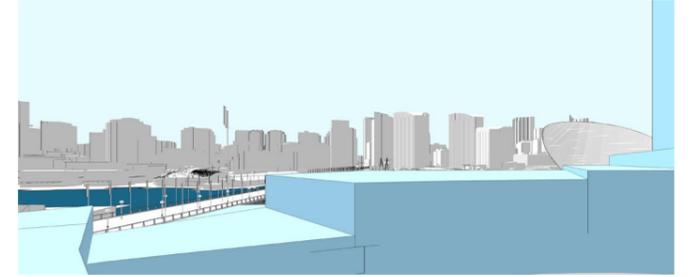
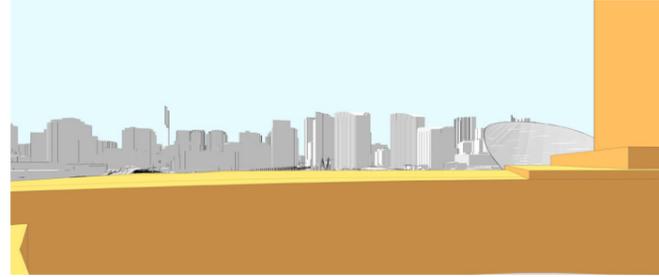
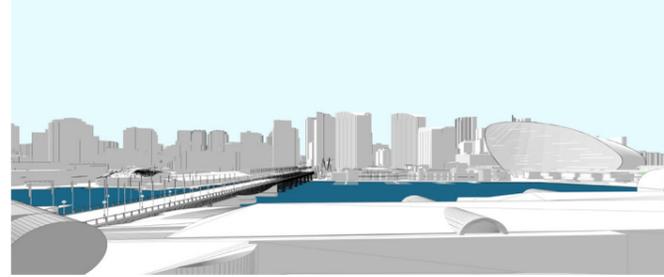


Image 58 View Impact Comparison: 50 Murray Street, Apt 403 (envelope only)

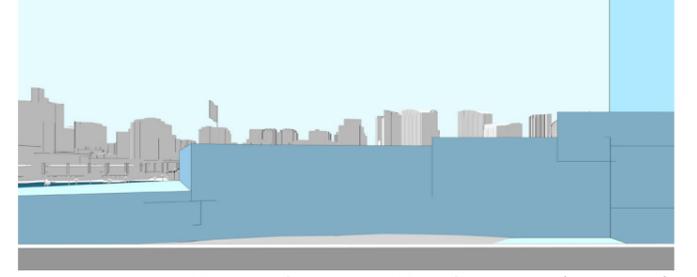
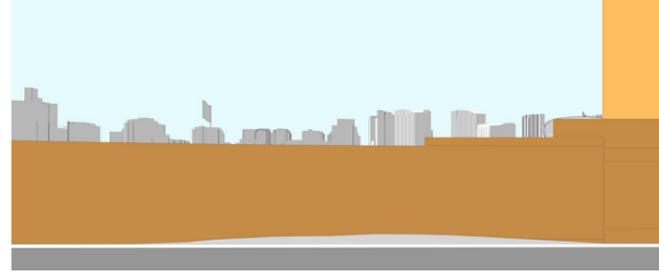
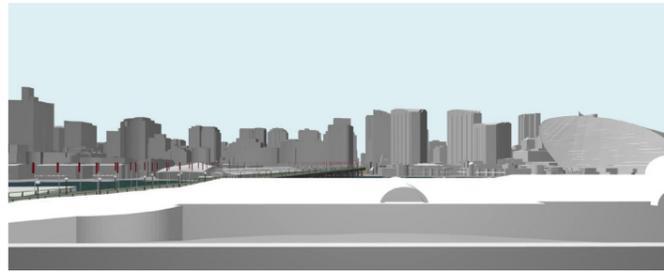


Image 59 View Impact Comparison: 50 Murray Street, Apt 204 (envelope only)

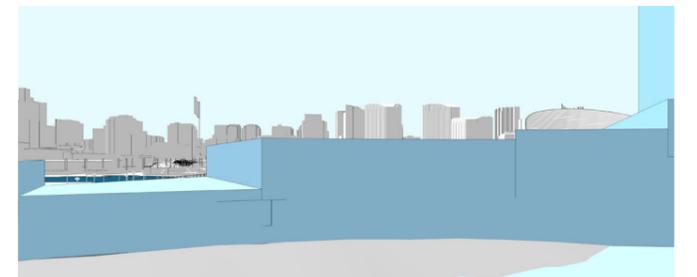
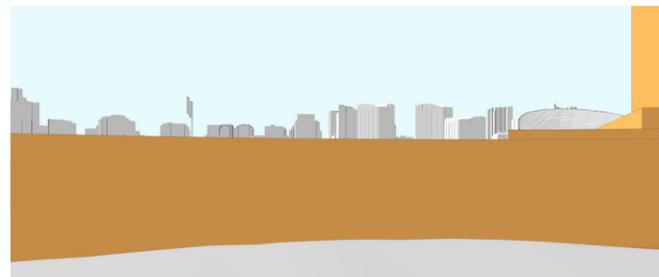
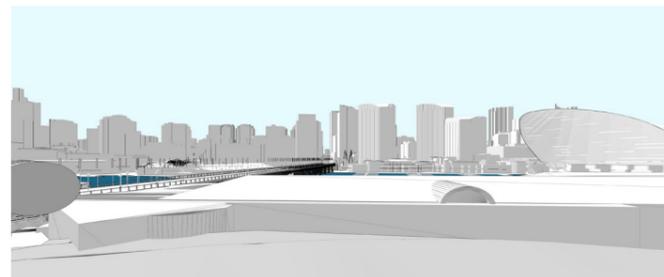
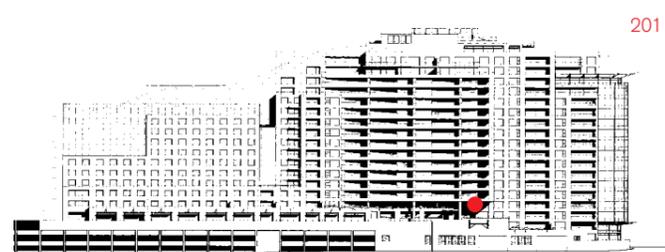


Image 60 View Impact Comparison: 50 Murray Street, Apt 201 (envelope only)



# 6.0 Response to Department of Planning, Infrastructure & Environment: Key Issue 2 & 3

Key Issues as nominated in DPIE letter ref:SSD 7874

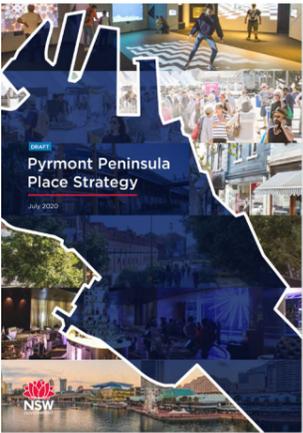
Key Issue 2 & 3: Residential Tower	Response to Issue
<p>1. The Department notes that the proposal presented at the meeting of 28 July 2020 seeks to increase the height of the residential tower to RL 166.25 m, which generally aligns with the height of the originally exhibited proposal in the EIS. Your RtS must include urban design justification for the increase in height having regard to the existing character of Darling Harbour set by existing and approved towers around Cockle Bay as well as the future character within the draft Pyrmont Peninsula Place Strategy dated July 2020.</p>  <p>2. Further consideration should be given to how the future building within the proposed envelope will address the concerns raised by the Department's independent design advisor about the potential visual bulk caused by the width of the tower. This should include the proposed maximum volumetric fill of the envelope and built form controls to ensure an appropriate design is achieved.</p>	<p>1. The revised envelope drawings as attached to this submission adopt a top RL of 166.950. This compares to RL 166.350 in the initial submission. The proposed height is consistent with the Draft Pyrmont Peninsula Place Strategy (DPPPS), which recommends a maximum height of RL 170 for this site. This opportunity for additional height is supported with the provision of additional public benefit through the creation of a new significant public accessible area of open space on the northern podium rooftop.</p> <p>The tower forms a coherent relationship with its immediate context, i.e. the ICC Hotel. It establishes a similar strategy as the eastern edge of Cockle Bay, with tower height increasing from the south. The desirable distinction in character between the eastern and western skyline of Cockle Bay can be maintained if the development of the western side of Cockle Bay is based upon a reduced number of well proportioned, slender towers which are well spaced apart. A slender residential tower will best ensure the intent of well proportioned, well spaced towers can be achieved, with the opportunity for an iconic tower design.</p> <p>The environmental impacts of the tower, including overshadowing upon public space and neighbours are less with the taller and smaller tower footprint. To mitigate against view impacts, the tower adopts an elongated plan, with the narrow facade oriented to the east and west, with wider facades to the north and south. Further consideration of the potential impacts of the tower in terms of solar access and views is provided in the following sections of this document.</p> <p>The height of the tower is acceptable given its current context and more importantly its future and wider context. This is illustrated and further considered on the following page.</p> <p>2. See page 25.</p>



Image 62 Height Analysis

## Tower Height

The proposed height is consistent with the Draft Pyrmont Peninsula Place Strategy (DPPPS), which recommends a maximum height of RL 170 for this site. The DPPPS notes that the strategy "identifies key sites as anchor points for major development to achieve the ambition of the strategy. Meeting these ambitions will necessitate changes in terms of land use zones and building height and density."

The industrial past of the site and broader precinct featured numerous storage and trading buildings at the waterfront, which at the time were amongst the tallest building in the harbour.

The proposed tower's relationship to the buildings which surround and define Darling Harbour is shown in Image 59. The proposed height is comparable to existing towers on the east side of Darling Harbour, less than the proposed tower at Cockle Bay Wharf, the southern Barangaroo towers and the Crown Sydney Hotel Resort at Barangaroo. The Sofitel Darling Harbour which adjoins the subject site has a height of RL 133.5m. Further developments around Darling Harbour include the Ribbon (IMAX site) at RL93.5. Further to the west, it is also expected that more tall towers will form part of the redevelopment of the Pyrmont Peninsula and the Bays Precinct, which encompasses 5.5km of harbour frontage, including the Sydney Fish Market. With consideration of the DPPPS, it is considered highly likely that further towers will become a feature of the adjacent skyline.

The public nature and importance to visitors of Darling Harbour mean that views of the proposed development from the east side of Darling Harbour are highly significant and primary. The visual presence of the proposed Harbourside tower in these views is mitigated by its orientation so that its short sides face east and west. This results in a small number of slender, well spaced towers from the Harbour.

This opportunity for additional height is supported with the provision of additional public benefit through the creation of a new significant public accessible area of open space on the northern podium rooftop and the improvement to the public domain.



Image 63 DPPPS: Amenity Based Height Strategy



Image 64 DPPPS: Renewal Focus Zones and Taller Building Clusters

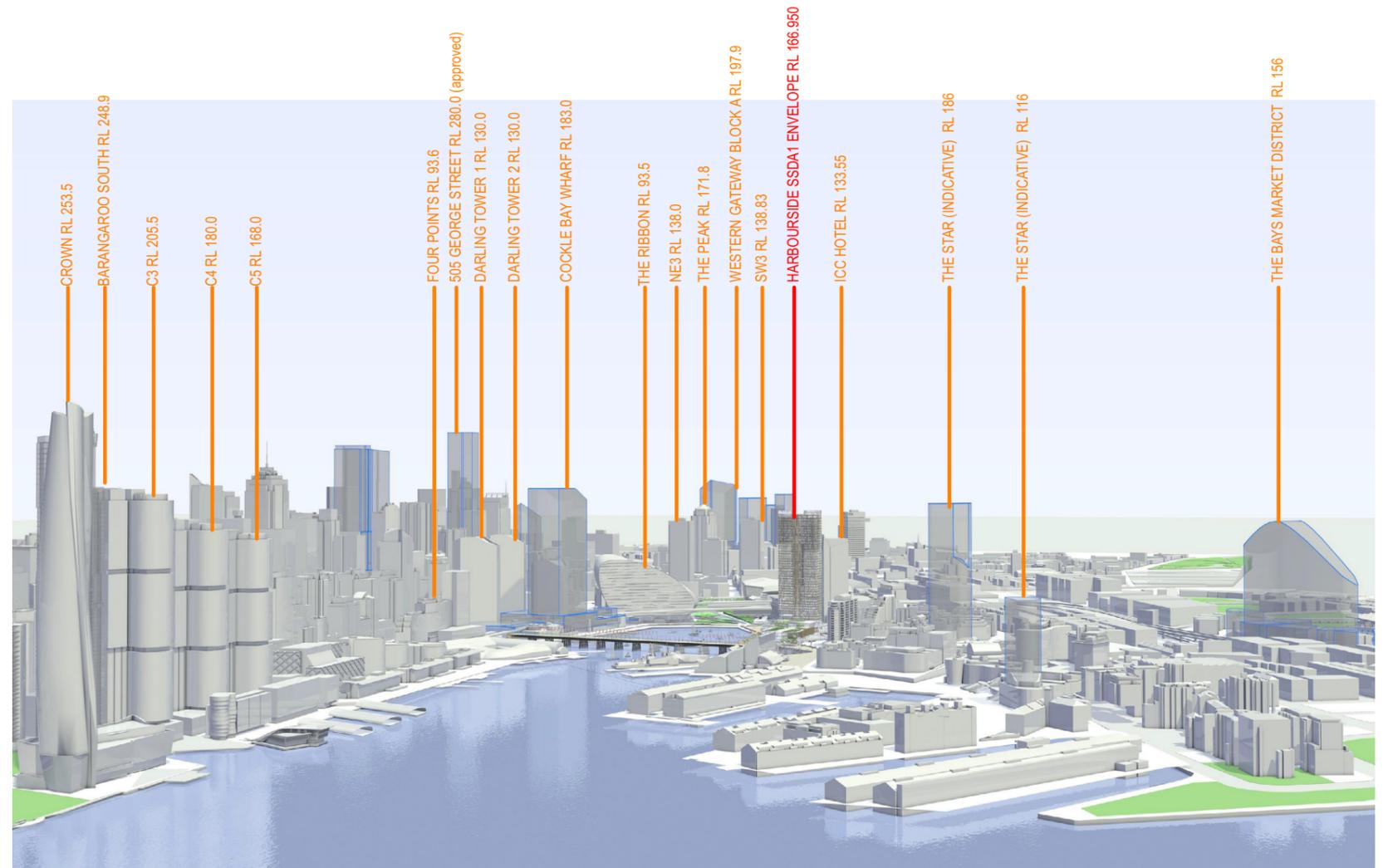


Image 65 Height Analysis



Image 66 Blackwattle Bay Masterplan  
([http://www.infrastructure.nsw.gov.au/media/2527/bays001-blackwattle-bay-consultation-a4-brochure-may2020\\_fa2\\_lr.pdf](http://www.infrastructure.nsw.gov.au/media/2527/bays001-blackwattle-bay-consultation-a4-brochure-may2020_fa2_lr.pdf))



Image 67 View from (approved) fish market looking north

## Tower Form

The tower form is appropriate for the residential component of the proposal and consistent with the City of Sydney DCP2012 Section 5.1.5 Building Bulk.

"For residential buildings and serviced apartments with a height above the 45m:

(a) the size of the floor plate above the street frontage height must not exceed 1,000sqm GFA, refer to Figure 5.21; and

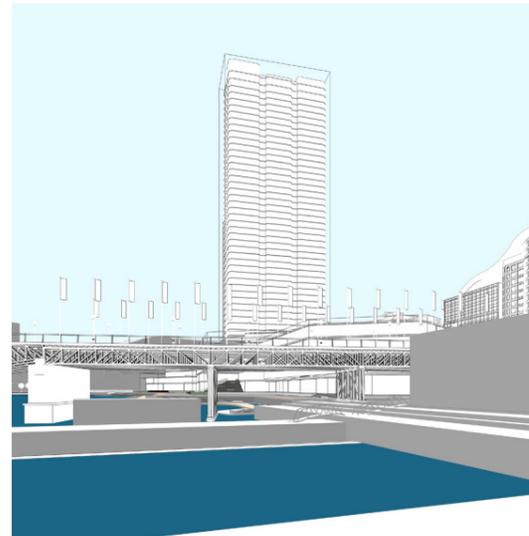
(b) the maximum horizontal dimension of the building facade parallel to the street frontage is 40m."

The tower envelope minimises impacts on the public realm and neighbours, with the narrow facade oriented to the east and west, with wider facades to the north and south. Whilst ensuring opportunities for daylight, outlook, view sharing, ventilation and privacy, the proposed envelope also allows for opportunities for varied built forms to reduce the perceived building bulk during the design excellence process.

A high level of amenity for common lobbies, corridors and apartments, e.g access to daylight and natural ventilation, will be provided with no more than 12 apartments provided off a circulation core on a single level. This is in line with the recommendation in the Apartment Design Guide Objective 4F-1, where achieving the design criteria for the number of apartments (8) off a circulation core may not be possible.

The series of diagrams on this page illustrate how alternate tower designs can be accommodated within the envelope. The envelope dimensions have been set to ensure suitable controls are in place whilst allowing for future design flexibility as part of a design excellence competition.

Tower Design as per Illustrative Scheme:



Alternative Tower Design (subject of future Design Excellence Process:

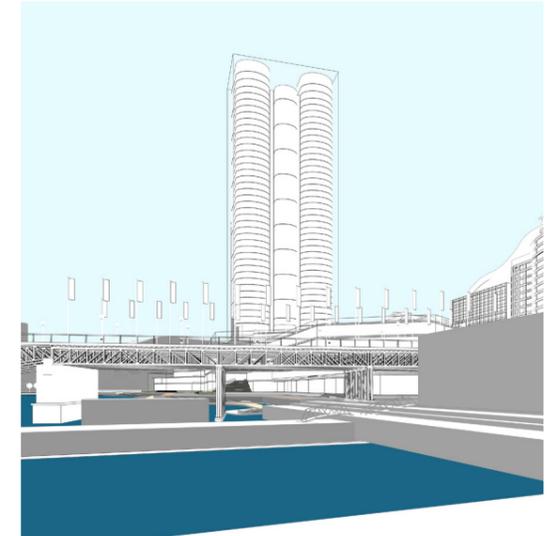
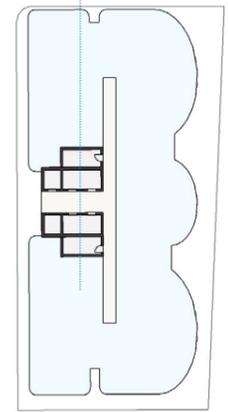
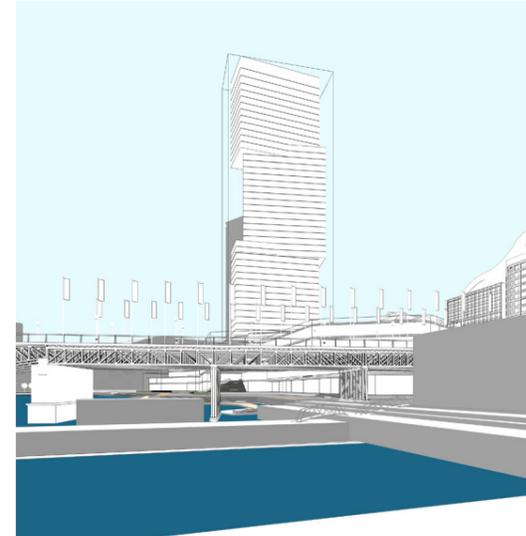
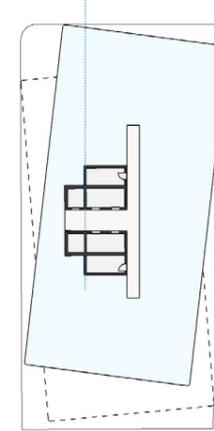
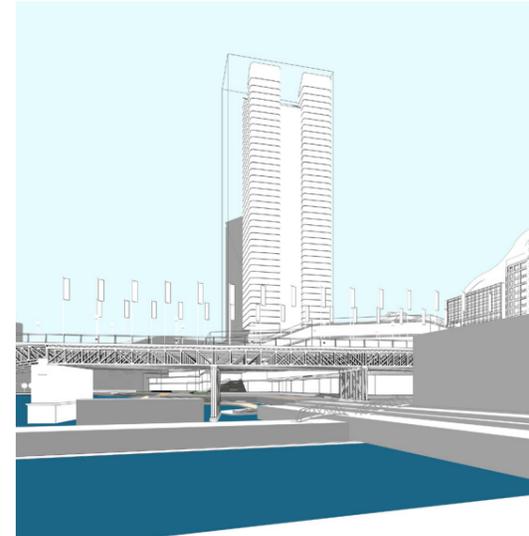
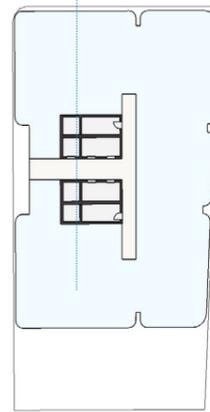
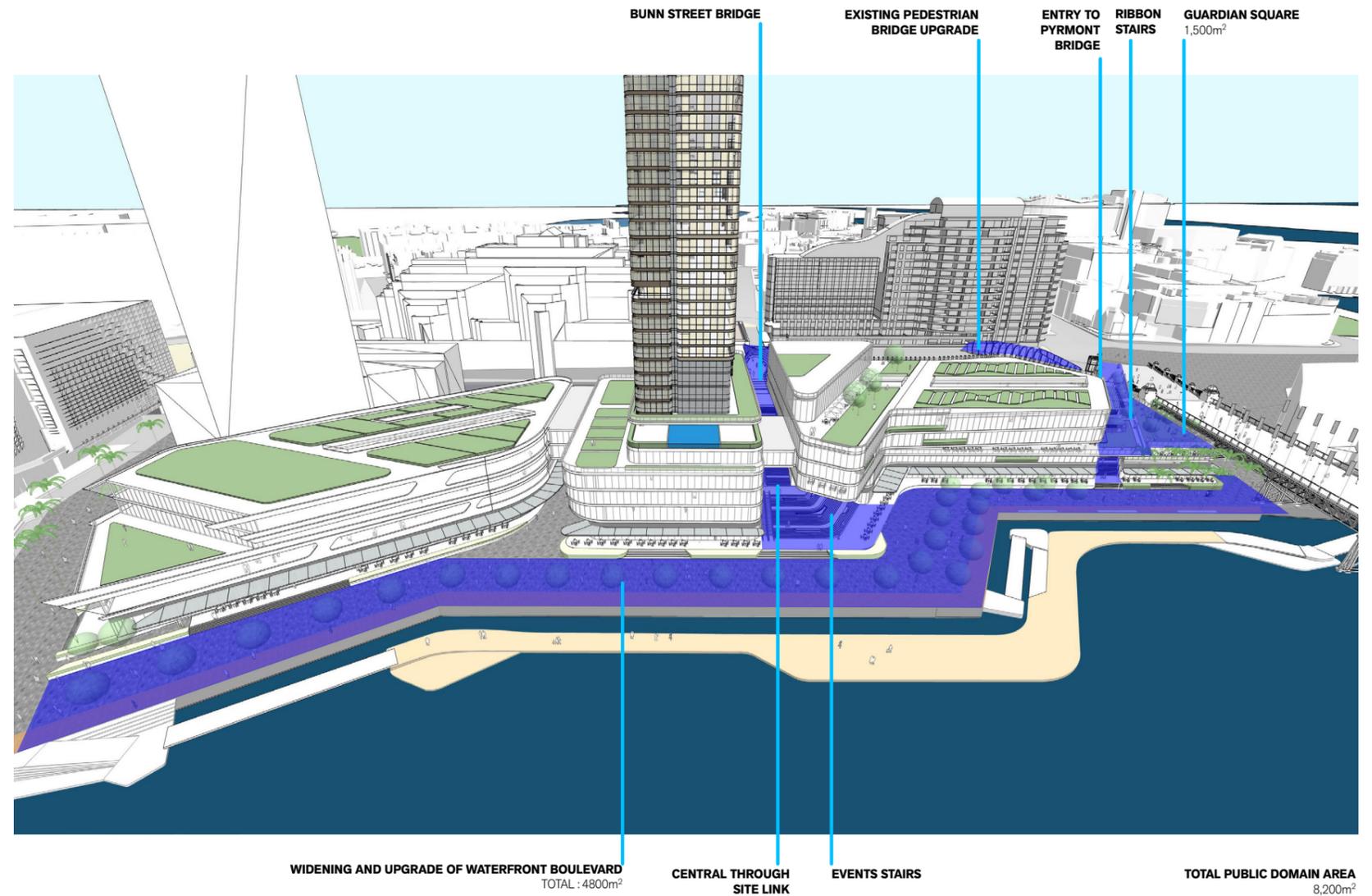


Image 68 Opportunity for Alternative Tower forms within Proposed Envelope

# 7.0 Response to Department of Planning, Infrastructure & Environment: Key Issue 4, 11-15

Key Issues as nominated in DPIE letter ref:SSD 7874

Key Issue 4: Public Benefits	Response to Issue
<p>Confirm the public benefits that will be secured by the Concept Proposal, including commitments in relation to the amount, design and function of the publicly accessible open space at the northern podium.</p>	<p>Full details of the public benefit commitments are outlined in Ethos Urban's report. This document seeks to outline the key public domain commitments as embodied in the proposal. The amended proposal provides improvements to the public domain with the following key benefits:</p> <ul style="list-style-type: none"> <li>- Deliver excellent public open space outcomes by providing publicly accessible open space on rooftop areas that include viewing platforms and gathering spaces.</li> <li>- Improve and enhance the events and gathering capacity of the public domain in the Tumbalong Park sub-precinct as a global tourism destination</li> <li>- Improve and enhance east-west connections</li> <li>- Deliver a safe, activated and inviting streetscape interface on all boundaries, including proposed 'back of house' or service areas on Darling Drive</li> </ul> <p>The diagram to the right qualifies the extent of public realm area as highlighted in blue. These key elements of the public realm are embedded into the Public Realm Guidelines that form part of this submission. This document will inform any future design as part of a Design Excellence Competition.</p> <p>Refer to Aspect's SSDA Public Domain Report for more information.</p>



## Guardian Square

A key amendment relative to the March 2020 proposal is the introduction of a large and generous plaza and stairs connection between the waterfront and Pymont Bridge. Through a series of workshops with the Department of Planning, the northern podium is cut back to improve view sharing and lowered to provide for a plaza space on the same level as the Pymont Bridge.

As the gateway to the Pymont Peninsula Precinct, Guardian Square is sited at a pertinent location, connecting the precinct to the foreshore and the CBD through Pymont Bridge. The built form above the plaza is set back up to 41 m, resulting in a publicly accessible space that opens up towards the foreshore. It is suitably located to receive the northern sun and appropriately sized to allow a diversity of large open spaces and intimate spaces.

Conceived as highly porous with a blending of inside and outside to facilitate shaded, green spaces, encouraging informal meetings and gatherings for the public and visitors, the retail offerings along the upper level connection spills out into Guardian Square. The plaza spans across various levels, with circulation paths joining Pymont Bridge to the waterfront via the Pymont Stairs Link, enhancing the east-west connections to Harris Street and the future Metro station. The upper level connection, as a Boulevard extension from the Tumbalong Park sub-precinct, also connects through the plaza to Pymont Bridge, extending the waterfront edge as a viewing platform, and increasing the event and gathering capacity of the public domain in the precinct as a global tourism destination.

A generous public and infrastructure furniture overlay includes cafe seating within dining terraces, feature seating along the boulevard edge, and large event seating steps, creates the additional smaller scale for everyday use to compliment the larger event scale of space within the site, allowing the site to be activated and programmed throughout the week.



Image 69 Guardian Square connecting Pymont to the foreshore

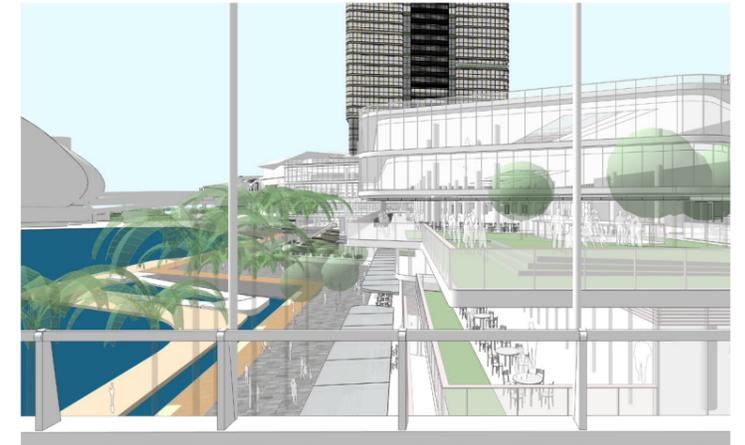


Image 70 Guardian Square on the same level as Pymont Bridge

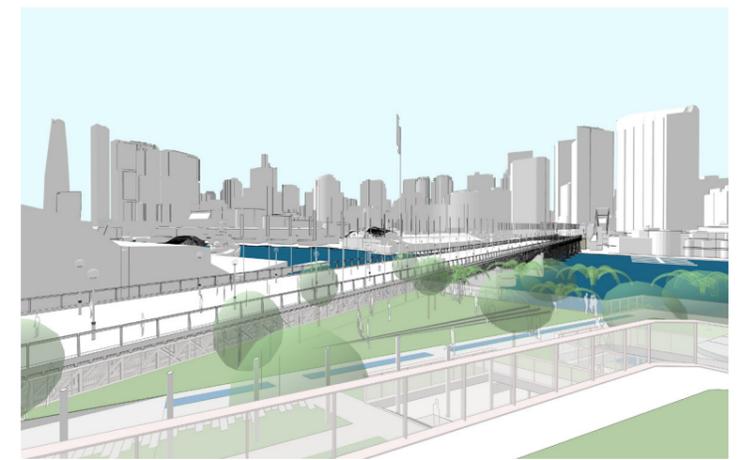


Image 71 View from L3 Plaza



Image 74 Pymont Stairs Link connecting to Guardian Square

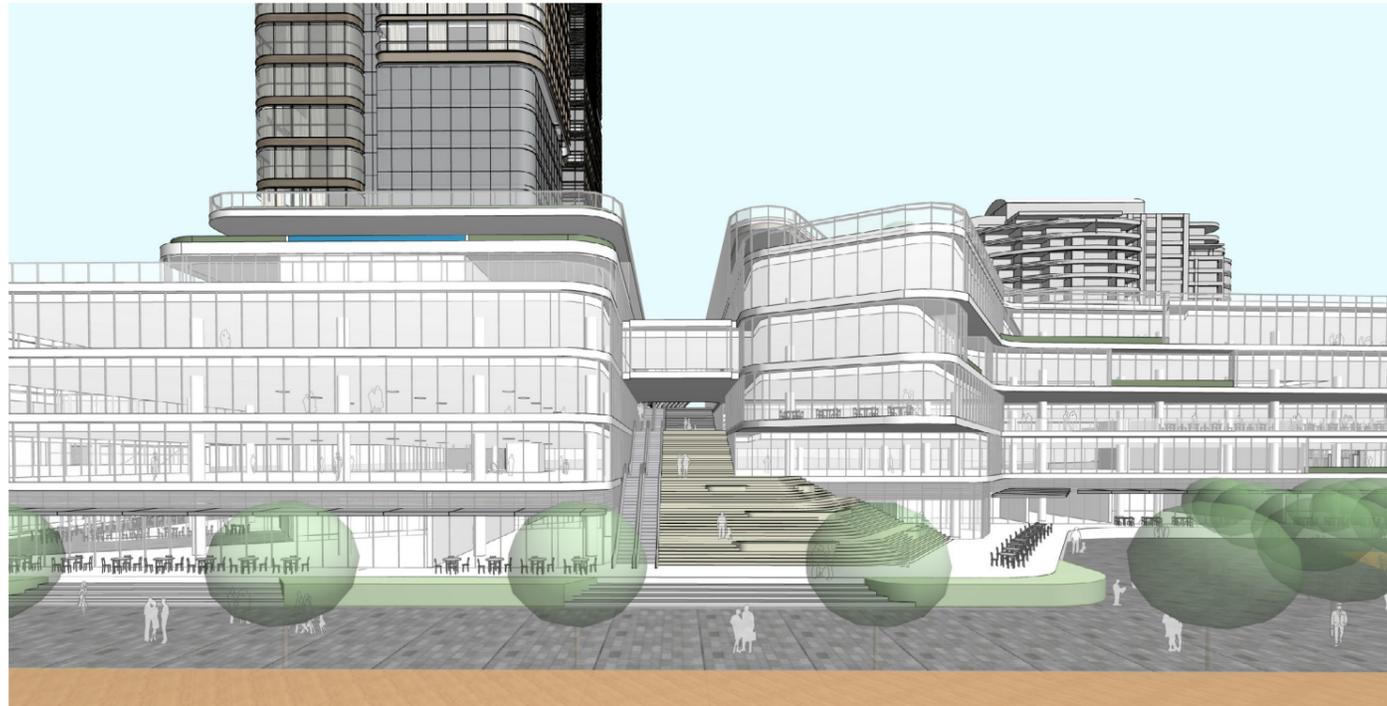


Image 73 Guardian Square: On approach from Harris St



Image 72 Guardian Square: Viewing Edge

The proposed development improves east /west pedestrian movement across the site connecting the existing residential areas of Pyrmont to the Waterfront and wider Darling Harbour precinct.



Indicative design showing relationship to Bunn Street from the Events Stairs

The important link over Darling Drive is proposed to be upgraded by a new pedestrian bridge to Bunn Street. This is an all access bridge gateway into the precinct creating a clear visual and physical pedestrian access between Pyrmont and the Harbour, and reconnecting the site to its local surroundings.



Indicative design showing Bunn Street bridge connection on approach from west

## Darling Drive Edge Treatment

The Draft Pyrmont Peninsula Place Strategy, dated July 2020 notes that "The interface between Darling Harbour and the Pyrmont Peninsula is hard; a change of level as well as road and rail corridors make moving between these two areas difficult, particularly further away from the Darling Harbour waterfront" and recommends that we "Investigate the re-utilisation of land on Darling Drive through redevelopment".

These proposals seek to ensure a significant amenity and connectivity improvement to the western edge of the site. The reference scheme see the porte-cochere relocated relative to the March 2020 proposal to ensure a greater level of activation to Darling Drive.

The western edge proposal has been designed to accommodate for a high level of activation which includes the Commercial, Retail and Residential drop-off/porte-cochere accessed via a slip lane off Darling Drive.

The western facade is proposed to be further articulated through highly visible vertical circulation connection providing access to the Commercial and Residential spaces. A new Retail entry is provide from the western edge with links to the new Bunn Street bridge.

The envelope allows for a high level of activation to the western façade / Darling Drive and improves visual connection between the waterfront promenade to the Convention Centre Light Rail Station / Darling Drive. The illustrative scheme indicates how this can be achieved. Detail resolution of this will form part of a SSDA2 submission.



Image 75 Reference Scheme - view showing opportunity for views to the waterfront from the Darling Drive drop off / porte-cochere



Image 76 Reference Scheme - view showing opportunity for increased activation and east /west connectivity all along Darling Drive

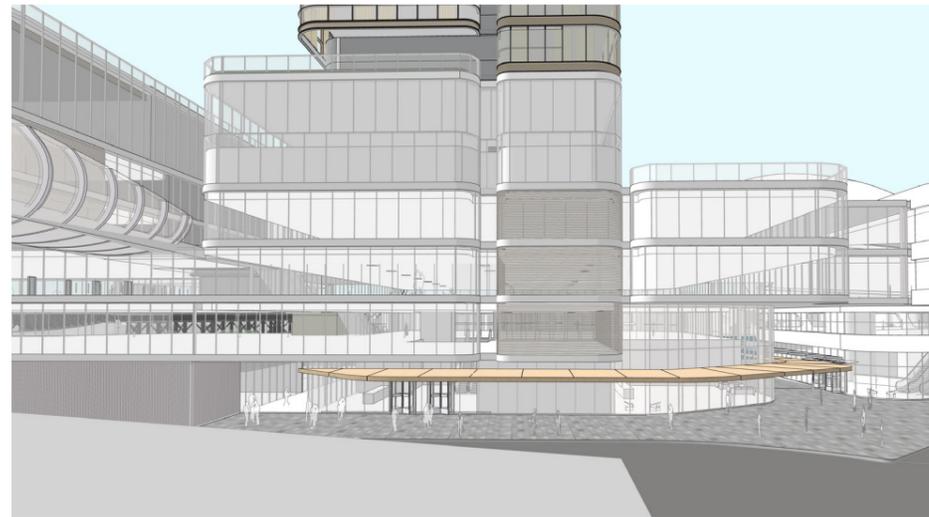


Image 77 Reference Scheme - view showing opportunity to extent activated facades north along Darling Drive

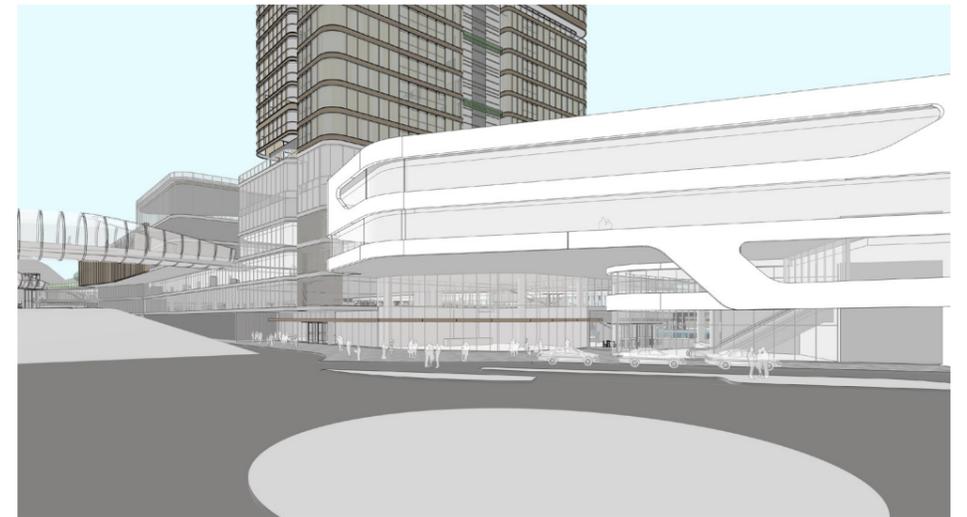


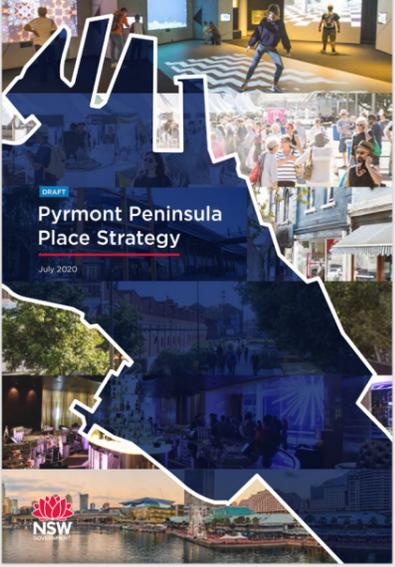
Image 78 Reference Scheme - view showing opportunity highly visible arrival / porte cochere on Darling Drive



Image 79 Public Domain as based on Illustrative Scheme

# 8.0 Response to Department of Planning, Infrastructure & Environment: Key Issue 5

Key Issues as nominated in DPIE letter ref:SSD 7874

Key Issue 5: Pyrmont Peninsula Place Strategy	Response to Issue	Opportunities identified for site in the DPPPS	Response to Opportunities identified in the DPPPS
<p>Address how the proposal is consistent with the vision, directions, opportunities for public benefits and specific considerations for Harbourside set out in the draft Pyrmont Peninsula Place Strategy (PPPS) dated July 2020.</p> 	<p>The project site is situated within the Tumbalong sub-precinct as defined in Draft Pyrmont Peninsula Place Strategy, dated July 2020. The proposal is consistent with the vision of the sub-precinct, in particular but not limited to the following:</p> <ul style="list-style-type: none"> <li>— Create new space for jobs in tourism and entertainment and supporting services, such as shops, restaurants, cafes and bars and transport, to create smaller activity areas.</li> <li>— Provide new commercial space to cater for jobs in industries aligning with the Innovation Corridor.</li> <li>— Transition building heights from higher areas to the waterfront and open space so taller buildings are located to respect privacy, public space, such as the waterfront promenade, Pyrmont Bridge and Tumbalong Park, views, heritage items and existing buildings.</li> <li>— Encourage green building facades and rooftop gardens in new development.</li> <li>— Create publicly accessible, privately-owned space, such as multi-purpose courts on rooftops or in podiums or viewing platforms that showcase Sydney Harbour.</li> <li>— Improve east-west active transport connections from Tumbalong Park into the Peninsula and up to Harris Street by addressing the barriers of light rail and back-of-house areas on Darling Drive.</li> <li>— Improve walking and cycling connections, permeability, and wayfinding throughout the Peninsula and to public spaces.</li> </ul>	<p>The Draft Pyrmont Peninsula Place Strategy identifies the following opportunities and special considerations for the Harbourside site.</p> <ul style="list-style-type: none"> <li>— Deliver excellence in public open space outcomes by providing publicly accessible open space on rooftop areas and indoor space in podiums that could include indoor recreation infrastructure, viewing platforms, meeting rooms, or other space to support the Innovation Corridor</li> <li>— Improve and enhance east-west connections from Harris Street to the waterfront through large sites</li> <li>— Improve and enhance the events and gathering capacity of the public domain in the Tumbalong Park sub-precinct as a global tourism destination</li> <li>— Deliver a safe, activated and inviting streetscape interface on all boundaries, including proposed 'back of house' or service areas on Darling Drive that promote east-west connectivity from Harris Street to the waterfront</li> <li>— Deliver an appropriate built form outcome to Pyrmont Bridge</li> <li>— Protect solar access to the harbour foreshore public domain</li> <li>— Prioritisation of the delivery of employment, entertainment and tourism floorspace</li> <li>— Tower below RL170</li> </ul>	<p>The proposal encourages opportunities for additional public benefits as identified in the Draft Pyrmont Peninsula Place Strategy (DPPPS). More information can be found in Aspect Studio's SSDA Public Domain Report:</p> <ul style="list-style-type: none"> <li>— The proposal offers key improvements with opportunities to provide excellent public open spaces that include viewing platforms, plaza and ample seating areas, for e.g. Guardian Square and the Event stairs. This is explored in detail in Section 7 and Aspect Studio's SSDA Public Domain Report.</li> <li>— The proposal seeks to improve connectivity from the western edge to the waterfront. As the gateway to the Pyrmont Peninsula Precinct, the connection is enhanced from Harris St to the waterfront through Guardian Square.</li> <li>— The events and gathering capacity of the public domain in the Tumbalong Park sub-precinct as a global tourism destination is enhanced with these key improvements:             <ul style="list-style-type: none"> <li>• Upgrading and widening of the waterfront</li> <li>• Events Stairs</li> <li>• Guardian Square</li> </ul> </li> <li>— These proposals seek to ensure a significant amenity and connectivity improvement to the western edge of the site. The reference scheme see the porte-cochere relocated relative to the March 2020 proposal to ensure a greater level of activation to Darling Drive. The envelope allows for a high level of activation and improved visual connection to the western façade / Darling Drive.</li> <li>— An appropriate built form that is sensitive to Pyrmont Bridge is proposed with increased setbacks and the provision of a new plaza on the same level as the Bridge. See page 22.</li> <li>— Solar access to the harbour foreshore public domain are limited and are considered acceptable given overall improvement to the public domain and overall precinct. See page 62.</li> <li>— Opportunities for delivery of employment, entertainment and tourism floorspace with 42,000m<sup>2</sup> of commercial and retail floor space proposed.</li> <li>— Tower Envelope is proposed at a height of RL166.95</li> </ul>



# 9.0 Response to Department of Planning, Infrastructure & Environment: Key Issue 6

## 8.1 Adjusted Envelope Plans

This section provides envelope plans for the revised concept proposal that prescribe maximum heights, building extents and land uses.

The envelopes are sought to be approved under the Stage 1 SSDA and will form the basis for the future detailed building [to be sought in subsequent Stage 2 DA(s)]

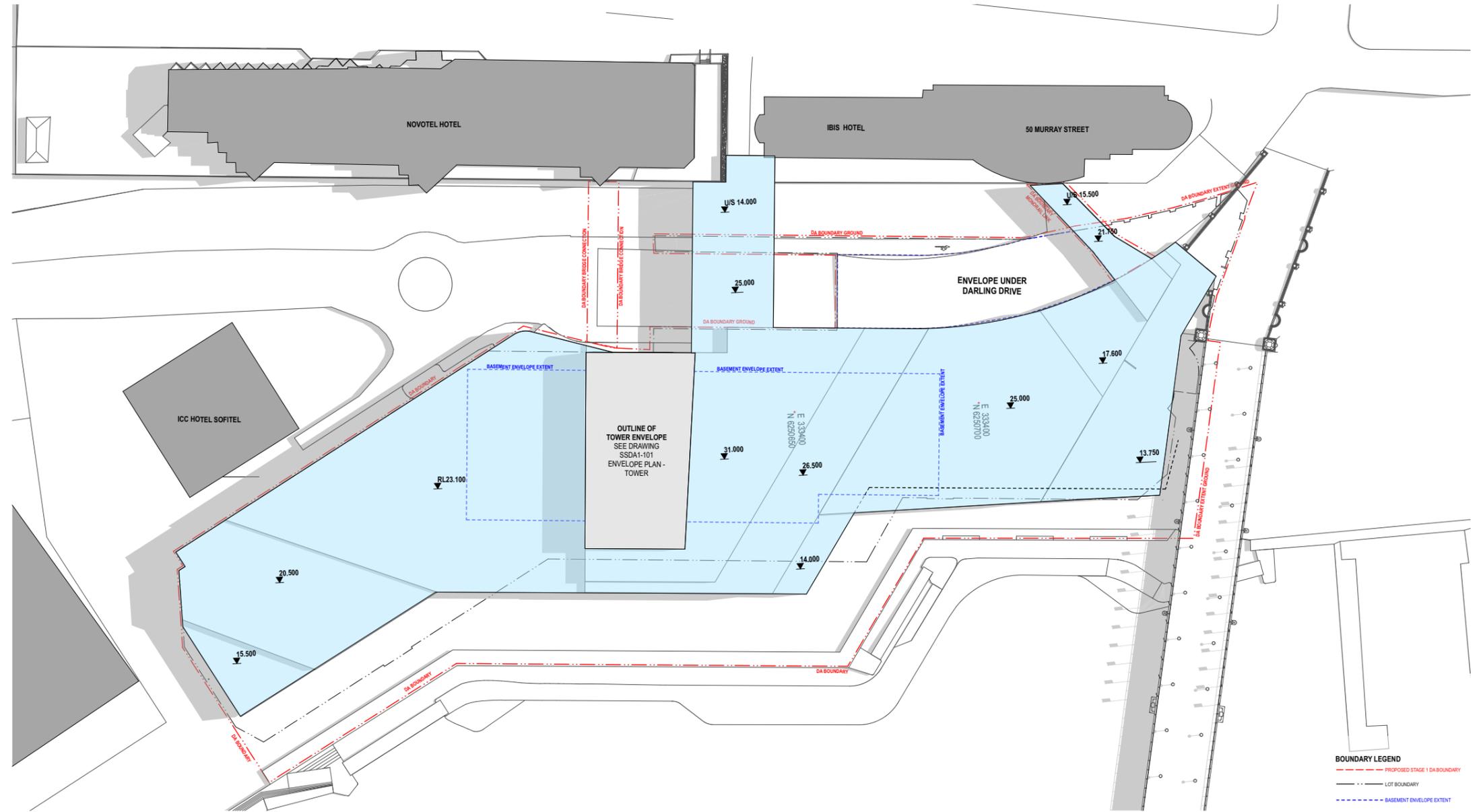


Image 82 Envelope Plan

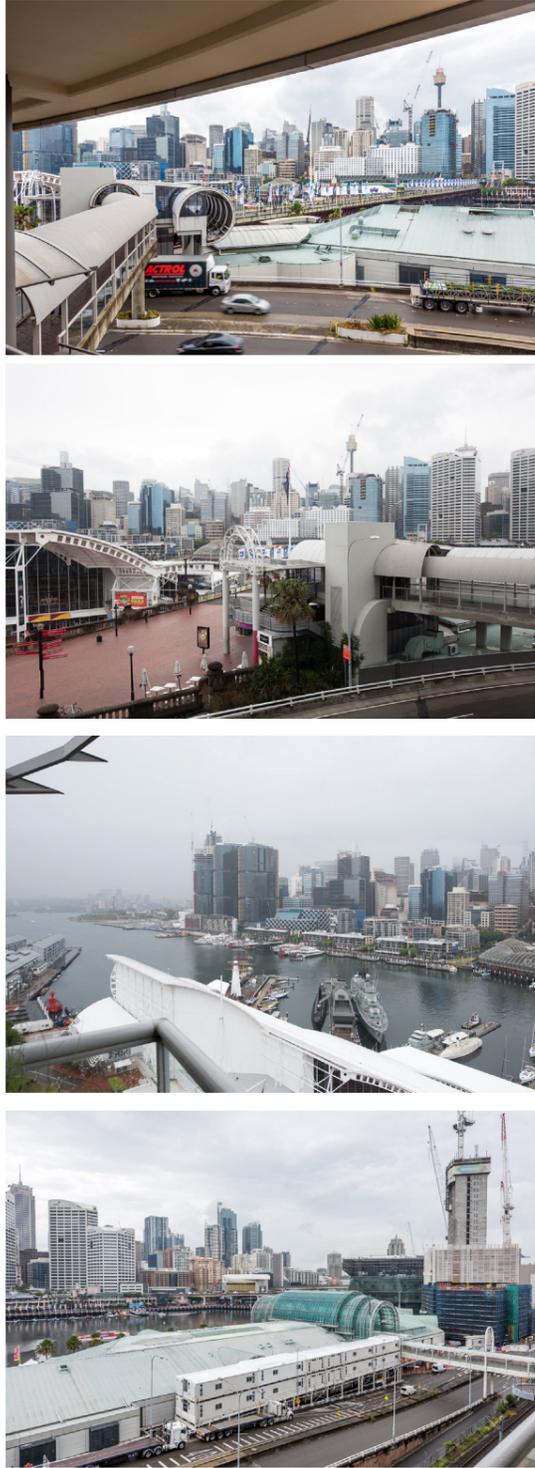


Image 83 Images Above - View from 50 Murray St residences

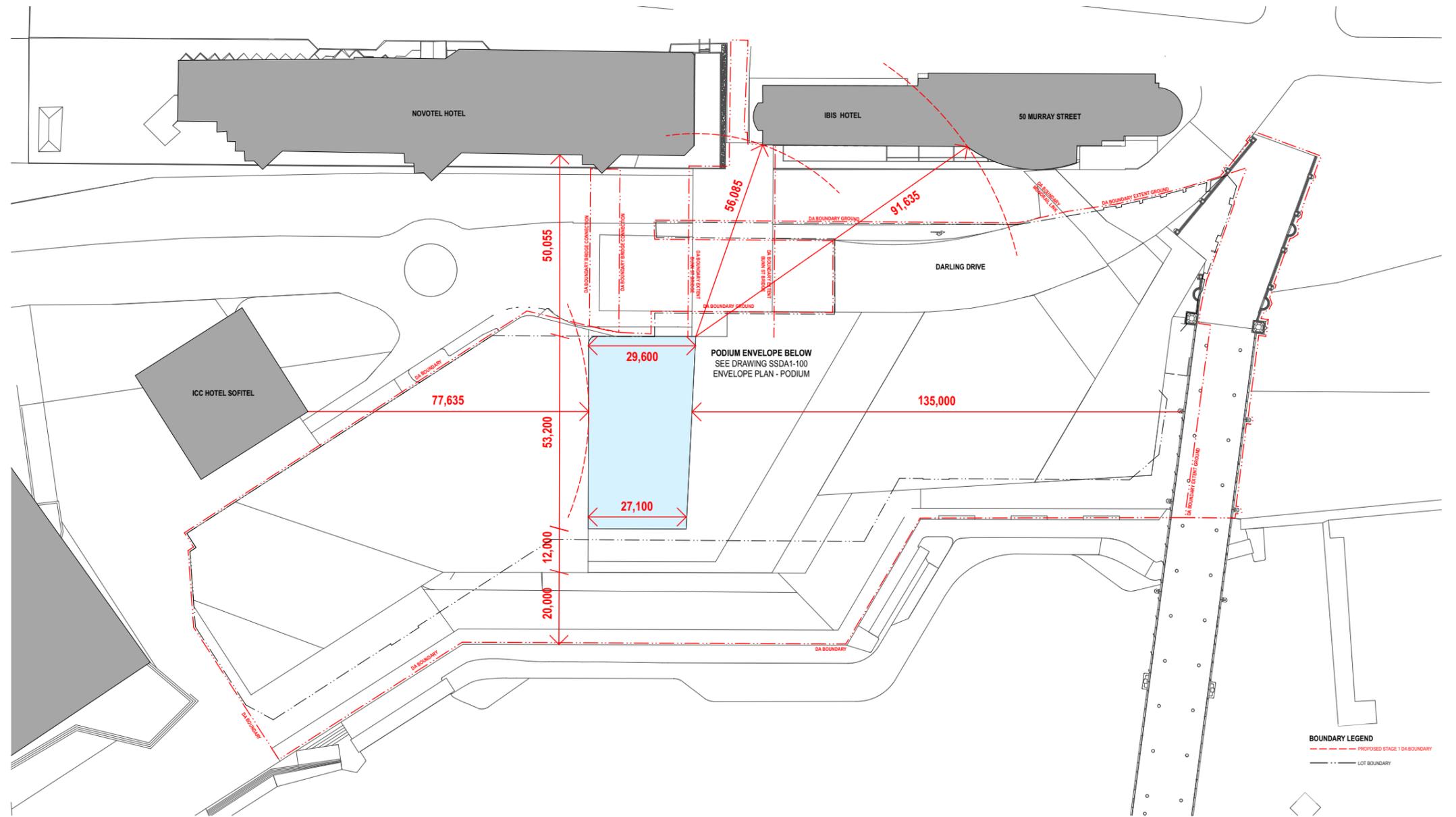


Image 84 Envelope Plan - Tower (No change)



Image 85 Envelope Plan - Basement

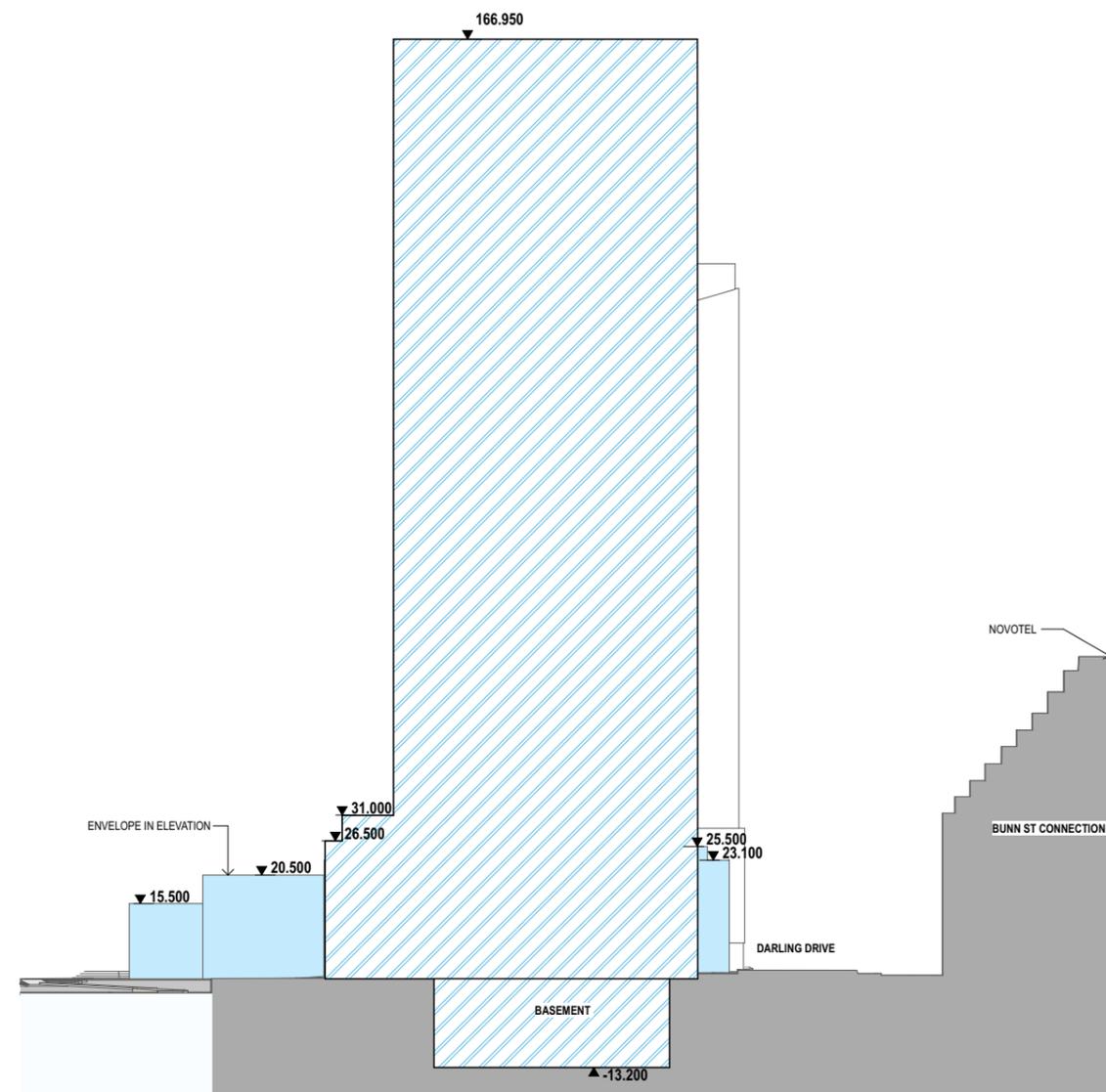
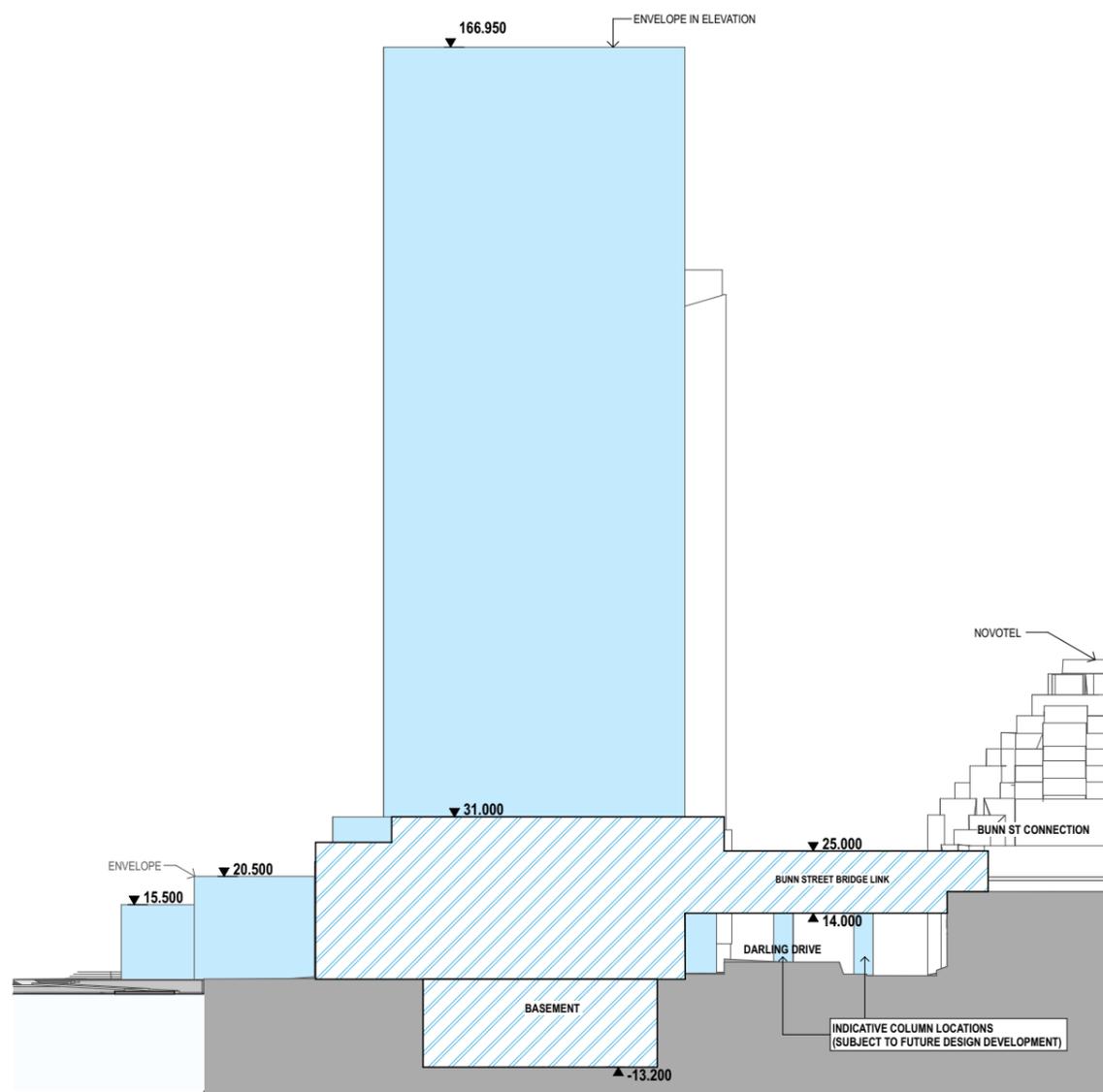


Image 86 Envelope Plan - Looking South

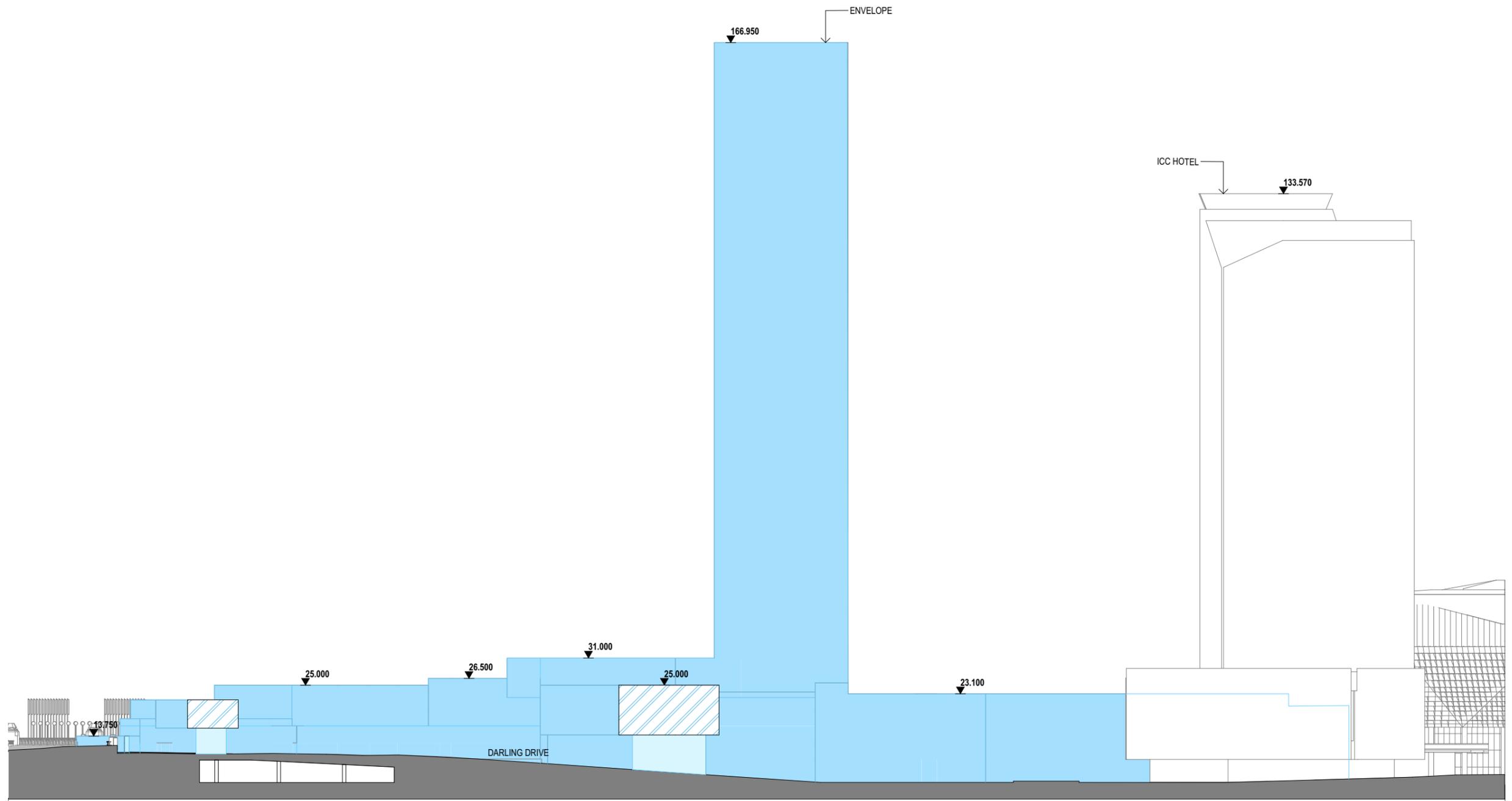


Image 87 Envelope Diagram - Western Elevation

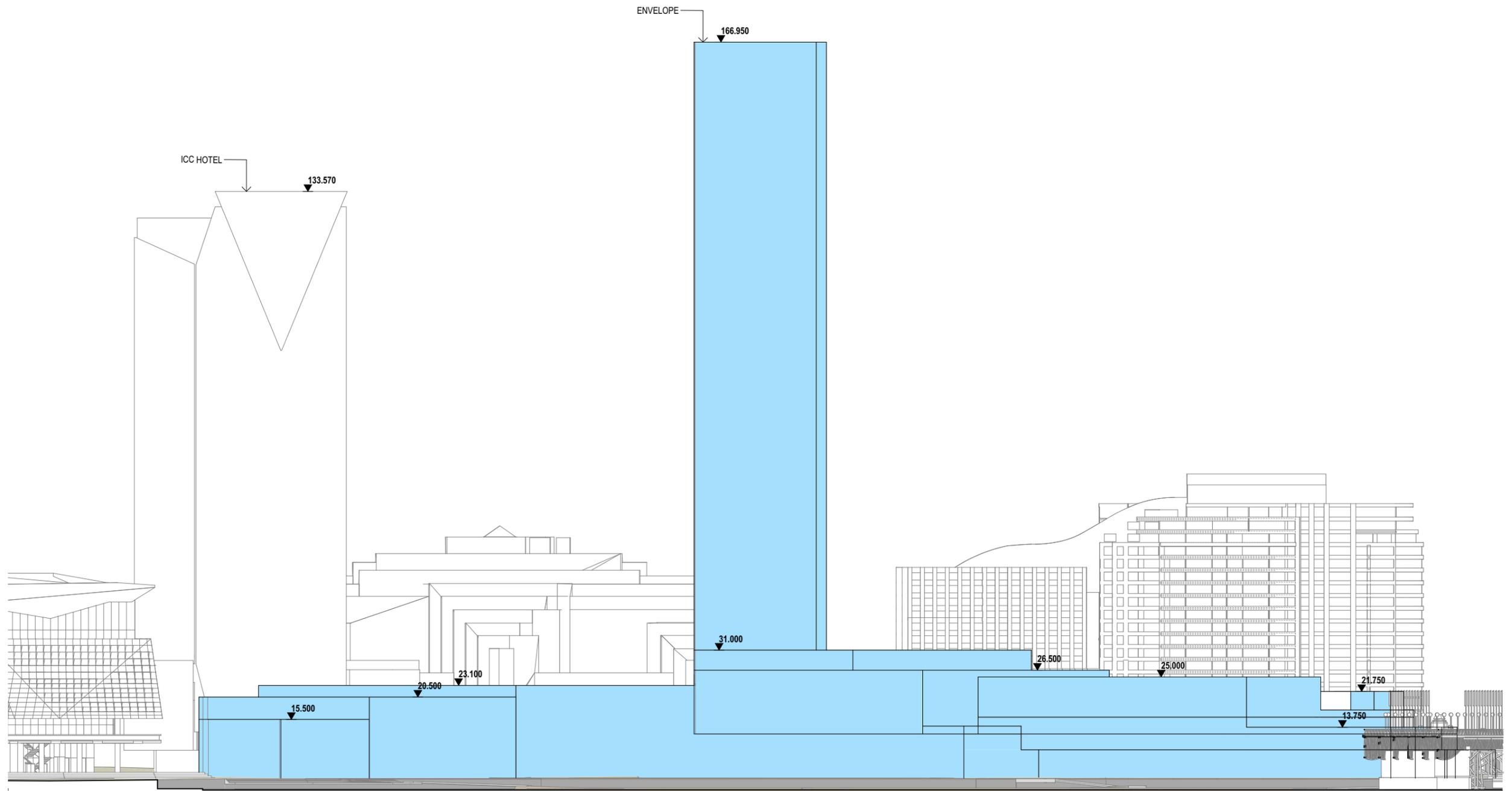


Image 88 Envelope Diagram - East Elevation

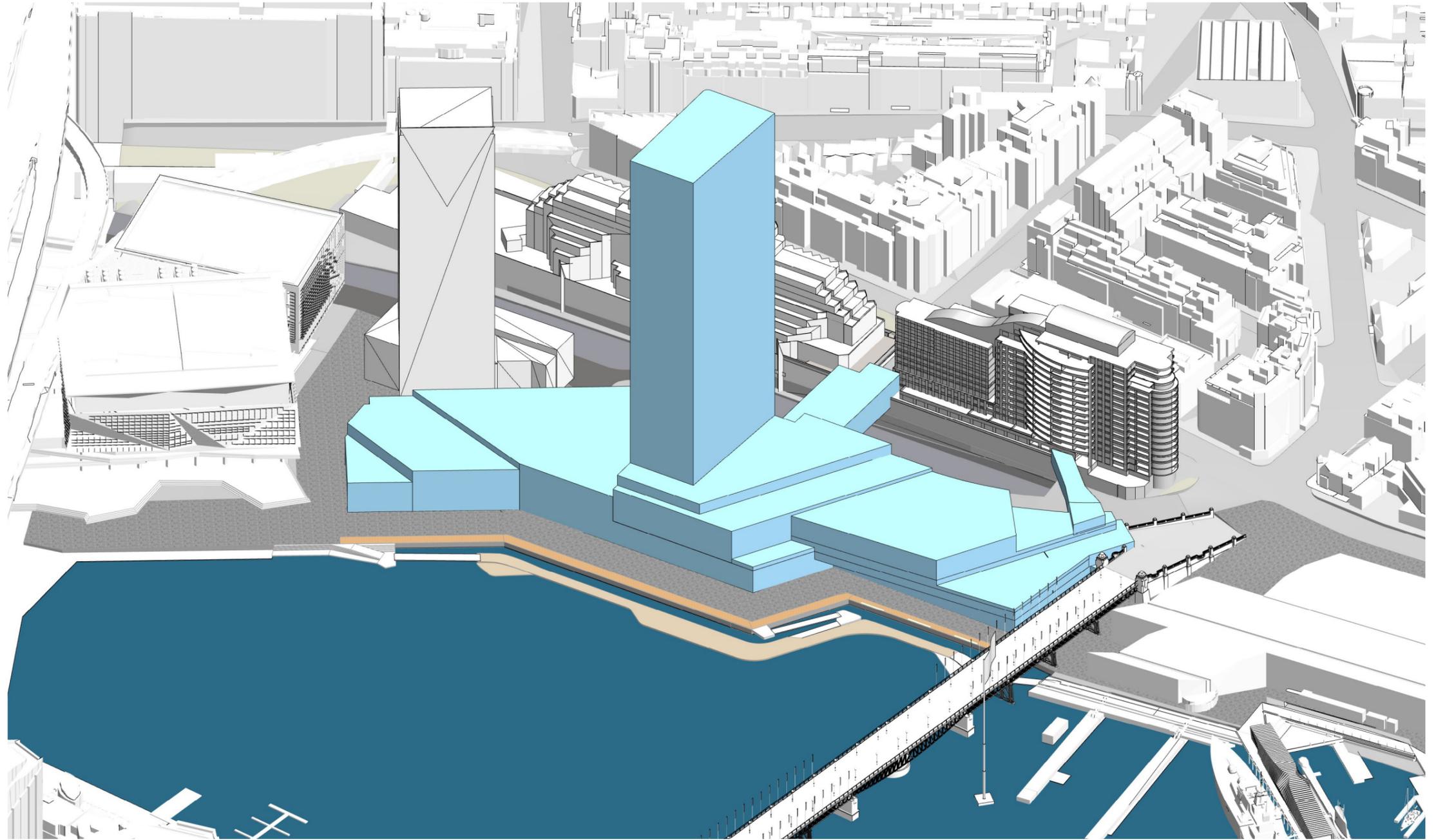


Image 89 Envelope Perspective - View 1

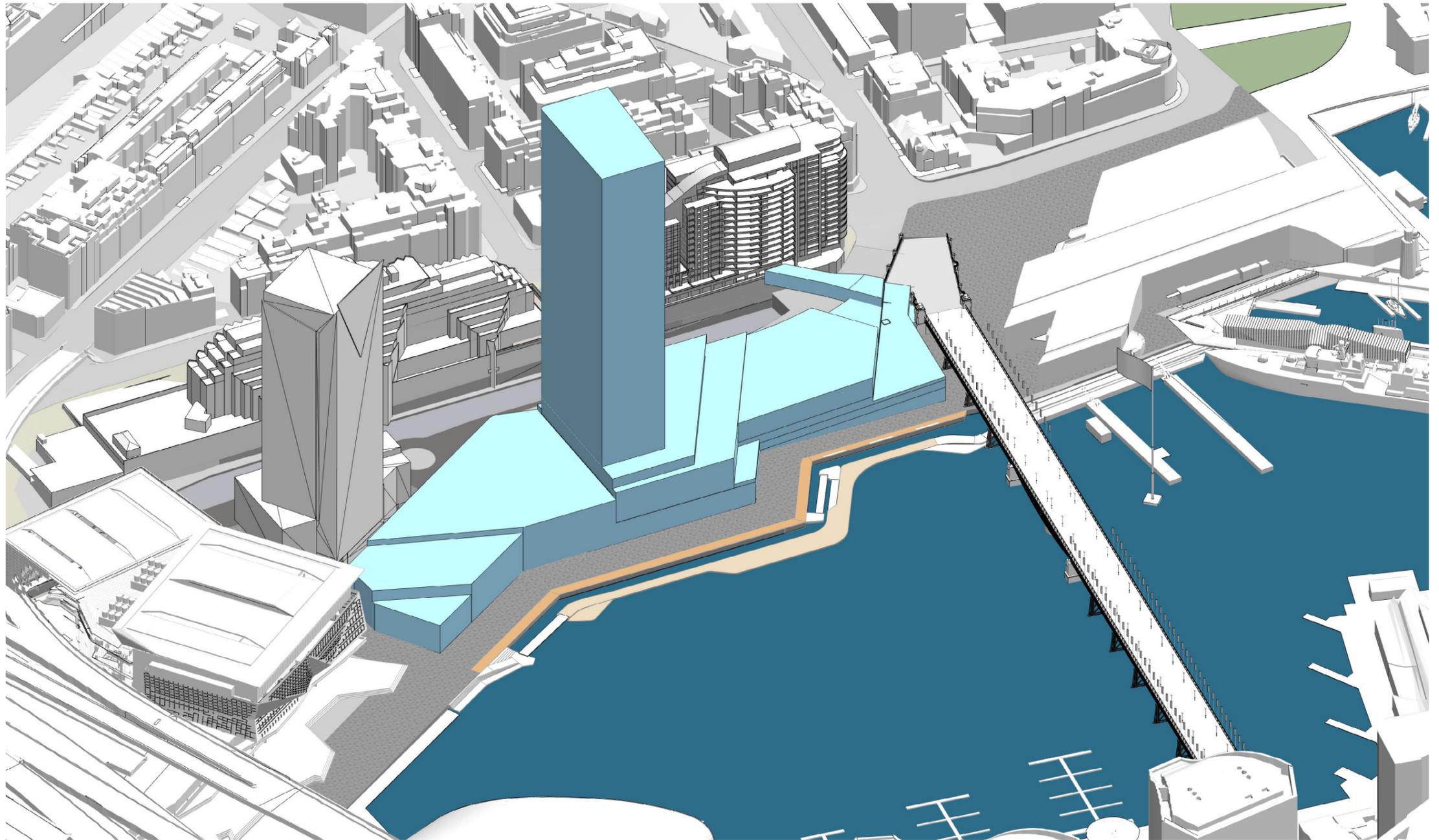


Image 90 Envelope Perspective - View 2

9.1 Illustrative Concept Design

This section of the report provides a description of the Illustrative Concept Design which has informed the Envelope Plans and includes maximum GFAs, height and massing.

The illustrative Design provides an indication of how the site may be developed under the proposed envelope, Design guidelines and maximum GFA controls. The built form described in the Illustrative scheme is indicative only and seeks to articulate a potential design solution without providing a detailed architectural response. Future Stage 2 Development Applications will provide and seek approval for the detailed architecture and construction of the site.

The Illustrative Design represents one scenario as to how the Harbourside Site could be redeveloped. The flexibility in the envelope plans ensures that there are multiple design iterations available.

The Illustrative Concept Design is provided within this section and is also attached at Appendix A.

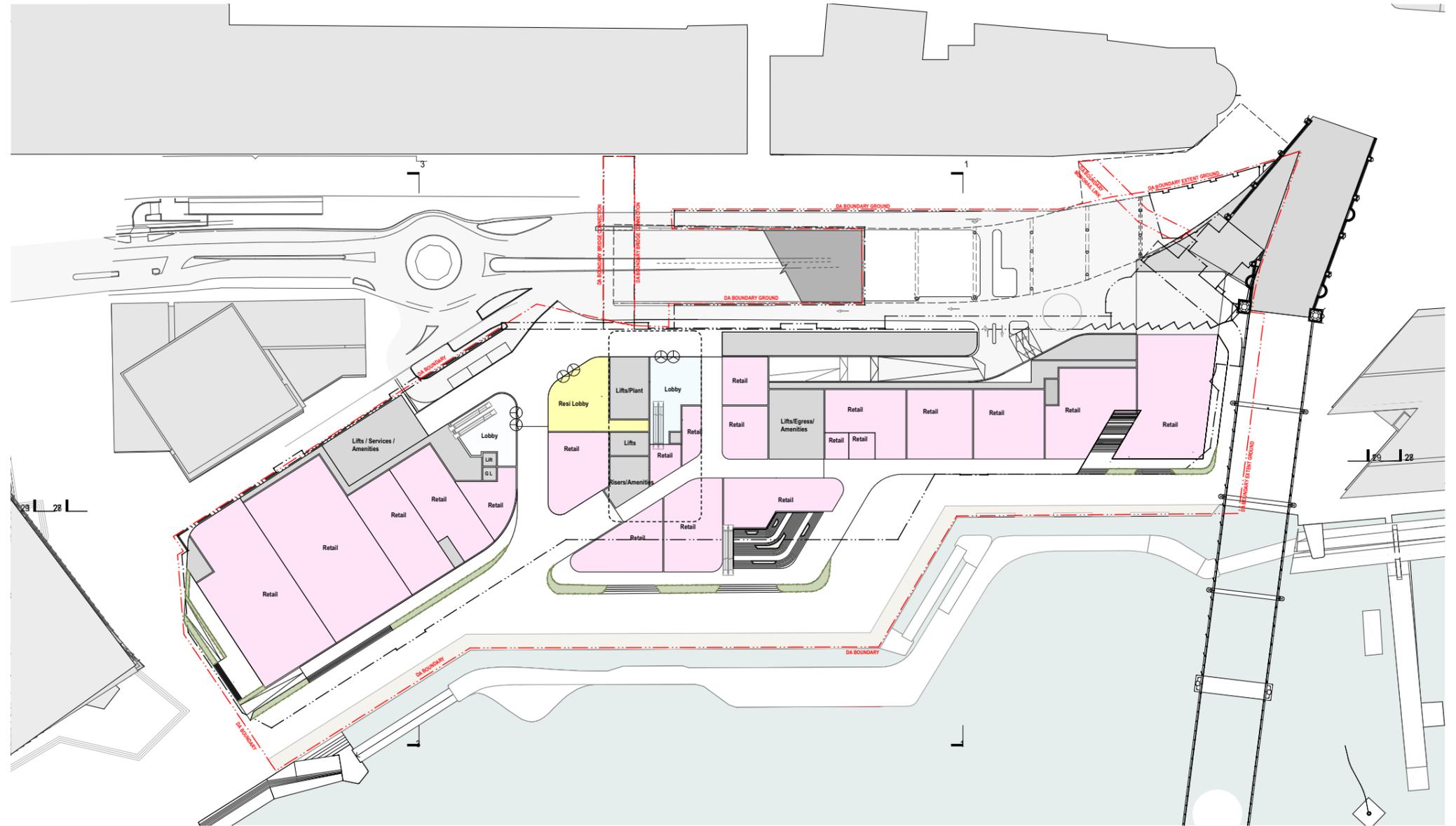


Image 92 Illustrative scheme - Ground Level plan showing interface with public domain



Image 91 Conceptual finishes and imagery



Image 93 Illustrative scheme looking from north east towards Pyrmont Bridge Interface

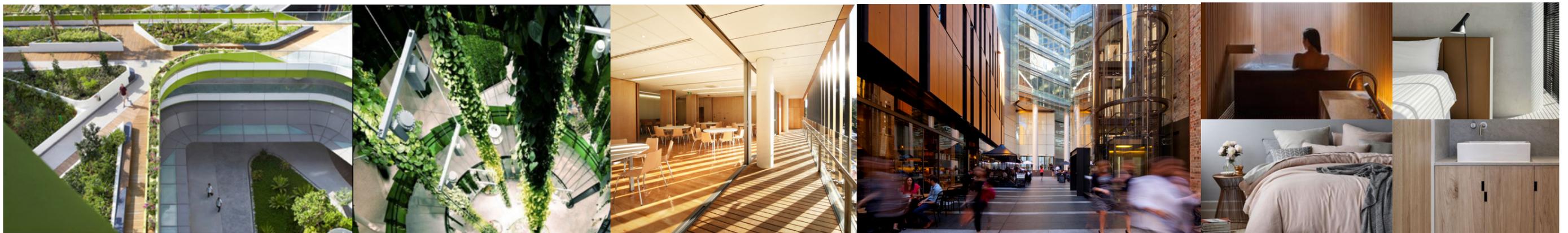


Image 94 Conceptual finishes and imagery

## Podium Plans

The Illustrative Concept Design identifies a retail and commercial podium of 4/5 levels including Ground. Being an illustrative scheme only, the design prescribes indicative spaces for a mix of differing retail and commercial tenancies with spatial organisation and nominal vertical circulation paths, building upon the massing and site principles.

The illustrative scheme shows all roof top areas of the podium as activated or with non accessible landscaping. Non accessible landscaped (green) areas are provided where privacy to residents and adjacent neighbouring residences has been given precedence.

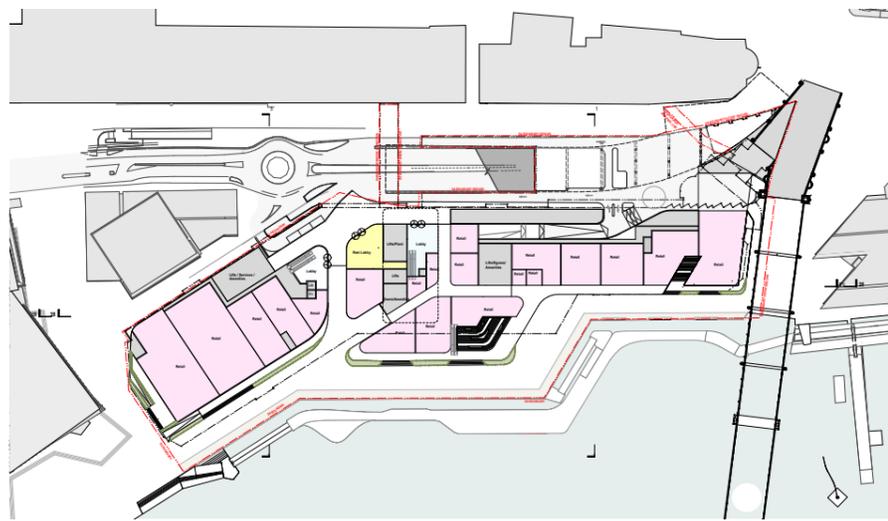


Image 95 Concept Plan Ground

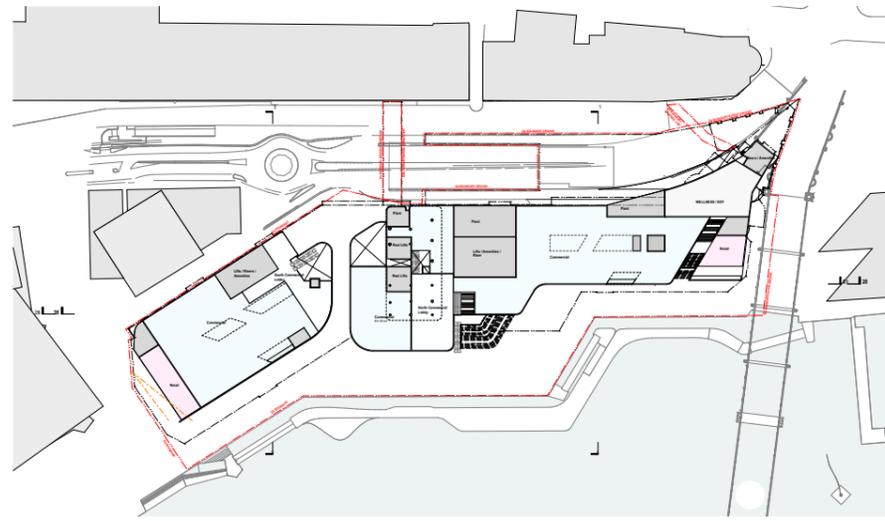


Image 96 Concept Plan L1

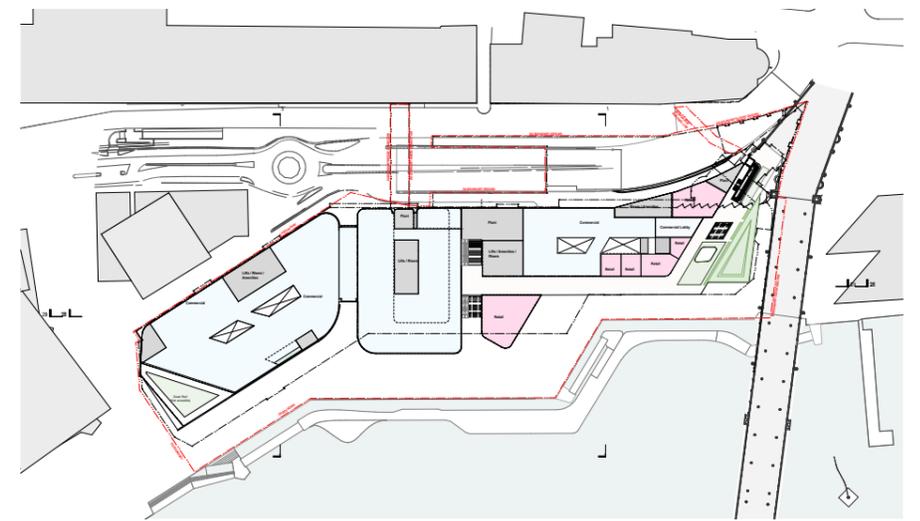


Image 97 Concept Plan L2

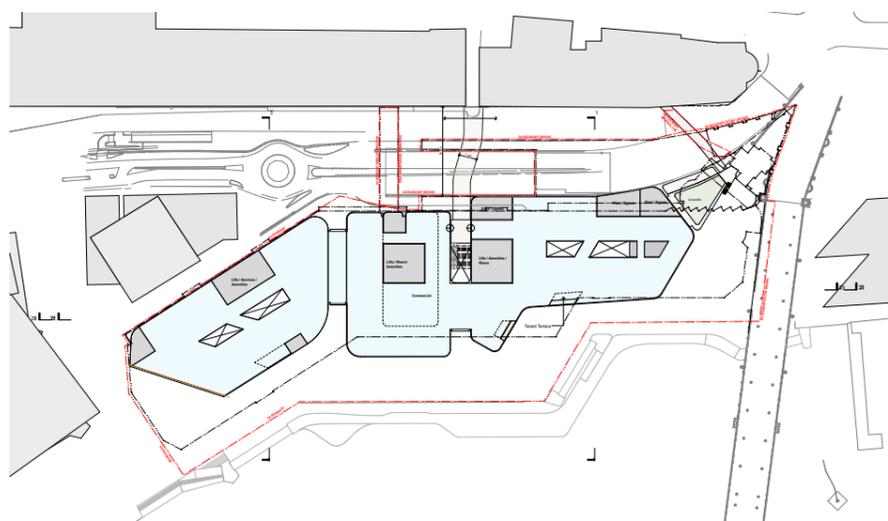


Image 98 Concept Plan L3

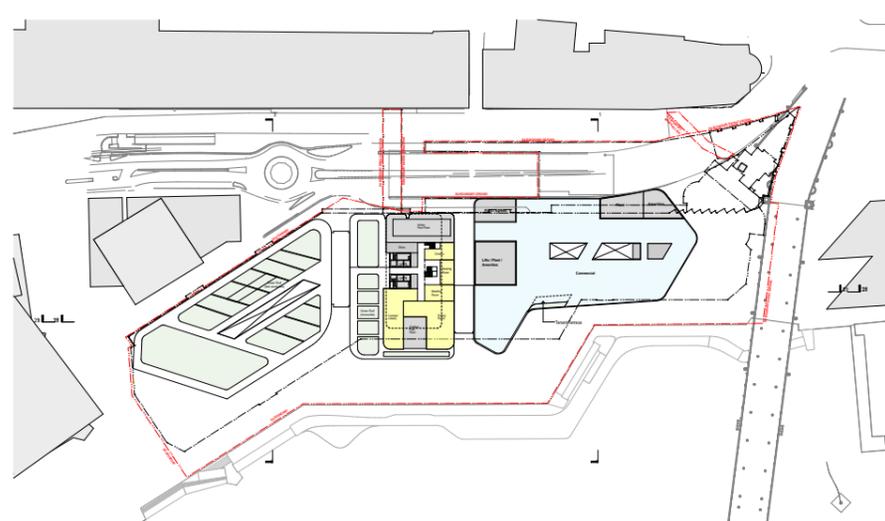


Image 99 Concept Plan L4

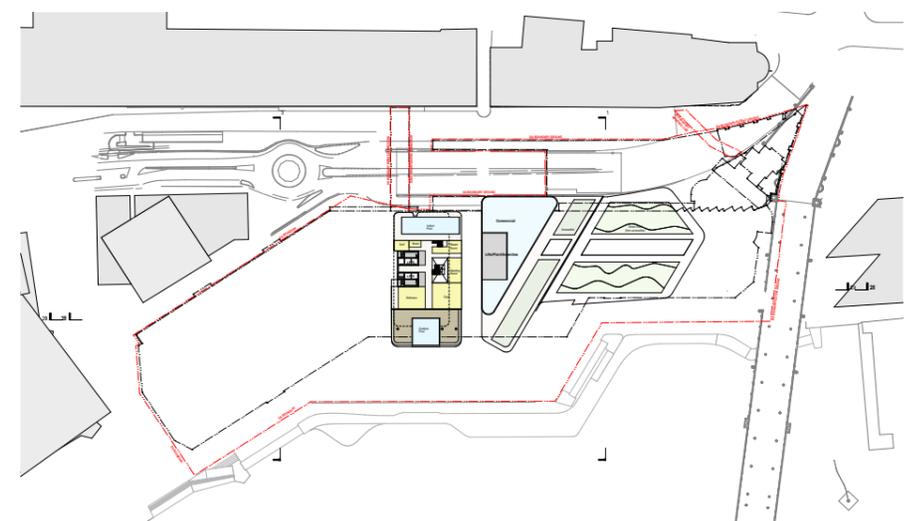


Image 100 Concept Plan L5

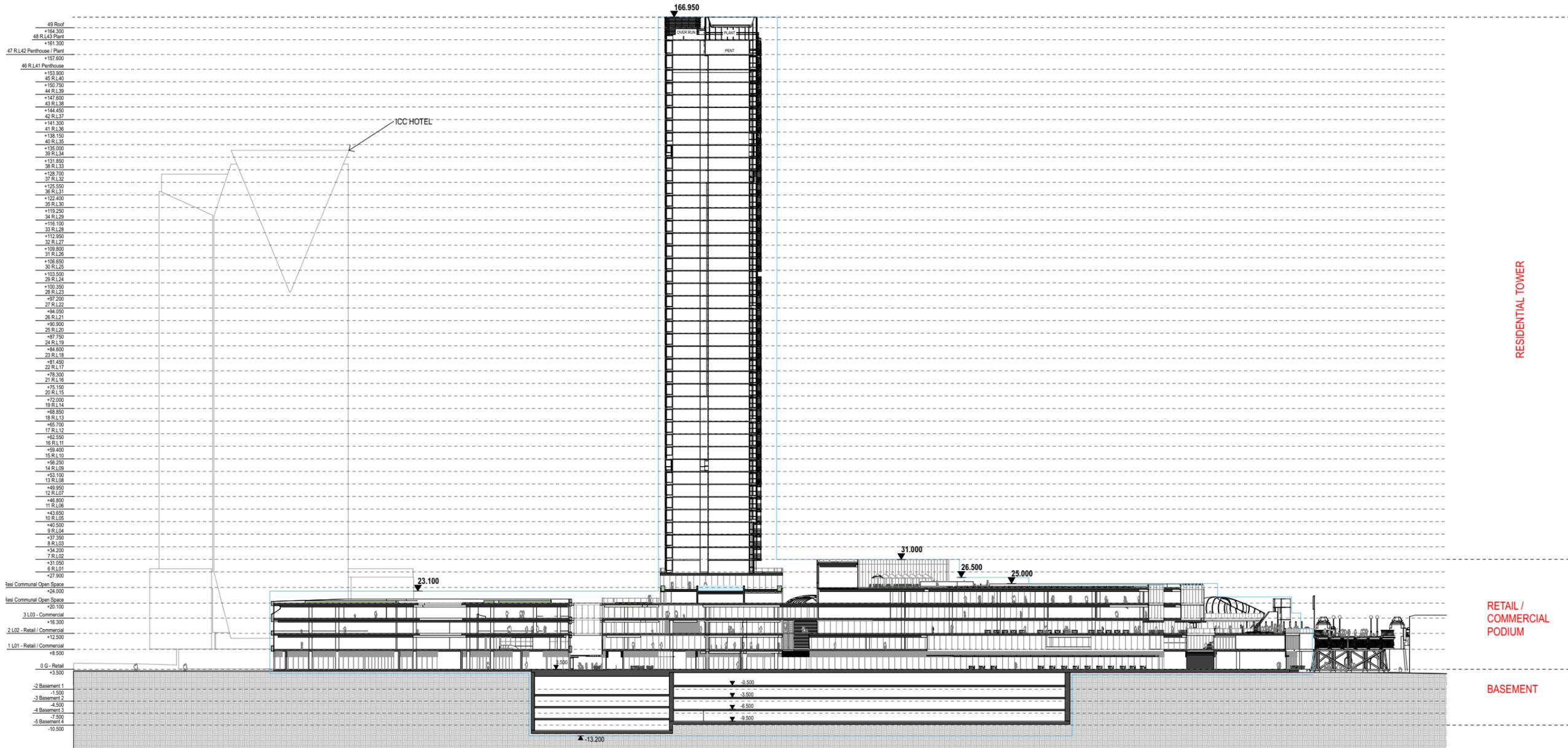


Image 101 (Above) Concept Scheme - Illustrative section

## Residential Plans

The Illustrative Concept Design identifies a Residential Tower with indoor and outdoor communal amenities located on L4 and L5. The outdoor pool and communal open space is located on the north and east side of the development, with expansive views overlooking Darling Harbour. The orientation and location of the communal open space ensures that it has excellent solar access, receiving a minimum of 50% direct sunlight for a minimum of 2 hours between 9am and 3pm during mid winter.

Being an illustrative scheme only, the design prescribes typical levels and apartment mix. Details to be developed at a later stage 2 DA

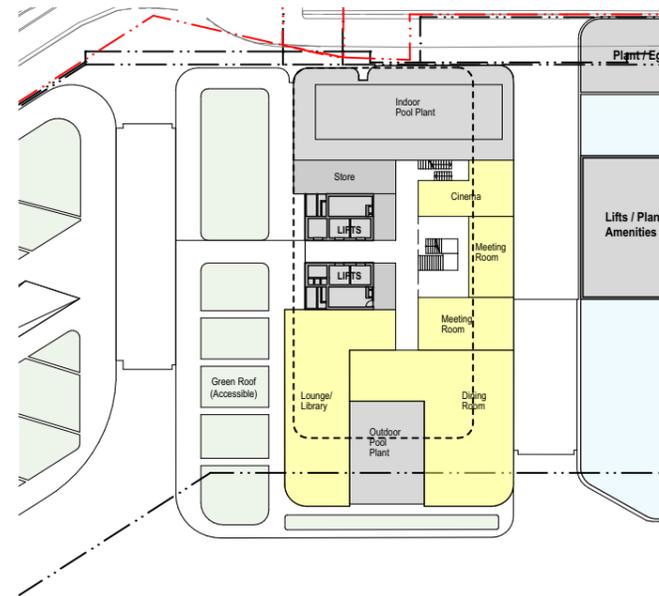


Image 102 Concept Plan Level 4 Residential Facilities with Communal Open Space

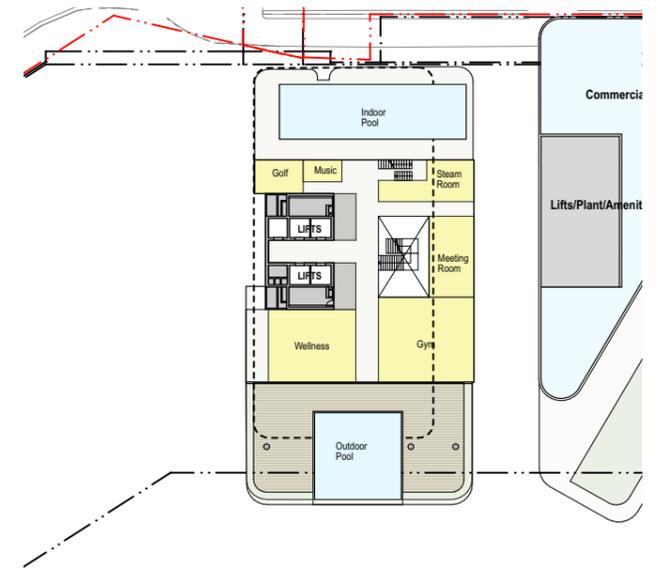


Image 103 Concept Plan Level 5 Residential Facilities (Pool Level)

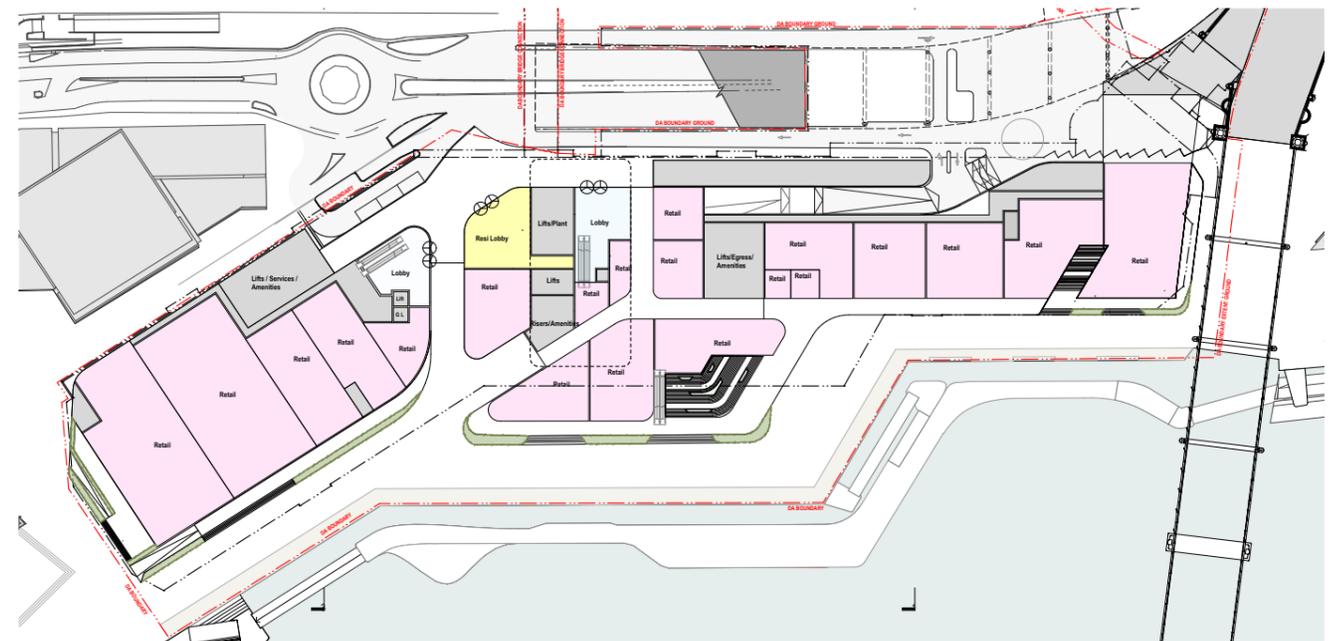


Image 104 Concept Plan Ground Level Residential Arrival

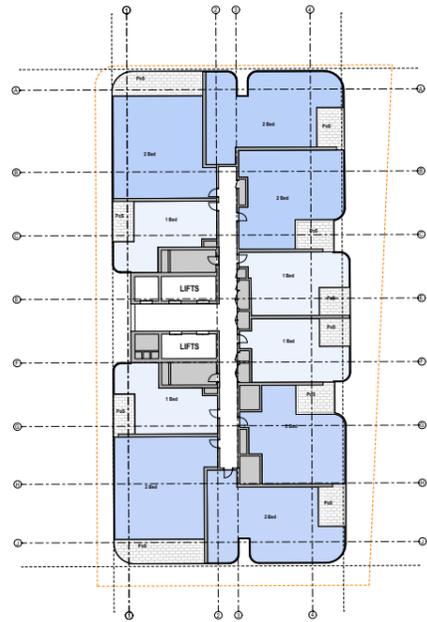


Image 105 Concept Plan Typical 1B Level

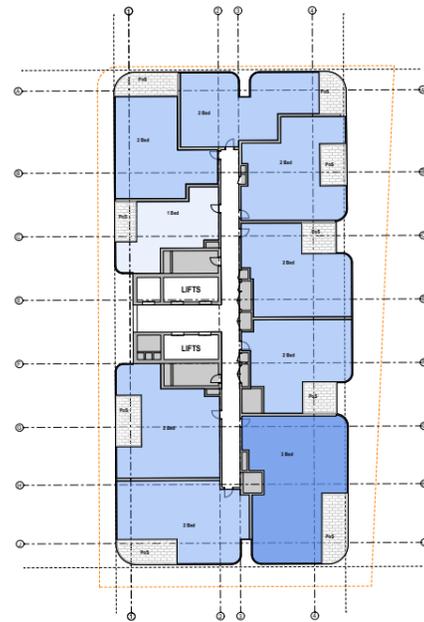


Image 106 Concept Plan Typical 2B Level

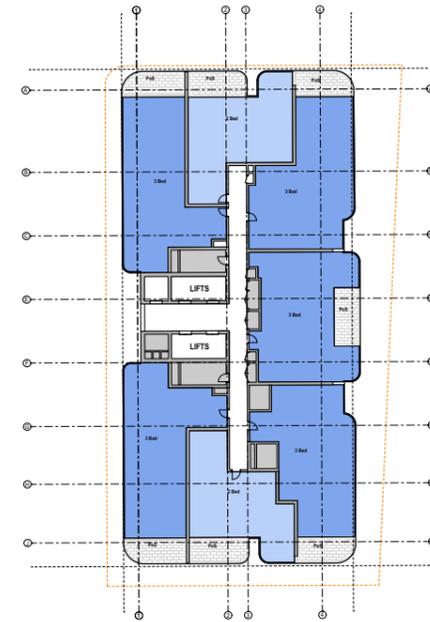


Image 107 Concept Plan Typical 3B Level

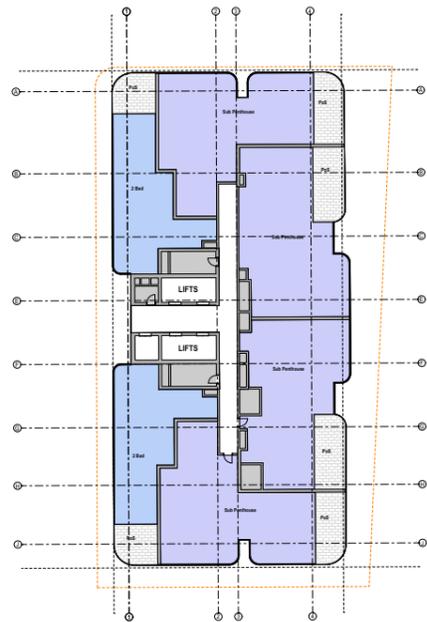


Image 108 Concept Plan Sub Penthouse Level

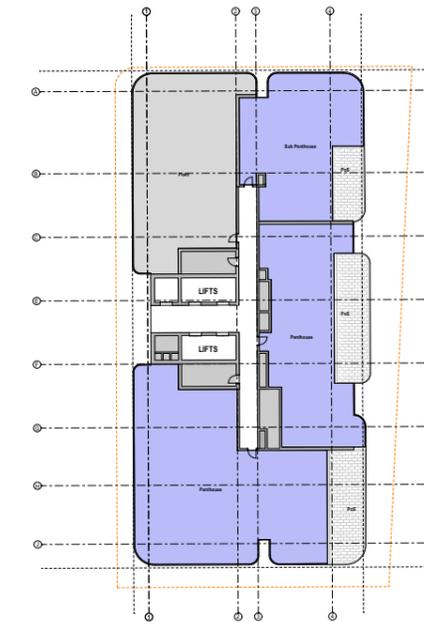


Image 109 Concept Plan Penthouse Level

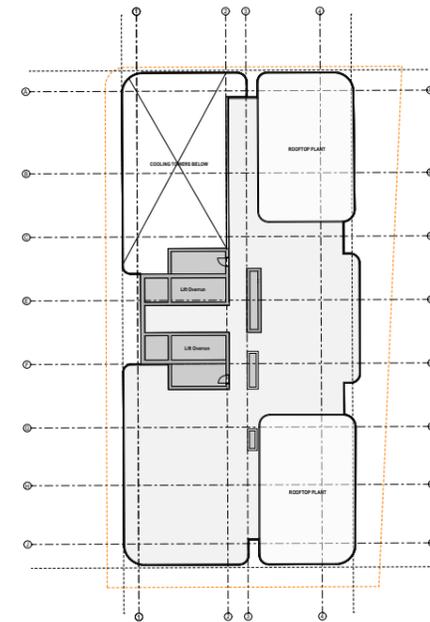


Image 110 Concept Roof Plan

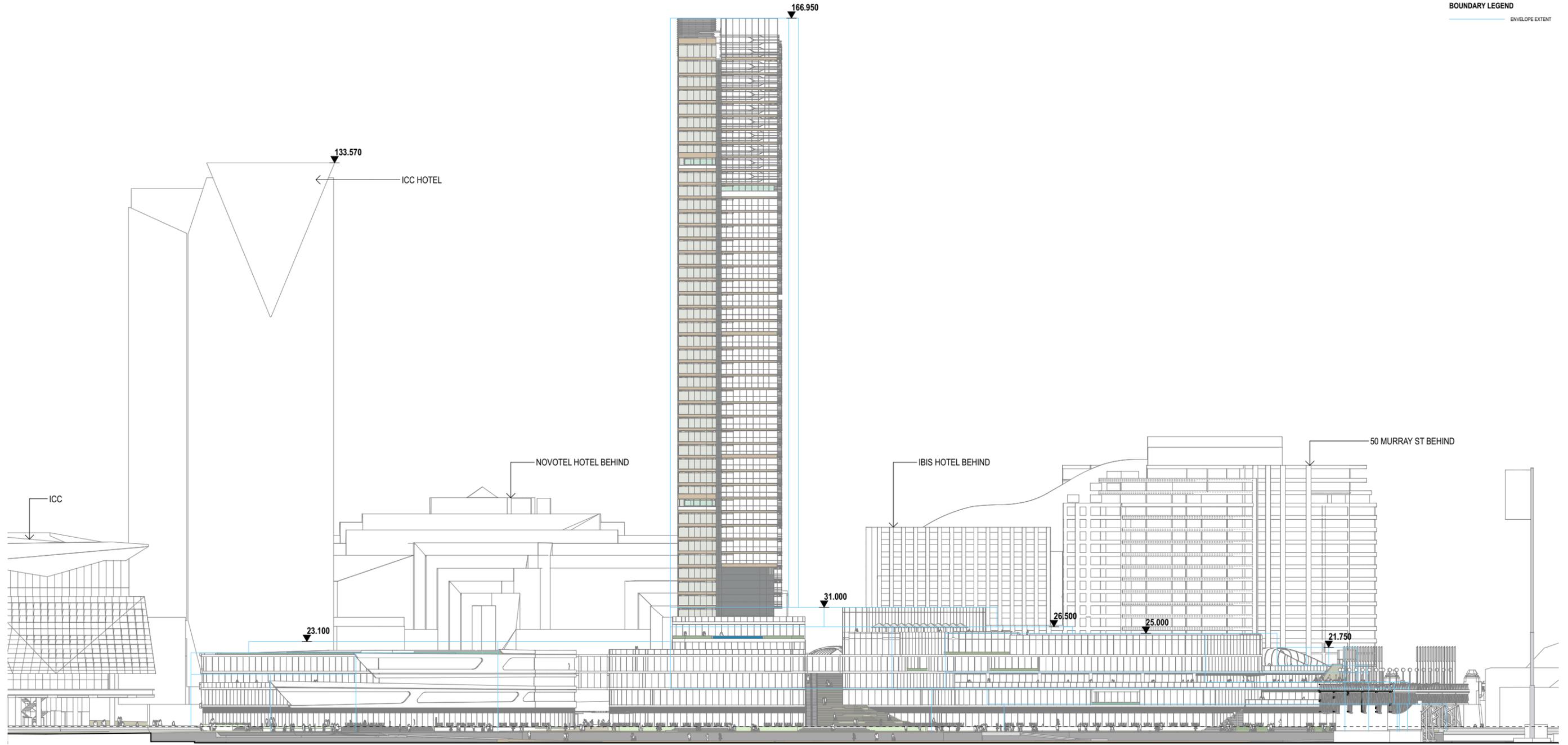


Image 111 Illustrative Eastern Elevation

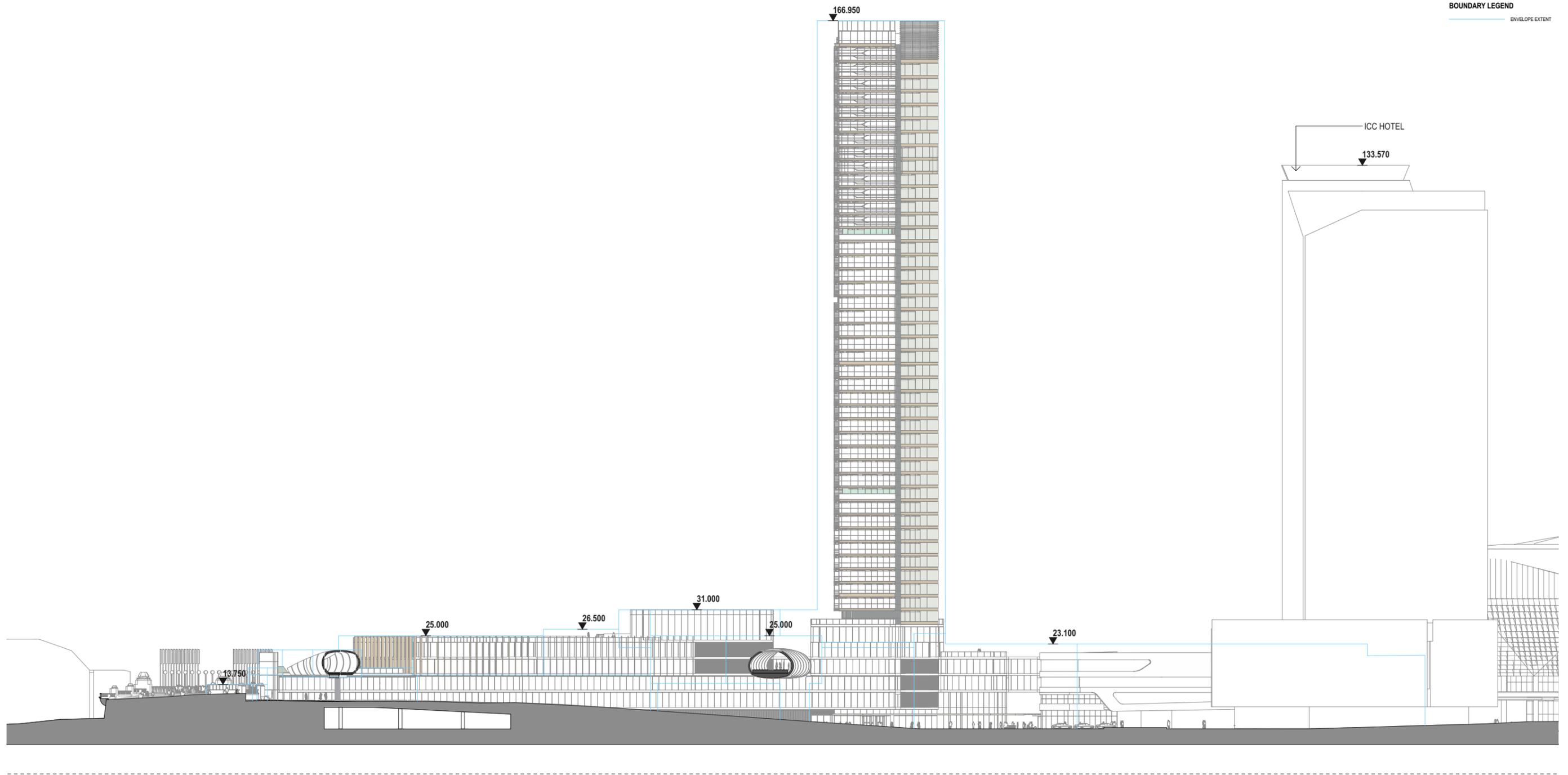


Image 112 Illustrative Western Elevation

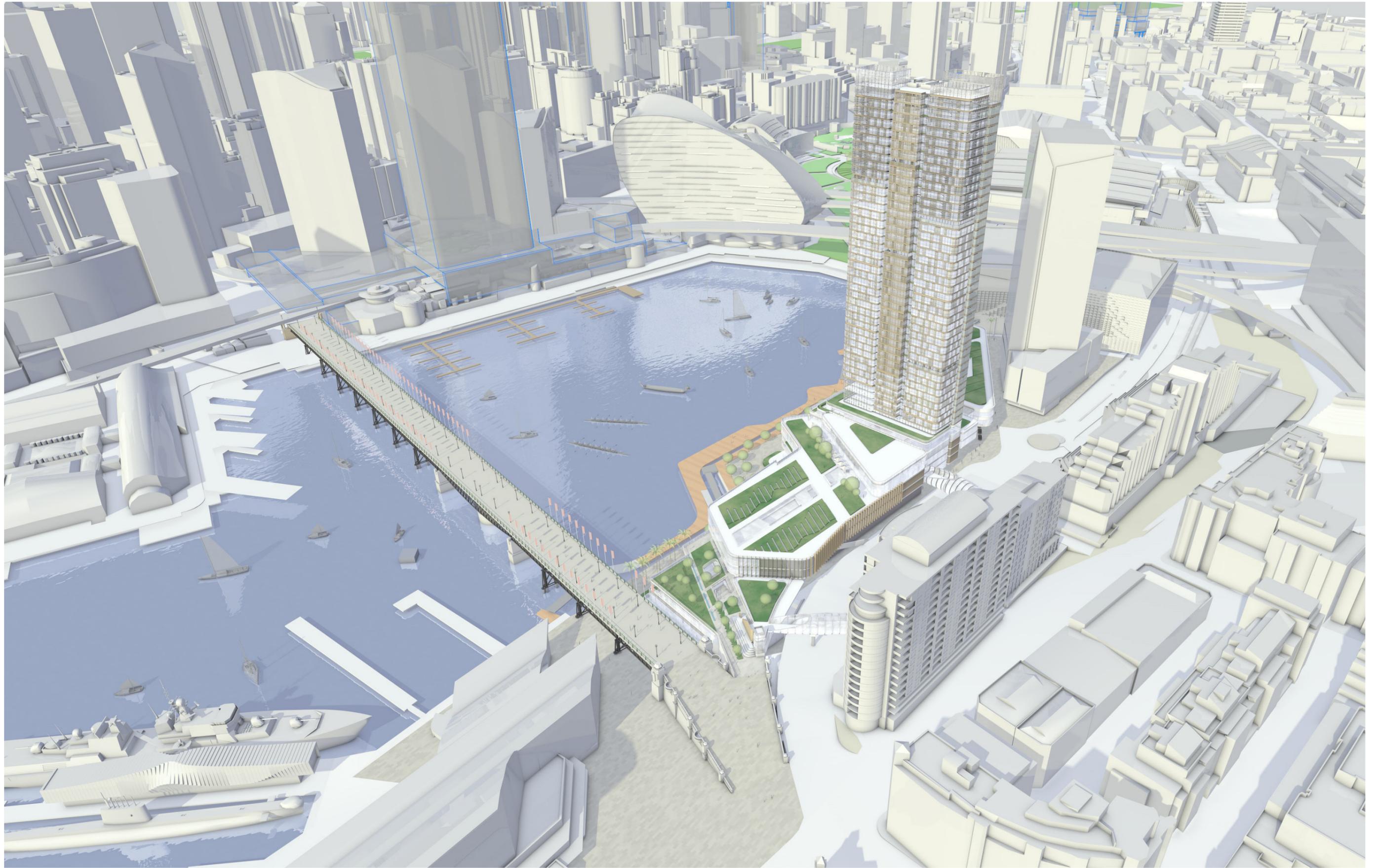


Image 113 Illustrative Scheme - Perspective

## Basement Parking, Traffic & Loading

Four levels of basement car parking are envisaged to service the development. Approximately 306 car spaces can be provided within these four levels for the residents. Refer to Traffic Report prepared by Arcadis for justification of car parking rates. The basement levels will also provide space for residential storage.

The loading dock serving the south podium and end of trip facilities as related to the retail/commercial component are located on Basement 1 level. Access is via the existing slip road to the west of Darling Drive which is accessed via the existing roundabout at the southern end of the site. Another Loading Dock for the north podium is located towards the north-west of the plan.

Opportunity for two new vehicle drop off are proposed along Darling Drive toward the south of the site for commercial and residential. Refer to the Traffic Plan as prepared by Arcadis for greater detail as related to traffic.



1 access to basement carpark via slip lane to west of Darling Drive - accessed from existing roundabout

2 new drop off past the basement carpark entry for commercial/retail/residential (separate identities for each asset)

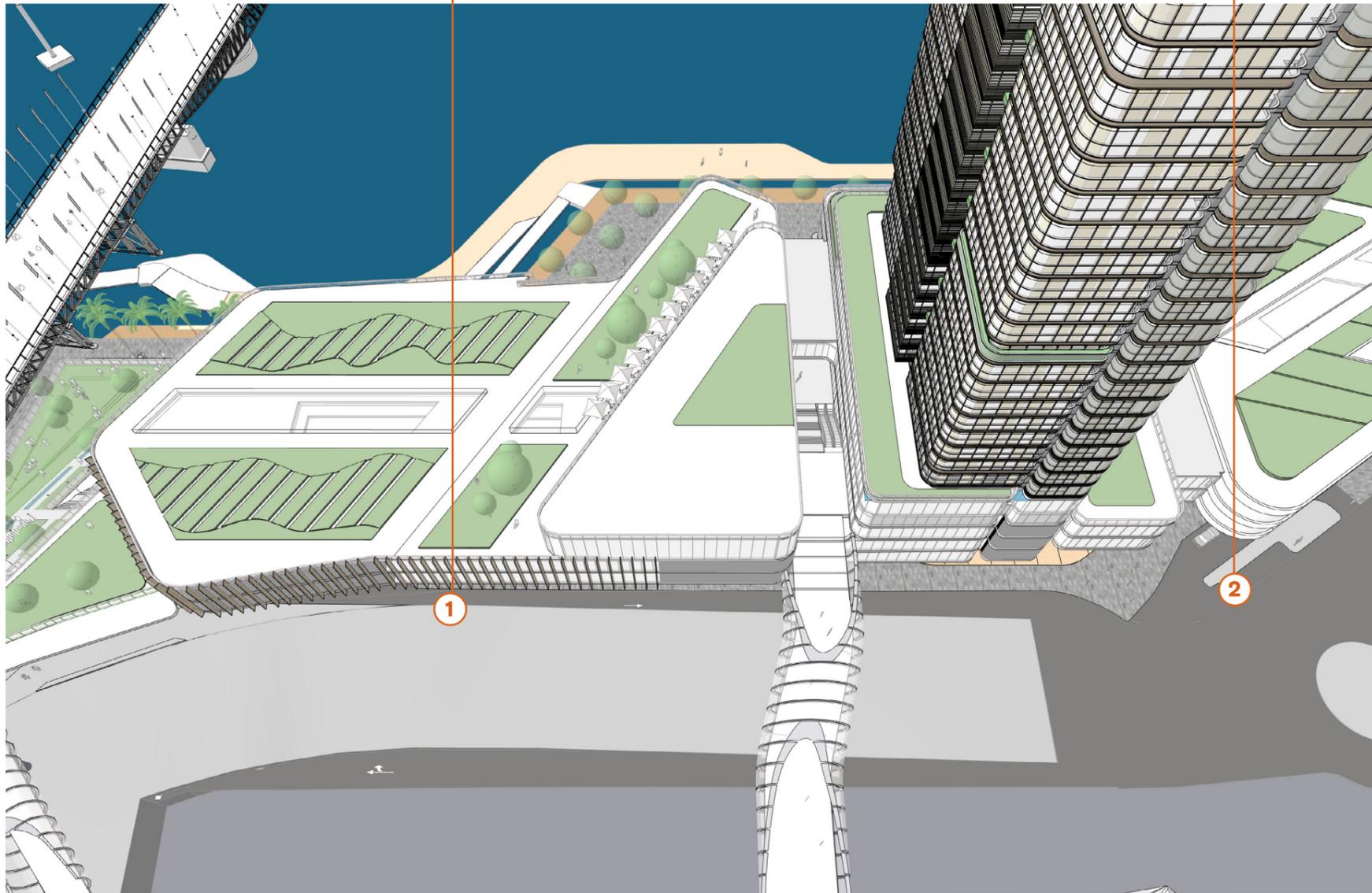


Image 114 Basement access, and Darling Drive drop off locations

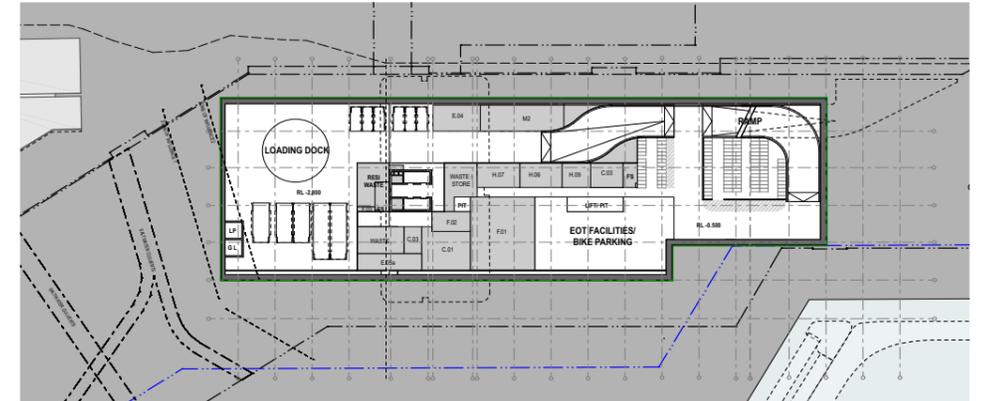


Image 115 Concept Plan - Basement 1

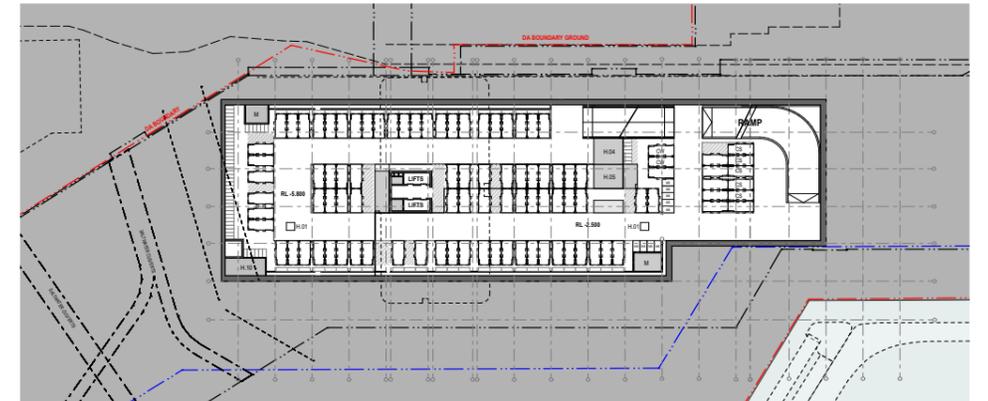


Image 116 Concept Plan - Basement 2

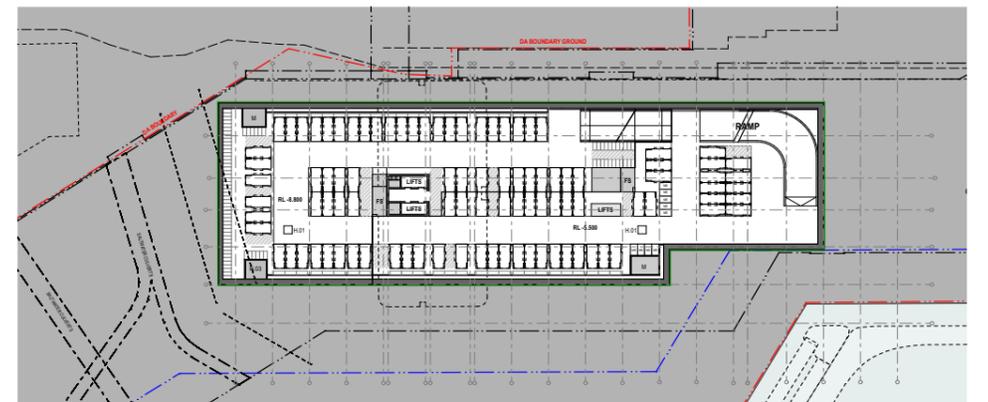


Image 117 Concept Plan - Basement 3



Image 118 Concept Plan - Basement 4

## Public Domain & Activation

Aspect Studios have prepared an SSDA Design Report that accompanies this submission which covers related to Public Domain works. Refer to this report for a detailed outline of the following initiatives:

- The Boulevard - The main spine and circulation of the public domain
- The Event stairs - Seating steps for viewing of large events
- Pyrmont Stairs Link - Seating steps and access to Pyrmont Bridge
- Pyrmont Bridge - Upgraded paving at Western entry
- Bunn Street Bridge - New bridge creating strong visual connection and pedestrian thoroughfare
- 50 Murray Street Bridge - Retention and upgrade of existing bridge to integrate with Harbourside redevelopment.
- Guardian Square - New plaza as the gateway to the waterfront from Pyrmont

These will be funded and delivered by Mirvac as Public Domain Works in kind.

In addition to the Works in kind, Mirvac is committing a fund for future activation works in the immediate precinct. The scope and design will be agreed with Landowner Place Management NSW through detailed design. Potential works could include:

- Public art
- Specialist lighting
- Heritage interpretation
- Street furniture
- AV&PA
- Public Wi-Fi

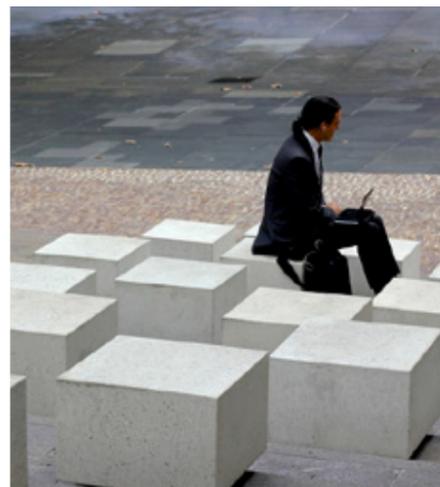


Image 119 Images Above : Illustrative Scheme

Image 120 Conceptual Images of Public Domain



- 1\_ Viewing pods to the Harbour
- 2\_ Local retail within seating in planting
- 3\_ Green link from pyrmont into Darling Harbour
- 4\_ Lawn with seating edges
- 5\_ Local pop-up events
- 6\_ Green roof

Image 121 Extract from Aspect Studio's Public Domain Design Report showing reference images for key elements

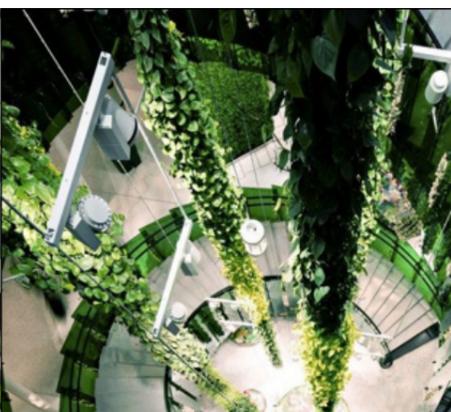


Image 122 Public Domain reference images

## Articulation and Materiality

### Uniquely Sydney

Pymont is a special place with a strong and unique character drawn from its rich history and distinctive topography and landscape. The facade systems and materiality should seek to ground the building in Pymont and the immediate waters edge landscape whilst the tower should adopt a higher degree of glazing and lightness.

The main façade of the residential tower is proposed to be high quality glazing with high VLT and low levels of reflectivity. With high level of articulation and variety of materials, the visual bulk of the building is reduced, particularly on the north and south facade.

The podium levels have opportunity to accommodate more organic forms or shapes with curved facades and high levels of articulation, with potential for green walls giving the form, texture and depth.



Image 123 Public Domain - as based on illustrative scheme





**TF1 Main Tower Facade**

High performance glazing, high VLT, low reflectivity.



**PF2 Podium Glazing**

Clear glass via a floor-by-floor system delivering external connectivity to the spaces behind.



**Timber**

Potential timber elements to be incorporated into the podium facades to provide warmth and softness.



**Stone**

Potential use of stone as a feature carried through the retail podium elements such that the facades and publicly accessible spaces are united through materiality and organic architectural expression.



## GFA Schedule

The total Gross Floor Area (GFA) of 87,000m<sup>2</sup> has been maintained.

	GFA (March 2020)	GFA(Sept 2020)
Residential	38,000	42,000
Non-residential	49,000	45,000
<b>Total</b>	<b>87,000</b>	<b>87,000</b>

- The GFA of the podium has reduced given the introduction of Guardian Square.
- The GFA of the tower has increased given the additional residential floors to offset loss of area associated with introduction of Guardian Square with no change to the floor plate size.
- The proposed GFA can be accommodated within the proposed building envelope with sufficient flexibility to break down the massing of the building, provide articulation, through site connections and open space in the DA Stage 2 Application. The distribution of GFA within the envelope is demonstrated in the following diagrams and GFA schedule.

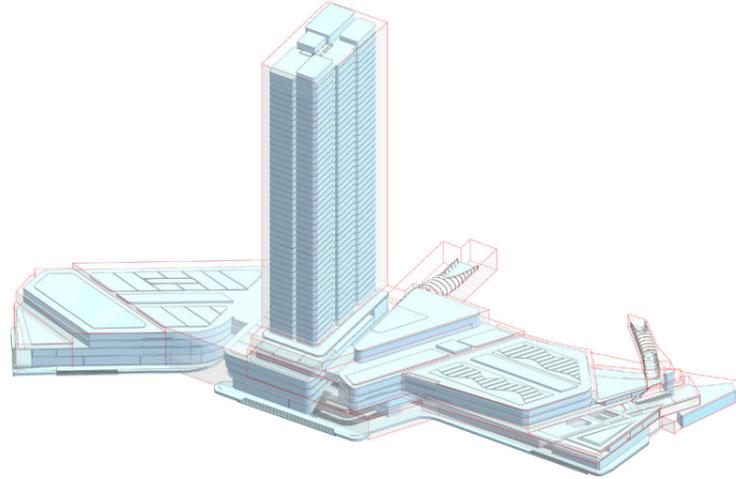


Image 124 Illustrative Scheme Massing Model / Proposed Envelope

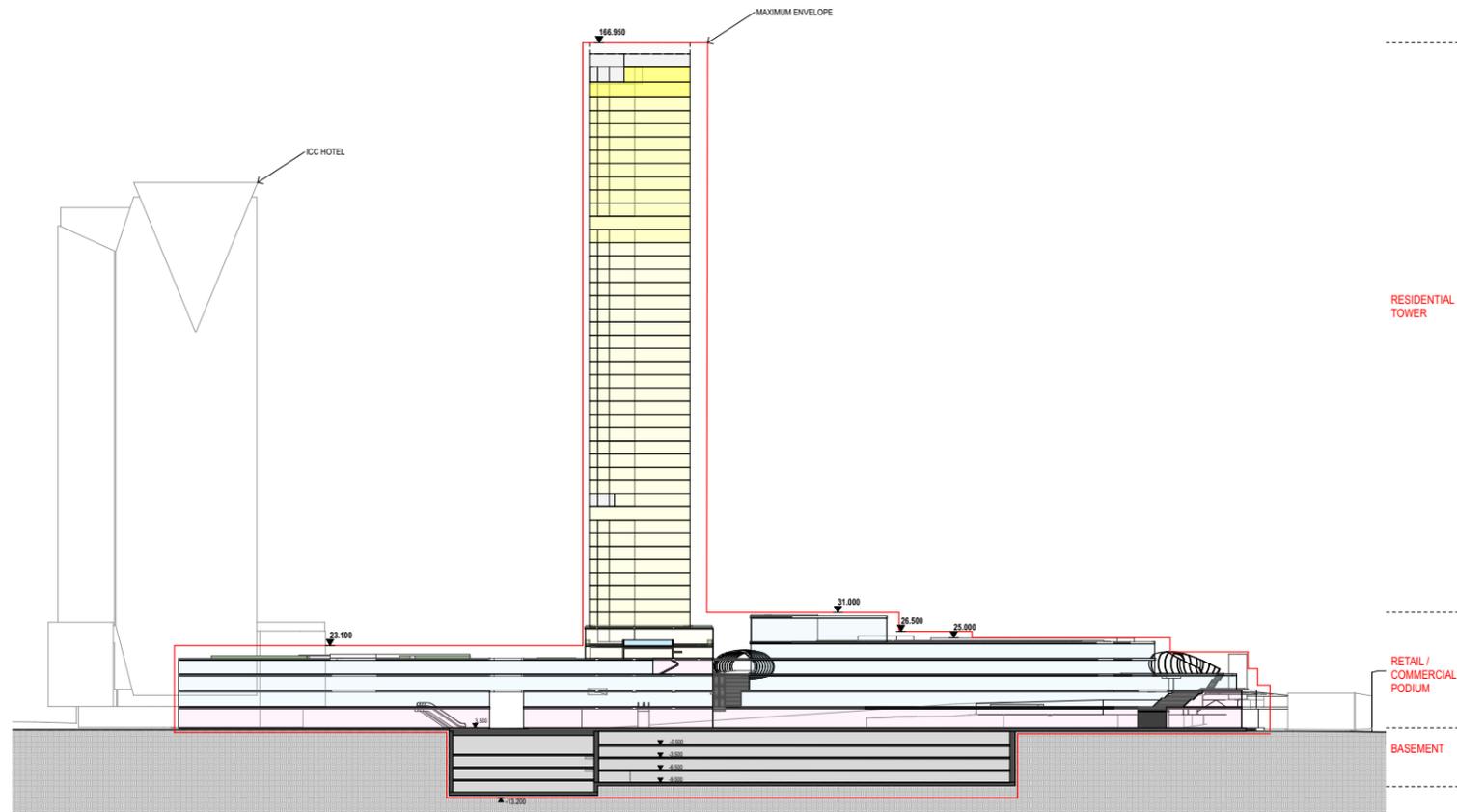


Image 125 Illustrative Scheme Indicative Section / Proposed Envelope

MVHS	HARBOURSIDE ILLUSTRATIVE SCHEME								MARCH 2020 SCHEME		
	RL	F/F	Typical Floor Plate	Illustrative GFA	Max BEA	Max GFA (90%)	% of Illustrative GFA to Max GFA		Non Resi GFA	Resi GFA	
<b>RESIDENTIAL</b>											
TOP RL	166.95										
Roof feature	164.30	2.65	FEATURE								
Level 48 - Plant	161.30	3	Plant								
Level 47 - Resi 42 Penthouse & Plant	157.60	3.7	PENT	728	1507	1357	53.7%				
Level 46 - Resi 41 Sub Penthouse	153.90	3.7	PENT	928	1507	1357	68.4%				
Level 45 - Resi 40	150.75	3.15	3 BED	948	1507	1357	69.9%				
Level 44 - Resi 39	147.60	3.15	3 BED	948	1507	1357	69.9%				
Level 43 - Resi 38	144.45	3.15	3 BED	948	1507	1357	69.9%		938		
Level 42 - Resi 37	141.30	3.15	3 BED	948	1507	1357	69.9%		938		
Level 41 - Resi 36	138.15	3.15	3 BED	948	1507	1357	69.9%		958		
Level 40 - Resi 35	135.00	3.15	3 BED	948	1507	1357	69.9%		958		
Level 39 - Resi 34	131.85	3.15	3 BED	948	1507	1357	69.9%		958		
Level 38 - Resi 33	128.70	3.15	3 BED	948	1507	1357	69.9%		958		
Level 37 - Resi 32	125.55	3.15	3 BED	948	1507	1357	69.9%		958		
Level 36 - Resi 31	122.40	3.15	2 BED	936	1507	1357	69.0%		958		
Level 35 - Resi 30	119.25	3.15	2 BED	936	1507	1357	69.0%		958		
Level 34 - Resi 29	116.10	3.15	2 BED	936	1507	1357	69.0%		958		
Level 33 - Resi 28	112.95	3.15	2 BED	936	1507	1357	69.0%		946		
Level 32 - Resi 27	109.80	3.15	2 BED	936	1507	1357	69.0%		946		
Level 31 - Resi 26	106.65	3.15	2 BED	936	1507	1357	69.0%		946		
Level 30 - Resi 25	103.50	3.15	2 BED	936	1507	1357	69.0%		946		
Level 29 - Resi 24	100.35	3.15	2 BED	936	1507	1357	69.0%		946		
Level 28 - Resi 23	97.20	3.15	2 BED	936	1507	1357	69.0%		946		
Level 27 - Resi 22	94.05	3.15	2 BED	936	1507	1357	69.0%		946		
Level 26 - Resi 21	90.90	3.15	2 BED	936	1507	1357	69.0%		946		
Level 25 - Resi 20	87.75	3.15	2 BED	936	1507	1357	69.0%		946		
Level 24 - Resi 19	84.60	3.15	2 BED	936	1507	1357	69.0%		946		
Level 23 - Resi 18	81.45	3.15	2 BED	936	1507	1357	69.0%		946		
Level 22 - Resi 17	78.30	3.15	2 BED	936	1507	1357	69.0%		946		
Level 21 - Resi 16	75.15	3.15	2 BED	936	1507	1357	69.0%		946		
Level 20 - Resi 15	72.00	3.15	1 BED	921	1507	1357	67.9%		946		
Level 19 - Resi 14	68.85	3.15	1 BED	921	1507	1357	67.9%		931		
Level 18 - Resi 13	65.70	3.15	1 BED	921	1507	1357	67.9%		931		
Level 17 - Resi 12	62.55	3.15	1 BED	921	1507	1357	67.9%		931		
Level 16 - Resi 11	59.40	3.15	1 BED	921	1507	1357	67.9%		931		
Level 15 - Resi 10 / Plant	56.25	3.15	1 BED	856	1507	1357	63.1%		931		
Level 14 - Resi 09	53.10	3.15	1 BED	921	1507	1357	67.9%		931		
Level 13 - Resi 08	49.95	3.15	1 BED	921	1507	1357	67.9%		931		
Level 12 - Resi 07	46.80	3.15	1 BED	921	1507	1357	67.9%		931		
Level 11 - Resi 06	43.65	3.15	1 BED	921	1507	1357	67.9%		931		
Level 10 - Resi 05	40.50	3.15	1 BED	921	1507	1357	67.9%		931		
Level 9 - Resi 04	37.35	3.15	1 BED	921	1507	1357	67.9%		931		
Level 8 - Resi 03	34.20	3.15	3 BED	948	1507	1357	69.9%		958		
Level 7 - Resi 02	31.05	3.15	3 BED	948	1507	1357	69.9%		958		
Level 6 - Resi 01	27.90	3.15	3 BED	948	1507	1357	69.9%		958		
<b>COMMERCIAL / RETAIL</b>											
Podium Level 5 - Resi Communal/Commercial	24.00	3.9	1,091	1,300	3,560	3,204	74.6%	2,391	585	1,080	1,665
Podium Level 4 - Commercial/Resi Communal	20.10	3.9	4,277	1,400	9,209	8,288	68.5%	5,677	7,561	845	8,406
Podium Level 3 - Commercial	16.30	3.8	10,969		13,700	12,330	89.0%	10,969	8,580		8,580
Podium Level 2 - Commercial/Retail	12.50	3.8	9,816		14,692	13,223	74.2%	9,816	11,183		11,183
Podium Level 1 - Commercial/Retail	8.50	4	10,648		15,886	14,297	74.5%	10,648	11,394		11,394
Ground Floor - Retail	3.50	5	8,195	295.71	16,162.4	14,546	58.4%	8,491	9,395	425	9,820
<b>TOTALS</b>			<b>44,996</b>	<b>41,991</b>		<b>122,867</b>	<b>70.8%</b>	<b>86,987</b>	<b>48,698</b>	<b>38,249</b>	<b>86,947</b>
<b>DIFFERENCE</b>			<b>-3,702</b>	<b>3,742</b>				<b>40</b>			

### Definitions:

- Maximum Building Envelope Area (BEA): This is the maximum area per floor, as per the proposed envelope in this submission.
- Maximum GFA (@90%): This is 90% of the above figure with 10% deduction representing an allowance for plant, etc. to provide a theoretical maximum GFA within the proposed envelope.
- Illustrative GFA: This is proposed GFA based on the illustrative scheme.
- Percentage of Illustrative Scheme GFA to maximum GFA: The percentage difference between the illustrative scheme GFA to the maximum scheme GFA



Image 126 Illustrative Proposal showing intent for Waterfront Public Domain

# 10.0 Response to Department of Planning, Infrastructure & Environment: Key Issue 8, 9

Key Issues as nominated in DPIE letter ref:SSD 7874

## Solar Analysis - Private Residences

Shadow impacts illustrates the mid winter shadow impacts to the private residential properties to the west and south west affected by the proposal.

The diagrams to the right show that shadow impacts to adjacent residential properties are limited. The original proposal for a tower located towards the north of the site resulted in some limited shadow impacts to 50 Murray Street. These have now be completely removed.

A sun eye view analysis of the Goldsbrough Apartments can be found on the following page.

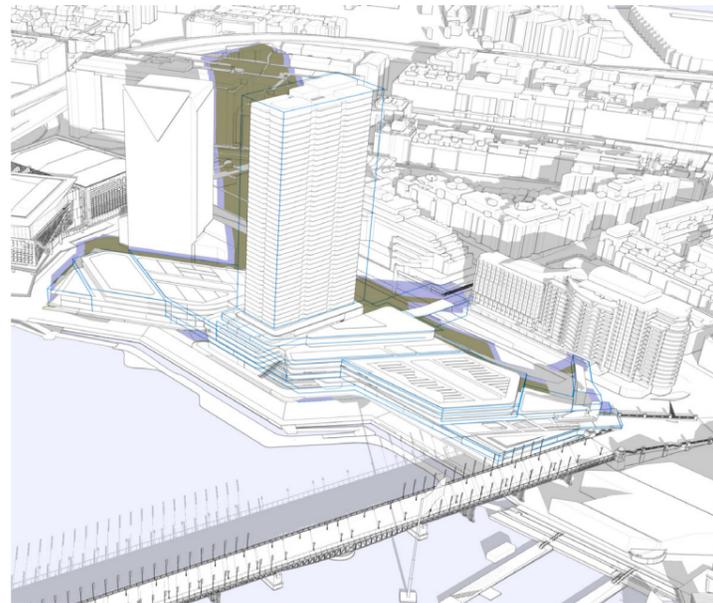


Image 127 June 21, 9am

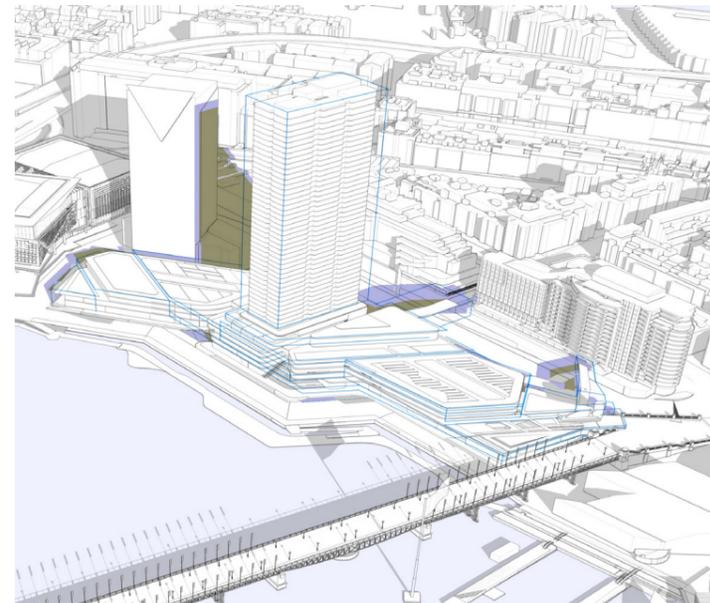


Image 128 June 21, 10am

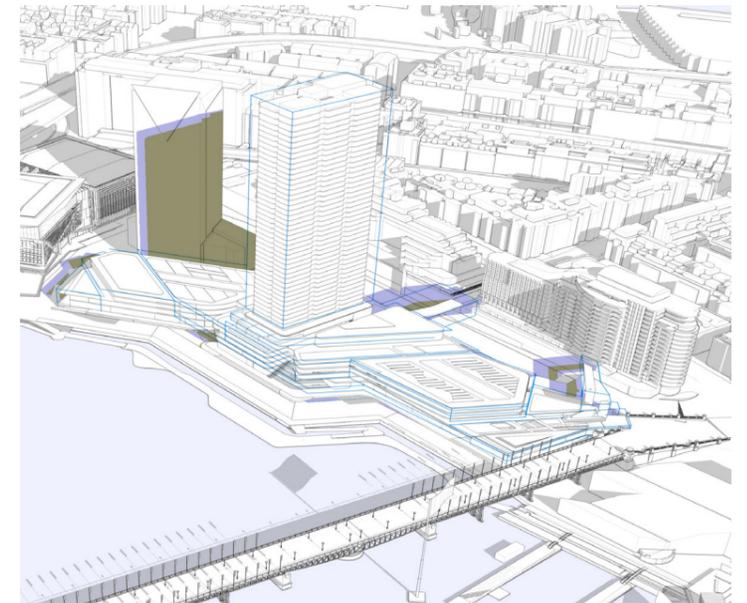


Image 129 June 21, 11am

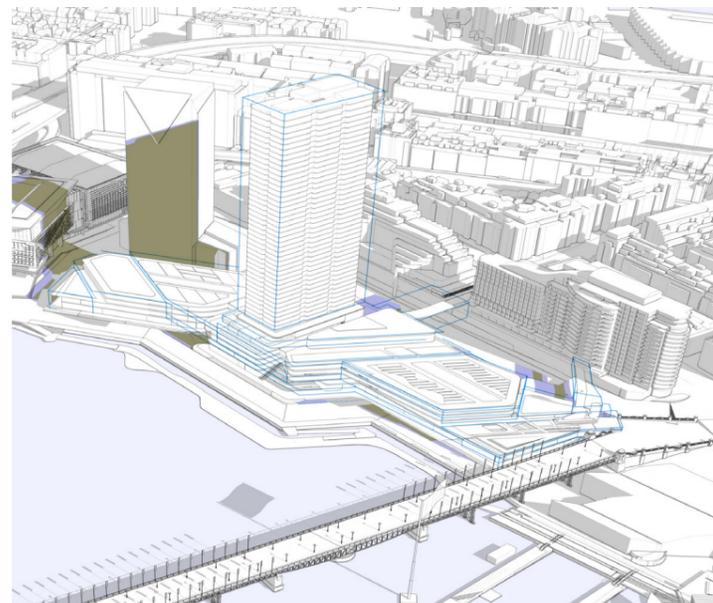


Image 130 June 21, 12pm

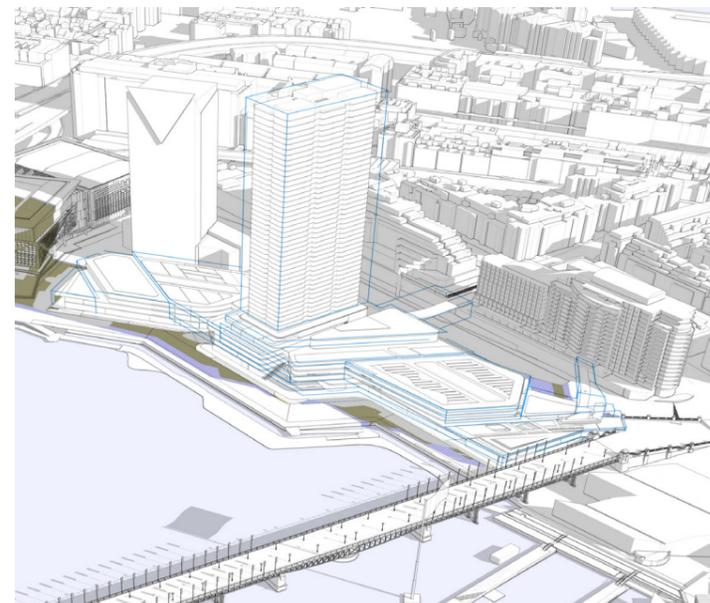


Image 131 June 21, 1pm

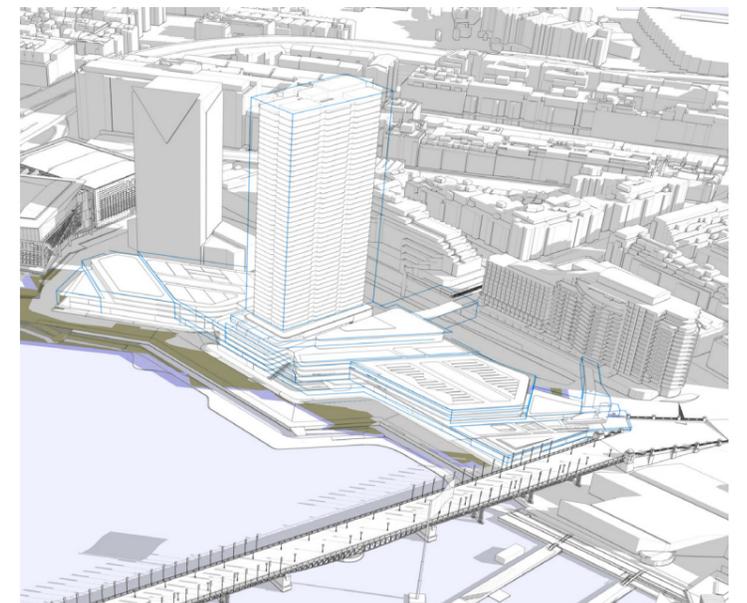


Image 132 June 21, 2pm

- EXISTING SHADOWS (INCLUDING EXISTING HARBOURSIDE RETAIL)
- PROPOSED ENVELOPE SHADOWS
- INDICATIVE CONCEPT SCHEME SHADOWS
- OVERLAPPING SHADOWS FROM BOTH THE PROPOSED ENVELOPE AND THE INDICATIVE CONCEPT SCHEME

## Sun Eye View Analysis

The sun eye view analysis illustrates the mid winter shadow impacts of the proposal to the private residential properties to the south west, the Goldsbrough Building.

The diagrams to the right show that shadow impacts to The Goldsbrough Building are limited and there is no change in the number of apartments in the building that receive a minimum of 2 hours direct sunlight.

Image 133 shows the solar heat map of the units affected by the development in mid winter. All affected units receives between 3 to 6 hours of sunlight. This demonstrates that the proposal achieves compliance with the Apartment Design Guide (ADG).

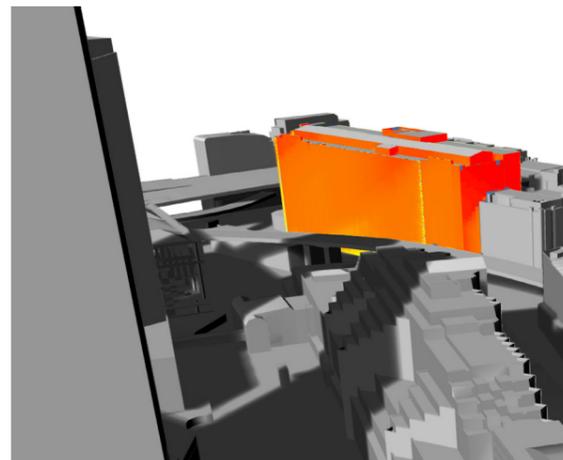
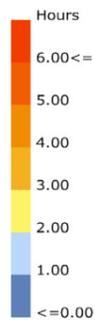


Image 133 Solar Analysis (Mid Winter) - Goldsbrough Building with proposed envelope in the foreground

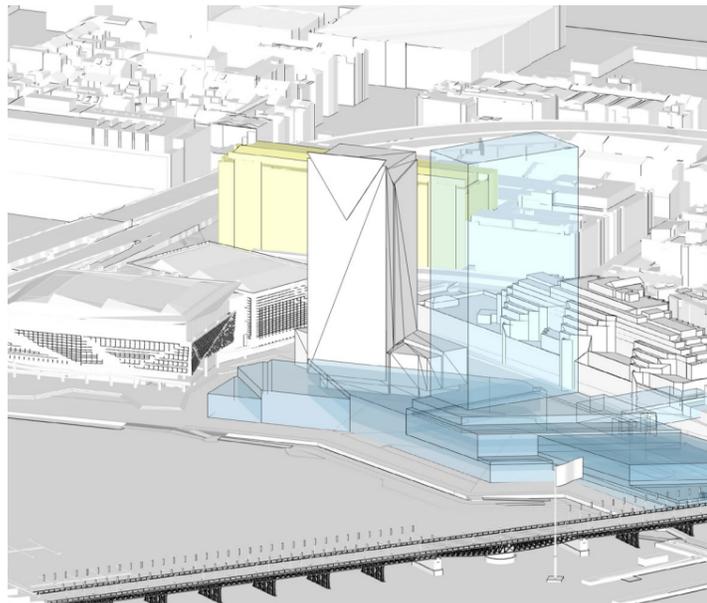


Image 134 June 21, 9am

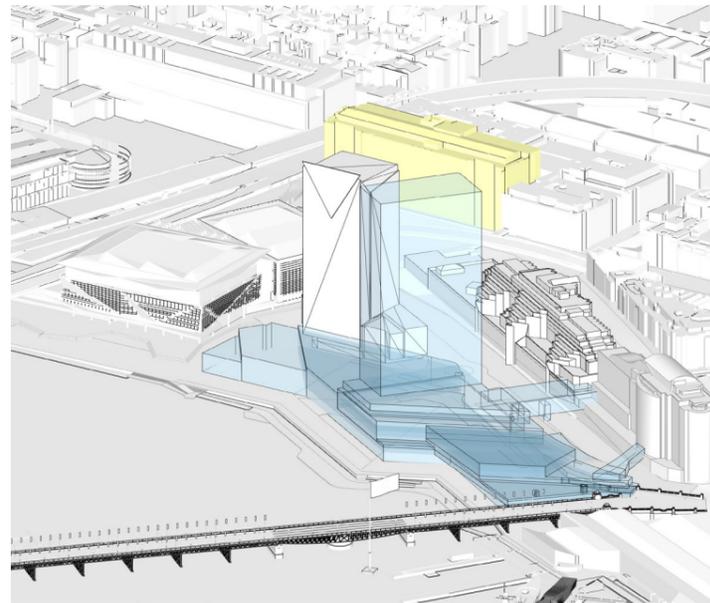


Image 135 June 21, 10am

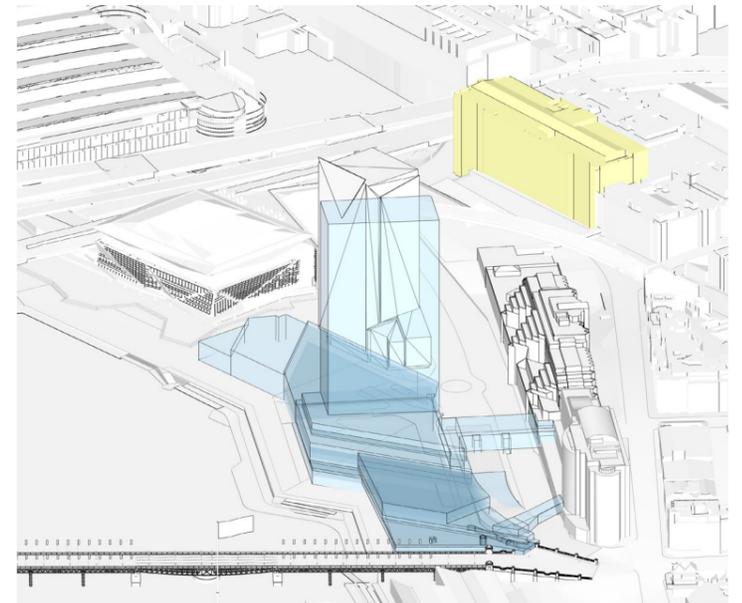


Image 136 June 21, 11am

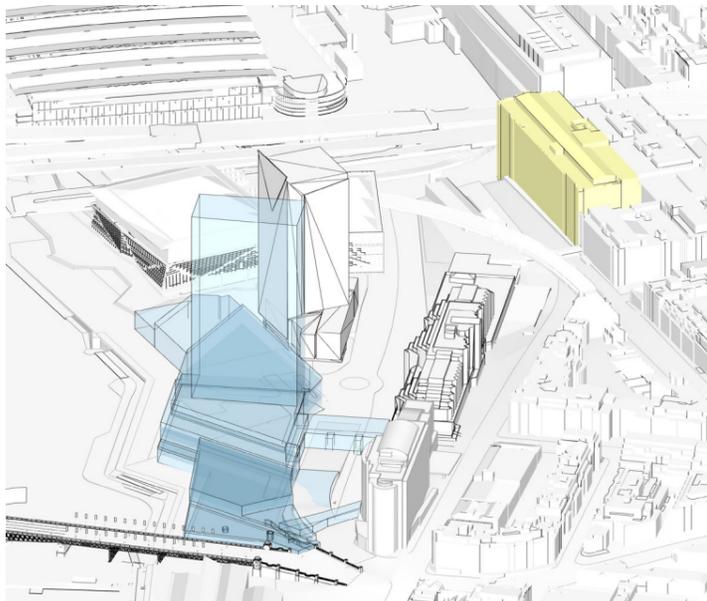


Image 137 June 21, 12pm

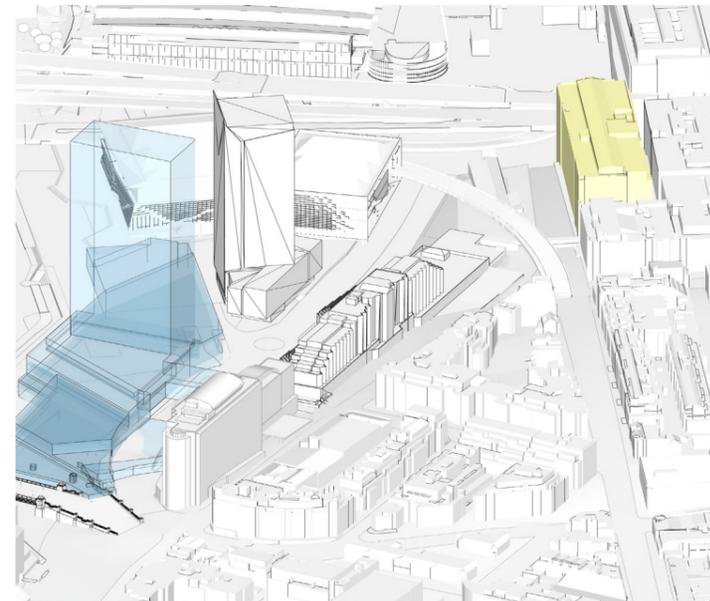


Image 138 June 21, 1pm

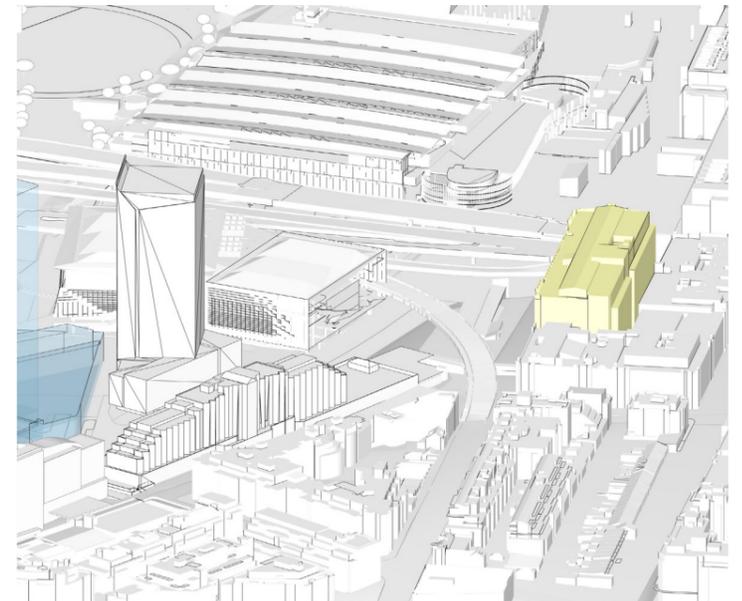


Image 139 June 21, 2pm

### Shadow Analysis - Foreshore/Promenade

Shadow impacts are illustrated within this report via updated shadow diagrams. Mid winter shadow impacts to the waterfront are limited to after 1.00pm and are considered acceptable given overall improvement to the public domain and overall precinct.



Image 140 June 21, 9am



Image 141 June 21, 9:15am



Image 142 June 21, 9:30am



Image 143 June 21, 9:45am



Image 144 June 21, 10am



Image 145 June 21, 10:15am

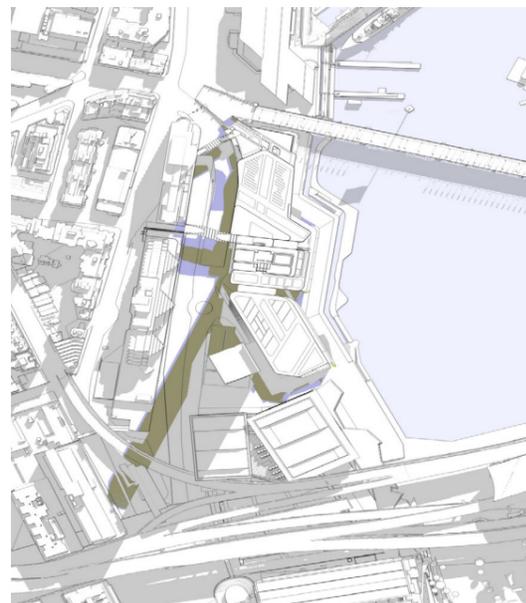


Image 146 June 21, 10:30am

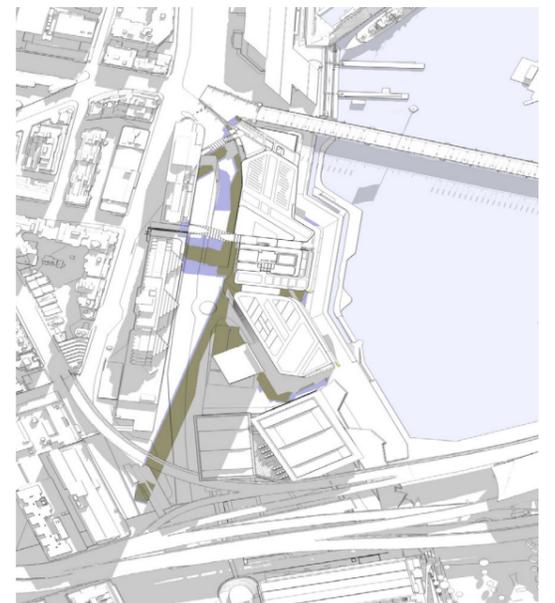


Image 147 June 21, 10:45am

- EXISTING SHADOWS (INCLUDING EXISTING HARBOURSIDE RETAIL)
- PROPOSED ENVELOPE SHADOWS
- INDICATIVE CONCEPT SCHEME SHADOWS
- OVERLAPPING SHADOWS FROM BOTH THE PROPOSED ENVELOPE AND THE INDICATIVE CONCEPT SCHEME

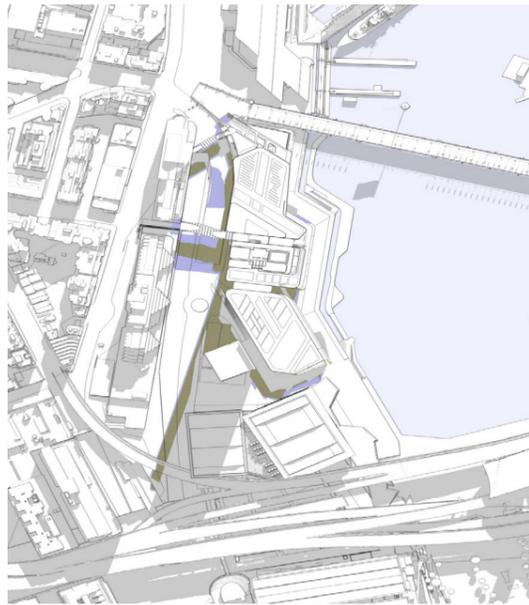


Image 148 June 21, 11am

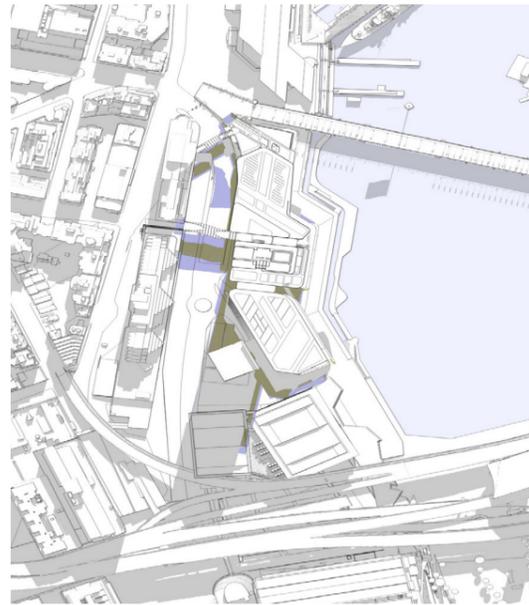


Image 149 June 21, 11:15am

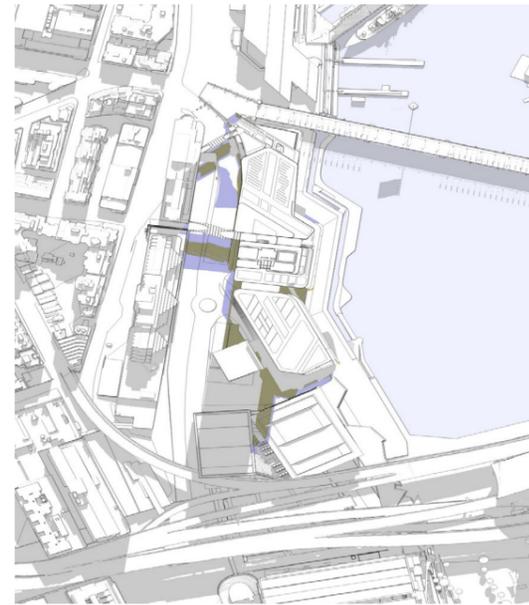


Image 150 June 21, 11:30am

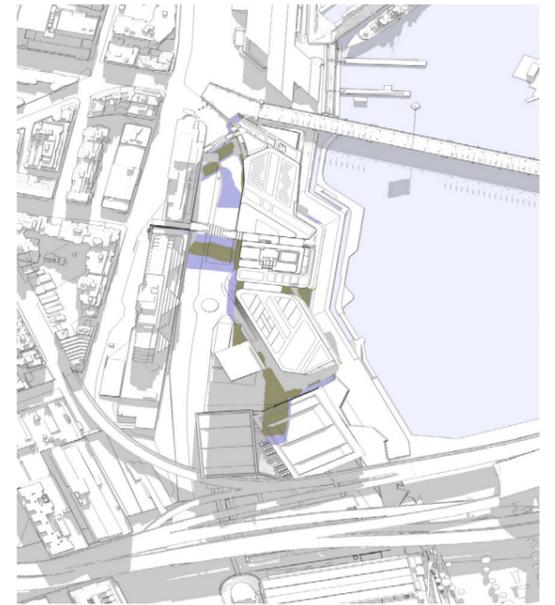


Image 151 June 21, 11:45am

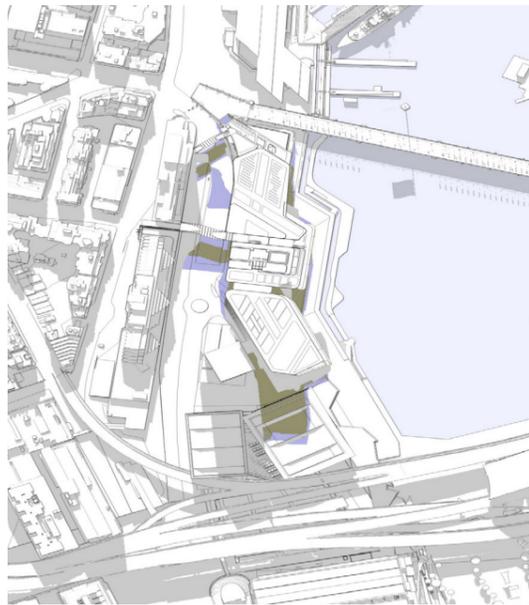


Image 152 June 21, 12pm

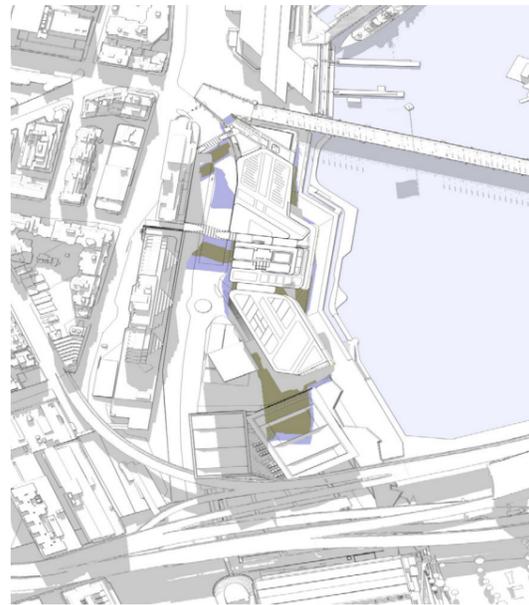


Image 153 June 21, 12:15pm

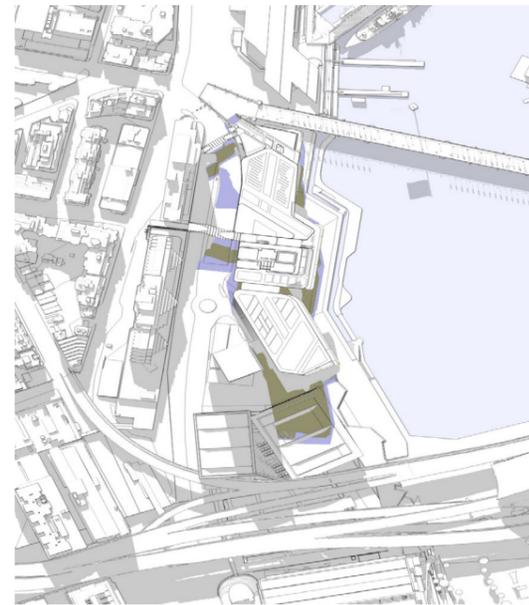


Image 154 June 21, 12:30pm

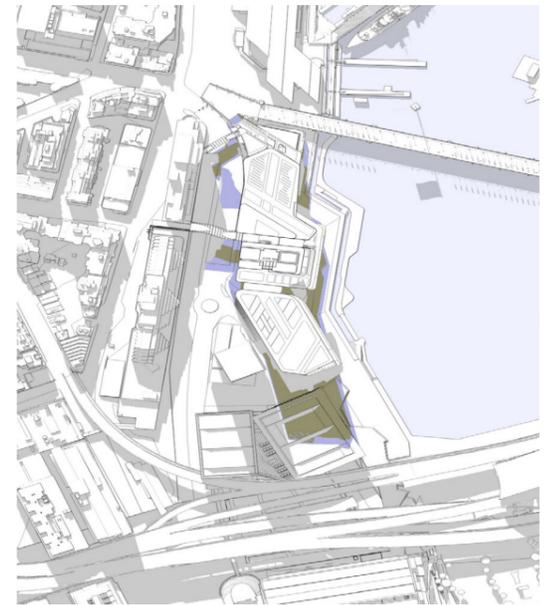


Image 155 June 21, 12:45pm

- EXISTING SHADOWS (INCLUDING EXISTING HARBOURSIDE RETAIL)
- PROPOSED ENVELOPE SHADOWS
- INDICATIVE CONCEPT SCHEME SHADOWS
- OVERLAPPING SHADOWS FROM BOTH THE PROPOSED ENVELOPE AND THE INDICATIVE CONCEPT SCHEME

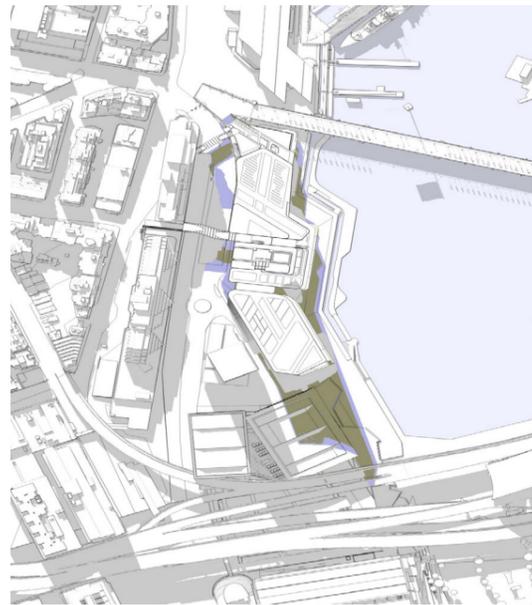


Image 161 June 21, 1pm



Image 162 June 21, 1:15pm



Image 163 June 21, 1:30pm

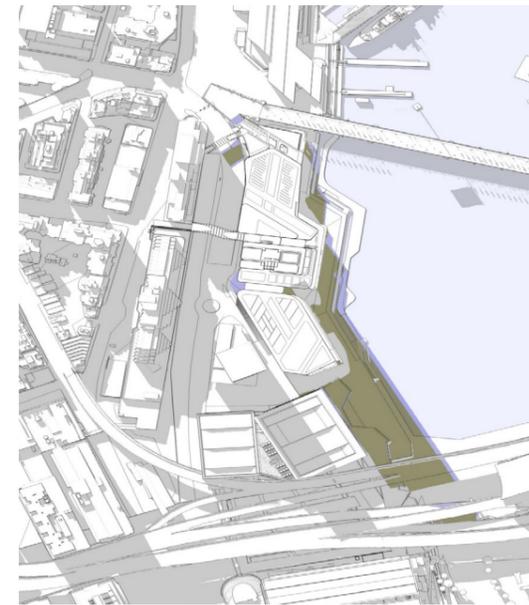


Image 164 June 21, 1:45pm

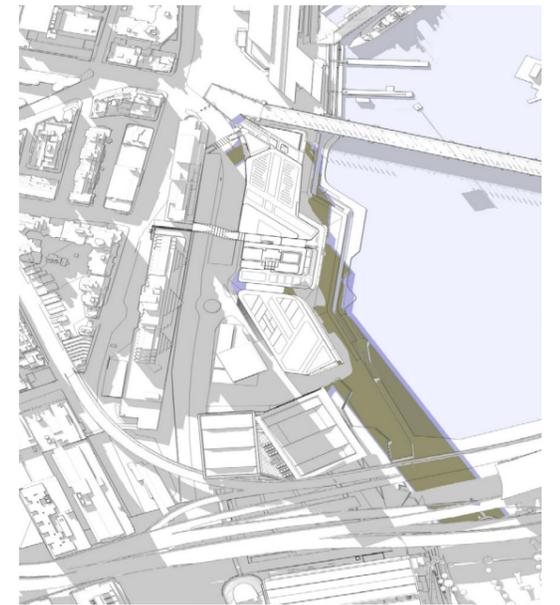


Image 156 June 21, 2pm

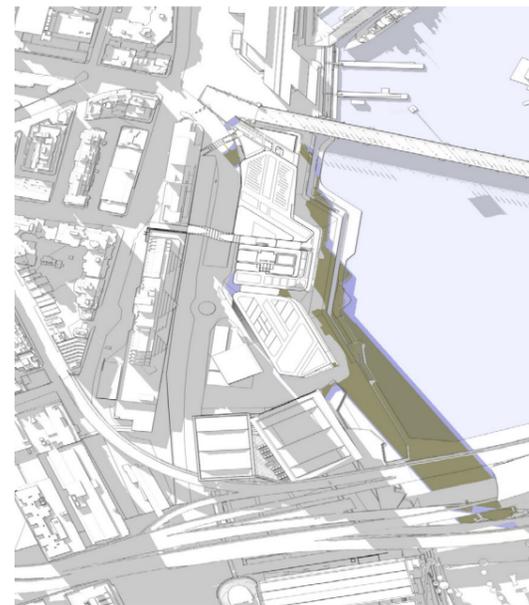


Image 157 June 21, 2:15pm

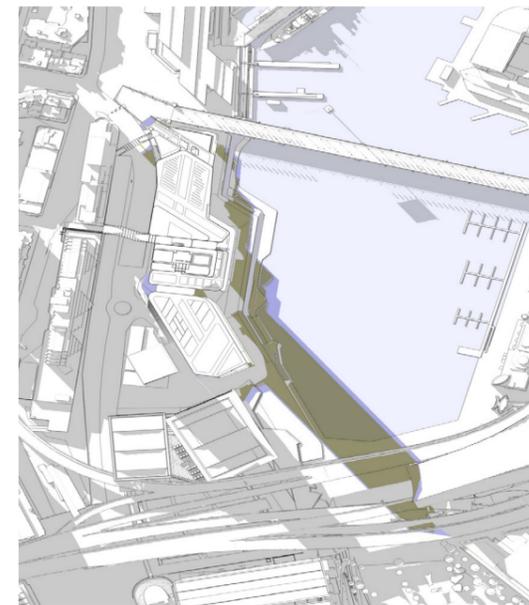


Image 158 June 21, 2:30pm

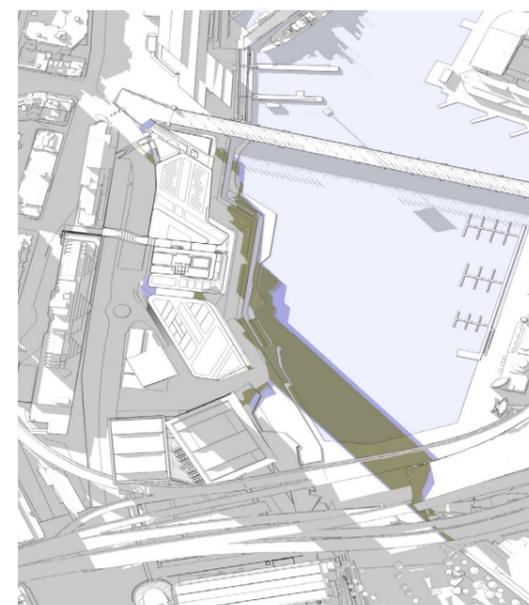


Image 159 June 21, 2:45pm

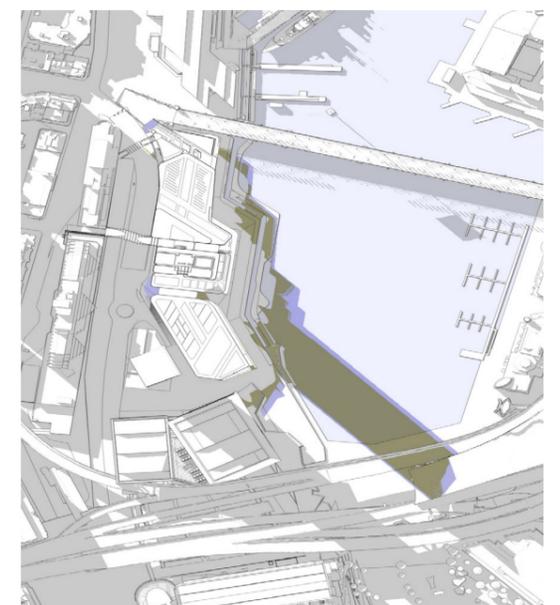


Image 160 June 21, 3pm

- EXISTING SHADOWS (INCLUDING EXISTING HARBOURSIDE RETAIL)
- PROPOSED ENVELOPE SHADOWS
- INDICATIVE CONCEPT SCHEME SHADOWS
- OVERLAPPING SHADOWS FROM BOTH THE PROPOSED ENVELOPE AND THE INDICATIVE CONCEPT SCHEME

# 11.0 Response to Department of Planning, Infrastructure & Environment: Key Issue 16-18

Key Issues as nominated in DPIE letter ref:SSD 7874

Key Issue 16-18: Land Use	Response to Issue
<ol style="list-style-type: none"> <li>1. Clarify how the proposed residential use will not prejudice the 24-hour operation of the public domain and wider precinct, or special events at Darling Harbour. This should include consideration of potential light and noise associated with special events (including Vivid, fireworks and other events within the SICCEP).</li> <li>2. Clarify the potential future noise mitigation strategies/ measures and provide details of the proposed alternative noise criteria.</li> <li>3. Demonstrate the types and effectiveness of potential façade and acoustic treatments available and how effective mitigation measures can align with ADG requirements for natural ventilation.</li> </ol> 	<ol style="list-style-type: none"> <li>1. Refer to Ethos Urban Report.</li> <li>2. The proposal seeks to minimise the impacts of external noise and pollution through various design solutions: <ul style="list-style-type: none"> <li>— Siting and layout of the apartments: The primary orientation of the building towards the north ensures that majority of the apartments will be oriented away from the major noise sources (Darling Harbour, City West Link, Tumbalong Park, SICCEEP).</li> <li>— Vertical Separation: The lowest residential floor in the illustrative scheme is set at RL27.90, ie: 24.4m above the waterfront public domain and set back approximately 14m from the podium. This vertical separation ensures that there will be minimal amenity impact for tower residents during Darling Harbour events.</li> <li>— Semi-enclosed balconies to mitigate noise</li> <li>— Design of façade elements (glass thickness and acoustic rating of glazing assembly)</li> <li>— Landscape buffer zones: The illustrative scheme shows all roof top areas of the podium as activated or with non accessible landscaping. Non accessible landscaped (green) areas are provided where privacy to adjacent neighbouring residences has been given precedence.</li> </ul> </li> <li>3. The proposal will undertake a performance pathway according the City of Sydney Performance pathway guideline to ensure the adequacy of natural ventilation in noisy environments. A detailed noise prediction study that takes into account room dimensions, setbacks from roadways and waterfront, window areas and noise data will be undertaken, alongside an assessment of ventilation system to achieve required indoor noise levels. Alternative ventilation strategies will then be proposed to ensure a satisfactory outcome. Potential alternative solutions are illustrated in the following pages. Appropriate amenity at a detail level, eg: facade treatments and acoustics will be integrated during design development as part of the SSDA2 process.</li> </ol> <p>This design approach is similar to other residential projects recently submitted to the City of Sydney for approval, including 189 Kent Street, 505 George Street and 77 Market Street. The SSDA2 proposal will build upon these approaches and precedence to ensure a satisfactory outcome.</p>

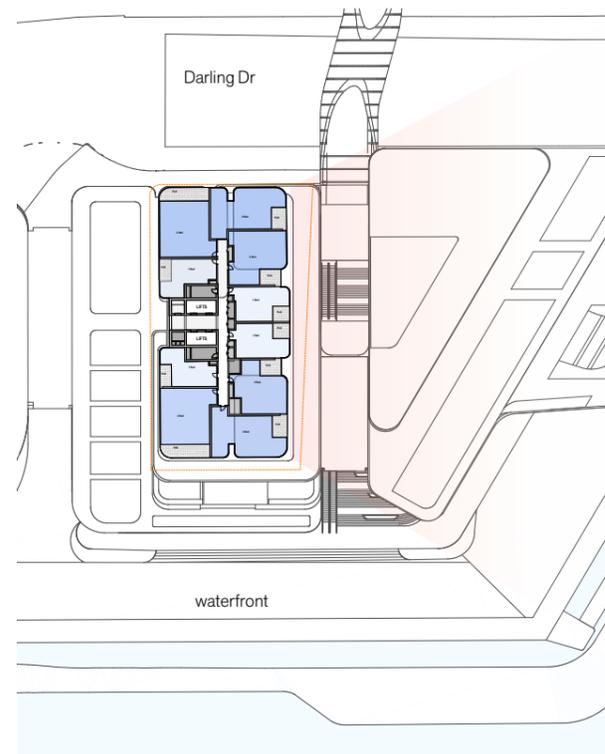


Image 165 Orientation of apartments away from major noise sources

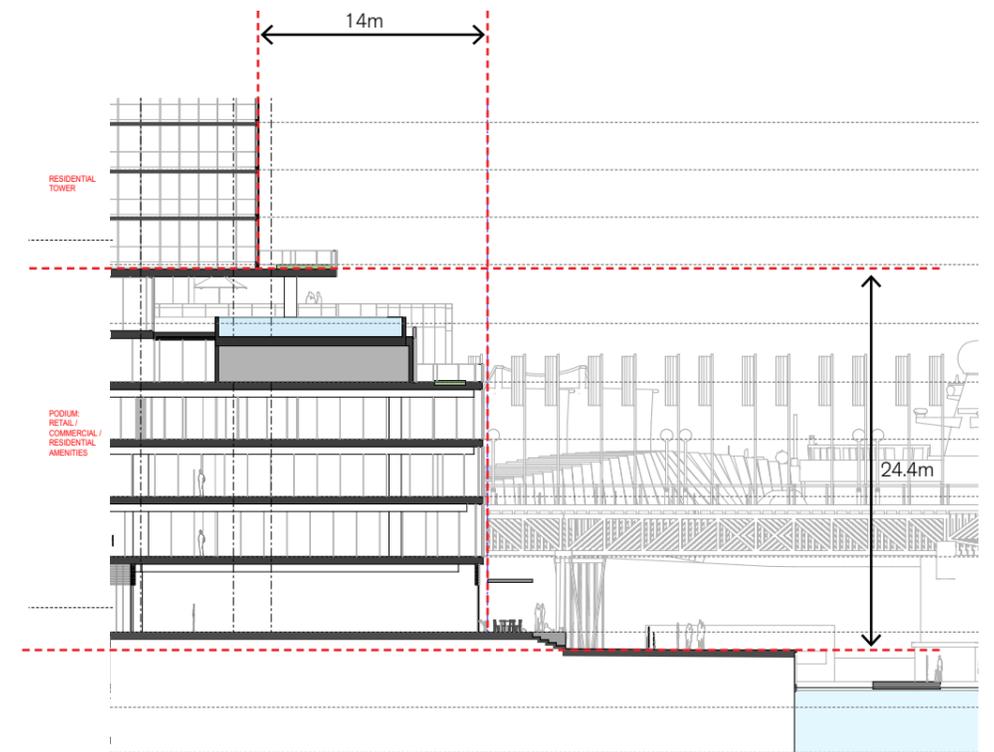


Image 166 Podium Section showing Vertical Separation between residential tower and Darling Harbour

**Potential Strategy 1: Ceiling Plenum**

An alternative potential solution to ensure ventilation in noisy environments is the integration of a ceiling plenum, as exemplified in a recently submitted development application at 189 Kent St Sydney.

The proposal comprises a horizontally orientated, acoustically attenuated, natural ventilation plenum above the balcony or living area/bedroom to facilitate air intake. An internal grille is provided at the interface to the room served by the plenum.

The concepts shown on the following pages are indicative only. Approval is not sought in the Concept Approval. Details will be developed during the design excellence process, with final detail subject of a Stage 2 DA.

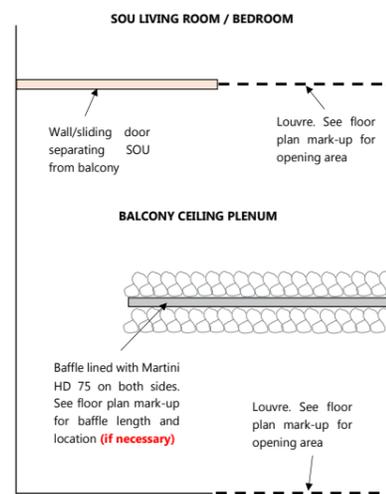


Image 167 Concept Plan: Ceiling Plenum with Balcony (Extract from Acoustic Report for 189 Kent St Sydney)

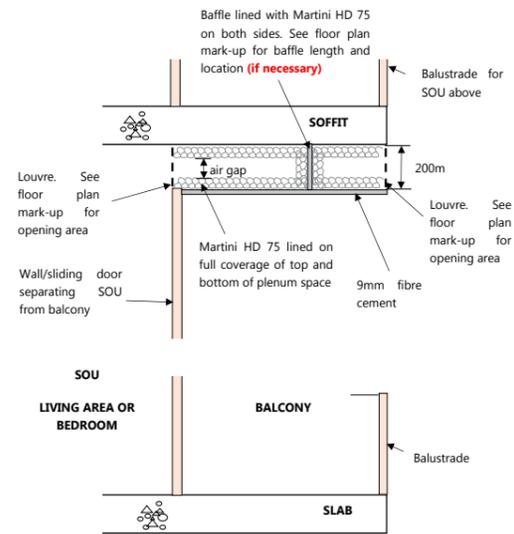


Image 168 Concept Section: Ceiling Plenum with Balcony (Extract from Acoustic Report for 189 Kent St Sydney)

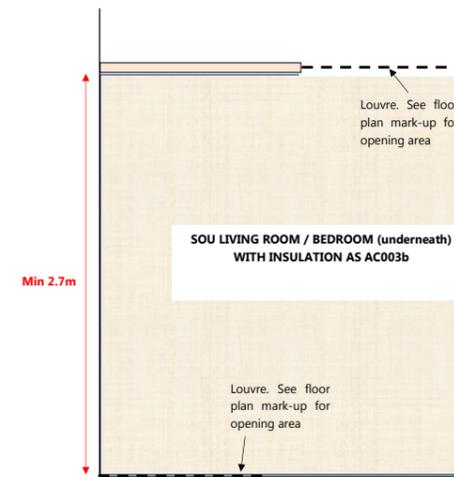


Image 169 Concept Plan: Ceiling Plenum without Balcony (Extract from Acoustic Report for 189 Kent St Sydney)

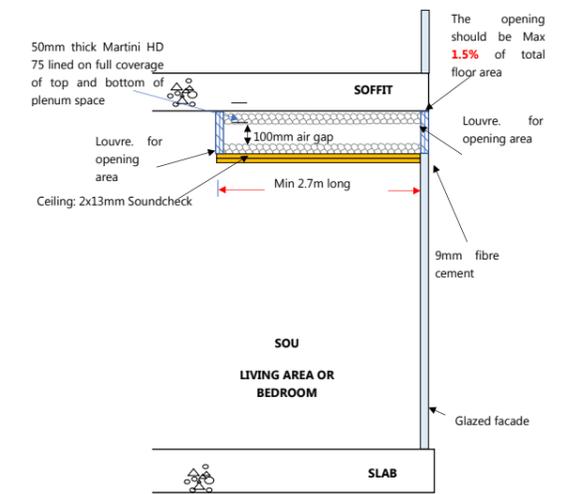


Image 170 Concept Section: Ceiling Plenum without Balcony (Extract from Acoustic Report for 189 Kent St Sydney)

**Potential Strategy 2: Acoustic Plenum - Facade**

An alternative potential solution to ensure ventilation in noisy environments is the design of an acoustic plenum on the facade, as exemplified in 505 George St, a recently submitted development application by Mirvac.

The proposal comprises a vertically orientated, acoustically attenuated, natural ventilation plenum. Architectural integration has been considered and the external face to outside comprises a relatively large perforated metal sheet. This perforated metal sheet transitions to a conventional weather proof louvre at the entry to the plenum proper. The plenum comprises acoustic lining, an operable damper and a fly screen. An internal grille is provided at the interface to the room served by the plenum.

The plenum is located adjacent to chamfered feature columns on the façade, which is faceted to create a curve of varying radius. This arrangement should benefit from increased differences in façade pressure coefficients between openings for apartments that rely on more than one plenum or cross ventilation through an unattenuated opening. For enclosed habitable rooms such as bedrooms, this places the opening on the opposite side of the room to the door to the room, which will provide improved air distribution.

The concepts shown on the following pages are indicative only. Approval is not sought in the Concept Approval. Details will be developed during the design excellence process, with final detail subject of a Stage 2 DA.

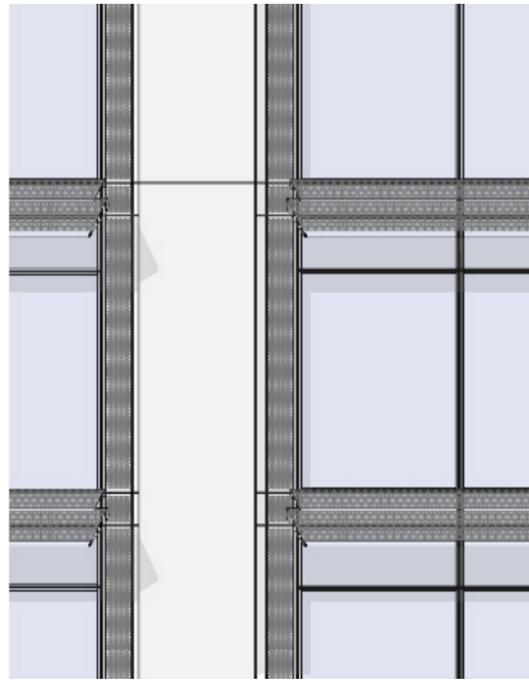


Image 171 Facade detail elevation of the acoustic plenum (Extract from 505 George St)

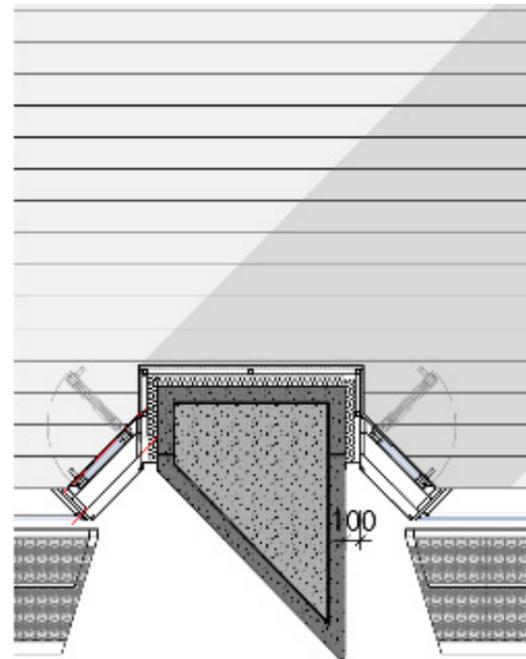


Image 172 Facade detail plan of the acoustic plenum (Extract from 505 George St)

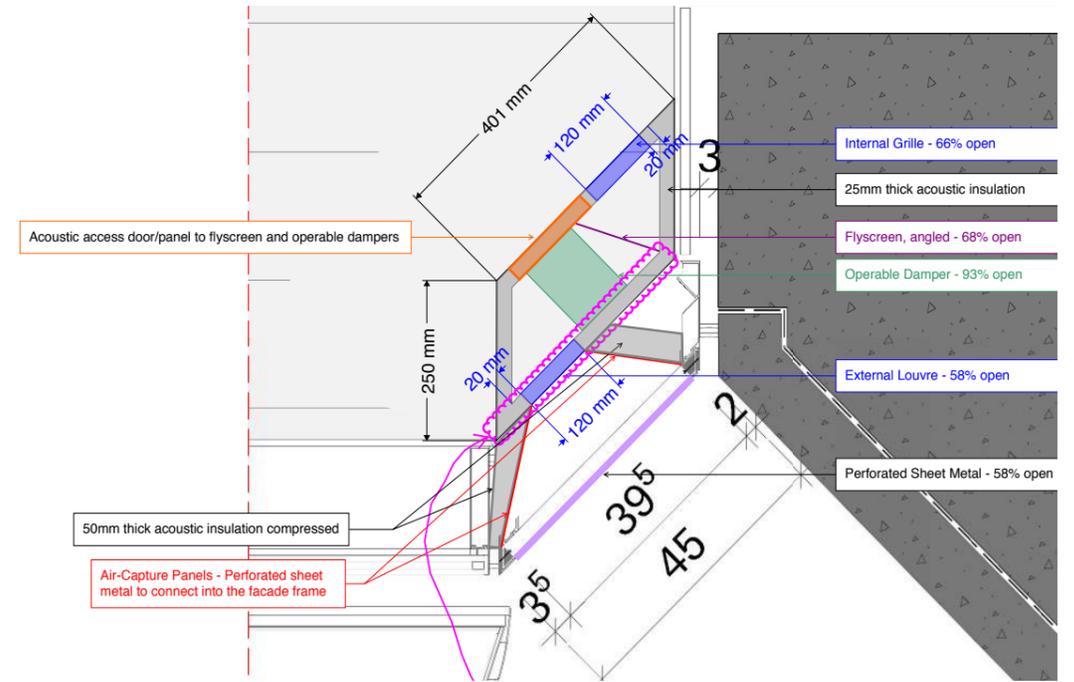


Image 173 Details of the acoustic plenum (Extract from Acoustic Report for 505 George St Sydney, recently submitted by Mirvac)

# 12.0 SEPP 65 Design Quality Principles & ADG Compliance

## SEPP 65

### Principle 1: Context and neighbourhood character

Good design responds and contributes to its context. Context is the key natural and built features of an area, their relationship and the character they create when combined. It also includes social, economic, health and environmental conditions. Responding to context involves identifying the desirable elements of an area's existing or future character. Well designed buildings respond to and enhance the qualities and identity of the area including the adjacent sites, streetscape and neighbourhood. Consideration of local context is important for all sites, including sites in established areas, those undergoing change or identified for change.

### Principle 2: Built form and scale

Good design achieves a scale, bulk and height appropriate to the existing or desired future character of the street and surrounding buildings. Good design also achieves an appropriate built form for a site and the building's purpose in terms of building alignments, proportions, building type, articulation and the manipulation of building elements. Appropriate built form defines the public domain, contributes to the character of streetscapes and parks, including their views and vistas, and provides internal amenity and outlook.

### Principle 3: Density

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

### Principle 4: Sustainability

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

### Principle 5: Landscape

Good design recognises that together landscape and buildings operate as an integrated and sustainable system, resulting in attractive developments with good amenity. A positive image and contextual fit of well designed developments is achieved by contributing to the landscape character of the streetscape and neighbourhood. Good landscape design enhances the development's environmental performance by retaining positive natural features which contribute to the local context, coordinating water and soil management, solar access, micro-climate, tree canopy, habitat values and preserving green networks. Good landscape design optimises usability, privacy and opportunities for social interaction, equitable access, respect for neighbours' amenity and provides for practical establishment and long term management.

### Principle 6: Amenity

Good design positively influences internal and external amenity for residents and neighbours. Achieving good amenity contributes to positive living environments and resident well being. Good amenity combines appropriate room dimensions and shapes, access to sunlight, natural ventilation, outlook, visual and acoustic privacy, storage, indoor and outdoor space, efficient layouts and service areas and ease of access for all age groups and degrees of mobility.

### Principle 7: Safety

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

### Principle 8: Housing diversity and social interaction

Good design achieves a mix of apartment sizes, providing housing choice for different demographics, living needs and household budgets. Well designed apartment developments respond to social context by providing housing and facilities to suit the existing and future social mix. Good design involves practical and flexible features, including different types of communal spaces for a broad range of people and providing opportunities for social interaction among residents.

### Principle 9: Aesthetics

Good design achieves a built form that has good proportions and a balanced composition of elements, reflecting the internal layout and structure. Good design uses a variety of materials, colours and textures. The visual appearance of a well designed apartment development responds to the existing or future local context, particularly desirable elements and repetitions of the streetscape.

Clause Number	Clause Title	Objective	Design Criteria	fjmt Studio Commentary												
<b>PART 03 - SITING THE DEVELOPMENT</b>																
	<b>Site Analysis</b>	<b>3A-1</b>	Site analysis illustrates that design decisions have been based on opportunities and constraints of the site conditions and their relationship to the surrounding context	<ul style="list-style-type: none"> <li>Refer to Section of the report - Site Location and Analysis</li> </ul>												
		<b>3B-1</b>	Building types and layouts respond to the streetscape and site while optimising solar access within the development	<ul style="list-style-type: none"> <li>Refer to the Streetscape section of the report</li> <li>The Apartments are located to optimise solar access and minimise overshadowing within the site and to the significant public domain elements.</li> </ul>												
	<b>Orientation</b>	<b>3B-2</b>	Overshadowing of neighbouring properties is minimised during mid winter	<ul style="list-style-type: none"> <li>The building forms and orientation have been composed to minimise overshadowing.</li> </ul>												
	<b>Public Domain Interface</b>	<b>3C-1</b>	Transition between private and public domain is achieved without compromising safety and security	<ul style="list-style-type: none"> <li>The Stage 1 SSDA concept proposals have been developed with consideration of this and the developed proposal can achieve this requirement.</li> </ul>												
		<b>3C-2</b>	Amenity of the public domain is retained and enhanced	<ul style="list-style-type: none"> <li>All apartments are provided with private open space in the form of balconies and larger terraces on the setback levels. The lowest residential level is 23.8m above the waterfront public domain proving good visual and acoustic separation.</li> </ul>												
	<b>Communal and Public Open Space</b>	<b>3D-1</b>	An adequate area of communal open space is provided to enhance residential amenity and to provide opportunities for landscaping 1. Communal open space has a minimum area equal to 25% of the site (see figure 3D.3) 2. Developments achieve a minimum of 50% direct sunlight to the principal usable part of the communal open space for a minimum of 2 hours between 9 am and 3 pm on 21 June (mid winter)	<ul style="list-style-type: none"> <li>There is opportunity for generous residential amenities on Level 4 and 5 as indicated on the illustrative scheme drawings. These facilities can have access to an external landscaped terrace.</li> </ul>												
		<b>3D-2</b>	Communal open space is designed to allow for a range of activities, respond to site conditions and be attractive and inviting	<ul style="list-style-type: none"> <li>There is opportunity for generous residential amenities on Level 4 and 5 as indicated on the illustrative scheme drawings. These facilities can have access to an external landscaped terrace.</li> </ul>												
		<b>3D-3</b>	Communal open space is designed to maximise safety	<ul style="list-style-type: none"> <li>Passive surveillance of space and CPTED principles have been considered throughout the development and can be enhanced with CCTV coverage of the public domain and lobby areas.</li> </ul>												
		<b>3D-4</b>	Public open space, where provided, is responsive to the existing pattern and uses of the neighbourhood	<ul style="list-style-type: none"> <li>The Stage 1 SSDA concept proposals have been developed with consideration of this and the developed proposal can achieve this requirement.</li> </ul>												
	<b>Deep Soil Zone</b>	<b>3E-1</b>	Deep soil zones provide areas on the site that allow for and support healthy plant and tree growth. They improve residential amenity and promote management of water and air quality Deep soil zones are to meet the following minimum requirements:  <table border="1"> <thead> <tr> <th>Site area</th> <th>Min. Dim.</th> <th>Deep Soil zone (% of site area)</th> </tr> </thead> <tbody> <tr> <td>&lt; 650m<sup>2</sup></td> <td>-</td> <td>7%</td> </tr> <tr> <td>650m<sup>2</sup> - 1500m<sup>2</sup></td> <td>3m</td> <td>7%</td> </tr> <tr> <td>&gt; 1150m<sup>2</sup></td> <td>6m</td> <td>7%</td> </tr> </tbody> </table>	Site area	Min. Dim.	Deep Soil zone (% of site area)	< 650m <sup>2</sup>	-	7%	650m <sup>2</sup> - 1500m <sup>2</sup>	3m	7%	> 1150m <sup>2</sup>	6m	7%	<ul style="list-style-type: none"> <li>The Stage 1 SSDA concept proposals have been developed with consideration of this and the developed proposal can achieve this requirement.</li> </ul>
Site area	Min. Dim.	Deep Soil zone (% of site area)														
< 650m <sup>2</sup>	-	7%														
650m <sup>2</sup> - 1500m <sup>2</sup>	3m	7%														
> 1150m <sup>2</sup>	6m	7%														
	<b>Site Amenity - Visual Privacy</b>	<b>3F-1</b>	Adequate building separation distances are shared equitably between neighbouring sites, to achieve reasonable levels of external and internal visual privacy Note: Separation distances between buildings on the same site should combine required building separations depending on the type of room <ul style="list-style-type: none"> <li>Separation between windows and balconies is provided to ensure visual privacy is achieved. Minimum required separation distances from buildings to the side and rear boundaries are as follows:  <table border="1"> <thead> <tr> <th>Building Height</th> <th>Habitable Room &amp; Balcony</th> <th>Non Habitable Room &amp; Balcony</th> </tr> </thead> <tbody> <tr> <td>Up to 12m (4 storeys)</td> <td>6m</td> <td>3m</td> </tr> <tr> <td>Up to 12m (5-8 storeys)</td> <td>9m</td> <td>4.5m</td> </tr> <tr> <td>Up to 25m (9+ storeys)</td> <td>12m</td> <td>6m</td> </tr> </tbody> </table> </li> </ul>	Building Height	Habitable Room & Balcony	Non Habitable Room & Balcony	Up to 12m (4 storeys)	6m	3m	Up to 12m (5-8 storeys)	9m	4.5m	Up to 25m (9+ storeys)	12m	6m	<ul style="list-style-type: none"> <li>All building separation distances comply with the criteria. The proposed scheme has opportunity for additional visual privacy by providing operable screening to the glazed facade.</li> </ul>
Building Height	Habitable Room & Balcony	Non Habitable Room & Balcony														
Up to 12m (4 storeys)	6m	3m														
Up to 12m (5-8 storeys)	9m	4.5m														
Up to 25m (9+ storeys)	12m	6m														
		<b>3F-2</b>	Site and building design elements increase privacy without compromising access to light and air and balance outlook and views from habitable rooms and private open space	<ul style="list-style-type: none"> <li>The Stage 1 SSDA concept proposals achieve this requirement.</li> </ul>												
	<b>Site Access - Pedestrian Access and Entries</b>	<b>3G-1</b>	Building entries and pedestrian access connects to and addresses the public domain	<ul style="list-style-type: none"> <li>All entries and pedestrian ways address the greater public domain.</li> </ul>												

**Harbourside — Apartment Design Guide Analysis - August 2018**

Clause Number	Clause Title	Objective	Design Criteria	fjmt Studio Commentary
		<b>3G-2</b>	Access, entries and pathways are accessible and easy to identify	<ul style="list-style-type: none"> <li>The Stage 1 SSDA concept proposals have been developed with consideration of this and the developed proposal can achieve this requirement.</li> </ul>
		<b>3G-3</b>	Large sites provide pedestrian links for access to streets and connection to destinations	<ul style="list-style-type: none"> <li>The concept proposals meet this requirement.</li> </ul>
	<b>Vehicle Access</b>	<b>3H-1</b>	Vehicle access points are designed and located to achieve safety, minimise conflicts between pedestrians and vehicles and create high quality streetscapes	<ul style="list-style-type: none"> <li>The basement access is located in the existing location, and is accessed via the slip road to the west of Darling Drive.</li> </ul>
	<b>Bicycle and Car Parking</b>	<b>3J-1</b>	<p>Car parking is provided based on proximity to public transport in metropolitan Sydney and centres in regional areas.</p> <p>1. For development in the following locations:</p> <ul style="list-style-type: none"> <li>on sites that are within 800 metres of a railway station or light rail stop in the Sydney Metropolitan Area; or</li> <li>on land zoned, and sites within 400 metres of land zoned, B3 Commercial Core, B4 Mixed Use or equivalent in a nominated regional centre</li> </ul> <p>The minimum car parking requirement for residents and visitors is set out in the Guide to Traffic Generating Developments, or the car parking requirement prescribed by the relevant council, whichever is less</p> <p>The car parking needs for a development must be provided off street.</p>	<ul style="list-style-type: none"> <li>The Stage 1 SSDA concept proposals have been developed with consideration of this and the developed proposal can achieve this requirement.</li> </ul>
		<b>3J-2</b>	Parking and facilities are provided for other modes of transport	<ul style="list-style-type: none"> <li>Bicycle parking is provided at a rate of either 1 secure bicycle cage per unit or a space in the open parking area located on Basement 1. There is also bicycle parking provided in the public domain on ground level (west).</li> </ul>
		<b>3J-3</b>	Car park design and access is safe and secure	<ul style="list-style-type: none"> <li>The car park is secure with access directly to the residential lobby.</li> </ul>
		<b>3J-4</b>	Visual and environmental impacts of underground car parking are minimised	<ul style="list-style-type: none"> <li>Parking is underground in three levels of basement.</li> </ul>
		<b>3J-5</b>	Visual and environmental impacts of on-grade car parking are minimised	<ul style="list-style-type: none"> <li>Parking is underground in three levels of basement.</li> </ul>
		<b>3J-6</b>	Visual and environmental impacts of above ground enclosed car parking are minimised	<ul style="list-style-type: none"> <li>There is no above ground parking.</li> </ul>
<b>PART 04 - DESIGNING THE BUILDING</b>				
	<b>Solar and Daylight Access</b>	<b>4A-1</b>	<p>To optimise the number of apartments receiving sunlight to habitable rooms, primary windows and private open space</p> <ul style="list-style-type: none"> <li>Living rooms and private open spaces of at least 70% of apartments in a building receive a minimum of 2 hours direct sunlight between 9 am and 3 pm at mid winter in the Sydney Metropolitan Area and in the Newcastle and Wollongong local government areas</li> <li>In all other areas, living rooms and private open spaces of at least 70% of apartments in a building receive a minimum of 3 hours direct sunlight between 9 am and 3 pm at mid winter</li> <li>A maximum of 15% of apartments in a building receive no direct sunlight between 9 am and 3 pm at mid winter</li> </ul>	<ul style="list-style-type: none"> <li>The Stage 1 SSDA concept proposals have been developed with consideration of this and the developed proposal can achieve this requirement. Refer to the diagrams on the following pages.</li> </ul>
		<b>4A-2</b>	Daylight access is maximised where sunlight is limited	<ul style="list-style-type: none"> <li>All apartments have been designed to maximise their window openings to capture views and as a consequence optimise their access to sunlight be it direct, reflected or ambient.</li> </ul>
		<b>4A-3</b>	Design incorporates shading and glare control, particularly for warmer months	<ul style="list-style-type: none"> <li>The Stage 1 SSDA concept proposals have been developed with consideration of this and the developed proposal can achieve this requirement.</li> </ul>
	<b>Natural Ventilation</b>	<b>4B-1</b>	All habitable rooms are naturally ventilated	<ul style="list-style-type: none"> <li>All apartments have operable windows with compliant open areas.</li> <li>All balconies have sliding doors opening into the living spaces to maximise ventilation</li> </ul>
		<b>4B-2</b>	The layout and design of single aspect apartments maximises natural ventilation	<ul style="list-style-type: none"> <li>Apartments are well orientated where possible to maximise the natural ventilation performance of apartments.</li> </ul>

Clause Number	Clause Title	Objective	Design Criteria	fjmt Studio Commentary
		<b>4B-3</b>	<p>The number of apartments with natural cross ventilation is maximised to create a comfortable indoor environment for residents.</p> <ol style="list-style-type: none"> <li>At least 60% of apartments are naturally cross ventilated in the first nine storeys of the building. Apartments at ten storeys or greater are deemed to be cross ventilated only if any enclosure of the balconies at these levels allows adequate natural ventilation and cannot be fully enclosed.</li> <li>Overall depth of a cross-over or cross-through apartment does not exceed 18m, measured glass line to glass line</li> </ol>	<ul style="list-style-type: none"> <li>The Stage 1 SSDA concept proposals have been developed with consideration of this and the developed proposal can achieve this requirement.</li> </ul>
		<b>4C-1</b>	<p>Ceiling height achieves sufficient natural ventilation and daylight access</p> <ol style="list-style-type: none"> <li>Measured from finished floor level to finished ceiling level, minimum ceiling heights are: Minimum ceiling height for apartment and mixed use buildings                             <ul style="list-style-type: none"> <li>Habitable Rooms - 2.7m</li> <li>Non-Habitable Rooms - 2.4m</li> <li>Two Storey Apartments - 2.7m for living area floor and 2.4m for second floor where it's area does not exceed 50% of the apartment area.</li> <li>Attic Spaces - 1.8m at edge of room with a 30 degree minimum ceiling slope.</li> <li>If located in mixed use areas - 3.3m for ground and first floor to promote future flexibility of use.</li> </ul> </li> </ol> <p>These minimums do not preclude higher ceilings if desired</p>	<ul style="list-style-type: none"> <li>All habitable rooms are capable of having a minimum ceiling height of 2.7m</li> <li>All non-habitable rooms are capable of having a minimum ceiling height of 2.4m</li> </ul>
		<b>4C-2</b>	<p>Ceiling height increases the sense of space in apartments and provides for well proportioned rooms</p>	<ul style="list-style-type: none"> <li>All habitable rooms are capable of having a minimum ceiling height of 2.7m</li> <li>All non-habitable rooms are capable of having a minimum ceiling height of 2.4m</li> <li>All ceiling mounted services are capable of being located in 2400 ceilings over wet areas.</li> <li>Bulkheads do not protrude into habitable spaces</li> </ul>
		<b>4C-3</b>	<p>Ceiling heights contribute to the flexibility of building use over the life of the building</p>	<ul style="list-style-type: none"> <li>The proposed development is for a mixed use residential development</li> <li>The apartment ceiling heights comply with Objectives 4C1 and 2</li> </ul>
		<b>4D-1</b>	<p>The layout of rooms within an apartment is functional, well organised and provides a high standard of amenity</p> <ol style="list-style-type: none"> <li>Apartments are required to have the following minimum internal areas:                             <ul style="list-style-type: none"> <li>1 Bedroom - 50m<sup>2</sup></li> <li>2 Bedroom - 70m<sup>2</sup></li> <li>3 Bedroom - 90m<sup>2</sup></li> </ul> </li> </ol> <p>The minimum internal areas include only one bathroom. Additional bathrooms increase the minimum internal area by 5m<sup>2</sup> each. A fourth bedroom and further additional bedrooms increase the minimum internal area by 12m<sup>2</sup> each.</p> <ol style="list-style-type: none"> <li>Every habitable room must have a window in an external wall with a total minimum glass area of not less than 10% of the floor area of the room. Daylight and air may not be borrowed from other rooms</li> </ol>	<ul style="list-style-type: none"> <li>All apartments in the illustrative scheme conform to the required minimum internal areas.</li> <li>Apartment sizes have been developed in accordance with the client brief and approvals on the development site whilst providing efficient apartment planning</li> <li>All habitable rooms in the illustrative scheme have windows which represent more than 10% of the floor area of the room.</li> </ul>
		<b>4D-2</b>	<p>Environmental performance of the apartment is maximised</p> <ol style="list-style-type: none"> <li>Habitable room depths are limited to a maximum of 2.5 x the ceiling height</li> <li>In open plan layouts (where the living, dining and kitchen are combined) the maximum habitable room depth is 8m from a window</li> </ol>	<ul style="list-style-type: none"> <li>All apartments in the illustrative scheme comply with the 8m to the back of the kitchen rule of thumb.</li> <li>All apartments in the illustrative scheme are open plan layouts, with living rooms and bedrooms located against the external envelope of the building to maximise natural light and ventilation.</li> </ul>
		<b>4D-3</b>	<p>Apartment layouts are designed to accommodate a variety of household activities and needs</p> <ol style="list-style-type: none"> <li>Master bedrooms have a minimum area of 10m<sup>2</sup> and other bedrooms 9m<sup>2</sup> (excluding wardrobe space)</li> <li>Bedrooms have a minimum dimension of 3m (excluding wardrobe space)</li> <li>Living rooms or combined living/dining rooms have a minimum width of:                             <ul style="list-style-type: none"> <li>3.6m for studio and 1 bedroom apartments</li> <li>4m for 2 and 3 bedroom apartments</li> </ul> </li> <li>The width of cross-over or cross-through apartments are at least 4m internally to avoid deep narrow apartment layouts</li> </ol>	<ul style="list-style-type: none"> <li>All apartments in the illustrative scheme comply with the minimum ADG bedroom sizes.</li> <li>All apartments in the illustrative scheme comply with the minimum ADG living room widths. Penthouses have wider living rooms.</li> </ul>

Clause Number	Clause Title	Objective	Design Criteria	fjmt Studio Commentary
	<b>Private Open Space and Balconies</b>	<b>4E-1</b>	<p>Apartments provide appropriately sized private open space and balconies to enhance residential amenity</p> <ul style="list-style-type: none"> <li>* 1 Bedroom - 8m<sup>2</sup> - min 2m depth</li> <li>* 2 Bedroom - 10m<sup>2</sup> - min 2m depth</li> <li>* 3 Bedroom - 12m<sup>2</sup> - min 2.4m depth</li> </ul> <p>For apartments at ground level or on a podium or similar structure, a private open space is provided instead of a balcony. It must have a minimum area of 15m<sup>2</sup> and a minimum depth of 3m.</p>	<ul style="list-style-type: none"> <li>• All of the proposed apartment balcony areas satisfy the ADG objectives. The scheme results in the following range of balcony sizes:                             <ul style="list-style-type: none"> <li>* 1 Bed External Area - 8m<sup>2</sup></li> <li>* 2 Bed External Area - 10m<sup>2</sup></li> <li>* 3 Bed External Area - 12m<sup>2</sup></li> </ul> </li> </ul>
		<b>4E-2</b>	Primary private open space and balconies are appropriately located to enhance liveability for residents	<ul style="list-style-type: none"> <li>• Balconies are located off the living areas to maximise sunlight and views.</li> </ul>
		<b>4E-3</b>	Private open space and balcony design is integrated into and contributes to the overall architectural form and detail of the building	<ul style="list-style-type: none"> <li>• Balconies are located within the building envelope to become an integral part of the form. Operable screens and louvres are used to control sunlight and winds.</li> </ul>
		<b>4E-4</b>	Private open space and balcony design maximises safety	<ul style="list-style-type: none"> <li>• The proposed development satisfies the requirements of the objective.</li> </ul>
	<b>Common Circulation and Spaces</b>	<b>4F-1</b>	<p>Common circulation spaces achieve good amenity and properly service the number of apartments</p> <ol style="list-style-type: none"> <li>1. The maximum number of apartments off a circulation core on a single level is eight</li> <li>2. For buildings of 10 storeys and over, the maximum number of apartments sharing a single lift is 40</li> </ol>	<ul style="list-style-type: none"> <li>• The maximum number of apartments off a circulation core on a single upper tower level is eleven (11). The lower levels have a maximum of thirteen (13). In response to this the amenity of the circulation space is lifted by providing access to views and natural daylight immediately adjacent to the lifts.</li> </ul>
		<b>4F-2</b>	Common circulation spaces promote safety and provide for social interaction between residents	<ul style="list-style-type: none"> <li>• Areas in front of lifts and corridor widths allow for sufficient circulation space and interaction of residents.</li> </ul>
	<b>Storage</b>	<b>4G-1</b>	<p>In addition to storage in kitchens, bathrooms and bedrooms, the following storage is provided:</p> <ul style="list-style-type: none"> <li>* 1 Bedroom - 6m<sup>3</sup></li> <li>* 2 Bedroom - 8m<sup>3</sup></li> <li>* 3 Bedroom - 10m<sup>3</sup></li> </ul> <p>At least 50% of the required storage is to be located within the apartment</p>	<ul style="list-style-type: none"> <li>• The Stage 1 SSDA concept proposals have been developed with consideration of this and the developed proposal can achieve this requirement. Refer to the basement plans included in the illustrative scheme.</li> </ul>
		<b>4G-2</b>	Additional storage is conveniently located, accessible and nominated for individual apartments	<ul style="list-style-type: none"> <li>• The Stage 1 SSDA concept proposals have been developed with consideration of this and the developed proposal can achieve this requirement.</li> </ul>
	<b>Acoustic Privacy</b>	<b>4H-1</b>	Noise transfer is minimised through the siting of buildings and building layout	<ul style="list-style-type: none"> <li>• Generally apartments are arranged side by side to assist in the resolution of acoustic separation and zoning. Noise sources such as lift shafts and common corridors have also been taken into account.</li> </ul>
		<b>4H-2</b>	Noise impacts are mitigated within apartments through layout and acoustic treatments	<ul style="list-style-type: none"> <li>• The Stage 1 SSDA concept proposals have been developed with consideration of this and the developed proposal can achieve this requirement.</li> </ul>
	<b>Noise and Pollution</b>	<b>4J-1</b>	In noisy or hostile environments the impacts of external noise and pollution are minimised through the careful siting and layout of buildings	<ul style="list-style-type: none"> <li>• Generally apartments are arranged side by side to assist in the resolution of acoustic separation and zoning. Noise sources such as lift shafts and common corridors have also been taken into account.</li> </ul>
		<b>4J-2</b>	Appropriate noise shielding or attenuation techniques for the building design, construction and choice of materials are used to mitigate noise transmission	<ul style="list-style-type: none"> <li>• Insulation will be provided to the facade walls to minimise noise. Elements of solid walls are provided to the balcony areas to further minimise noise transfer</li> </ul>
	<b>Apartment Mix</b>	<b>4K-1</b>	A range of apartment types and sizes is provided to cater for different household types now and into the future	<ul style="list-style-type: none"> <li>• The Stage 1 SSDA concept proposals have been developed with consideration of this and the developed proposal can achieve this requirement.</li> </ul>
		<b>4K-2</b>	The apartment mix is distributed to suitable locations within the building	<ul style="list-style-type: none"> <li>• The mix is distributed evenly across the floors with the premium/larger apartments taking up the corner positions.</li> </ul>
	<b>Ground Floor Apartments</b>	<b>4L-1</b>	Street frontage activity is maximised where ground floor apartments are located	<ul style="list-style-type: none"> <li>• Not applicable</li> </ul>
		<b>4L-2</b>	Design of ground floor apartments delivers amenity and safety for residents	<ul style="list-style-type: none"> <li>• Not applicable</li> </ul>
	<b>Facades</b>	<b>4M-1</b>	Building facades provide visual interest along the street while respecting the character of the local area	<ul style="list-style-type: none"> <li>• The Stage 1 SSDA concept proposals have been developed with consideration of this and the developed proposal can achieve this requirement.</li> </ul>
		<b>4M-2</b>	Building functions are expressed by the facade	<ul style="list-style-type: none"> <li>• The Stage 1 SSDA concept proposals have been developed with consideration of this and the developed proposal can achieve this requirement.</li> </ul>
	<b>Roof Design</b>	<b>4N-1</b>	Roof treatments are integrated into the building design and positively respond to the street	<ul style="list-style-type: none"> <li>• The concept proposals for the roof has been developed to respond to the relative exposure of the building to the degree to which they are viewed from adjoining developments.</li> </ul>
		<b>4N-2</b>	Opportunities to use roof space for residential accommodation and open space are maximised	<ul style="list-style-type: none"> <li>• The concept proposals incorporate roof terraces where the building form steps.</li> </ul>
		<b>4N-3</b>	Roof design incorporates sustainability features	<ul style="list-style-type: none"> <li>• The Stage 1 SSDA concept proposals have been developed with consideration of this and the developed proposal can achieve this requirement.</li> </ul>
	<b>Landscape Design</b>	<b>4O-1</b>	Landscape design is viable and sustainable	<ul style="list-style-type: none"> <li>• The Stage 1 SSDA concept proposals have been developed with consideration of this and the developed proposal can achieve this requirement.</li> </ul>
		<b>4O-2</b>	Landscape design contributes to the streetscape and amenity	<ul style="list-style-type: none"> <li>• The Stage 1 SSDA concept proposals have been developed with consideration of this and the developed proposal can achieve this requirement.</li> </ul>

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Clause Number	Clause Title	Objective	Design Criteria	fjmt Studio Commentary
	<b>Planting on structures</b>	<b>4P-1</b>	Appropriate soil profiles are provided	<ul style="list-style-type: none"> <li>• Raised planters within the upper level terraces can provide sufficient soil depth for planting appropriately scaled plants.</li> </ul>
		<b>4P-2</b>	Plant growth is optimised with appropriate selection and maintenance	<ul style="list-style-type: none"> <li>• Plant selection will be selected to achieve this requirement.</li> </ul>
		<b>4P-3</b>	Planting on structures contributes to the quality and amenity of communal and public open spaces	<ul style="list-style-type: none"> <li>• The Stage 1 SSDA concept proposals have been developed with consideration of this and the developed proposal can achieve this requirement.</li> </ul>
	<b>Universal Design</b>	<b>4Q-1</b>	Universal design features are included in apartment design to promote flexible housing for all community members <ul style="list-style-type: none"> <li>• Developments achieve a benchmark of 20% of the total apartments incorporating the Liveable Housing Guideline's silver level universal design features</li> </ul>	<ul style="list-style-type: none"> <li>• The Stage 1 SSDA concept proposals have been developed with consideration of this and the developed proposal can achieve this requirement.</li> </ul>
		<b>4Q-2</b>	A variety of apartments with adaptable designs are provided	<ul style="list-style-type: none"> <li>• The Stage 1 SSDA concept proposals have been developed with consideration of this and the developed proposal can achieve this requirement.</li> </ul>
		<b>4Q-3</b>	Apartment layouts are flexible and accommodate a range of lifestyle needs	<ul style="list-style-type: none"> <li>• Equitable access is provided to all apartment doors in the illustrative scheme are in accordance with AS1428.2</li> </ul>
	<b>Adaptive Reuse</b>	<b>4R-1</b>	New additions to existing buildings are contemporary and complementary and enhance an area's identity and sense of place	<ul style="list-style-type: none"> <li>• Not applicable</li> </ul>
		<b>4R-2</b>	Adapted buildings provide residential amenity while not precluding future adaptive reuse	<ul style="list-style-type: none"> <li>• Not applicable</li> </ul>
	<b>Mixed Use</b>	<b>4S-1</b>	Mixed use developments are provided in appropriate locations and provide active street frontages that encourage pedestrian movement	<ul style="list-style-type: none"> <li>• The project is a compliant mixed use development within the approved boundaries and given the retail locations and expected pedestrian activation of the precinct, the proposed development will achieve the objective.</li> </ul>
		<b>4S-2</b>	Residential levels of the building are integrated within the development, and safety and amenity is maximised for residents	<ul style="list-style-type: none"> <li>• The proposed development satisfies the requirements of the objective.</li> </ul>
	<b>Awning and Signage</b>	<b>4T-1</b>	Awnings are well located and complement and integrate with the building design	<ul style="list-style-type: none"> <li>• The proposed development can satisfy the requirements of the objective.</li> </ul>
		<b>4T-2</b>	Signage responds to the context and desired streetscape character	<ul style="list-style-type: none"> <li>• Signage to be developed under separate application</li> </ul>
	<b>Energy Efficiency</b>	<b>4U-1</b>	Development incorporates passive environmental design <ul style="list-style-type: none"> <li>* Adequate natural light is provided to habitable rooms (see 4A Solar and daylight access)</li> <li>* Well located, screened outdoor areas should be provided for clothes drying</li> </ul>	<ul style="list-style-type: none"> <li>• See 'Solar and Daylight Access' for natural daylighting.</li> <li>• All apartments in the illustrative scheme to have internal drying facilities and balconies.</li> </ul>
		<b>4U-2</b>	Development incorporates passive solar design to optimise heat storage in winter and reduce heat transfer in summer	<ul style="list-style-type: none"> <li>• The proposed development can satisfy the requirements of the objective.</li> </ul>
		<b>4U-3</b>	Adequate natural ventilation minimises the need for mechanical ventilation	<ul style="list-style-type: none"> <li>• Natural ventilation is provided.</li> </ul>
	<b>Water Management and Conservation</b>	<b>4V-1</b>	Potable water use is minimised	<ul style="list-style-type: none"> <li>• The proposed development satisfies the requirements of the objective</li> </ul>
		<b>4V-2</b>	Urban storm water is treated on site before being discharged to receiving waters	<ul style="list-style-type: none"> <li>• The proposed development satisfies the requirements of the objective.</li> </ul>
		<b>4V-3</b>	Flood management systems are integrated into site design	<ul style="list-style-type: none"> <li>• The Stage 1 SSDA concept proposals have been developed with consideration of this and the developed proposal can achieve this requirement.</li> </ul>
	<b>Waste Management</b>	<b>4W-1</b>	Waste storage facilities are designed to minimise impacts on the streetscape, building entry and amenity of residents	<ul style="list-style-type: none"> <li>• All waste storage and management facilities are not accessible nor visible to the general public.</li> </ul>
		<b>4W-2</b>	Domestic waste is minimised by providing safe and convenient source separation and recycling	<ul style="list-style-type: none"> <li>• The Stage 1 SSDA concept proposals have been developed with consideration of this and the developed proposal can achieve this requirement.</li> </ul>
	<b>Building Maintenance</b>	<b>4X-1</b>	Building design detail provides protection from weathering	<ul style="list-style-type: none"> <li>• The materiality and detailing of the proposed development are in keeping with the client brief, building typology and expected building life.</li> </ul>
		<b>4X-2</b>	Systems and access enable ease of maintenance	<ul style="list-style-type: none"> <li>• All facades are accessible for cleaning and maintenance.</li> </ul>
		<b>4X-3</b>	Material selection reduces ongoing maintenance costs	<ul style="list-style-type: none"> <li>• Materials will be carefully selected to require minimum ongoing maintenance.</li> </ul>
	<b>Building Configuration - Safety of Children</b>		<ul style="list-style-type: none"> <li>▪ Windows have safety screens, window locks or other safety devices to prevent falls.</li> <li>▪ Room layouts minimise the need to locate furniture immediately adjacent windows or balustrades</li> </ul>	<ul style="list-style-type: none"> <li>• All windows located at fall height will be capable of being fitted with restrictors that limit openings to 125mm</li> </ul>

# 13.0 Appendix A: Architectural Drawings