

F ARCHITECTURAL FORM

THE SITE AS AN
ARCHITECTURAL MARKER

STRATEGIC CONTEXT

Sydney's spectacular waterfront setting is not only naturally beautiful, it has also inspired some of the city's most iconic and recognisable structures. From the Opera House to the Harbour Bridge, as well as the cumulative CBD skyline, Sydney's buildings are just as iconic and recognisable as the city's harbour setting.

However, the city's architecture provides neither a singular response to the harbour nor is a static element. Different locations in the city have different characteristics and in turn present different opportunities for built form responses. Additionally, as the city grows and responds to changing demands, so to does the architectural response.

Sydney's skyline consists of two distinctly different silhouettes:

- The CBD cluster: Whose skyline is valued for the cumulative cluster of buildings and is distinctive for a number of iconic recognisable structures that sit within the overall cluster such as Sydney Tower; and
- Iconic singular buildings viewed in the round: These buildings sit apart from the CBD skyline in other locations around the city and therefore are likely to be seen 'in the round'. These buildings are valued for their visual qualities such as slenderness and uniqueness.

Within Sydney, there are a number of cluster skyline silhouettes emerging as the city embraces the multi-centred structure. While the CBD skyline is the most prominent and recognisable, additional skyline forms include North Sydney, Chatswood and the emerging skyline of Parramatta.

Iconic singular buildings as well as iconic clusters or groupings of buildings are also prevalent. These include the International Towers of Barangaroo which are designed as a group of three to be read together. The ICC is a singular tall building however proposals for a new tower at Harbourside could change this context to more of a grouping or a small cluster.



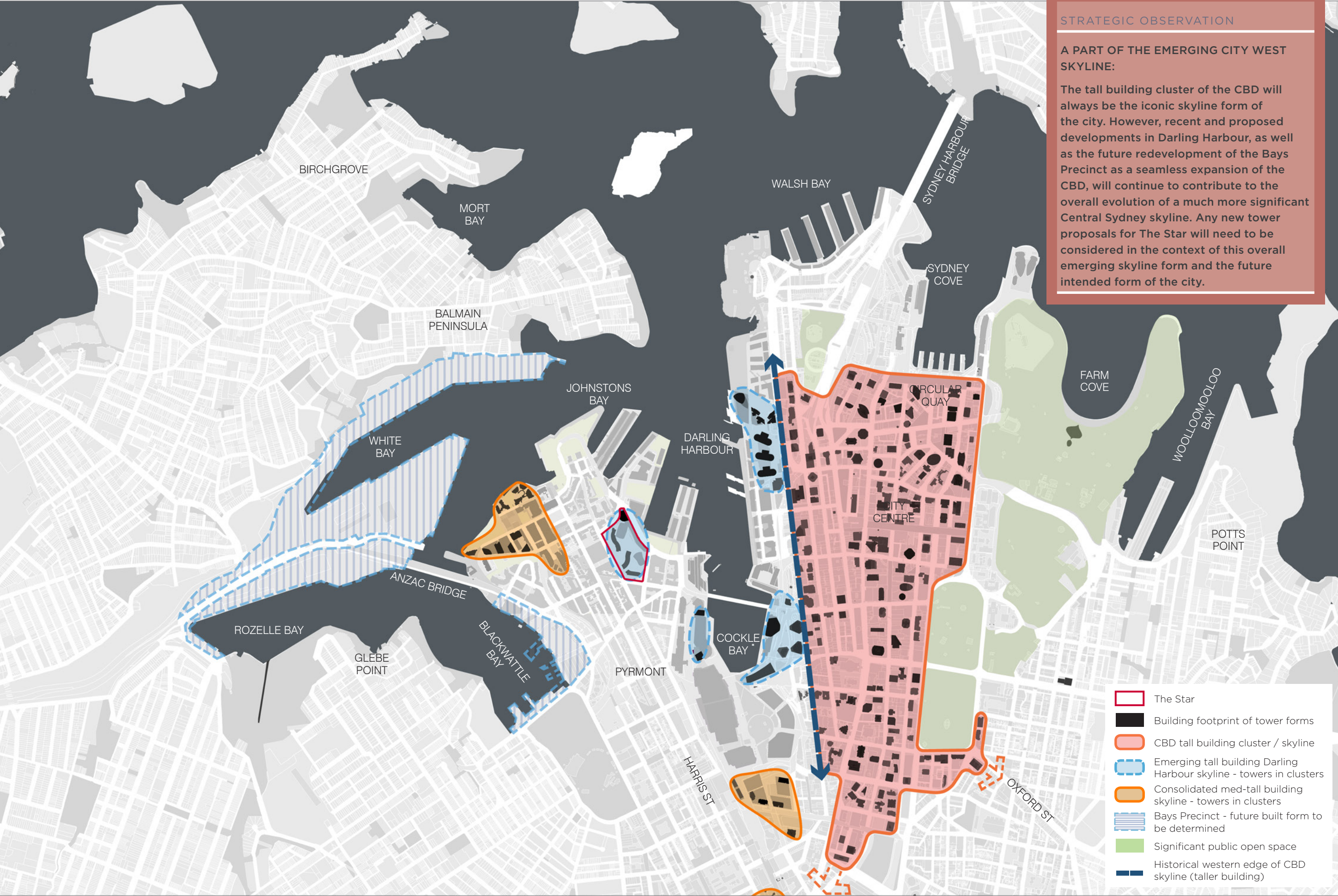


FIGURE 63: Strategic analysis: Architectural form

ARCHITECTURAL FORM

URBAN CONTEXT

In terms of architectural value to the city, there are two key considerations for buildings in terms of their overall contribution to the context and character of the city being the contribution to city skyline and the experience at street level. These considerations relate to two different scales of experience as well, strategic context and local context respectively.

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.

Within the emerging 'global waterfront' precinct that includes The Star, Barangaroo and Darling Harbour there has been a recent change in the overall character of the area including the way in which buildings relate to the public spaces and waterfront areas of the precinct. This has included the emergence of tall tower forms closer to the waters edge that previously occurred in this location.

Most of this change has occurred on larger sites, either as part of significant scale urban renewal sites or larger land holdings. These sites have the ability to accommodate more significantly scaled buildings and mitigate any potential impacts.

At the human 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.

The grain of building in Darling Harbour, reflects its industrial heritage. As the engine room of industrial Sydney in the 19th and 20th centuries, Darling Harbour and much of Pyrmont was home to commercial shipping yards, warehousing, industrial factories and power stations. While many of the uses in this area have changed, the large format building footprints have remained and are now home to shopping centres, convention centres, exhibition halls and podiums for commercial towers.



FIGURE 64: Local context analysis: Architectural form SCALE 1:7500

KEY DIRECTIONS:

F.1 THE CITY'S GLOBAL WATERFRONT:
The emerging built form of the global waterfront precinct is changing the relationship between buildings and the waterfront. Understanding this evolution will ensure The Star responds with a tower that is relative to both its current and future context.

F.2 A MARKER FOR PYRMONT:
The contribution of the tower to the identity of Pyrmont as both a singular marker and part of a future cluster is essential.

- The Star
- Building footprints
 - Extra large lots
 - Large lots
 - Medium lots
 - Fine grain lots

SITE INVESTIGATIONS:

TALL BUILDINGS AND THE WATERFRONT

The varying conditions of Sydney's harbour have resulted in varying built form response. Even within the context of the City Centre and Darling Harbour there are a number of different waterfront characters and built form responses. Often the definition between tall towers and lower rise building forms are marked by streets, dramatic changes in level, historical views or heritage building locations.

Within the City Centre, Sydney's tall tower forms have evolved over time. Today, there is a clear line of definition with regards to how far tall towers extend north along the peninsula. This has been defined by the Sydney Observatory and the view lines that extend from this location. The recent redevelopment of Barangaroo has retained height south of this location. At Circular Quay this has resulted in a dramatic change in scale at the water's edge. Alfred Street delineates the line between the tall tower forms and the lower rise structures of Circular Quay Station and the ferry terminal buildings located adjacent to the waterfront.

At Barangaroo, prior to the redevelopment, tall tower forms were located east of Hickson Road, with wharf development or lower buildings forms occupying the waterfront zone. These lower building forms included Kings Wharf and Cockle Bay Wharf. Barangaroo in turn transformed this relationship locating seven tower forms forward of Hickson Road. Six of these towers, known as International Towers and Central Barangaroo residential towers, are located on podium forms with a new street located between them and the waterfront public realm. Between the street and the waterfront a series of additional low-rise linear building forms is located towards to the waterfront. The remaining tower sits forward of this alignment on the waterfront side of the new street.

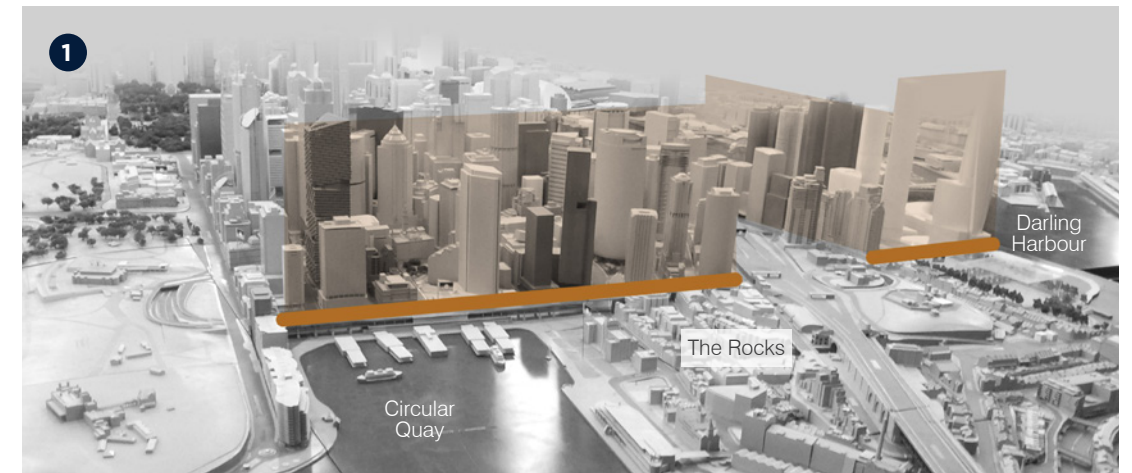
Barangaroo has set a new precedent for the way buildings relate to the Darling Harbour waterfront. Recent developments or proposals which seek to located tall tower forms forward of historically established alignments and within 'the waterfront zone' include the ICC, Cockle Bay Wharf and Harbourside.

Within Pyrmont, and specifically in the context of The Star, the waterfront character presents a unique relationship between the waterfront and building forms. A series of pier like forms extend from the peninsula out over the water and are occupied by low-rise buildings forms. Pirrama Road, in front of The Star, forms a clear definition of the change in built form typology and also is the alignment of the historical sandstone cliffs that define the waterfront and the built up are of the peninsula in this location.

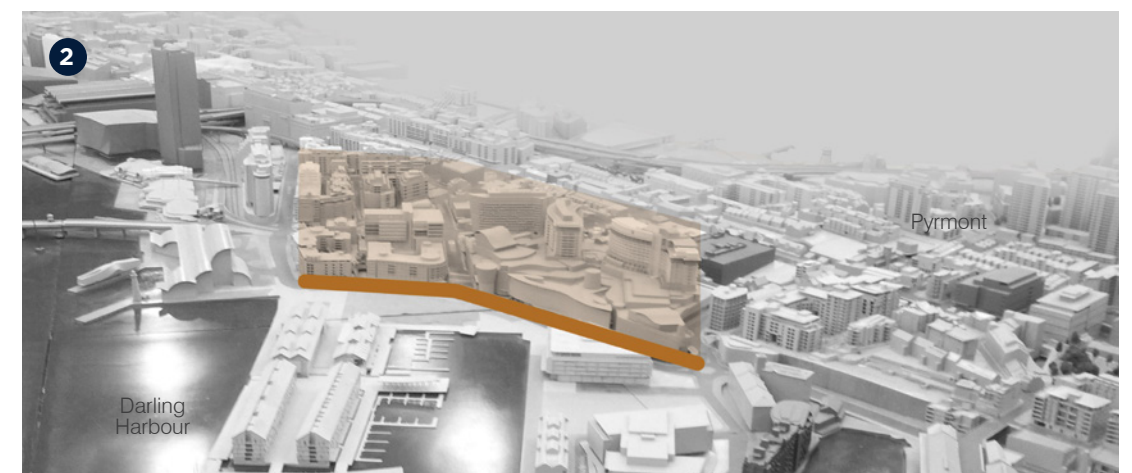
- The Star
- Established extent of tower forms
- Historical location of tower forms set back from waterfront
- New waterfront tower forms
- Historical definition of tower forms and lower height waterfront buildings
- Proposed definition of tower forms and lower height waterfront buildings



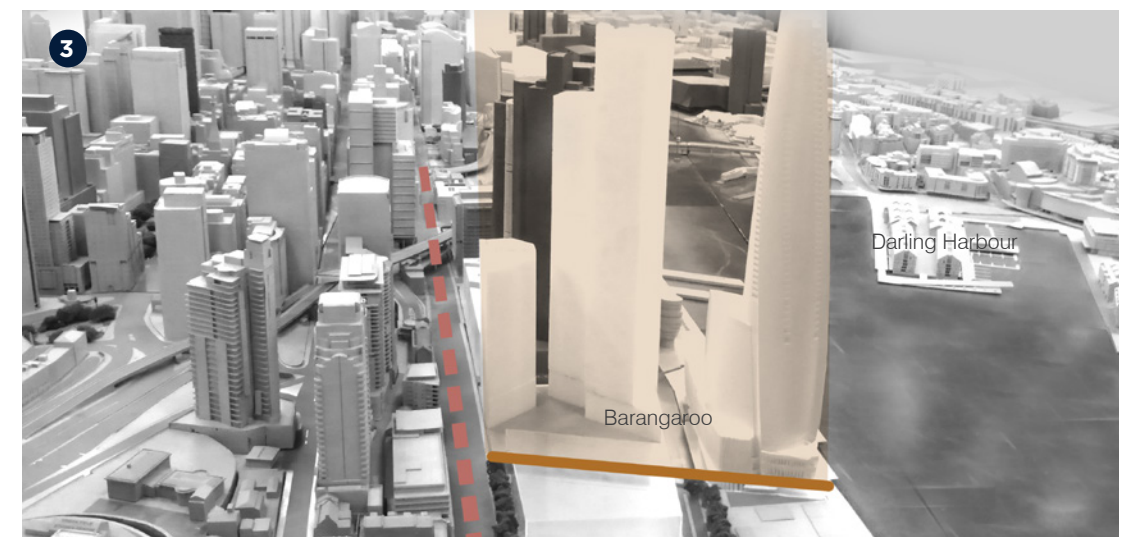
FIGURE 65: Tall buildings and waterfront analysis



Boundary between tall tower forms and lower height buildings on the waterfront at Circular Quay and Barangaroo.



Proposed boundary between tall tower forms and lower height buildings on the waterfront in the context of The Star.



Historical boundary between tall tower forms and lower height buildings at Barangaroo has changed.

SITE INVESTIGATIONS:

GLOBAL WATERFRONT PRECINCT EMERGING SKYLINE ANALYSIS

The shape of the Darling Harbour waterway creates a long, deep water body enclosed by peninsulas on either side. The result in this location is a unique experience in which development on both sides of the bay have a strong relationship to one another.

Analysis of the built form context of the harbour over time shows the historical pattern of development scale (and often use) mirroring each other on either side of the harbour.

The emergence of tall tower forms around this waterfront in proximity to the waters edge in recent years has significantly changed the context in which The Star now sits. This experience of the waterfront is a key one due the role of Darling Harbour as a key hub for ferries utilised everyday by residents of the city as well as a major hub for harbour based experiences which are major drivers of tourism.

Analysis of these tower forms and their heights in the context of the whole of the global waterfront precinct identifies some emerging trends in relation to the overall form of the precinct as follows:

- The cluster of towers at Barangaroo ranges from 168m to 253m from southern end of the precinct to Crown Hotel at the northern end of Central Barangaroo.
- At the base of the waterfront, there are two clusters of building most of which reflect a tapering of buildings from the heights of Barangaroo as follows:
 - Further south the existing cluster of buildings at Darling Park sit at a maximum height of 130m. Adjacent to this, the recently completed Hyatt Regency Hotel building and the currently under construction IMAX ribbon both will sit at 94m.
 - Beyond the waterfront at the base of Tumbalong Park and the public space in front of the Darling Live Precinct sits Darling Square. The tallest buildings in this redevelopment sit at 138m.
 - Aside from this a recently submitted proposal at Cockle Bay Wharf proposes a new tower form at a height of 235m.

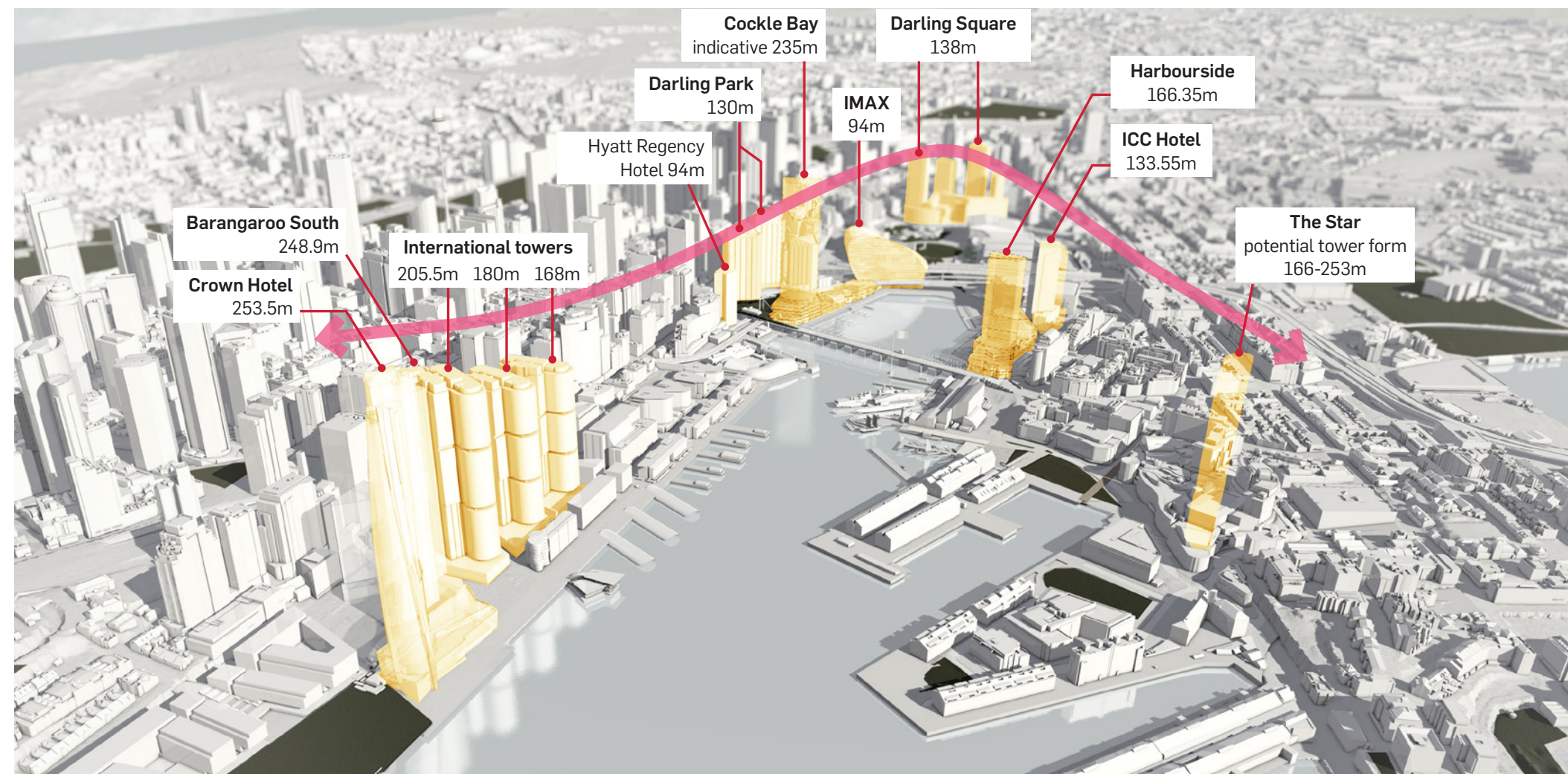


FIGURE 66: 3D visualisation of emerging 'Global Waterfront' precinct skyline around the Darling Harbour waterway



FIGURE 67: Historical photo series of buildings around the Darling Harbour waterfront

- At the base of the western foreshore of the harbour, the recently completed ICC Hotel sits at 133m. And emerging proposals for a new tower, along with the redevelopment of Harbourside, propose a tower form to a height of 166m.

The key take-outs of this analysis demonstrate an emerging form of the skyline as it addresses the waterfront. This includes the tallest buildings located at the 'entrance' to the harbour framing the precinct. In this context, it is in keeping with the emerging character of the precinct that a tower form that sits between the 166m proposed at Harbourside and that of the 253m tall Crown Tower is keeping with the emerging form of the precinct.

It is important to note, there is no established strategic guidance in this location to the overall outcome of buildings in this location, And that there are proposals within the precinct which vary this over arching trend.

In the context of the city centre skyline, this is not unusual in that buildings within the city centre have emerged over time creating an interesting cluster. However in modelling these heights, the tower form would sit in the general massing height of the buildings within the city centre, acknowledging that within the 'western edge' of the city, the Central Sydney Strategy proposes to allow an increase in building heights.

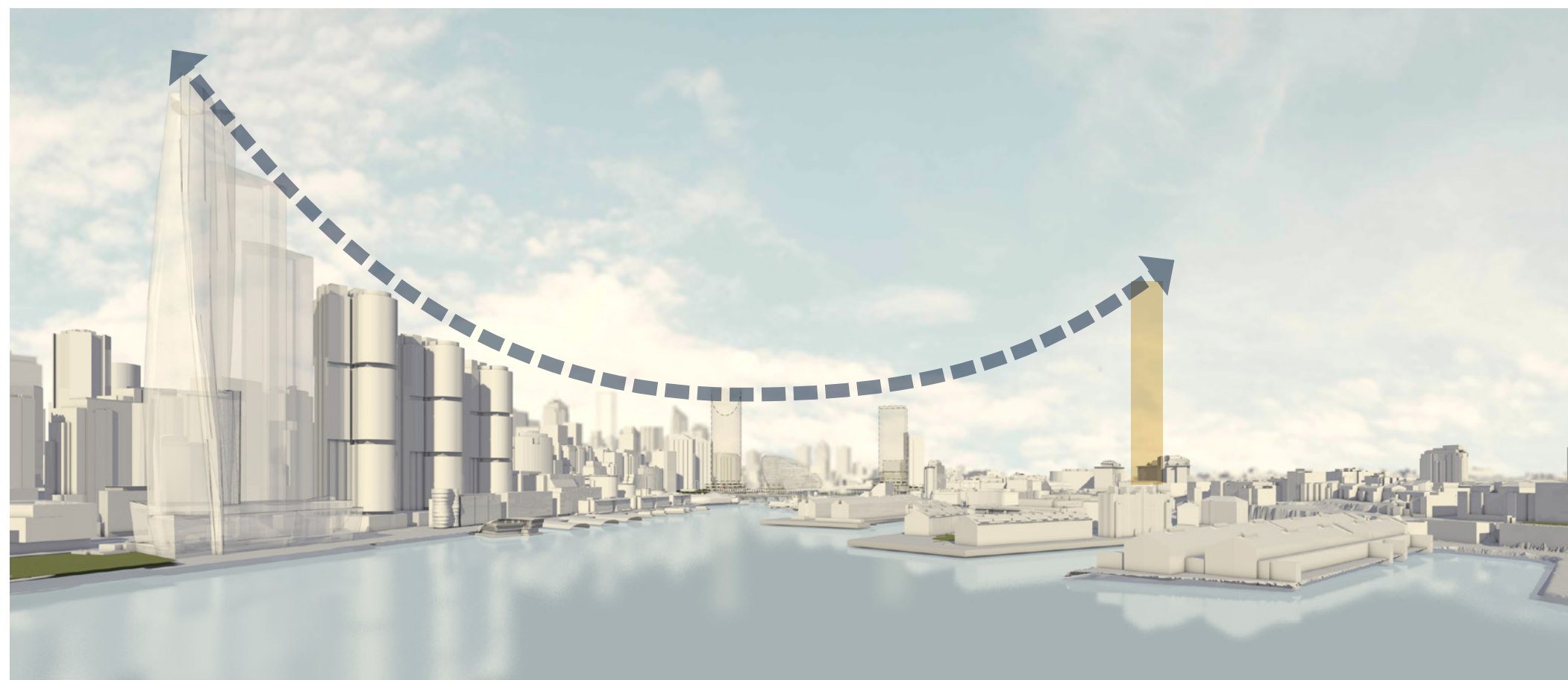


FIGURE 68: 3D model view of potential skyline massing from Darling Harbour

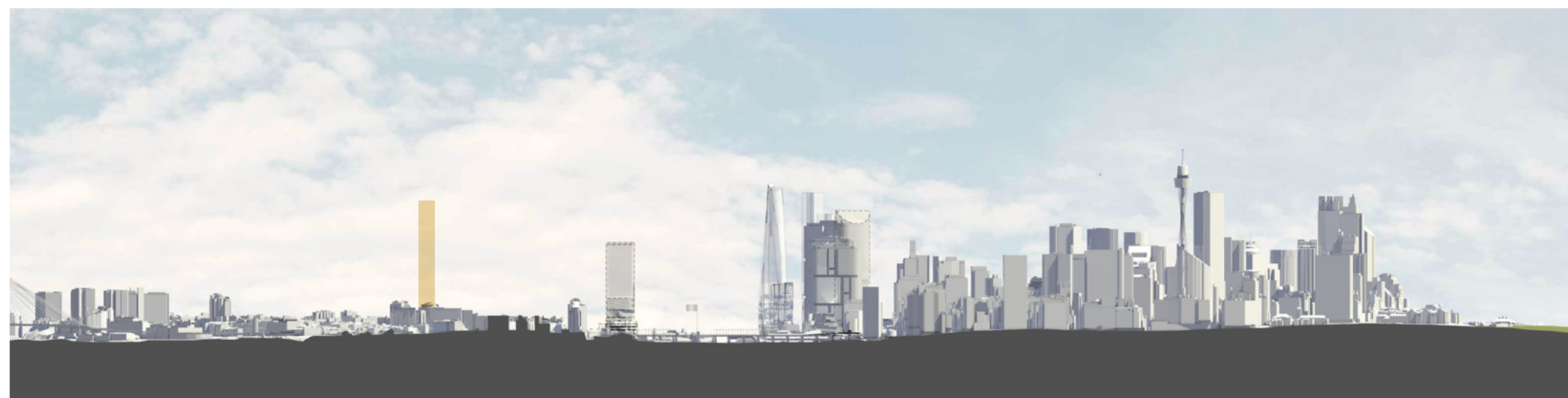


FIGURE 69: Indicative cross city section showing potential skyline massing through the city centre, Darling Harbour and Pyrmont



SITE INVESTIGATIONS:

DARLING HARBOUR TOWER PROPOSALS

With the city currently undergoing an unprecedented level of change and growth, recent developments in some locations have transformed the way buildings relate to the waterfront. Nowhere is this more prevalent than in Darling Harbour.

Over the past five years the built form and skyline of Darling Harbour has undergone a dramatic transformation. This transformation has seen the emergence of a new urban context and consequentially establishment of a unique relationship between buildings, the harbour and the pedestrian foreshore for Sydney - one that is still emerging and evolving.

The first signs of a transformation were instigated by the proposals for the International Towers and Crown Casino at Barangaroo. Since the establishment of Barangaroo, a number of development proposals have embraced this new relationship between tall buildings and the Darling Harbour Waterfront.



FIGURE 70: Section key plan

BARANGAROO INTERNATIONAL TOWERS

One of the key principles for the architectural response of Barangaroo was to create a new western frontage to the city centre where previously buildings had somewhat turned away from the industrial edge.

The development of 3 podium and tower forms for the international towers saw the traditional stepping down of building heights to the water's edge be reversed with the towers boldly fronting the harbour. In dialogue with the existing form of the city centre behind them, the buildings deliberately grew in height towards the north terminating in the casino tower which defined the city's north western edge.

The cross-section of built form at the water's edge comprises lower-rise buildings adjoining the foreshore path mediating the change in scale to the taller tower-on-podiums forms which sit behind this.

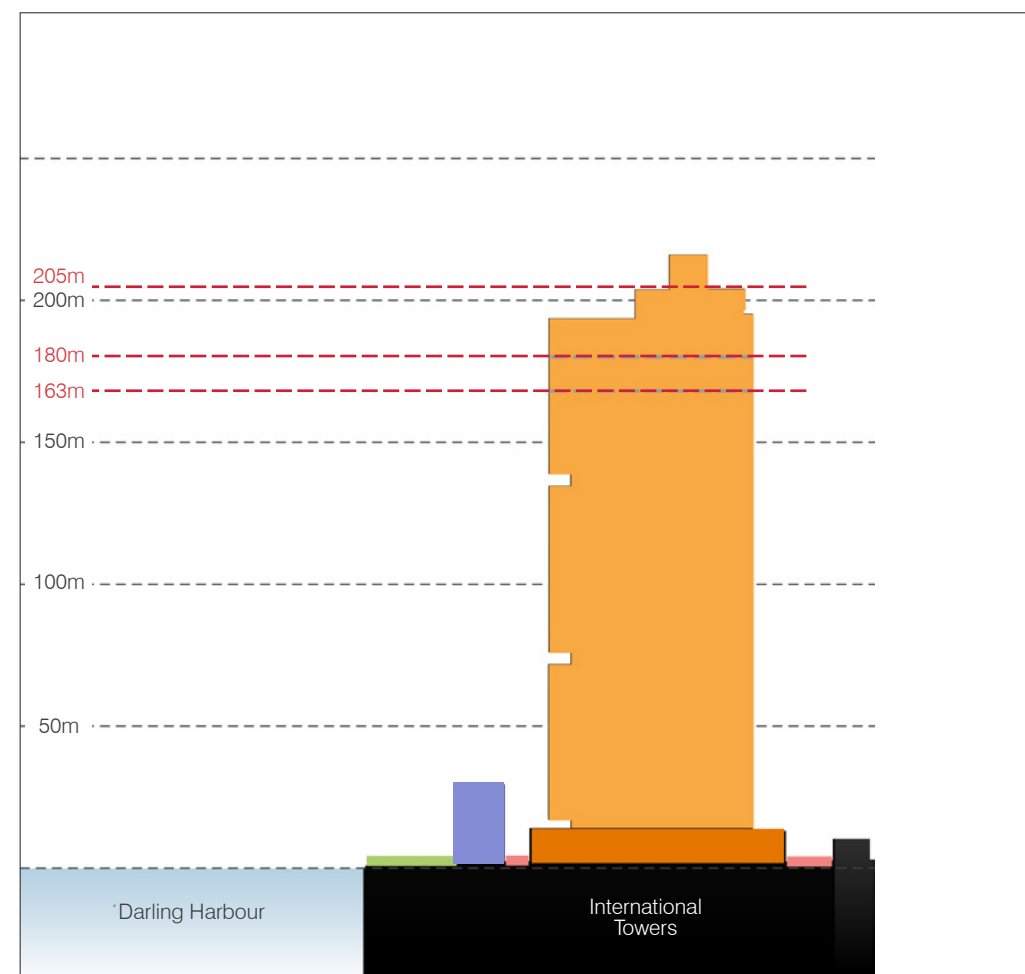


FIGURE 71: Section A - International Towers Barangaroo

BARANGAROO INTERNATIONAL TOWERS

The contextual architectural response of the international towers is deliberately punctuated by a landmark building for the Crown Hotel. Brought forward to sit adjacent to the foreshore path, the form, positioning and height of this building aims to create an iconic architectural statement as a key marker in city wayfinding.

As previously mentioned the Casino Tower is the tallest building, aligning with and adding definition to the city's north western edge.

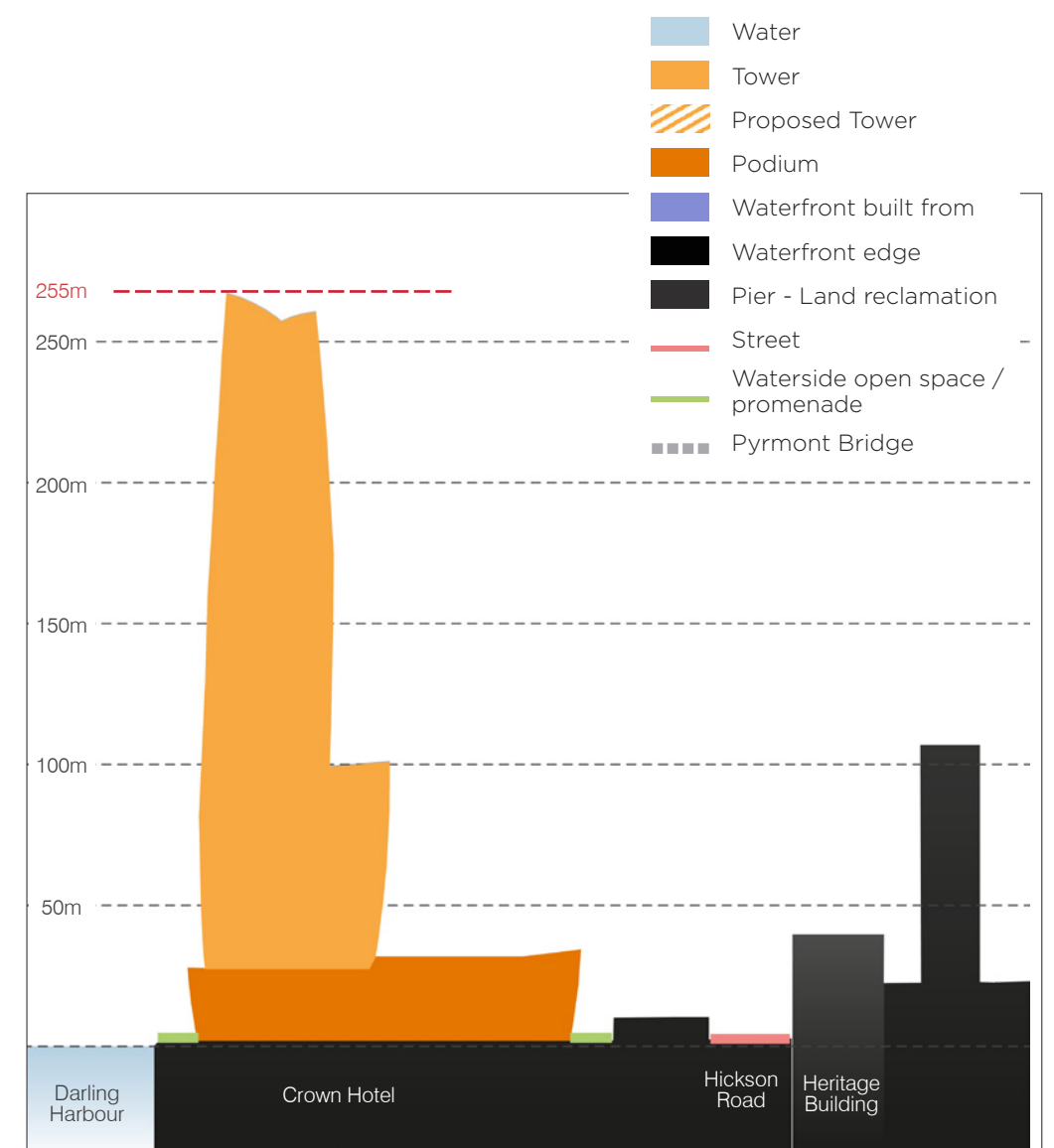


FIGURE 72: Section B - Crown Hotel Barangaroo

THE SOFFITEL @ THE ICC

As part of the International Convention Centre precinct, a proposal for a 134m high hotel tower was included. Now complete, the new Sofitel sits behind the existing Harbourside shopping centre.

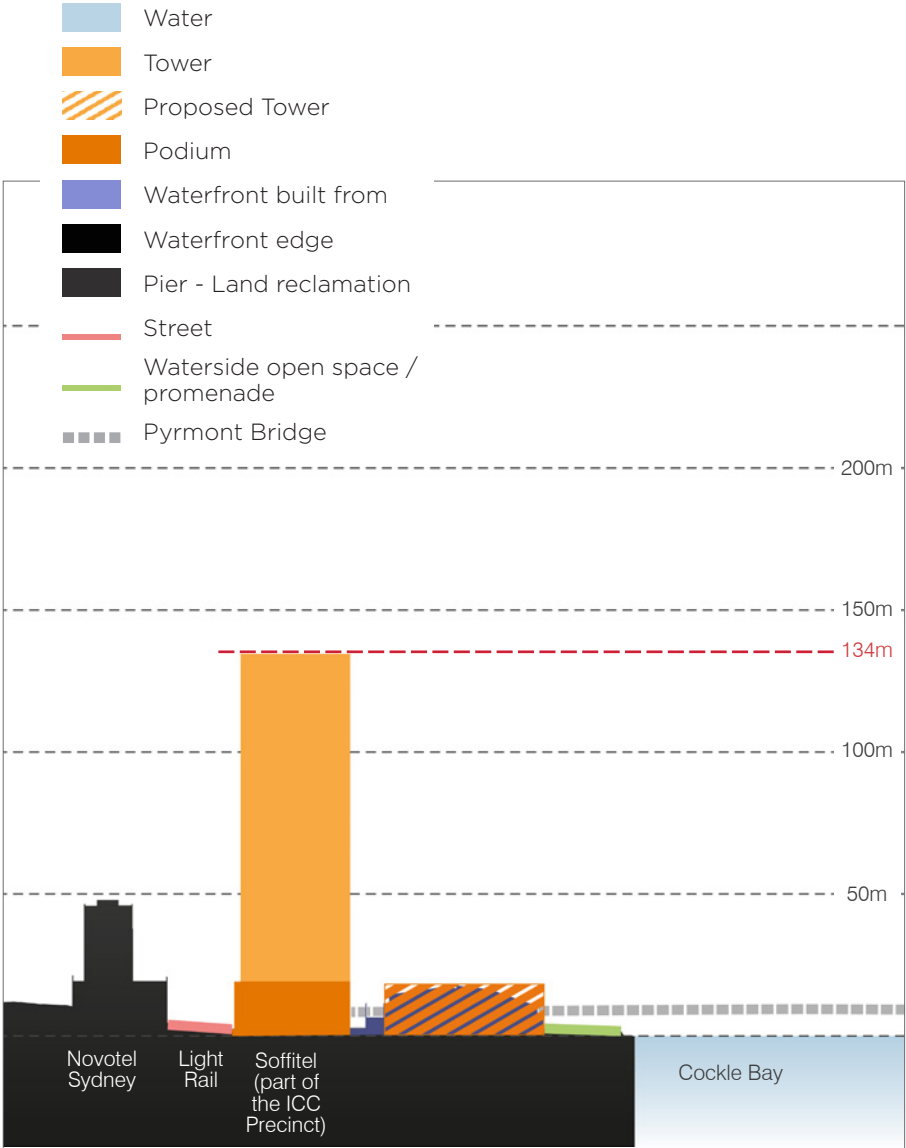


FIGURE 73: Section C: ICC Hotel Darling Harbour

COCKLE BAY

A proposal for a fourth tower as part of the Darling Park and Cockle Bay Wharf precinct on the eastern side of Darling Harbour included the demolition of existing buildings of Cockle Bay Wharf to deliver a new integrated retail podium with the 12,000 m2 of public domain space and building envelopes for a tower base and a tower up to 235 metres high.

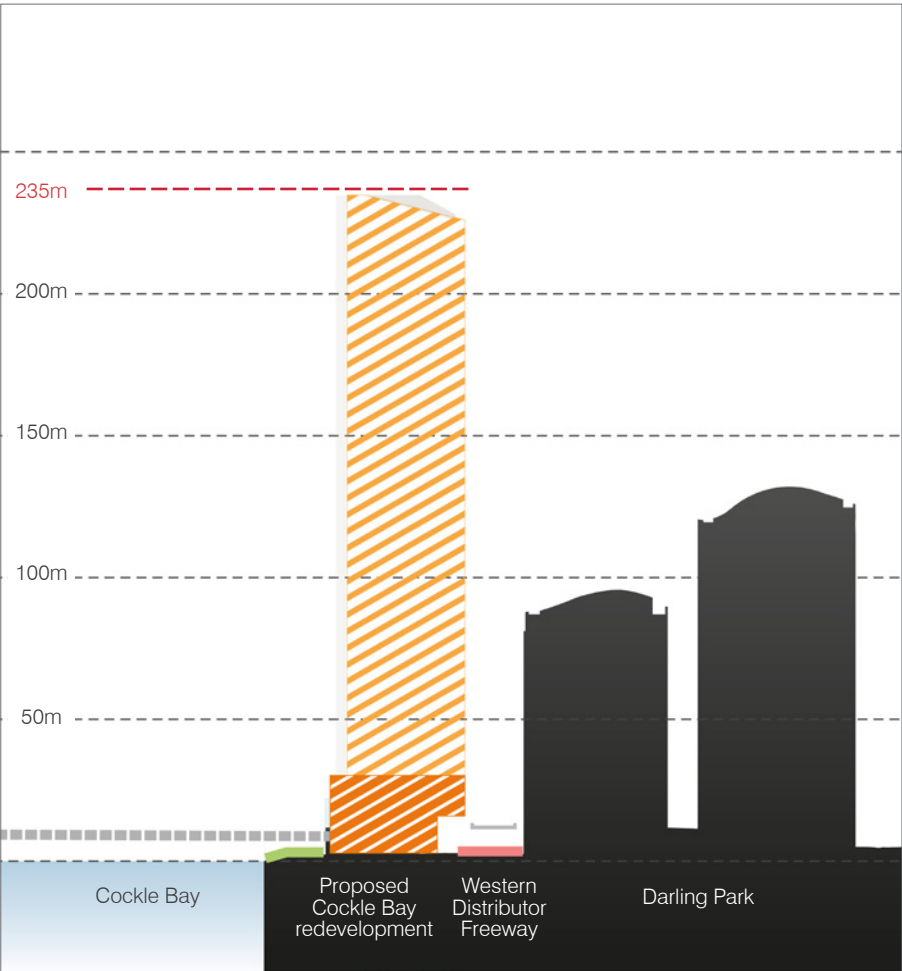


FIGURE 74: Section D: Proposed Cockle Bay Redevelopment

HARBOURSIDE

In August 2016, Mirvac requested new SEARs for the preparation of an EIS to accompany a Staged Development Application (DA) for the proposed redevelopment of the site for a significant new retail shopping centre and residential apartment tower.

The proposal comprises four levels of retail and restaurant floor space with a residential tower above. The tower is located towards the centre of the northern portion of the site. It features a typical floor plate of approximately 1,000 sqm and is oriented to maximise the sharing of views with existing buildings behind.

It sits on top of a retail podium which includes consideration of a public domain concept that integrates the development with the adjoining ICC Precinct, Darling Harbour foreshore, Pyrmont Bridge and Pyrmont.

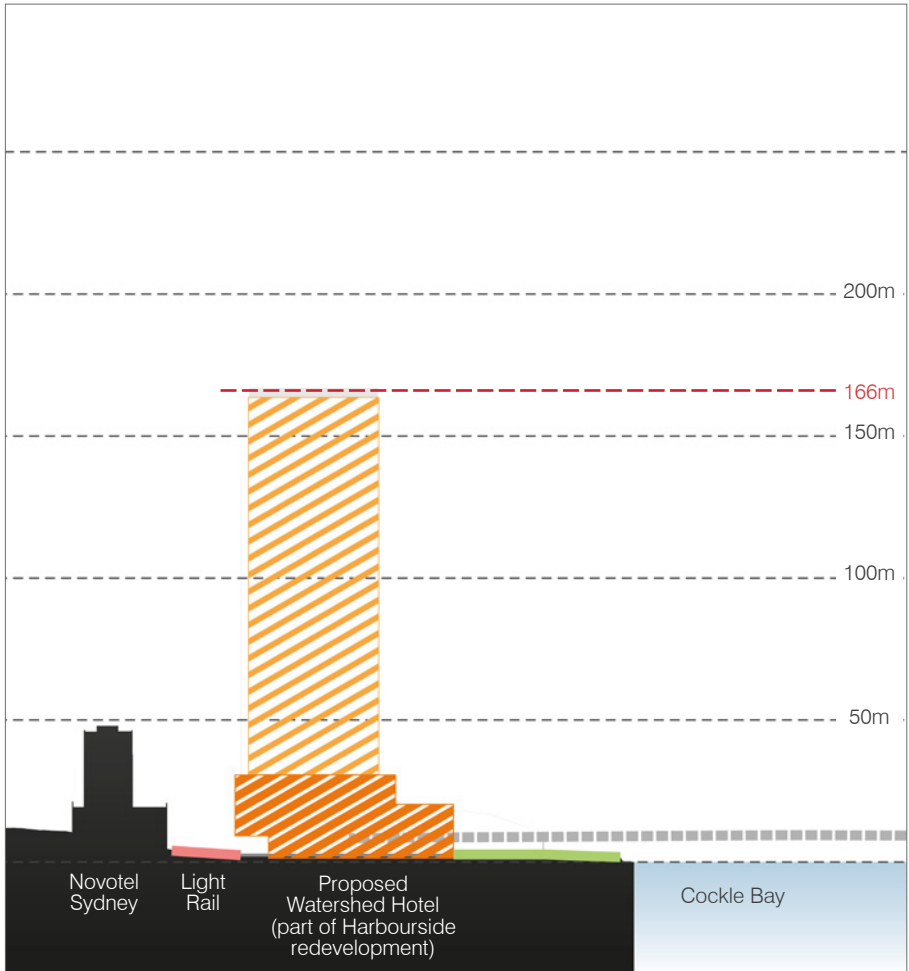


FIGURE 75: Section E: Proposed Cockle Bay Redevelopment

PROPOSED TOWER FOR AT THE STAR

The proposed height range for the tower at The Star ranges from 166m to 253m. The section opposite through The Star and Darling Island illustrates the relationship between existing low rise building forms on Darling Island, the existing and proposed podium massing of The Star and the proposed tower form for The Star. This section demonstrates the role of Pirrama Road as the key element providing definition between the lower rise waterfront and taller buildings forms.



FIGURE 76: Section key plan

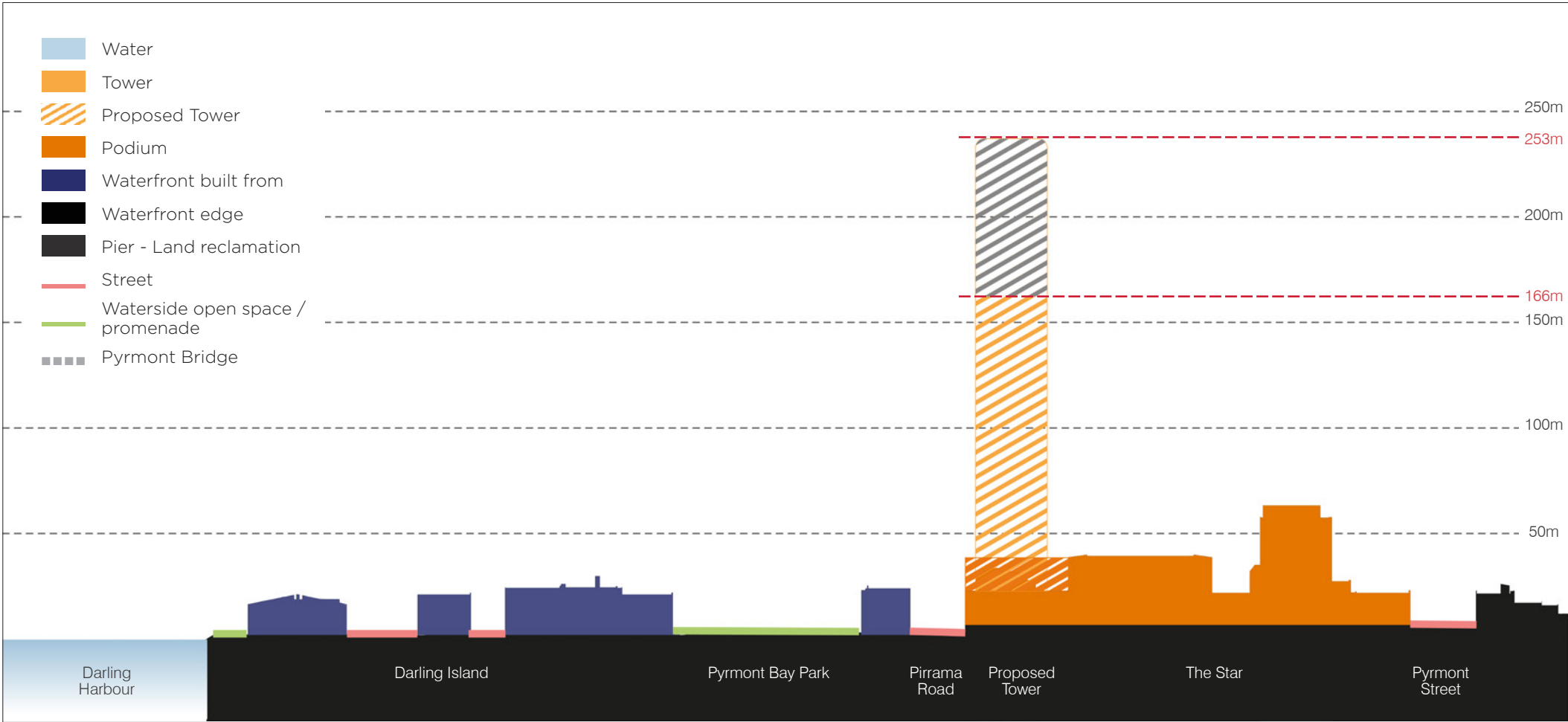


FIGURE 77: Section F: The Star and Darling Island

SITE DEVELOPMENT PRINCIPLE:

The detailed site investigations presented on the previous pages have identified the following:

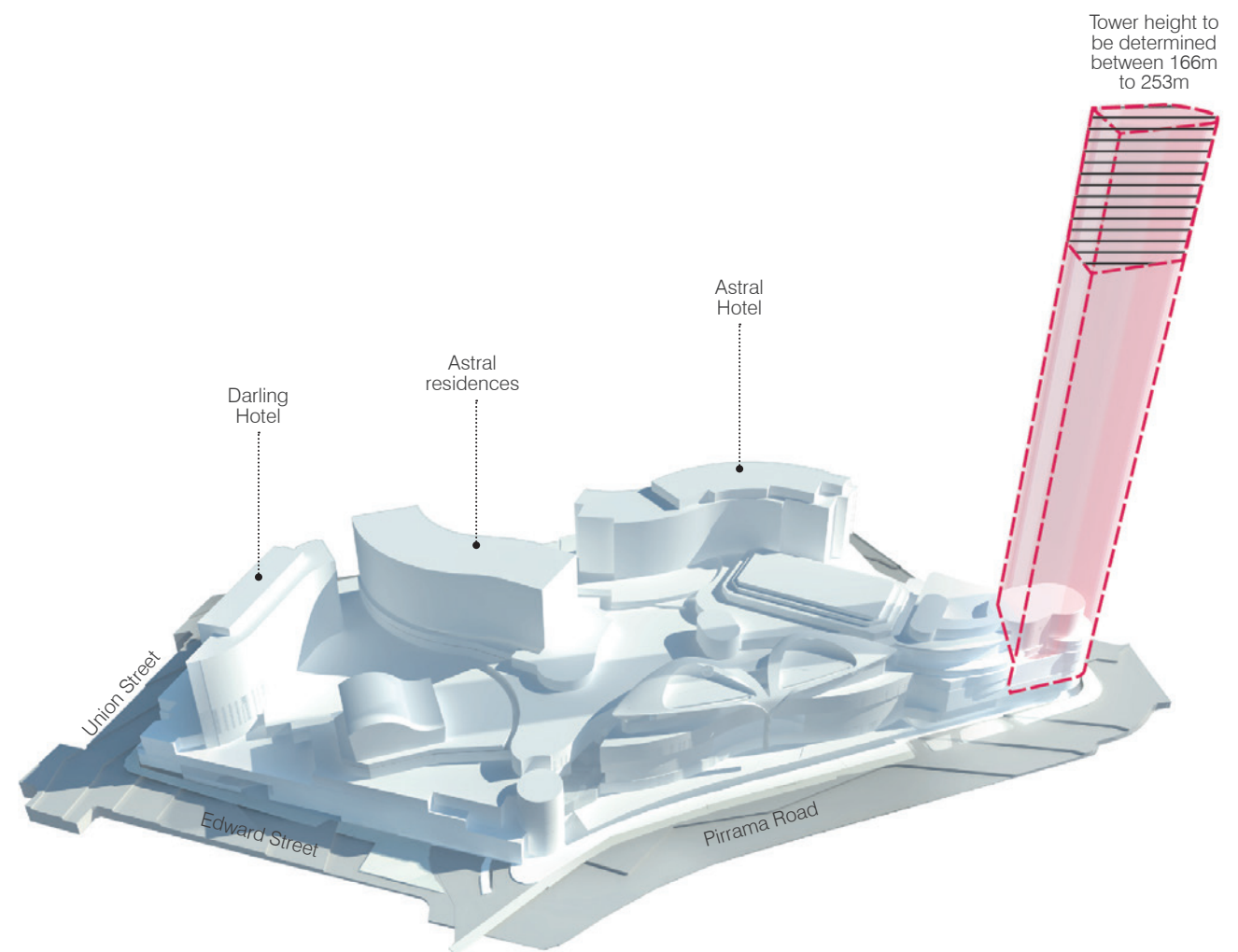
Provide a landmark tower on The Star that marks the western extent of the emerging 'global waterfront' precinct and provides balance symmetry to the visual experience of building massing as viewed from Darling Harbour.

SITE OUTCOMES:



Further investigate the height of a tower for The Star between 166m - 253m.

SITE OUTCOME



SITE INVESTIGATIONS:

VISUAL CONTEXT ANALYSIS

The skyline of Sydney's CBD is one of the most recognisable in the world. Valued for its collective silhouette, iconic structures such as the Harbour Bridge, Opera House and Sydney Tower form distinctive elements within the overall composition. In recent years, the skyline form of the western edge of the CBD has transformed. The development of Barangaroo as Sydney's Global Waterfront has established a new visual context for Darling Harbour. Gradually, this has begun to translate around the harbour to the western foreshore. Additionally, with the redevelopment of the Bays Precinct underway, it is likely the inner west skyline along the waterfront will dramatically transform in the near future.

Today, the Pyrmont Peninsula goes relatively unnoticed in the context of the CBD skyline and the emerging global waterfront skyline that frames Darling Harbour. Within the context of Pyrmont, the Anzac Bridge forms the only significant and recognisable structure with the residential towers of Jacksons Landing emerging to the east.

Like the power station before it, The Star is a unique part of the city's urban scape and more importantly is a key international and local destination for people in the city. However unlike the power station, it is almost unidentifiable within the skyline of the city.

Visual analysis from key public viewing places around the site demonstrates it is not a recognisable form and does not contribute to the overall iconic visual context of Darling Harbour as the global waterfront precinct. As the defining site at the western extent of Darling Harbour, redevelopment on the site presents an opportunity to re-establish a distinct visual marker completing the physical form.



FIGURE 78: Visual Context Analysis - public viewing points in the emerging 'Global Waterfront' precinct



FIGURE 79: View of site from Barangaroo Waterfront



FIGURE 84: View of site from Barangaroo Reserve



FIGURE 80: View of site from King Street Wharf



FIGURE 81: View of site from Pyrmont Bridge



FIGURE 82: View of site from Cockle Bay Wharf

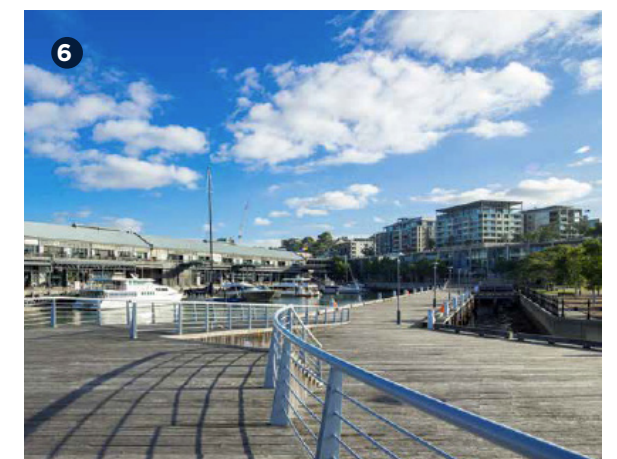


FIGURE 83: View of site from Pirrama Park

SITE INVESTIGATIONS:

ARCHITECTURAL MARKERS

The location of the tower within the Pyrmont Peninsula means that it is largely viewed either as part of the emerging skyline that frames the Darling Harbour/Cockle Bay waterfront, or as a singular tower that is viewed in-the-round. This is in contrast to the Sydney CBD skyline in which buildings are viewed as more of a cluster of tall buildings.

Around the world, cities which once had few tall buildings are seeing rapid changes to their skylines. A prominent example of this is London's skyline which over the past 20 years has seen a series of significant changes.

Modern day skyscrapers in London first appeared in 1991 with One Canada Square, which formed the centrepiece of the Canary Wharf development. Standing alone for 10 years this building was an iconic silhouette on the skyline and very much a building viewed-in-the-round. 10 years later, a number of new towers appeared on London's skyline including a cluster at Canary Wharf and a number of new towers in the City of London's financial district near Bishopsgate. This included the Heron Quays buildings, the Broadgate Tower and the gherkin-shaped 30 St Mary Axe. Again, many of the buildings started out as singular forms on the skyline soon to be joined by others to create small clusters.

A recent example of a tower designed to be viewed in the round is The Shard in London. The Shard is an important urban landmark on the southern side of The Thames and stands removed from other tall building clusters located in the City and Canary Wharf. The Shard was conceived as a spire-like crystal sculpture emerging from the River Thames.

However, like the The Gherkin and One Canada Square before it, the current context of The Shard - currently experienced as a stand alone tall building, has the potential to change and be joined by a small cluster of tall buildings. With an estimated 455 tall buildings in the pipeline in London, the city's skyline is set to dramatically change over the next decade and in doing so change the context of The Shard from a singular tower-in-the-round to one which may exist as part of a small cluster and also as an ever expanding London skyline.



FIGURE 86: One Canada Square stands alone on the skyline at Canary Wharf in 1991



FIGURE 87: London skyline of the Gherkin



FIGURE 85: Canary Wharf Skyline with the London skyline in the background



FIGURE 90: Potential future cluster of tall buildings rounds the Gherkin (source: *New London Development*)



FIGURE 88: Potential future london skyline - based on existing approvals and proposals (source: www.skyscrapercity.com)



FIGURE 89: Existing view of central London skyline depicting The Shard at Southwark opposite the central London skyline at Bishopsgate

SITE DEVELOPMENT PRINCIPLE:

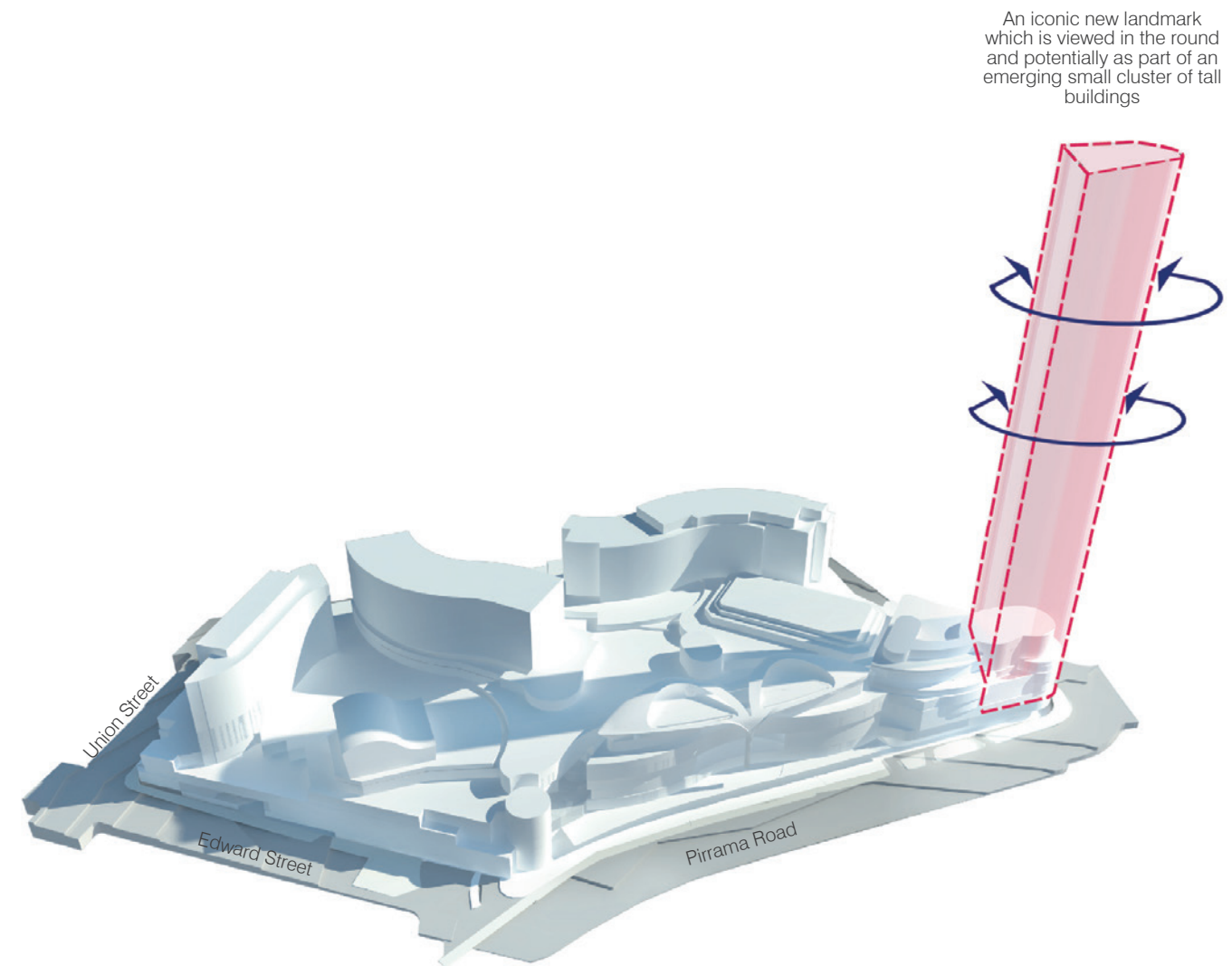
The detailed site investigations presented on the previous pages have identified the following:

The detailed design and massing of the building must stand the test of time and its location within what will be an ever changing context.

SITE OUTCOMES:

- Detailed design of the building should consider how it is experienced as an iconic building viewed in the round in the short-term.
- Detailed building massing should also consider how the building would be experienced as part of a future small cluster of buildings and part of an expanded city centre skyline.

SITE OUTCOME



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