

7.1 Sunlit Public Spaces:

Protecting and enhancing the Public Space of Pymont

This project should enhance the public spaces of Pymont. It should minimise winter overshadowing of the squares and parks of Pymont, particularly during the middle of the day. The protection of these important public spaces should be a determinant of the form and height of the new building.

The architectural form has been developed to ensure solar access to key public spaces is maximised. These public spaces have helped define the form, profile and height of the new building, so that the architecture enhances and responds to these key important public spaces and protects their ongoing significance to Pymont and the broader community.

Union Square marks the centre, perhaps even the heart of Pymont and is a lively active public space that is only going to increase in importance and significance. Union Street itself began as a steep track from Harris Street down to the foreshore where there was a ferry wharf to take passengers across to the city and now it forms an even more central artery connecting Pymont to the city via the historic Pymont Bridge. Union Square contains the Pymont War Memorial which was unveiled on 8 April 1922 by NSW Governor Sir Walter Davidson.

Union Square is a major heritage precinct. It includes the Post Office in Harris Street, the Harlequin Inn pub, two bank buildings in Union Street, the homes from 4-20 Union Street, all buildings from 99-125 Harris Street, the terrace from 135-141 Harris Street and terraces from 1-21 Paternoster Row. All of these buildings are listed on the Register of the National Estate.

Shadow impact analyses utilising specialist 'heat map' software have measured before-and-after direct solar access to public space between the hours of 9.00am and 3.00pm across the duration of a year for Union Square and Pymont Bay Park. Detailed analysis and commentary is provided in *Public Space Solar Analysis* on page 152 of this report.



Key public and landscaped space.



Mid winter shadow analysis: June 21 at 2.00pm, showing sun access protection of Pirrama Park before 2.00pm.

7.2 Sharing with Neighbours:

Winter Sun and Views

This landmark project should also be a good, supportive neighbour to the existing residence of Pymont. The new building form should minimise any effects on neighbouring residential dwellings and share both views and access to winter sun.

The briefed maximum height of the tower envelope was determined in relation to the winter shadow profile over nearby dwellings, to ensure a minimum of two hours of sunlight at the winter solstice. The residential buildings most likely affected are those north of Miller Street, between Jones and Harris Streets. We have carefully studied these shadow effects and can confirm the tower form and design minimises solar access impacts to these residents. Detailed analysis and commentary is provided in *Daylight impacts on adjacent properties* from page 156 of this report.

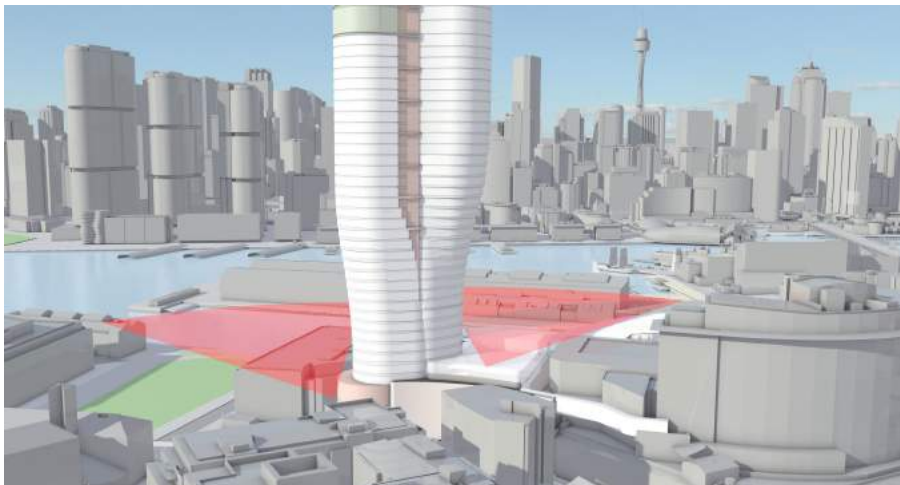
The location of the proposed tower does not compromise view from many existing residential buildings in Pymont. Most affected however are the two apartment buildings on Jones Bay Road and above the sandstone escarpment accessed from Point Street. We have carefully studied the existing view lines from these apartment and set projecting view lines from their living rooms towards the view. The tower has been set-back at the corresponding level, to improve view access and view sharing for these apartments.

Although less affected and less significant, we have also projected view lines from the apartment towers of Jackson Landing towards the City and Harbour, similar setting back the corresponding levels of the new tower to improve view sharing.

In this way the form and profile of the new building has been shaped by winter sun access to, and the preservation of views from, the existing nearby residential apartments.



View impact consideration from adjacent and distant building have both informed the development of the tower's form.



The tower form steps back at the lower level to share views with neighbours and to improve winter sun access to the public domain.



7.3 A New Pyrmont Neighbourhood Centre:

and extended Public Space Network

This is a strategic site in relation to Pyrmont's public space network. There is the opportunity for the project to enhance and extend this network, and also to appropriately mark this important north facing corner with a new neighbourhood centre.

The important intersection of Pirrama Road and Jones Bay Road provides opportunity for greater pedestrian focus and a dedicated neighbourhood space. At this northern point of the site, the tree lined boulevard of Pirrama Street flows into a more local streetscape. Positioning a new neighbour centre on this key corner of the site establishes this currently inactivated location an important new focus within the Pyrmont public space network.

The neighbourhood centre establishes a human scale at the north of the site, relating to the adjacent sandstone escarpment and local buildings, whilst also being articulated as a welcoming public building independent from the main tower.

The existing community facilities of Pyrmont will greatly benefit from enhancement and extension, to meet the evolving needs of local residences and the growing local population. This new facility will complement existing community amenities and respond directly to community needs, while giving a clear public identity to this north facing corner. A more detailed description of the proposed centred is included in the following pages of this report.

The strategy to define Jones Bay Road as public and community centric is reinforced by moving the residential entry to address Jones Bay Road, and separating it from the hotel entry on Pirrama Road.



Junction of Pirrama Road and Jones Bay Road.



The tower from steps back at the lower level to share views with neighbours and to improve winter sun access to the public domain.



7.4 Responsive Organic Biomorphic Tower Form:

A Landmark for Pyrmont

This is to be an organic responsive biomorphic architecture.

It is shaped primarily, not by function or development ideals but in relation to the public spaces of Pyrmont and the amenity of the neighbourhood residences and community.

This is an organic architecture of progressive adjustment responding to the uniqueness of its site and place. An organic and sculptural form emerges from the projection and alignment of the sun access-planes, view lines, setback, alignments with sandstone escarpments.

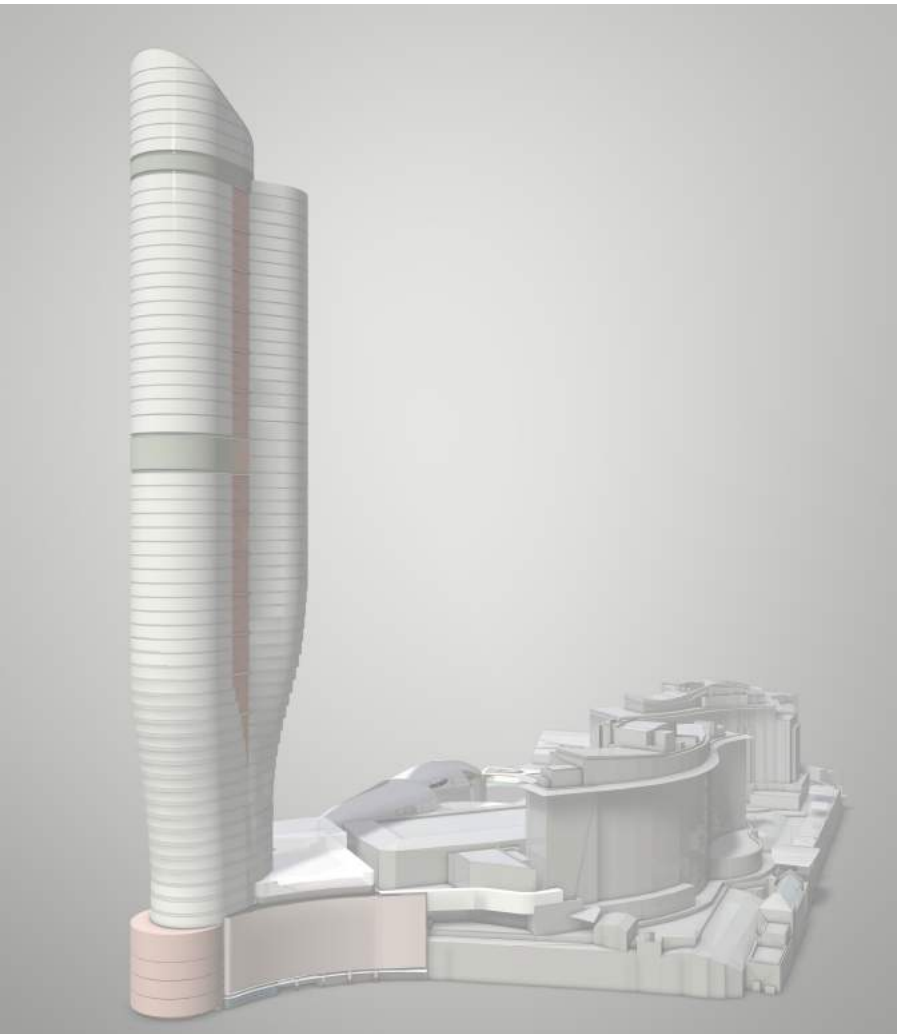
This approach creates a unique specific architectural form shaped by the squares, parks and community, the urban form of Pyrmont. A landmark for Pyrmont and the City of Sydney that is not the result of a imported, placeless, international architecture, but an unique identity, growing from and responding to the very special qualities of this beautiful place.

Responsive to the sun and elements in an organic way, similar to natural systems in nature. A responsive biomorphic form of architecture.

Such a responsive architectural form can not be singular, and like the forms in nature, an interrelation between two forms, is more subtle, nuanced and responsive. Two elliptical forms grow naturally from the curved geometry of the site, and set-back from the north to create space for a new public form and open space. As these two primary elliptical forms rise, they turn, adjust and interlock in relation to the view lines of neighbours, position of the sun in winter in relation to public open spaces, and to maximise sun access for residential neighbourhoods.

The forms are curvilinear, almost shaped by the elements, to allow wind to move easily around them and avoid down-drafts and negative environmental effects at the street and open spaces.

The outcome is a finely proportioned gentle interplay of curvilinear forms, a soft sculptural architecture shaped by the elements of Pyrmont to create a unique and memorable landmark of Pyrmont and Sydney.



7.5 Rising from the Sandstone:

An Architecture of Pyrmont

Pyrmont is a special place with a strong and unique character drawn from its rich history and distinctive topography and landscape. It is this unique character that we have been inspired by and want to embody in the architecture of the new building, so it becomes part of the continued evolution of this special place.

There are perhaps four distinct periods to the character and evolution of Pyrmont:

PRE - EUROPEAN

NATURAL MINERAL SPRING OF COLD WATER BUBBLING FROM THE ROCK MIDDENS OF SHELLFISH SANDY BEACHES AND CLIFFS



SETTLEMENT

STONE AND MASONRY PYRMONT ARCHITECTURE YELLOW-BLOCK SANDSTONE QUARRY + CLIFFS THE STONE THAT PUBLIC SYDNEY WAS BUILT FROM



INDUSTRIAL

THE LANDMARK POWER STATION RAIL LINES + INDUSTRIAL STEELWORK TIMBER WHARFS + WATERFRONT



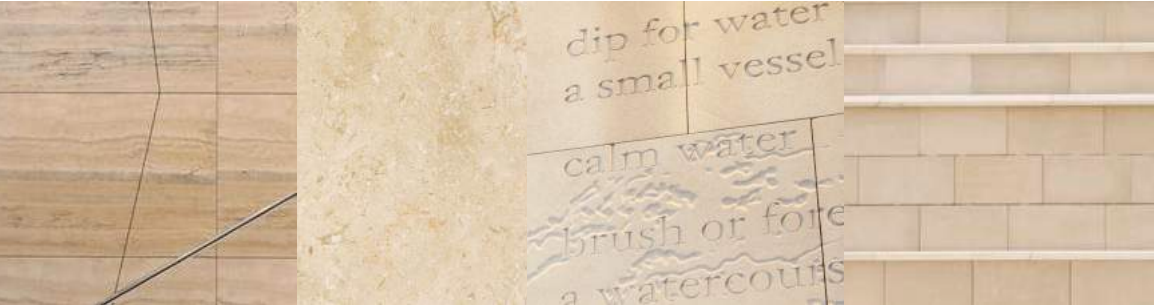
CONTEMPORARY

PARKLANDS AND SANDSTONE ESCARPMENT HERITAGE AND WHARF TRANSFORMATIONS PUBLIC GARDENS AND SPACES



Each of these periods has a character and materiality that has formed Pyrmont. We have drawn on each period for inspiration and reference in the making of an innovative and entirely contemporary architecture, that will add to the unique Pyrmont sense of place.

MATERIALITY CONCEPT IMAGES



7.6 A Great Hotel City Landmark:

Unique Open and Inviting

This will be a great landmark hotel, a building that gives further identity to Pyrmont and Sydney. Like the great hotel of other cities this hotel will provide a visitor and public focus for Sydney.

The Plaza Hotel in New York is a public landmark for the city loved not only but the visitor and guests but by locals as it helps define the City through it's form and public spaces. Similarly, more recently the Shangri-la Hotel at the 'Shard', in London is a landmark for Southbank and a true public destination.

This new Ritz Carlton hotel will be a similar public landmark destination for Sydney. It's publicly accessible spaces and grand rooms, bars, restaurants, facilities and dramatic views to the Harbour and City will make it an incomparable destination.

Importantly, the design has emphasised the visitor and public nature of the new hotel with the strong external expression of the elevated sky lobby and associated publicly accessible lounge, bar and restaurant.

THE SHARD, LONDON



THE PLAZA, NEW YORK



7.7 Landcsape and environment:

Integration with architecture

This is to be a landmark of sustainability not only in terms of the strategies to achieve a GreenStar rating of five but consistent with biomorphic approach to architecture. The systems are organic in character and full integrated into the building.

The form of the tower and the 'ribbon' have been developed with consideration of wind, sun and landscape.

The organic tower form with setbacks at street level will assist in wind management. The pool decks of the ribbon are enclosed towards the existing Astral Towers to protect against funneled winds and to ensure acoustic privacy for residents.

The side core to the tower has been revealed on the western elevation of the tower. The glazed curtain wall is peeled back to reveal this core and the associated glazed lift lobbies. This reduces the area of curtain wall and allows a different facade treatment to be employed in this area.

This accommodates a vertical 'green spine' on the west of the core. Planting is incorporated at regular vertical intervals. The glazed facades allow opportunities for the lift lobbies to incorporate natural ventilation when wind conditions permit.



Vertical 'green spine' extend to the roof



The ribbon from have been developed with detail consideration of wind slows and environmental comfort.





8.0 Urban Context

8.1 Urban Context | Relative to CBD

Urbis' Urban Context Report comments upon the potential architectural value to the city being at two key levels, ie: skyline and the experience at street level, noting the following:

- At the strategic scale, the relationship and contribution of buildings to the overall city skyline is one of the key considerations. This includes the overall height of the building and the location of the building in terms of whether it forms part of a clustering of buildings or is more singular in nature and is viewed in the round.
- At the local scale, the design, grain and articulation of the podium or lower levels of the building is the key experience. This relates to both the experience people have along the streets of the city as well as those on along the harbour foreshore.

fjmt's proposal have been developed with careful consideration of how the tower is viewed in the round as part of the CBD skyline, as part of the Pymont peninsula skyline, and within the broader skyline of Sydney both as current and with consideration of possible future development.

The following pages of this report examine how the tower sits within each of the above contexts. Following discussion with the Design Review Panel the tower has also been studied with consideration of potential future towers in the CBD and Bay Precinct. The potential future towers in the Bay Precinct are speculative only. The potential future towers with the CBD are based on City Of Sydney's Central Sydney Planning Strategy 2016 - 2036, extract of which are provided to the right.



Extract from Central Sydney Planning Strategy showing potential future tower clusters with the CBD

Extracts from Central Sydney Planning Strategy showing potential future tower clusters with the CBD

AM_10
Giba Park
Existing View



AM_11
Giba Park
Potential View



AM_08
Gladesville Bridge
Existing View



AM_09
Gladesville Bridge
Potential View

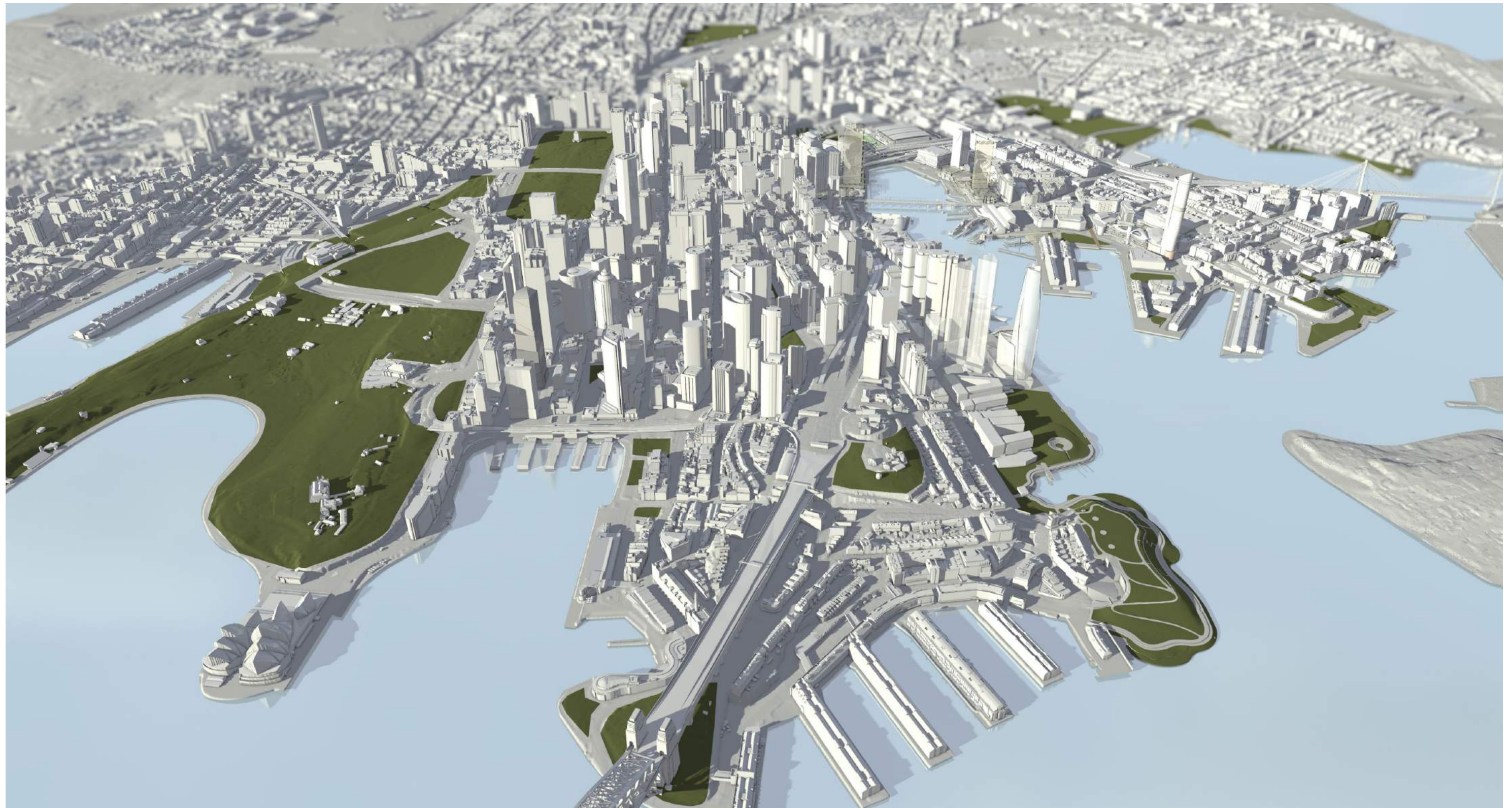


AM_06
Balls Head
Existing View

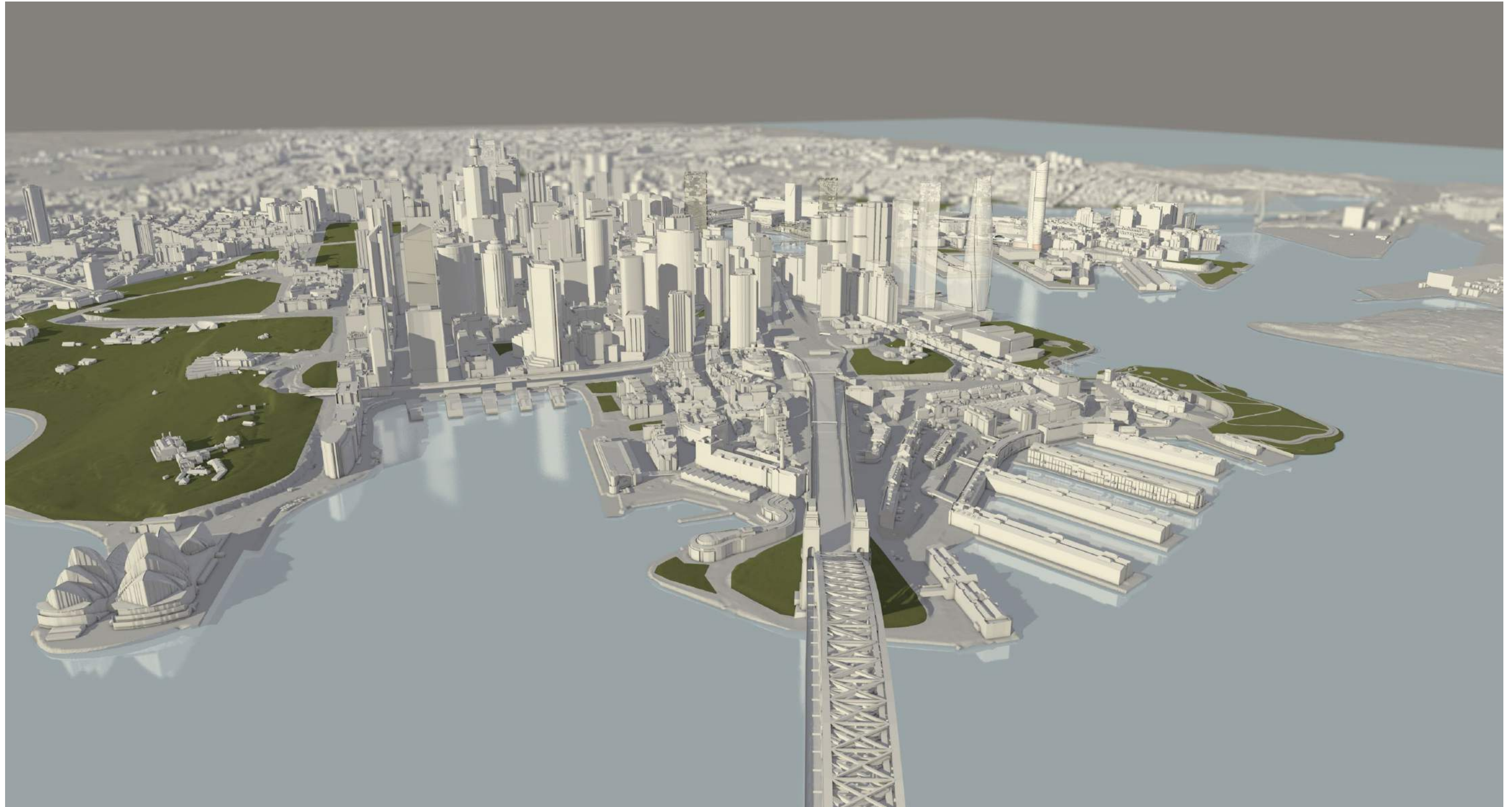


AM_07
Balls Head
Potential View



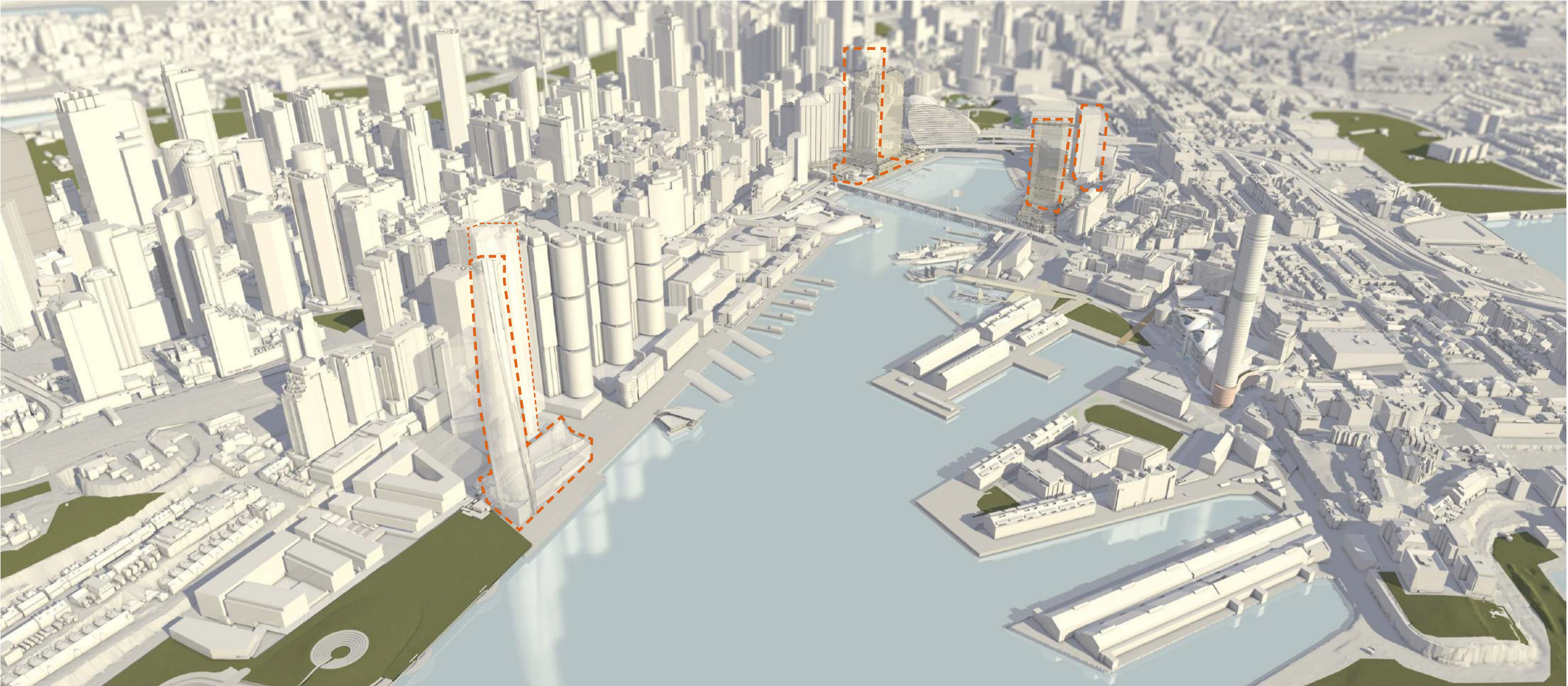


City model showing proposed tower relative to CBD context



City model showing propsoed tower relative to CBD context

8.2 Urban Context | Cockle Bay



Harbourside: Stage 1 SSDA - illustrative scheme
RL 166.35



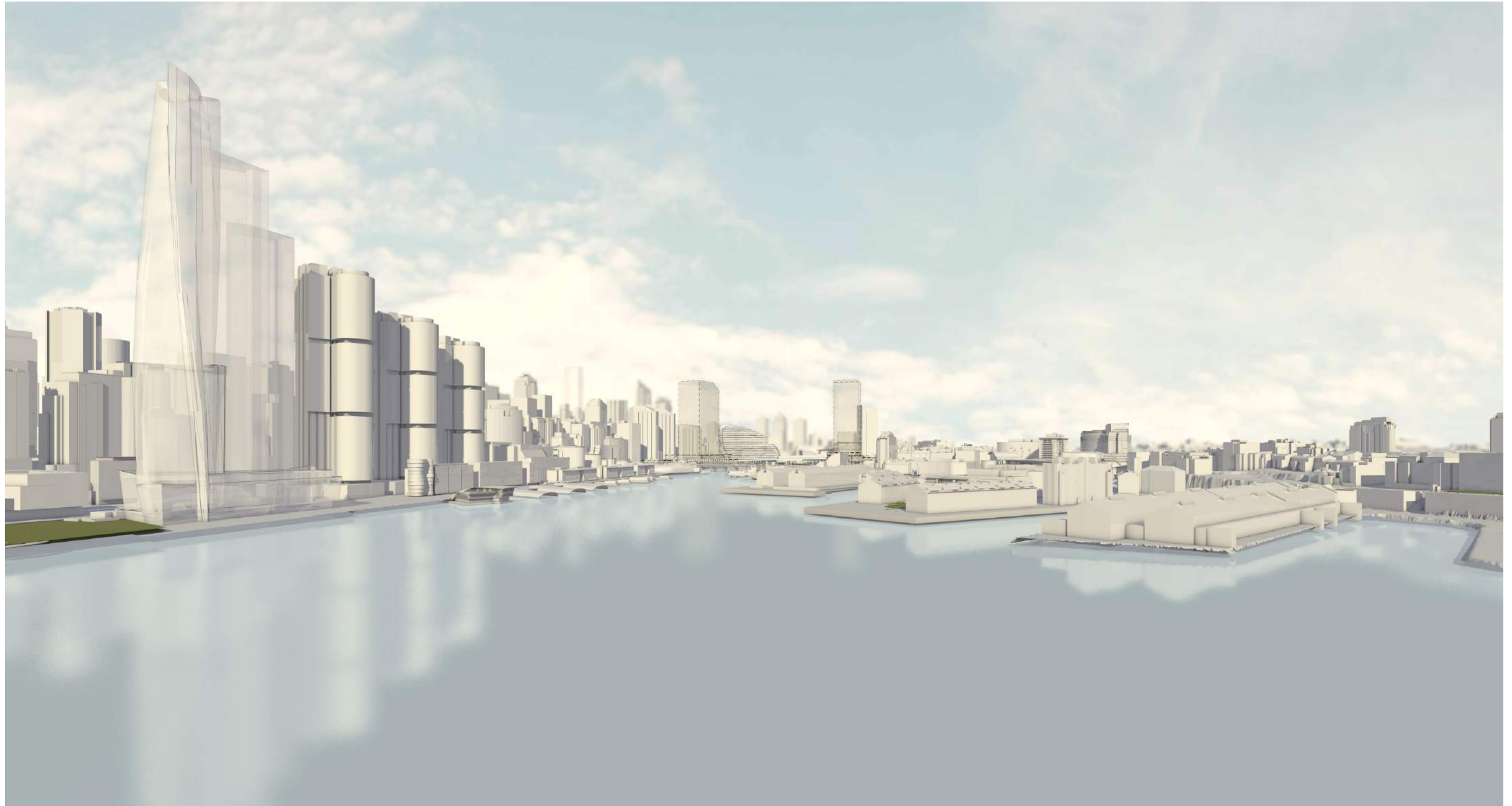
Barangaroo: Residential Towers and Crown
RL 271.3 (Crown) RL 250 (residential)



Cockle Bay: Stage 1 SSDA - illustrative scheme
RL 235



ICC Hotel: Sofitel
RL 133.55

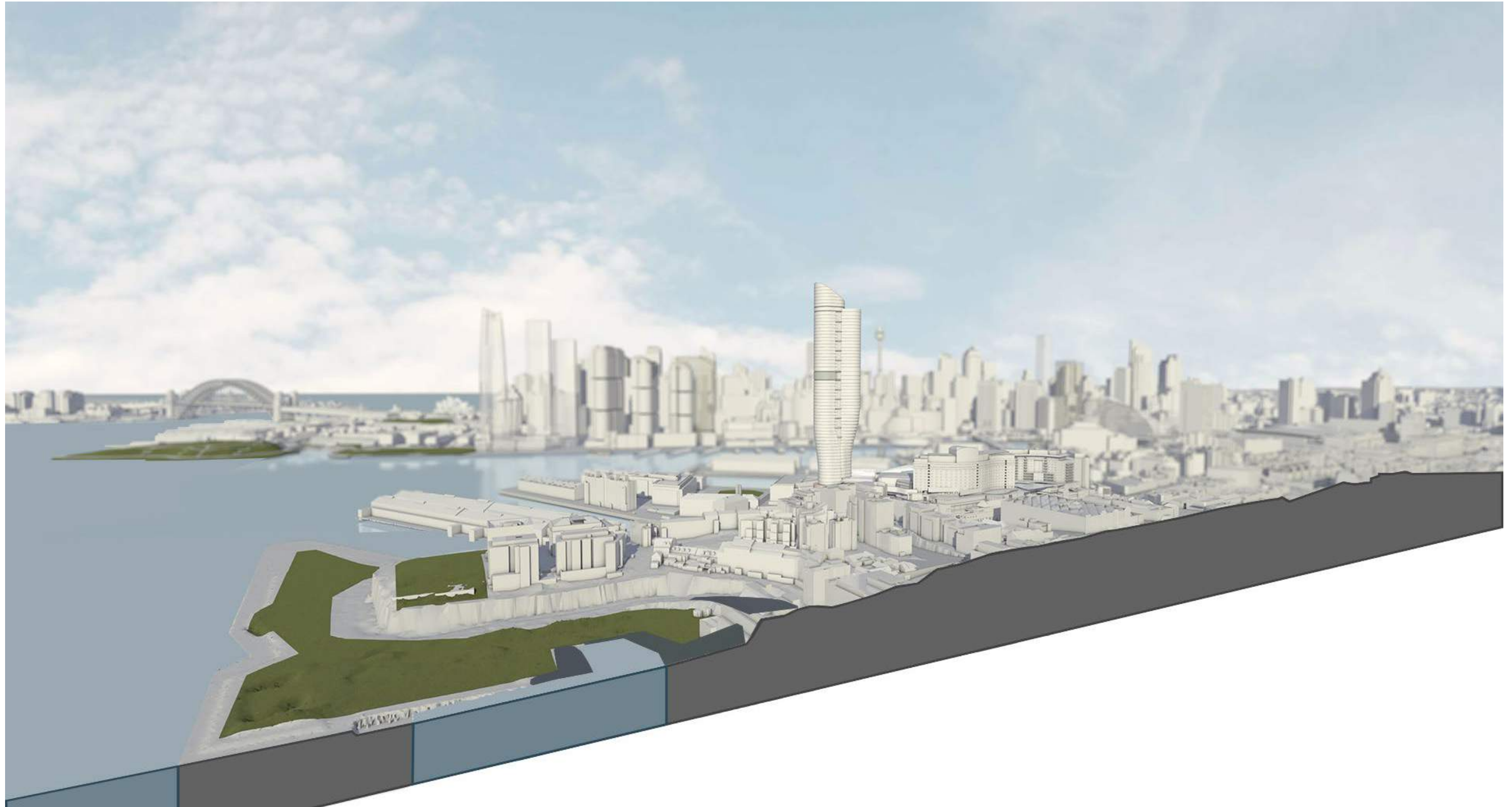


City model showing proposed tower relative to Cockle Bay context

8.3 Urban Context | Pymont



City model showing propsoed tower relative to Pymont Context



City model showing proposed tower relative to Pyrmont Context

8.4 **Urban Context** | Cross Sections through city



City section looking north

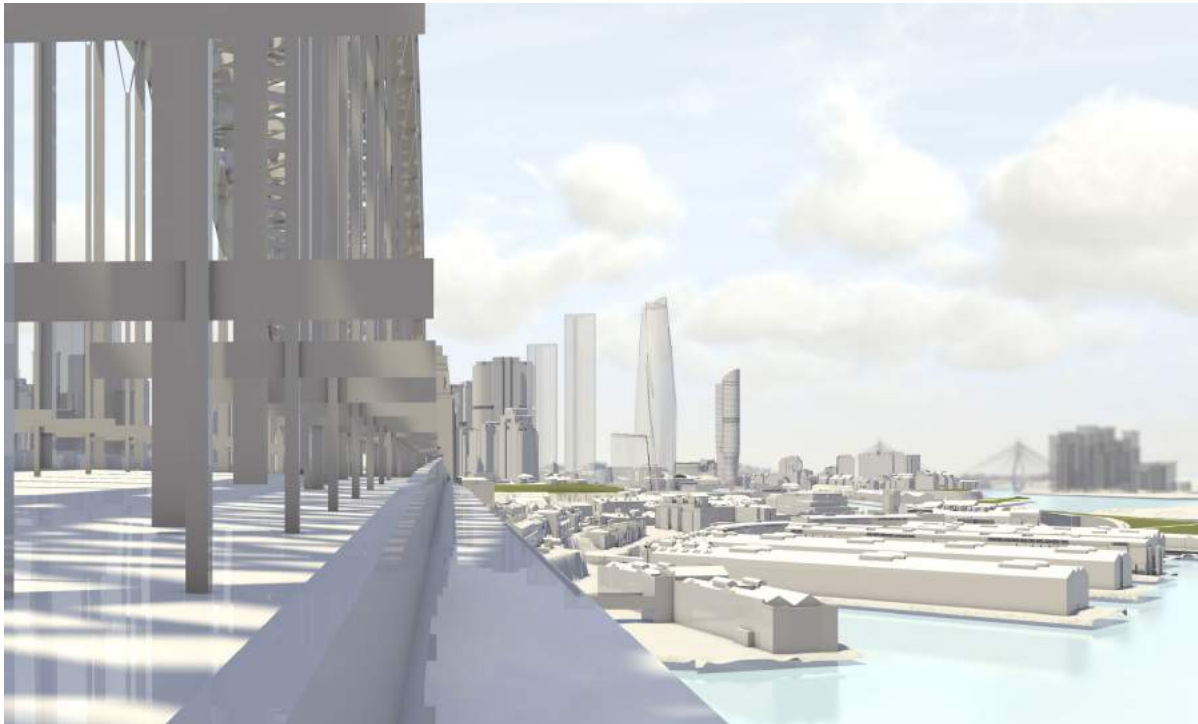
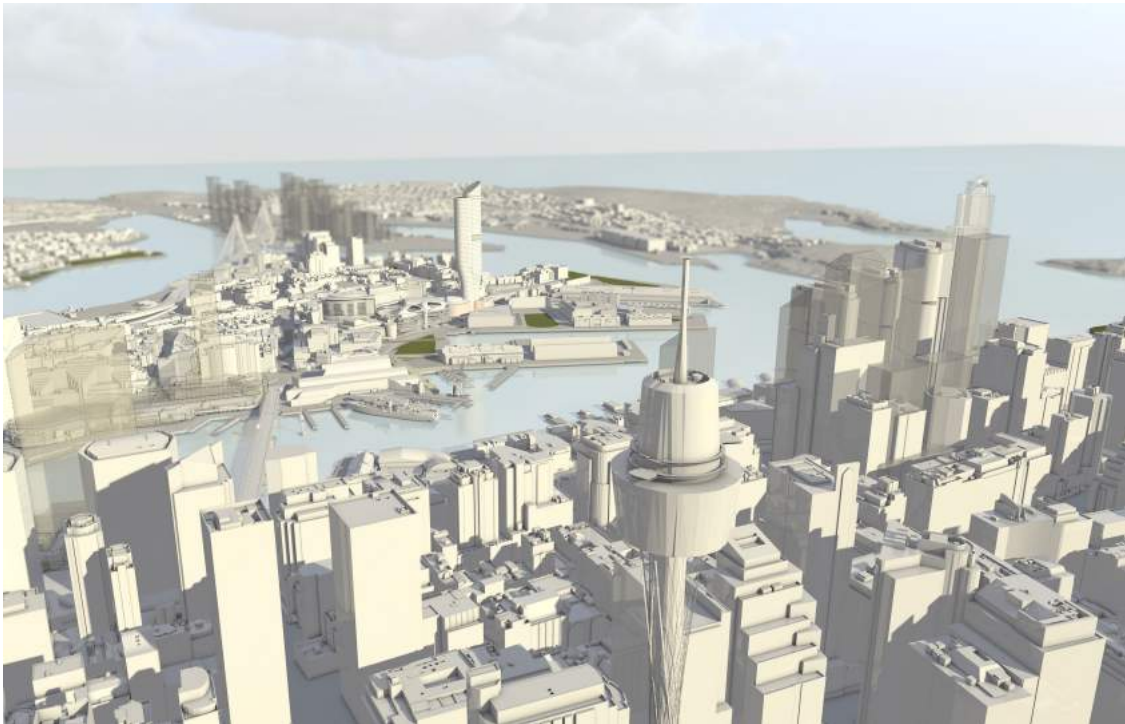


City section looking south

8.5 Urban Context I in projected future CBD and Bays Precinct context

As requested by the Design Review Panel (DRP) at the March 2017 review session, the design team have studied the tower with consideration of projected future height in the CBD and the Bays Precinct to the west.

The potential future towers in the Bay Precinct are speculative only. The potential future towers with the CBD are based on City Of Sydney's Central Sydney Planning Strategy 2016 - 2036.

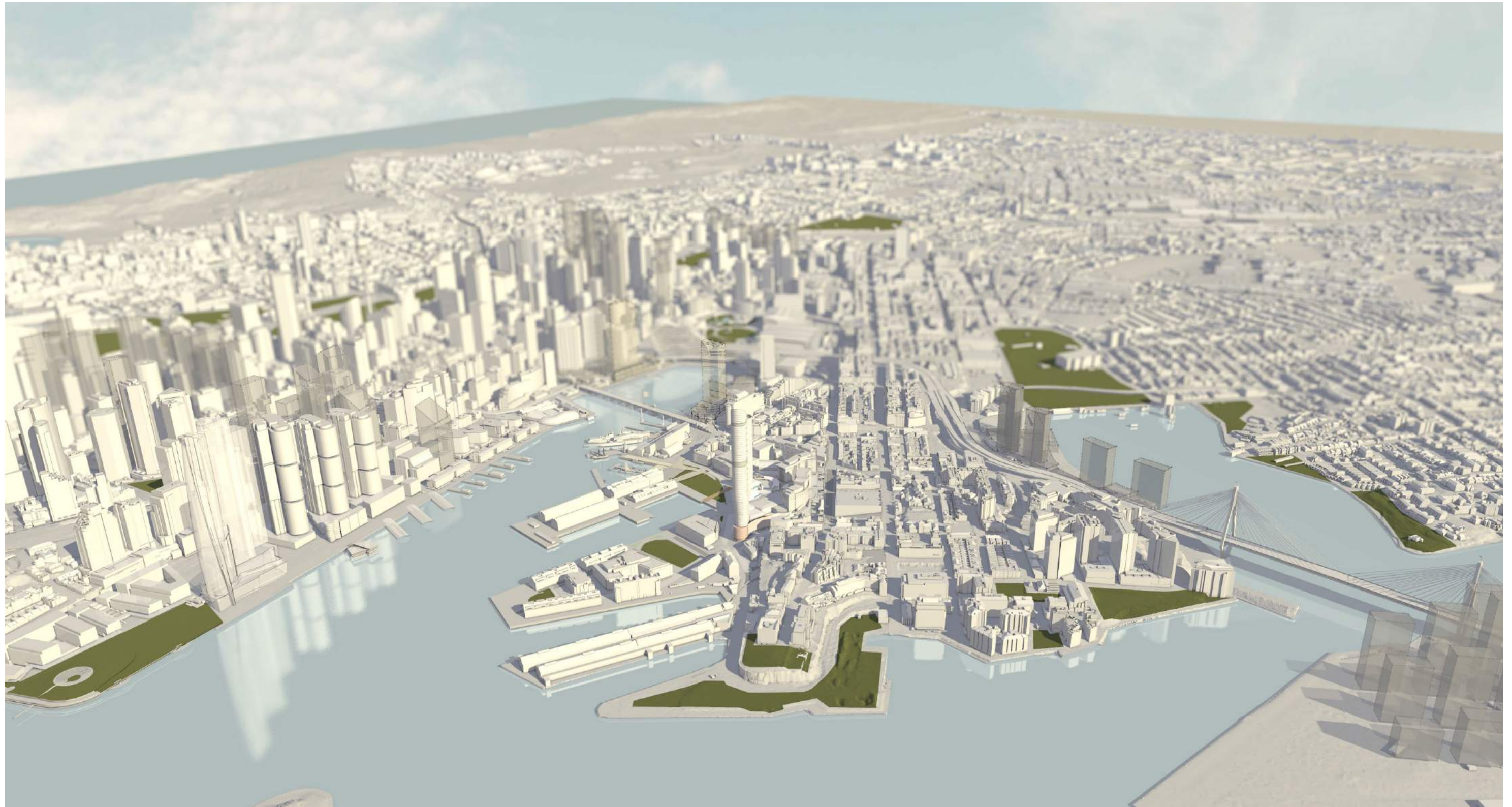




City section looking north - includes projected future CBD and Bays Precinct towers



City section looking south



City model showing proposed tower relative Pyrmont, with potential future towers to CBD and Bay's Precinct shown for information only

8.6 A tower in the round

Located on the Pyrmont Peninsula, the area is currently devoid of tall buildings, however it sits within a wider city context including Darling Harbour Waterfront, Barangaroo, Kings Wharf, Cockle Bay and Darling Live. This wider context has a number of recent buildings of comparable scale. This 'emerging waterfront' precinct is the first signs of the changing context that is set to shape the future form of Central Sydney as it grows west.

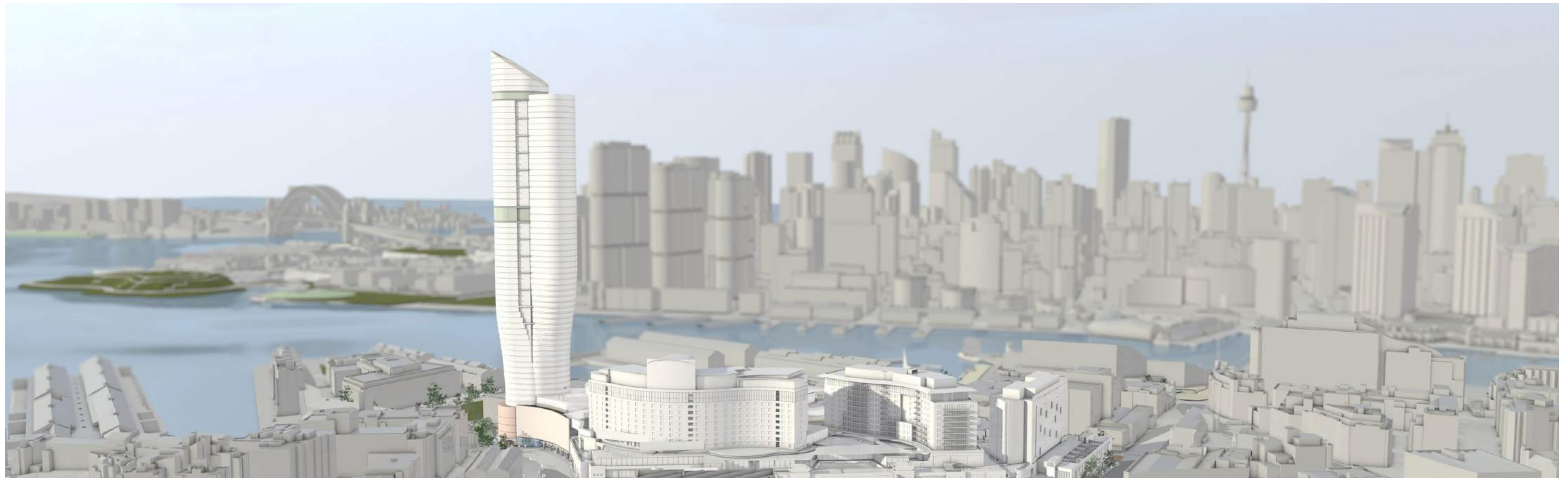
There are several sites within the immediate Pyrmont Context that have the capacity to accommodate tall buildings in the future. Due to the limited number of sites and area, future taller development in this locality is likely to occur as a singular tower or small clusters of towers rather than the significant skyline cluster that occurs in the Sydney CBD. This means, buildings are likely to be seen 'in the round', at least in the short to medium term.

Given that tower stands alone from the CBD and other tower clusters, and will be viewed in the round, it gives rise to an architectural form and expression that responds to this unique condition. The organic form of the tower

with incremental adjustments in plan between floors at the lower levels ensure that the tower makes a rich, positive and varying contribution to the skyline of both Pyrmont and the broader city context.

A precedent example of a tower design that is viewed in the round is The Shard, London. The Shard has been an important urban landmark on the south of the Thames and stands removed from other major tower groups in the City and Canary Wharf. The Shard was conceived as a spire-like sculpture emerging from the River Thames.





A tower designed to be viewed in the round

8.7 Long view impacts

Martin Place and Barangaroo Reserve

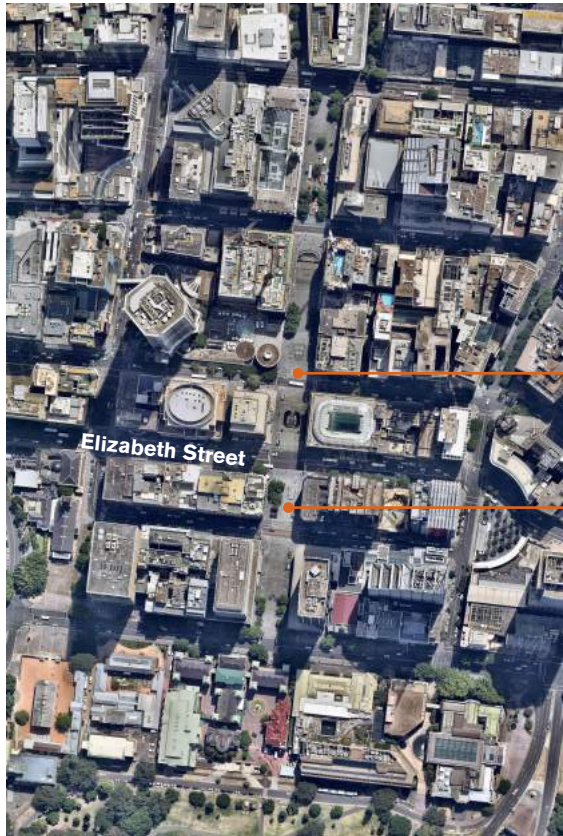
City of Sydney have identified Martin Place to have a 'Protected Sky Silhouette' in the Central Sydney Planning Strategy, 2016 - 2036.

The proposed tower will have a visual impact from within Martin Place, which is limited to the elevated eastern portion as illustrated on the montage to the right (taken between Elizabeth and Phillip Streets at point A as marked below).

As one moves west along Martin Place towards the Cenotaph, the tower will eventually no longer be visible. This point is approximately at B as marked below. Distant views of the tower from the upper areas of Martin Place have been assessed and are deemed to be acceptable.

Other long views, e.g. from Barangaroo Reserve as illustrated to the right of this page are less sensitive with the tower appearing well proportioned and elegant.

Refer to Architectus' Visual Impact Assessment for detail analysis and commentary of distant views.



Martin Place (note: west is to top of page)



View from Martin Place (point A as marked to left)



View from Barangaroo Reserve

8.8 Union square

View and shadow impacts

Union Square is perhaps the most important public square in Pyrmont. Union Street itself began as a steep track from Harris Street down to the foreshore where there was a ferry wharf to take passengers across to the city and now it forms an even more central artery connecting Pyrmont to the city via the historic Pyrmont Bridge. Union Square contains the Pyrmont War Memorial which was unveiled on 8 April 1922 by NSW Governor Sir Walter Davidson. The memorial contains the names of around 750 local men who served in World War 1. It is surmounted by an angel of peace.

Union Square is a major heritage precinct. It includes the Post Office on Harris Street, the Harlequin Inn pub, two bank buildings on Union Street, the homes from 4-20 Union Street, all

buildings from 99-125 Harris Street, the terrace from 135-141 Harris Street and terraces from 1-21 Paternoster Row. All of these buildings are listed on the Register of the National Estate.

Given the local importance of Union Square, fjmt have carried out a detail assessment of the view and shadow impacts to Union Square as part of the design evolution. Shadow impacts have been examined at 15 minute intervals during mid winter, and for a range of dates either side of mid winter such that the shadow impacts could be fully understood and considered relative to decisions on form and height. Detailed analysis and commentary is included later within this report.



existing photographs - Union Square



View from Union Square

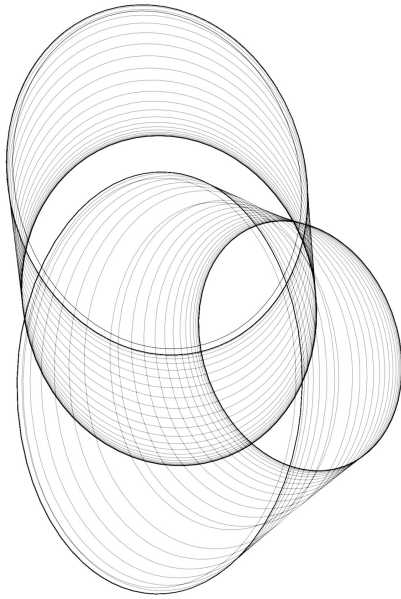
8.9 Form Evolution

Plan geometry and form study

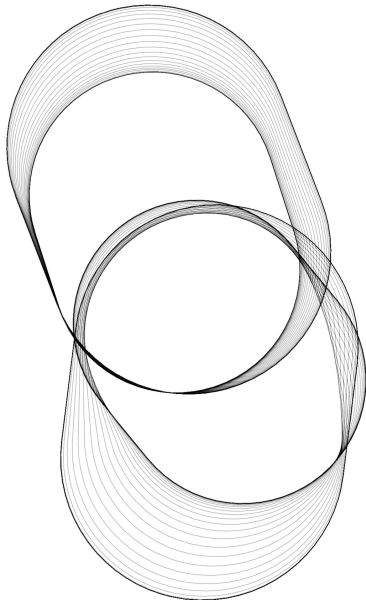
The tower form of the initial competition submission was generated from a pair of interlocking volumes which were generated from transitioning 'two radii ellipse' forms. This initial geometry is represented in the upper diagram to the right. The northern tower volume slightly rotated and pushed out towards the north as it rose. The southern volume grew in sizes, while rotating and stepping south as it rose. In three dimensions this gives rise to a pair of interlocking, twisting volumes.

The geometry was significantly following the initial submission. The 'two radii ellipses' were changed to a capsule geometry, which are semi-circular at the ends. In addition the extent of stepping and rotation was been refined. The final geometry is diagrammatically represented in the lower diagram to the right.

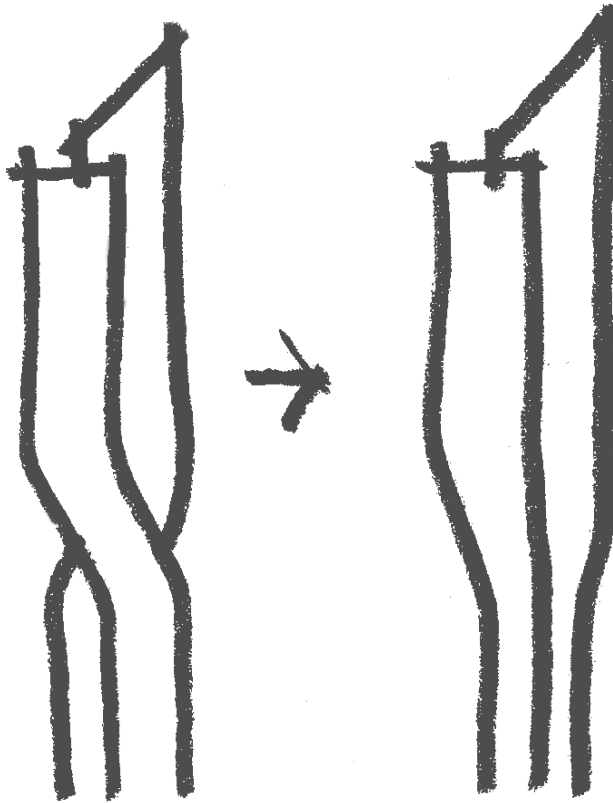
This final geometry provides a simple, elegant tower form that retains and improves upon the initial design intent whilst addressing structural, construction and internal planning flexibility.



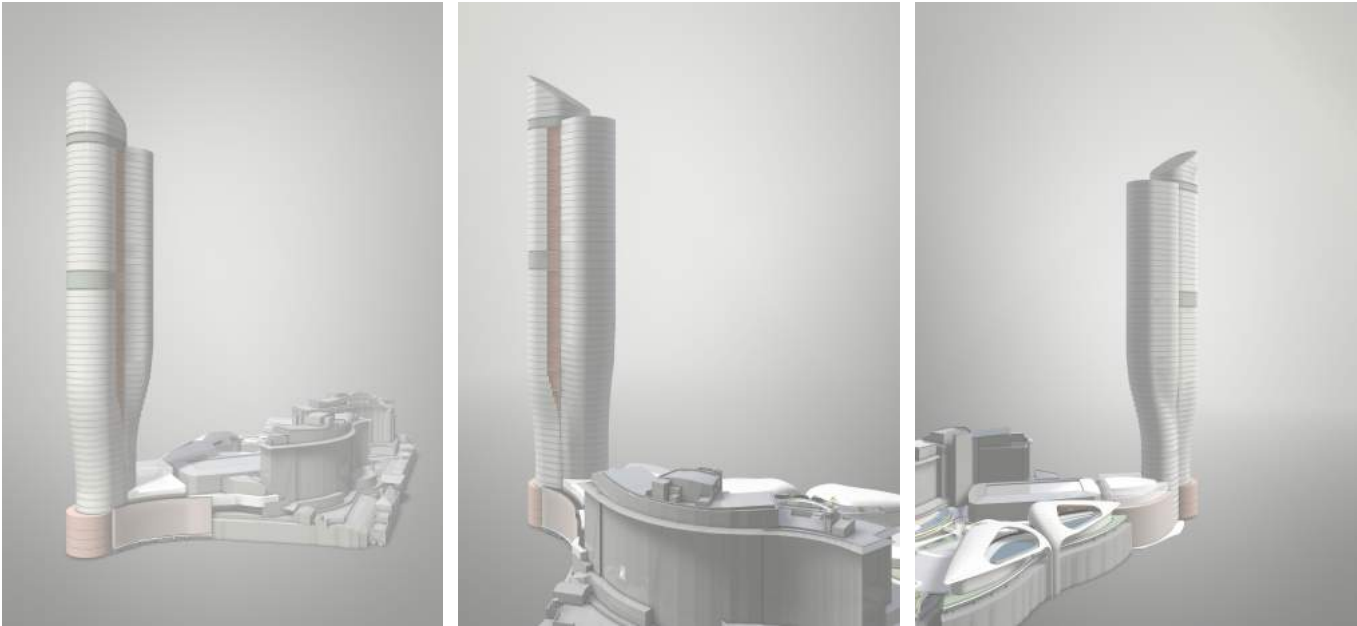
Phase 1 geometry diagram:
transitioning 'two radii ellipse' forms



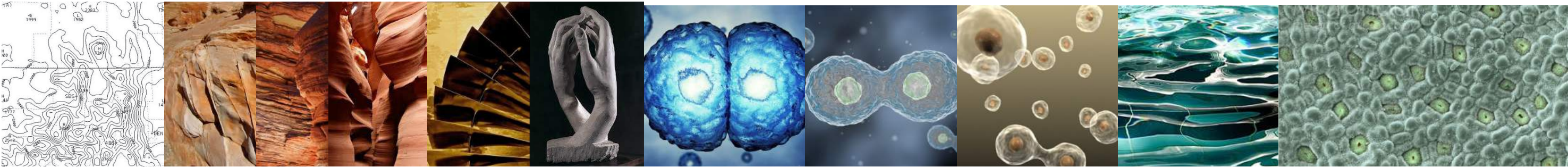
Amended geometry diagram:
transitioning 'capsule' forms



Form evolution sketch



Form studies



8.10 Plan Evolution

Evolution from centre core to side core

The plans adopts a side core configuration. A side core allows greater flexibility in the planning of the hotel and apartments and permits a high level of modulation between hotel guest rooms.

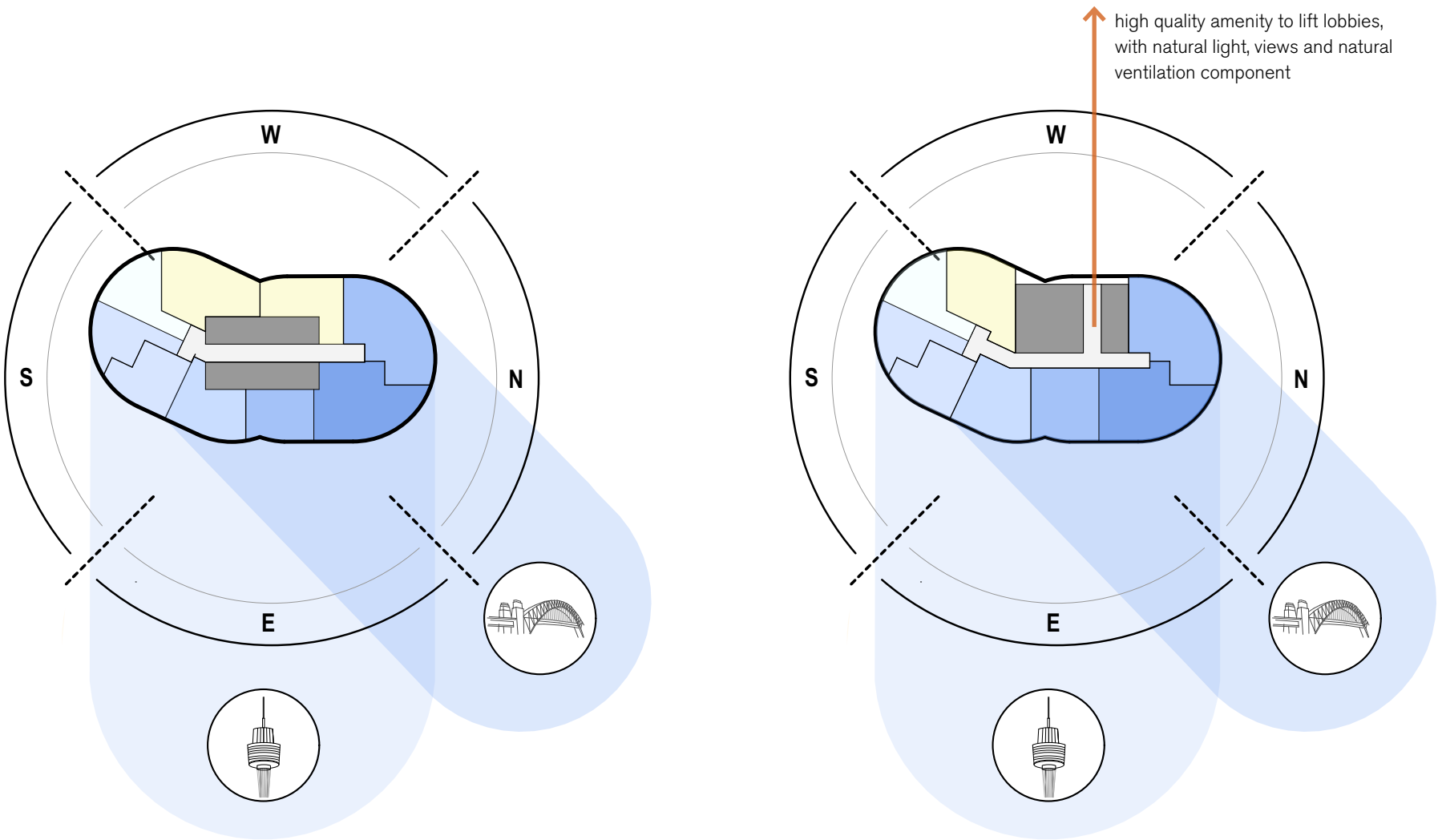
Additionally, a side core arrangement locates the majority of the hotel and apartment accommodation to the north, south and east of the floor plate, thus optimising opportunities for views whilst avoiding direct western sun. This is diagrammatically represented to the right of this page, together with a comparison relative to a centre core.

The adopted side core permits high quality views and natural daylight to the lift lobbies to all levels of the tower. The side core also provides for large interconnected spaces within the sky lobby and avoids the 'racetrack' configuration inherent with a centre core.

The side core is revealed on the western elevation of the tower. The glazed curtain wall is peeled back to reveal this core and the associated glazed lift lobbies. This allows a different facade treatment to be employed in this area, incorporating a vertical 'green spine' on the west of the core. Planting is incorporated at regular vertical intervals.



core facade showing glazed lift lobby, and planting to core



Centre core: view and amenity analysis

Side core: view and amenity analysis



indicative views from upper levels

8.11 Developed Form Studies

The rationalised stepping and twisting forms create thoughtful and balanced expression allowing the tower design to sit comfortably in its context.



Developed form study: view from Cockle Bay



Developed form study: view from west

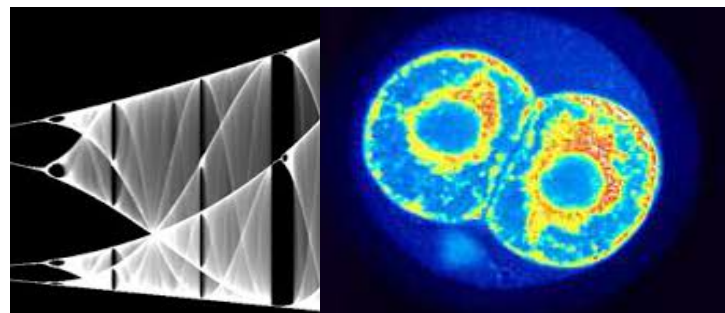


Developed form study: rationalised stepping of lower tower levels

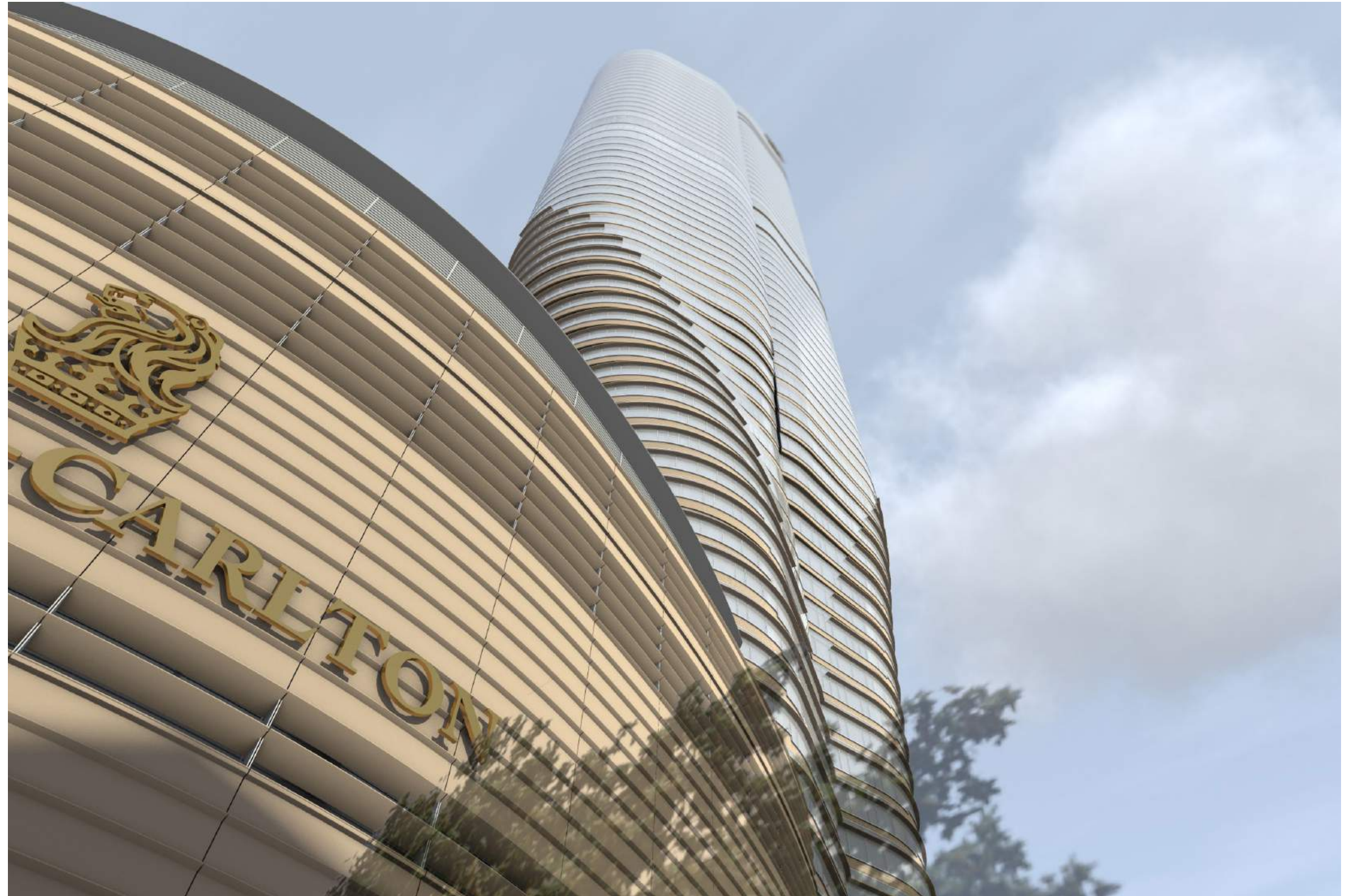




Developed form study: rationalised southern tower volume



francis-jones morehen thorp



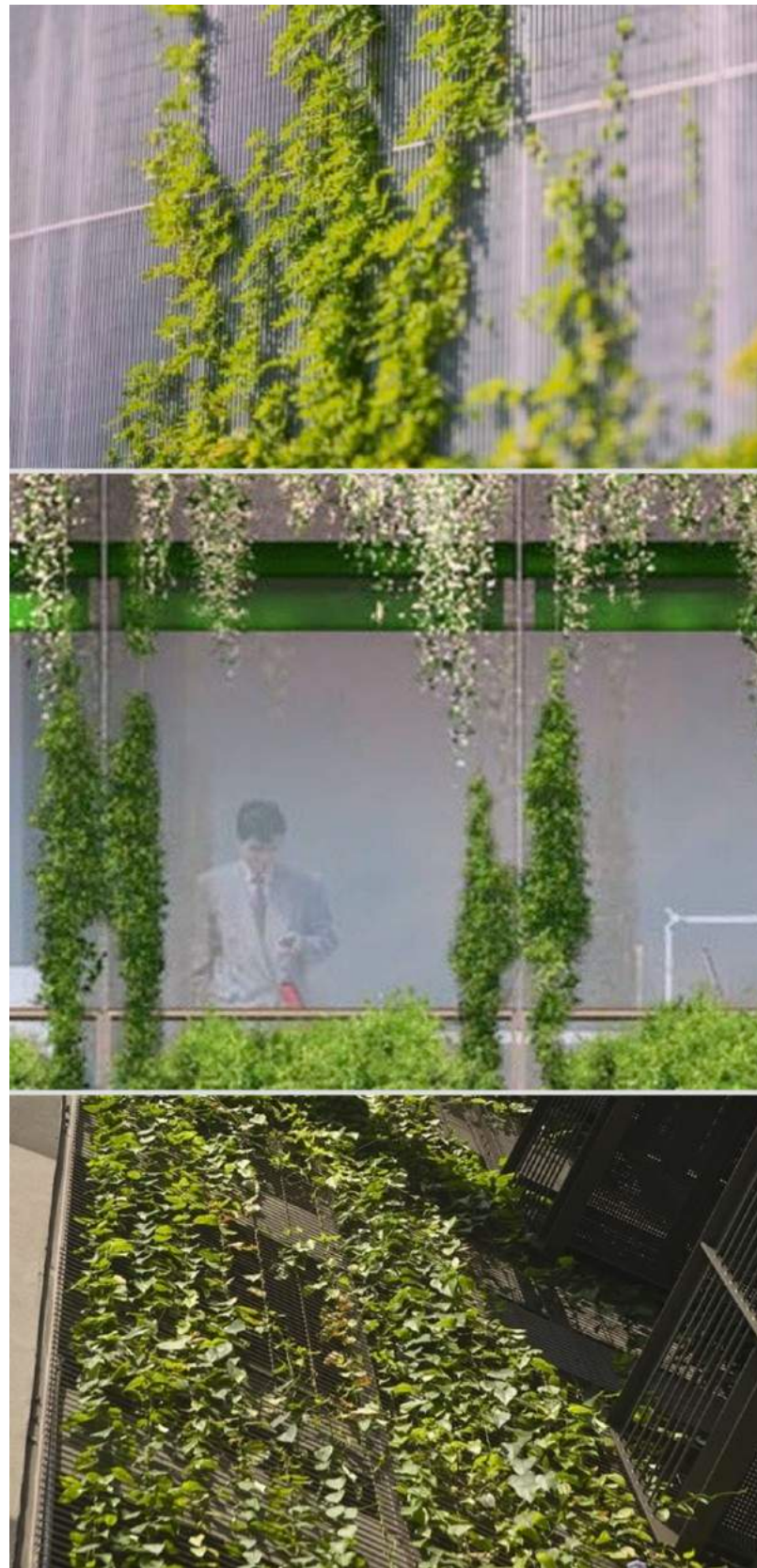
8.12 Expression of two interlocked forms



East Elevation - Oragne shading highlights the 'seam' where the two forms meet, expressing the interlocking forms.



West Elevation - Oragne shading highlights the changing materiality of the core cladding and lobby glazing as the facade 'skin' peels away revealing a green wall.



Examples of possible green wall expression along the core facade



9.0 Public Domain

An extended public domain network

Public Entry and Activation

Community Building

Site Connections

Jones Bay Road

