

# Barangaroo South

**Concept Plan MP06\_0162**

**Modification Application &  
State Significant Precinct  
Amendment**



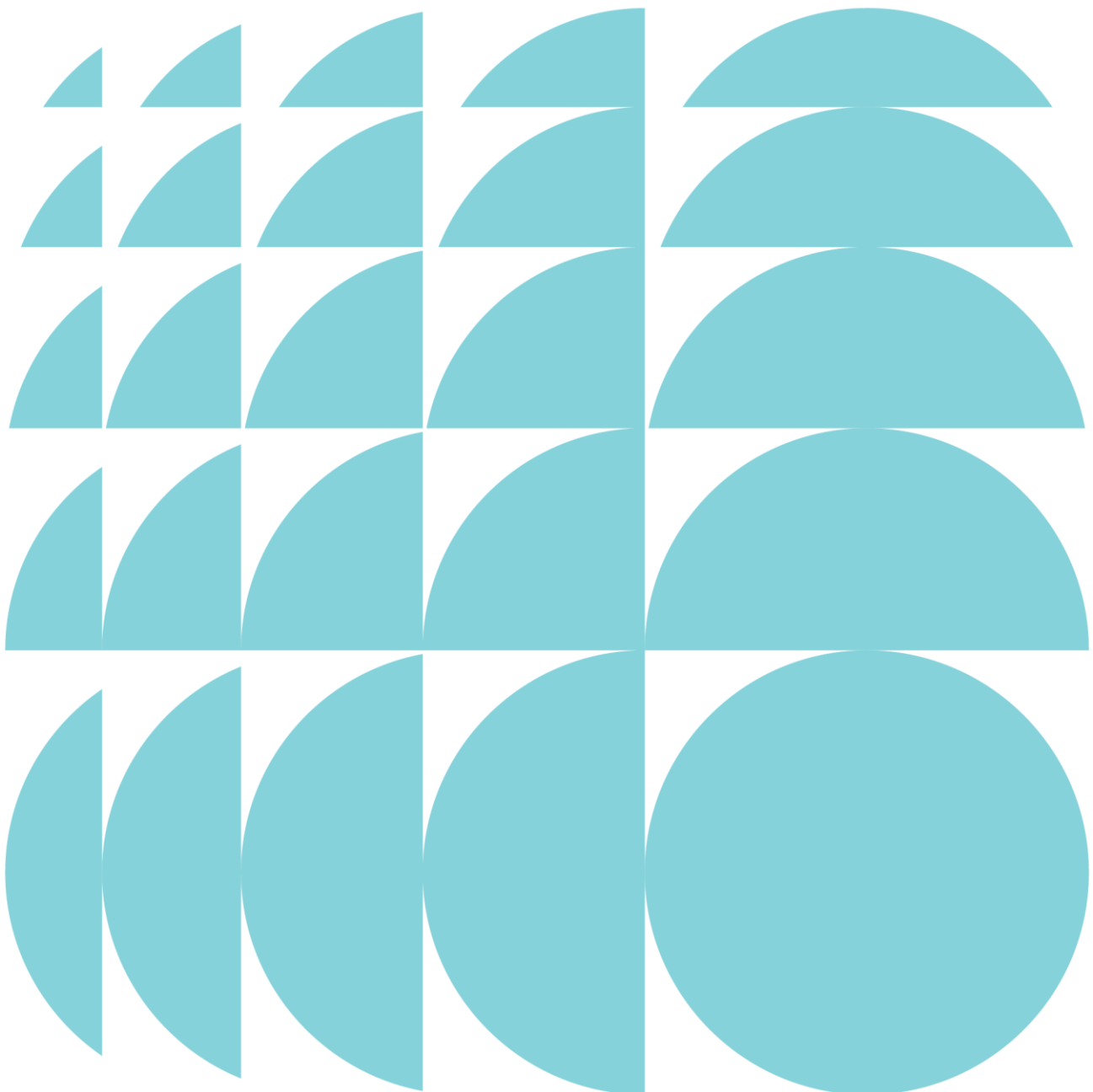
### Barangaroo South

Concept Plan MP06\_0162 Modification 10 and  
State Significant Precinct SEPP Amendment

Submitted to the NSW Department of Planning,  
Industry and Environment

On behalf of Infrastructure NSW

7 April 2020 | 10051



---

#### CONTACT

Michael Rowe                      Director                      [mrowe@ethosurban.com](mailto:mrowe@ethosurban.com)                      9956 6962

Reproduction of this document or any part thereof is not permitted without prior written permission of Ethos Urban Pty Ltd.

This document has been prepared by:



Frances Mehrstens                      7 April 2020

This document has been reviewed by:



Michael Rowe                      7 April 2020

Reproduction of this document or any part thereof is not permitted without written permission of Ethos Urban Pty Ltd. Ethos Urban operates under a Quality Management System. This report has been prepared and reviewed in accordance with that system. If the report is not signed, it is a preliminary draft.

---

VERSION NO. 6

DATE OF ISSUE 5 FEBRUARY 2020

REVISION BY FM

APPROVED BY MR

---

Ethos Urban Pty Ltd  
ABN 13 615 087 931.  
[www.ethosurban.com](http://www.ethosurban.com)  
173 Sussex Street, Sydney  
NSW 2000 t 61 2 9956 6952

---

<b>Executive Summary</b>	<b>5</b>
<b>1.0 Introduction</b>	<b>12</b>
<b>2.0 Background</b>	<b>14</b>
2.1 The Approved Concept Plan and SSP SEPP	14
2.2 Reason for the Modification	14
2.3 Planning Pathway	17
2.4 Infrastructure NSW	17
2.5 Barangaroo South Development Applications	18
2.6 Future Modifications to Other Approvals as a Result of This Modification	19
2.7 Secretary's Environmental Assessment Requirements	20
<b>3.0 Consultation</b>	<b>24</b>
3.1 Council and Agency Consultation	24
3.2 Community Consultation	24
<b>4.0 Site Analysis</b>	<b>24</b>
4.1 The Concept Plan site	24
4.2 Concept Plan Modification Area	26
4.3 Legal Description	26
4.4 Existing Development	27
<b>5.0 Proposed Modification to Barangaroo Concept Plan</b>	<b>28</b>
5.1 Overview of Proposed Modifications	28
5.2 Changes to Concept Plan Gross Floor Area	28
5.3 Changes to Block 4A and Building R4B Envelope	29
5.4 Changes to Block 4B	31
5.5 Delivery of Key Worker Housing	31
5.6 Proposed Modifications to Instrument of Approval	31
5.7 Revised Statement of Commitments	35
5.8 Barangaroo South Built Form and Urban Design Controls	35
<b>6.0 State Significant Precincts SEPP Amendment</b>	<b>36</b>
<b>7.0 Substantially the Same Development</b>	<b>37</b>
<b>8.0 Environmental Assessment</b>	<b>42</b>
8.1 Relevant EPIs, Strategies, Plans and Guidelines	42
8.2 Built Form and Urban Design	46
8.3 Residential Amenity	48
8.4 Overshadowing	49
8.5 Visual Impact	50
8.6 Private View Loss	62
8.7 Wind	62
8.8 Transport Management and Accessibility	63
8.9 Prescribed Airspace for Sydney Airport	63
8.10 Sydney Observatory Impacts	64
8.11 Public Benefits	64
8.12 Social Impacts	65
8.13 Economic Impacts	66
8.14 Indicative Staging	66
8.15 Sustainability	67
8.16 Infrastructure, Utilities and Services	68
8.17 Other Environmental Impacts	68
<b>9.0 Conclusion</b>	<b>69</b>

## Figures

Figure 1	Barangaroo South site plan	6
Figure 2	Proposed Barangaroo Metro station	16
Figure 3	Aerial photo of Barangaroo	25
Figure 4	Location of Block 4A and 4B	26
Figure 5	Proposed Building R4B envelope	29
Figure 6	Comparison of approved and proposed height of Building R4B	30
Figure 7	Indicative staging plan for Barangaroo South	67

## Tables

Table 1	Summary of Concept Plan Modifications	14
Table 2	Director General's Environmental Assessment Requirements	20
Table 3	Proposed GFA Change by Use	28
Table 4	Proposed GFA Change by Development Block	29
Table 5	Assessment against relevant strategies, EPIs, policies and guidelines	42
Table 6	Comparison of approved and proposed view impacts	52
Table 7	Summary of other technical assessments	68

## Appendices

- A** Site Survey  
*Geostrata*
- B** Envelope Drawings  
*Lendlease Integrated Solutions*
- C** Built Form and Urban Design Controls  
*Ethos Urban in conjunction with Rogers Stirk Harbour + Partners*
- D** State Significant Precincts SEPP GFA Map  
*Lendlease Integrated Solutions*
- E** Urban Design Report  
*Rogers Stirk Harbour + Partners*
- F** Architectural Design Statement  
*Renzo Piano Building Workshop*
- G** Shadow Diagrams  
*Virtual Ideas*
- H** Visual Impact Assessment  
*Virtual Ideas*
- I** View Analysis  
*Virtual Ideas and Lendlease Integrated Solutions*
- J** Wind Assessment  
*Windtech*
- K** Supplementary Transport Management and Accessibility Plan  
*JMT Consulting*
- L** Aviation Impact Assessment  
*AvLaw*
- M** Sky View Impacts  
*UNSW Unisearch*
- N** Infrastructure & Stormwater Concept Plan  
*Cardno*
- O** Noise and Vibration Assessment  
*Wilkinson Murray*
- P** Air Quality Assessment  
*AECOM*
- Q** Sustainability Report  
*Lendlease Integrated Solutions*
- R** Staging Plan  
*Lendlease Integrated Solutions*
- S** Statement of Commitments  
*Ethos Urban*

## Executive Summary

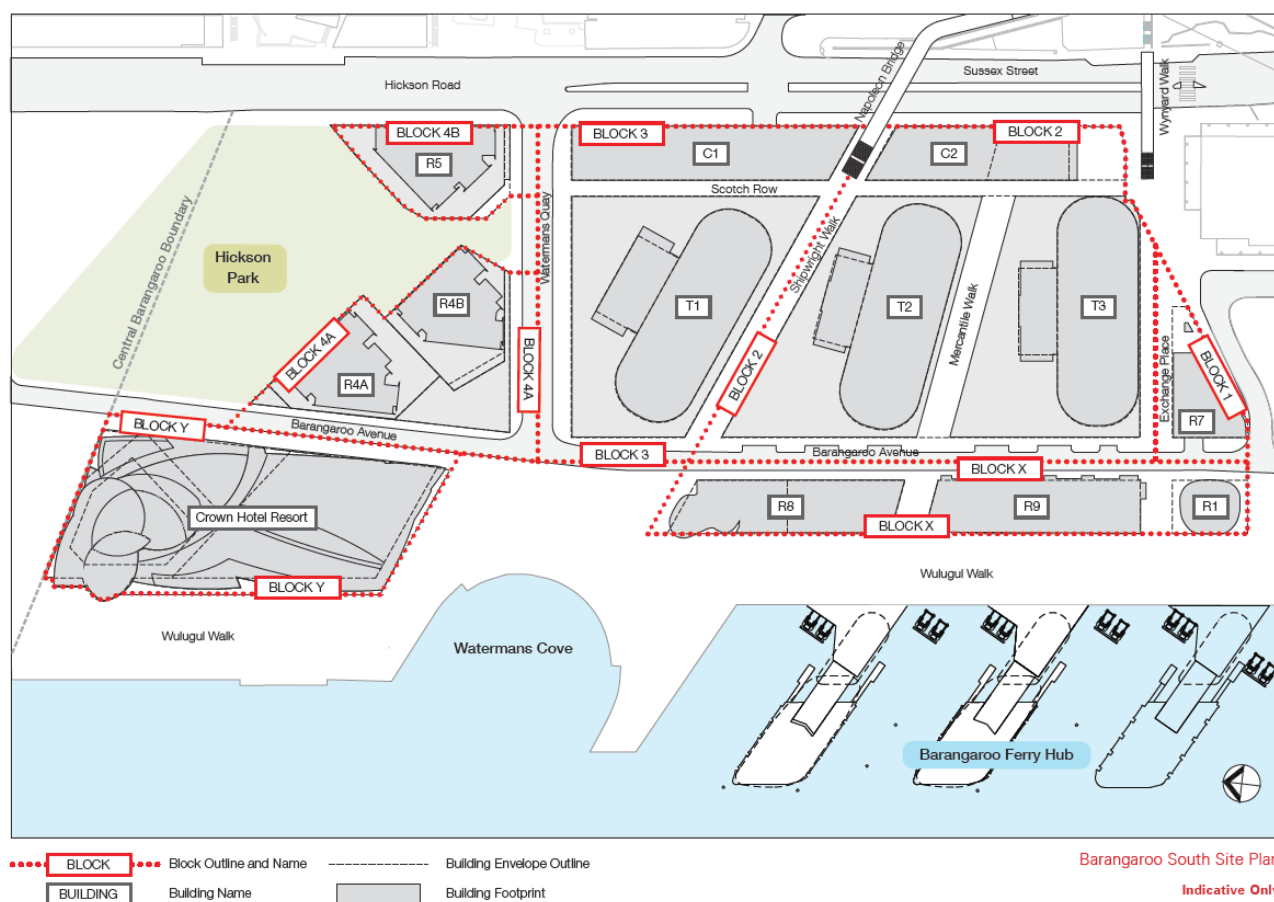
### Background

Since planning for Barangaroo commenced in 2006, the Precinct has evolved to become an integral part of the urban framework of Sydney and has developed a reputation as both a world-class place for residents, workers and visitors. In addition to delivering significant commercial, residential and community floor space, the multi award winning development, which was recently recognised as Australia's first carbon neutral precinct, includes major new infrastructure for Sydney, including public spaces such as the 6 hectare Barangaroo Reserve and Wulugul Walk (the foreshore walk), new public transport infrastructure such as the Barangaroo Ferry Wharfs and the future Sydney Metro station. Barangaroo has become an international model for Government working with the Private sector to achieve exemplar outcomes in areas such as urban design, place making, environmental and social sustainability.

Concept Plan approval (MP06\_0162) for the redevelopment of East Darling Harbour (now known as Barangaroo) was granted in February 2007. To facilitate the redevelopment of the Barangaroo site under the Concept Plan, the site was listed in Part 12 of Schedule 3 of the *State Environmental Planning Policy (Major Development)* 2005 (later renamed *State Environmental Planning Policy (State Significant Precincts)* 2005 (SSP SEPP)).

The Concept Plan Approval was issued in accordance with Part 3A of the Environmental Planning and Assessment Act 1979 (EP&A Act), which has since been repealed. Notwithstanding the repeal of Part 3A, the EP&A Act includes transitional provisions for Concept Plans and Project Applications approved under Part 3A to allow for modifications to be assessed and determined as though Part 3A had not been repealed. In accordance with the Environmental Planning and Assessment (Savings, Transitional and Other Provisions) Regulation 2017 (Savings and Transitional Regulation) the approved Concept Plan may continue to be modified. Therefore, this modification application submitted by Infrastructure NSW is made in accordance with the provisions of 75W(c) of the EP&A Act on the basis that the project is substantially the same as the Concept Plan incorporating the previous modifications, the most recent being Modification 8.

The Barangaroo Precinct has been divided into three distinct redevelopment areas (from north to south) – Barangaroo Reserve completed in 2015, Barangaroo South – the primarily mixed use commercial, retail, residential and tourist accommodation area of the precinct – and Central Barangaroo which is currently in a master planning phase. The approved Concept Plan has been modified seven times, with the most recent Modification 8 (Mod 8) in 2016. This application submitted by Infrastructure NSW proposes to modify the approved Concept Plan (Mod 8) as it relates to Barangaroo South only, however it considers and contributes to the wider precinct of Barangaroo. The Blocks the subject of this modification application are known as Block 4A and Block 4B as shown in **Figure 1** below. The development Blocks are defined for the purpose of setting maximum development parameters, and may contain more than one building. Block 4A contains Building R4A and Building R4B, while Block 4B contains Building R5.



**Figure 1 Barangaroo South site plan - indicative only**

Source: Ethos Urban

Barangaroo South has been progressively completed over the last five years, establishing a commercial, retail and residential precinct that is ideal to support additional density. The first stage of Barangaroo South is now complete and occupied by residents and workers. The second and third stages comprise of the Crown Hotel Resort and three residential towers (collectively known as One Sydney Harbour). The construction of the Crown Hotel Resort is well underway and scheduled for completion in late 2020, and construction of the basement for the three residential towers within Block 4A and Block 4B has commenced.

The Barangaroo Precinct benefits from access to a range of public transport modes, as well as retail and services to meet the daily needs of residents and workers. At the same time that development at Barangaroo South has been progressing, the strategic planning direction for Greater Sydney has evolved to focus on creating a 30-minute city, where homes are connected to jobs by efficient transport networks. The *Greater Sydney Region Plan*, *Eastern City District Plan* and *State Infrastructure Strategy* outline a clear direction to locate residential density close to transport, integrating land use and transport to accommodate the forecast population growth.

Consistent with this strategic direction, a Metro station was announced for Central Barangaroo in June 2015 as part of the Sydney Metro CBD and Southwest project, which is currently under construction and targeted for completion in 2024. Infrastructure NSW has been working with Sydney Metro and development partners to ensure land use planning and infrastructure provision within the Precinct is appropriately integrated with the new metro station. As part of the delivery of the Sydney Metro, the NSW Government has been reviewing the Barangaroo Concept Plan to understand how the Precinct can further leverage opportunities associated with Sydney Metro – a one in 200 year opportunity project – to support additional activity in the Sydney CBD, and drive a high level of patronage on the new Metro rail.

The three new residential towers within Barangaroo South are located within Block 4A and Block 4B of the Concept Plan (refer **Figure 1**), with Building R4A and Building R4B located in Block 4A, and Building R5 located in Block 4B. The buildings are designed by Renzo Piano Building Workshop (RPBW) and are the subject of separate



development consents, and are yet to commence substantial construction. As such, it is proposed to increase the residential dwelling capacity within two of the buildings in order to capitalise on the provision of the Sydney Metro infrastructure, while maintaining excellence in urban design and minimising adverse environmental impacts.

Specifically, it is proposed to include this additional floor space within Building R4B and Building R5. No change to Building R4A is proposed. Building R4B will increase in height by approximately 25 metres requiring an adjustment to the approved Concept Plan (Mod 8) Building Envelope Plan, whilst the additional floor space in Building R5 will be accommodated within the approved Building Envelope Plan. Accordingly, the purpose of this Modification to the Concept Plan (referred to as 'Mod 10') is to facilitate the delivery of additional density and amenity for the residents within the Barangaroo South site. The modification will necessitate an amendment to the building height and floor space standards contained in the SSP SEPP.

## Infrastructure NSW

Infrastructure NSW was established in July 2011 to assist the NSW Government in identifying and prioritising the delivery of critical public infrastructure for NSW. As of 1 July 2019, Infrastructure NSW is the State Government agency responsible for the development of Barangaroo and management of its public spaces. This involves maintaining control of the Barangaroo Concept Plan and facilitating and administering the delivery of all development contemplated by the Concept Plan.

The NSW Government was the original proponent of the Barangaroo Concept Plan, which is the material instrument for delivering the vision for Barangaroo. It is therefore appropriate that in circumstances where changes to the Barangaroo Concept Plan (as approved) are contemplated, the NSW Government remains in control of that process as the proponent of any application(s) it deems necessary in order to holistically deliver the vision and objects of the *Barangaroo Act 2009* (transferred to Infrastructure NSW on 1 July 2019) (the Act) as set out in section 5 of the Act.

In light of the status of Central Barangaroo and the concurrent delivery of Barangaroo South, it is also critical that NSW Government drive alignment between development occurring across the precinct to ensure the overarching vision and objects of the Act are realised and that consistent and holistic cross-agency coordination on the Barangaroo Concept Plan is achieved.

This application to modify the Barangaroo Concept Plan and corresponding amendment to the planning controls for Block 4A and Block 4B is made in accordance with Infrastructure NSW's functions under Section 14 of the *Barangaroo Act 2009* to achieve the objects set out in section 3 of the Act:

### 3 Objects of Act

**The objects of this Act are as follows:**

- (a) to encourage the development of Barangaroo as an active, vibrant and sustainable community and as a location for national and global business,
- (b) to create a high quality commercial and mixed use precinct connected to and supporting the economic development of Sydney,
- (c) to facilitate the establishment of Barangaroo Reserve and public domain land,
- (d) to promote the orderly and sustainable development of Barangaroo balancing social, economic and environmental outcomes,
- (e) to create in Barangaroo an opportunity for design excellence outcomes in architecture and public domain design.

### 14 Principal functions of Infrastructure NSW under this Act

- (1) **Infrastructure NSW has the following functions under this Act:**
  - (a) to promote, procure, facilitate and manage the orderly and economic development and use of Barangaroo, including the provision and management of infrastructure,
  - (b) to promote, procure, organise, manage, undertake, secure, provide and conduct cultural, educational, residential, commercial, transport, tourist and recreational activities and facilities at Barangaroo,
  - (c) to develop and manage the Barangaroo Reserve and public domain so as to encourage its use by the public and to regulate the use of those areas,
  - (d) to facilitate and provide for appropriate commercial activities within the Barangaroo Reserve and public domain that are consistent with their use for cultural, educational and recreational activities and the use and enjoyment of those areas by the public,

***(e) to promote development within Barangaroo that accords with best practice environmental and town planning standards, is environmentally sustainable and applies innovative environmental building and public domain design,***

***(f) to liaise with Government agencies with respect to the co-ordination and provision of infrastructure associated with Barangaroo,***

***(g) to undertake the delivery of infrastructure associated with Barangaroo or that relates to the principal functions under this Act of Infrastructure NSW.***

**[emphasis added]**

Infrastructure NSW will continue to collaborate with its delivery partners to ensure the right outcomes for the precinct - as a whole - are achieved, and that density and land use is commensurate to and integrated appropriately with transport and infrastructure.

### **Proposed Modification to the Concept Plan (Mod 10)**

#### Residential Gross Floor Area and Building Envelope

Concept Plan (Mod 10) relates to the Barangaroo South portion of the site to which the Barangaroo Concept Plan applies. The proposed modification seeks to increase the Concept Plan residential Gross Floor Area (GFA) allocation for Block 4A and Block 4B by a total of 8,000sqm and amend the height of the Building Envelope Plan for Building R4B from RL 210 to RL 235. Block 4A accommodates Building R4A and Building R4B, and Block 4B accommodates Building R5 (refer to **Figure 1**).

In order to support the above changes, the Concept Plan is proposed to be modified to:

- increase the Concept Plan maximum GFA for Block 4A from 86,979sqm to 92,629sqm (+5,650sqm);
- increase the Concept Plan maximum GFA for Block 4B from 19,158sqm to 21,508sqm (+2,350sqm);
- increase the Concept Plan residential maximum GFA of Block 4A from 86,166sqm to 91,816sqm;
- increase the Concept Plan residential maximum GFA of Block 4B from 18,287sqm to 20,637sqm;
- increase the Concept Plan maximum height on the Building Envelope Plan for Building R4B from RL 210 to RL 235, which remains within the maximum height control of RL 250 applying to Block 4A under the SSP SEPP; and
- introduce an additional 3m setback to the south-western corner of Building R4B above RL 209 on the Building Envelope Plan.

The approved Building Envelope Plan for Building R4A and Building R5 will remain unchanged.

The proposed GFA increase is equivalent to approximately 1.3% of the total approved GFA across the Precinct. A comparison of the approved and proposed GFA across the site is proposed in the table below.

Use	Concept Approval Maximum GFA (sqm)	Proposed Mod 10 Maximum GFA (sqm)	Change (sqm)
<b>Office Uses (maximum)</b>	No maximum within the total approved maximum	No maximum within the total approved maximum	No Change
<b>Residential Uses (maximum)</b>	183,031	191,031	+ 8,000
<b>Tourist Uses (maximum)</b>	76,000	76,000	No change
<b>Retail Uses (maximum)</b>	34,000	34,000	No change
<b>Active Uses in the RE1 Zone (maximum)</b>	5000	5000	No change
<b>Community Uses (<u>minimum</u> GFA)</b>	12,000	12,000	No change
<b>Maximum GFA</b>	<b>594,354</b>	<b>602,354</b>	<b>+ 8,000 (+ 1.3%)</b>

Block	Concept Approval Maximum GFA (sqm)	Proposed Mod 10 Maximum GFA (sqm)	Change (sqm)
Block 1	1,927	1,927	No change
Block 2	197,280	197,280	No change
Block 3	129,934	129,934	No change
Block 4A	86,979	92,629	+ 5,650
Block 4B	19,158	21,508	+ 2,350
Block X	18,908	18,908	No change
Block Y	77,500	77,500	No change
Block 5	29,688	29,688	No change
Block 6	3,000	3,000	No change
Block 7	15,000	15,000	No change
<b>TOTAL</b>	<b>579,354</b>	<b>587,354</b>	<b>+ 8,000</b>

#### Key Worker Housing

The Modification also seeks to align the timeframe for the delivery of onsite and offsite Key Worker Housing (KWH) commitments associated with Barangaroo South so that all KWH is delivered by the later of the practical completion of Building R5 or the last occupation certificate of Building R5.

The proposed increase in residential GFA will result in proportional increase in the floor space for KWH dwellings in accordance with the conditions of the approved Concept Plan.

The proposed changes described above necessitate modifications to the existing Instrument of Approval, Statement of Commitments and Barangaroo South Built Form and Urban Design Controls for the Concept Plan.

The proposed modification to the GFA and the building envelope will necessitate an amendment to the SSP SEPP, as outlined below.

#### Amendment to State Significant Precincts SEPP

The proposed increase in GFA will necessitate an amendment to the GFA allocations for Block 4A and 4B under the SSP SEPP as outlined below<sup>1</sup>:

- Block 4A maximum GFA increase from 94,740sqm to 100,390sqm.
- Block 4B maximum GFA increase from 20,970sqm to 23,320sqm.

Building R4B is located within Block 4A, which already has a maximum height of RL 250 under the SSP SEPP. Therefore, the building envelope plan height increase proposed in Mod 10, remains below the maximum permitted for Block 4A under the SSP SEPP and as such no amendments to the height of building controls is required.

#### Substantially the Same Development

The modifications will not result in any significant additional social or environmental impacts as previously assessed for the approved Concept Plan. Based on a qualitative and quantitative assessment of the proposed modifications

<sup>1</sup> The definition of GFA that applies under the SSP SEPP requires the area of a wintergarden to be counted as GFA. Condition B34(3) of the Barangaroo Concept Plan (Mod 8) permits wintergarden areas to be excluded from GFA, which accordingly results in a lower maximum GFA under the Concept Plan than under the SSP SEPP. The higher maximum GFA under the SSP SEPP reflects that wintergardens are counted as GFA for the purpose of the SSP SEPP GFA maximum.

the Minister can be satisfied that the Concept Plan as proposed to be modified is substantially the same as the project to which the approved Concept Plan as modified currently relates.

### **Environmental Assessment**

An environmental assessment of the proposed Mod 10 has been undertaken in accordance with the issues identified in the Director-General's Requirements (DGRs) for Modification 8. This is on the basis that the proposed modifications are comparable (but on a lesser scale) to Modification 8, and the likely environmental impacts are similar. As a result, the Department confirmed that the Modification 8 DGRs continue to be relevant to this planning application in January 2020.

#### *Built Form and Urban Design*

The amended built form of Concept Plan (Mod 10) remains generally consistent with the key principles of the Rogers Stirk Harbour + Partners (RSHP) Master Plan that informed the approved Concept Plan. Increasing the height of Building R4B by 25 metres does not change the findings of the assessment undertaken for Concept Plan (Mod 8) with regard to built form and urban design. This proposal will continue to provide an appropriate height in its context, whilst the additional GFA in Building R5 will result in a minor adjustment to the building footprint and can be accommodated entirely within the approved Concept Plan Building Envelope Plan.

There is no change to the siting of the tower envelopes for Building R4A, Building R4B and Building R5 in plan, and this modification continues to implement and strengthen the Barangaroo South master plan 'fan' principle which seeks to create an east-west radial building and block arrangement within the precinct. In addition to this, the tower heights continue to be staggered according to the master plan principle that enshrines a hierarchical ascendancy of tower heights that rise from Hickson Road in the east and reach the highest point at Block Y on the Harbour foreshore.

The overshadowing, and view and visual impacts as a result of the additional height are limited and generally consistent with the impacts of the approved Concept Plan. There will be no changes to the approved streetscape or public domain, and the Concept Plan will continue to deliver a high-quality world class urban environment.

#### *Transport and Accessibility*

The proposed modification will generate an average of 11 additional trips during the AM peak, however the overall traffic generation as a result of the Barangaroo development has been significantly reduced (by some 86 additional trips) due to revised RMS trip generation rates and recent traffic surveys of comparable developments. The proposed Sydney Metro will provide significant benefit to future residents and workers by providing high-frequency, high-capacity public transport services in addition to the existing public transport options at the site. No change is proposed to existing car parking rates or pedestrian and cyclist access throughout the precinct.

#### *Wind*

Wind impacts as a result of the additional height to the Building Envelope Plan for Building R4B will be generally unchanged from the approved Concept Plan and will not require any additional mitigation measures.

The additional GFA for Block 4B (Building R5) would not result in any additional significant wind impacts to the surrounding area.

#### *Prescribed Airspace for Sydney Airport*

The proposed additional height will not impact airspace operations and will be capable of receiving aviation approval for the proposed building and crane operations, and Building R5 is not considered an obstacle from an aeronautical perspective as its height is below that which the prescribed airspace commences.

#### *Sydney Observatory Impacts*

The proposed additional height to the Building Envelope Plan for Building R4B will result in a reduction in viewing opportunities of the Jewel Box Cluster, Southern Cross and the Pointers (Alpha and Beta Centauri) during August, September and the beginning of October as these objects of interest become obstructed by Building R4B as they move through the sky. The additional impact is considered acceptable on the basis that on most nights these

objects of interest are obscured for only part of an observing session and the Observatory may rearrange the viewing schedule so that these objects are viewed first prior to them becoming obscured.

The proposed additional GFA to Block 4B for Building R5 does not have any impact on the Sydney Observatory.

#### *Social and Economic Impacts*

The Concept Plan will continue to result in positive social and economic impacts, through the provision of increased residential density in a location that is located close to employment, public transport, public open space, key services and other cultural and recreation facilities. The additional GFA will provide more homes in proximity to the future Sydney Metro, additional KWH, and the potential for larger apartments within Building R5 thereby improving amenity for future residents. Locating homes closer to jobs is consistent with the objectives of the NSW Government *Greater Sydney Region Plan* and *Eastern City District Plan*, which aims to create a 30-minute city through co-location of housing, employment and transport.

#### *Public Benefit*

The Barangaroo project has and continues to deliver a significant range of public benefits such as, but not limited to: revitalisation and access to the waterfront, provision of large areas of new public open space and public domain, community uses, public art and social programs, and regional infrastructure upgrades. The minor nature of the proposal does not necessitate reconsideration of the public benefit being delivered, however it is noted that the additional GFA will provide for a proportionate increase in Key Worker Housing.

#### **Conclusion**

This section 75W modification application seeks amendments to the approved Concept Plan (MP06\_0162) relating to height and GFA in Block 4A, GFA in Block 4B and the timing for the delivery of KWH.

Proposed Mod 10 seeks to provide more homes in a location that will benefit from the future Sydney Metro transport infrastructure and the broader locational benefits of Barangaroo, consistent with strategic planning priorities of NSW Government.

Having regard for the environmental, strategic, and physical commonalities and differences between the approved Concept Plan and Mod 10, the Minister can be satisfied that the project to which the Concept Plan as modified relates is substantially the same as the project to which the Concept Plan (as approved) currently relates. Whilst the proposed modification results in a minor quantitative change to the approved GFA and building height, the modification does not significantly alter the essential features of the approved Concept Plan and will remain substantially the same development.

Based on the assessment within this Environmental Assessment Report and the accompanying technical reports, it has been determined that there are limited environmental impacts beyond those originally assessed and determined to be acceptable in the approved Concept Plan. The potential environmental impacts associated with Mod 10 are manageable and do not require additional mitigation measures.

## 1.0 Introduction

This Environmental Assessment Report (EAR) has been prepared to accompany an application (Mod 10) to modify the approved Barangaroo Concept Plan (MP06\_0162) as it currently applies to Barangaroo South (referred to herein as 'Mod 10' or 'the modification' or 'the proposal'). It also seeks to amend the gross floor area (GFA) provisions that apply to the site under Schedule 3 of the *State Environmental Planning Policy (State Significant Precincts) 2005* (SSP SEPP).

This EAR is submitted by Infrastructure NSW to the Minister for Planning and Public Spaces pursuant to clause 3C, Schedule 2 of the *Environmental Planning and Assessment (Savings, Transitional and Other Provisions) Regulation 2017* (Savings and Transitional Regulation). These provisions allow for the continued application of the provisions of the now repealed section 75W of Part 3A of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

Since the approval of the most recent modification to the Concept Plan in 2016, the strategic vision for Greater Sydney has evolved through the *Greater Sydney Region Plan* and the *Eastern City District Plan*. These strategic planning policies conceptualise Sydney as a 'metropolis of three cities', where residents live within 30 minutes of work, education and health facilities, as well as other services and amenities.

Barangaroo is located in the Eastern Harbour City and falls within the Innovation Corridor, where economic growth will be dependent on close proximity to homes, transport and a range of cultural, entertainment and leisure activities. Strategic planning priorities relating to infrastructure, liveability, productivity and sustainability focus on integration of land use and transport and seek to leverage from the established reputation of the Sydney CBD as Australia's financial capital. Barangaroo is explicitly identified as meeting demand for employment floor space, as well as setting the benchmark for sustainable urban development in Australia and globally. Accordingly, additional residential density at Barangaroo South will strengthen the strategic planning direction to create the 30-minute city, where homes are located close to jobs, recreation facilities and other amenities.

Recognising the important strategic role that Barangaroo plays in metropolitan Sydney, the NSW Government announced a Metro Station at Barangaroo as part of the Sydney Metro. This further emphasises Barangaroo as an appropriate place for growth, where transport infrastructure supports both residents and workers, as well as visitors. The Barangaroo Metro Station will combine Sydney's world-class metro rail system with the city's new global business hub, servicing an economic catchment with an estimated value of \$8 million within a 10-minute walk of the station. This 10-minute walking catchment includes the established mixed use precinct at Barangaroo South, which accommodates a large range of businesses, residential uses and retail and dining, supported by public domain that activates the Sydney Harbour waterfront.

The success of Barangaroo, its role in achieving the strategic direction for the Eastern City District and the provision of a Sydney Metro Station at Central Barangaroo has been the catalyst for reconsidering the density on the site. In addition to this, the demonstrated reputation of the Barangaroo Precinct for design excellence, sustainability and as a place, make Barangaroo South an ideal location for additional residential density. Significant areas of Barangaroo South are either under construction or completed. Notwithstanding this, it was prudent to consider how Barangaroo South could accommodate additional density in response to the provision of the Sydney Metro infrastructure at Barangaroo, balanced with the urban parameters of the precinct. The Residential Building R4B envelope (herein after referred to as Building R4B) was identified as having the capacity to accommodate additional density through increased height without having any additional adverse environmental or urban design impacts. In addition to this, Building R5 was also identified as having capacity to accommodate additional density within the existing approved Building Envelope Plan. Under the Concept Plan, Building R4B is located in Block 4A and Building R5 is located in Block 4B.

Accordingly, this modification seeks to amend the height of the Building Envelope Plan for Block 4A as it relates to Building R4B to RL 235 and increase the residential GFA for Block 4A and Block 4B by a total of 8,000sqm.

In order to support the above changes, the Concept Plan is proposed to be modified to:

- increase the Concept Plan maximum GFA for Block 4A from 86,979sqm to 92,629sqm;
- increase the Concept Plan maximum GFA for Block 4B from 19,158sqm to 21,508sqm;
- increase the Concept Plan residential maximum GFA of Block 4A from 86,166sqm to 91,816sqm;



- increase the Concept Plan residential maximum GFA of Block 4B from 18,287sqm to 20,637sqm;
- increase the Concept Plan maximum height on the Building Envelope Plan for Block 4A as it relates to Building R4B from RL 210 to RL 235, noting Block 4A currently provides for a maximum height of RL 250 under the SSP SEPP; and
- introduce an additional 3m setback to the south-western corner of Building R4B above RL 209 on the Building Envelope Plan.

In addition to the changes above, this Modification also seeks to align the timeframe for the delivery of KWH in Barangaroo South and offsite to reflect that the onsite and offsite KWH will both be completed by the later of the practical completion of Building R5 or the last occupation certificate of Building R5. KWH will otherwise continue to be provided in accordance with the requirements of the Concept Plan, with additional KWH floorspace being provided due to the proposed increase in GFA.

The changes described above necessitate modifications to the existing Instrument of Approval, Statement of Commitments and Barangaroo South Built Form and Urban Design Controls for the Concept Plan.

A corresponding amendment to the SSP SEPP is also proposed to support the modifications to the Concept Plan. The SEPP amendment will increase the maximum GFA<sup>2</sup> for Block 4A from 94,740sqm to 100,390sqm and the maximum GFA for Block 4B from 20,970sqm to 23,320sqm.

This EAR has been prepared for Infrastructure NSW by Ethos Urban. It describes the site, its environs, the proposed Mod 10 and includes an assessment of the potential environmental impacts of the proposal. Due to the similarities between this modification and the Concept Plan, the Department confirmed in January 2020 that the Director General's Requirements (DGRs) issued for Concept Plan (Mod 8) should be used to inform the environmental assessment. It should be read in conjunction with the studies and other information appended to this report, which provide a technical assessment of the environmental impacts of the proposed development and recommend mitigation measures to manage potential environmental impacts associated with the proposal.

---

<sup>2</sup> It is noted that the definition of GFA that applies under the SSP SEPP requires the area of a wintergarden to be counted as GFA. Condition B34(3) of the Barangaroo Concept Plan (Mod 8) permits wintergarden areas to be excluded from GFA for Block 4A and Block 4B, which accordingly results in a lower maximum GFA under the Concept Plan than under the SSP SEPP. The higher maximum GFA under the SSP SEPP reflects that wintergardens are counted as GFA for the purpose of the SSP SEPP GFA maximum.

## 2.0 Background

### 2.1 The Approved Concept Plan and SSP SEPP

A Concept Plan for the Barangaroo site was prepared by the Sydney Harbour Foreshore Authority and approved by the Minister for Planning on 9 February 2007. The approved Concept Plan has been modified seven times since originally being approved (Modification 5 was withdrawn) and the Statement of Commitments has been revised accordingly. Of these seven modifications, a number related to minor administrative errors and clarifications. A summary of each of the modifications is provided in **Table 1** below.

**Table 1 Summary of Concept Plan Modifications**

Modification	Status	Scope
Modification No. 1	Approved 25/09/2007	Correction of minor typographical errors in the Concept Plan Instrument of Approval and modification to design excellence requirements.
Modification No. 2	Approved 16/02/2009	Modification to seek an additional 120,000sqm of commercial floor space on the site distributed across Blocks 2, 3, 4 and 5.
Modification No. 3	Approved 11/11/2009	Amended design for the Headland Park and Northern Cove, removal of Block 8 and part Block 7, reduction of floor space by 18,800sqm and removal of the Sydney Ports Harbour Control tower.
Modification No. 4	Approved 16/12/2010	Modification to allow for a mixed use development involving a maximum of 563,965sqm of GFA contained within 7 blocks on a total site area of 22 hectares, an increase in height of a number of the proposed towers within Barangaroo South, the establishment of the new pier and landmark building extending into the Harbour; and reconfiguration and activation of the public waterfront area through the introduction of uses including retail and residential to the west of Globe Street.
Modification No. 5	Withdrawn	Modification to clarify wording within the Concept Plan relating to the distribution of total GFA within the Barangaroo site and to correct a number of minor typographical errors in the approval.
Modification No. 6	Approved 25/03/2014	Modification to realign several block boundaries, revise the approved urban design controls, modify several conditions relating to community floor space, and car and bicycle parking.
Modification No. 7	Approved 11/04/2014	Approval to add a temporary concrete batching plant to the approved range of uses intended for Barangaroo South.
Modification No. 8	Approved 28/06/2016	Modification to relocate Block Y (the landmark hotel building) from Darling Harbour back on to the Barangaroo site and the associated reconfiguration of the urban structure, including increasing the maximum GFA from 563,965 to 594,354sqm and height limits across the site.
Modification No. 9	Not yet submitted	DGRs were issued on 15/04/2014 to make a range of modifications to Central Barangaroo. See Section 2.3.

To facilitate the redevelopment of the Barangaroo site under the Concept Plan, the site was listed in Part 12 of Schedule 3 of the then 'Major Development SEPP' (later renamed the SSP SEPP). The SSP SEPP zones the Barangaroo site part B4 Mixed Use and part RE1 Public Recreation. It also establishes maximum building heights and GFA restrictions for the nominated development blocks within the B4 Mixed Use zone.

### 2.2 Reason for the Modification

#### Strategic policy and the 30-minute city

Since the last modification to the Concept Plan was approved in 2016, the strategic vision for metropolitan Sydney has evolved to conceptualise Sydney as a 'metropolis of three cities', as outlined in the *Greater Sydney Region Plan (March 2018)*, *Eastern City District Plan (March 2018)* and *State Infrastructure Strategy (March 2018)*. The concept seeks to create an urban structure where residents live within 30 minutes of their job, education and health facilities, services and other amenities. This concept represents a change of land use and transport patterns to boost Greater Sydney's liveability, productivity and sustainability. The Barangaroo Precinct is consistent with this overarching strategic direction articulated in the *Greater Sydney Region Plan* and *Eastern City District Plan* and supports the creation of the 30-minute city by co-locating housing, employment, transport, recreation infrastructure and other services in a single location, that is also connected to other centres by a range of transport options.

Under the Eastern City District Plan Barangaroo is located in the Eastern Harbour City, identified as Australia's global gateway and financial capital. The population is forecast to grow from 2.4 million in 2016 to 3.3 million people in 2036, with growth in urban renewal areas that benefit from increased infrastructure and services, open spaces



and public spaces. The *State Infrastructure Strategy 2018 – 2038 (SIS)* responds to the forecast population growth by seeking to maximise existing assets and ensuring that investment in transport infrastructure is integrated with land use to create the 30-minute city. This will continue to strengthen the Sydney CBD as the global headquarters for Australia's top businesses, as well as improve liveability and sustainability. This urban structure has already been successfully implemented at Barangaroo South, where a mixed use residential, commercial and retail precinct has been delivered alongside world-class sustainability infrastructure and public domain. High amenity, high density residential precincts, such as Barangaroo South, are therefore distinct assets that support the Harbour CBD's global role and supporting liveability and sustainability investment to match the established economic strength is a major opportunity for growth.

The *District Plan* notes that Barangaroo has provided much-needed additional office space, forming part of the Innovation Corridor that supports the competitiveness of Greater Sydney. The Innovation Corridor on the western edge of the Harbour CBD encompasses Barangaroo, Walsh Bay, the University of Technology Sydney (UTS) and University of Sydney precincts, the Royal Prince Alfred Hospital precinct, Redfern to Eveleigh and The Bays precinct. Significant development is underway, planned or completed in this corridor that will substantially transform the CBD. This includes the Walsh Bay Arts and Cultural Precinct, Darling Harbour Live and ICC Sydney, and the new Sydney Fish Market at Blackwattle Bay, as well as other major development at Darling Square and the UTS campus.

The Innovation Corridor will support creative and digital industries, alongside business support and other services, which are important to the competitiveness of Greater Sydney and rely on proximity to housing options. In the northern part of the Innovation Corridor, Barangaroo is a key location where housing is provided close to employment, as well as in close proximity to a range of transport options that connect to other centres.

In addition to this, the *District Plan* identifies the contribution Barangaroo has made to creating a low-carbon district, with investment in sustainable water, sewer, waste and energy infrastructure. The *District Plan* explicitly notes that Barangaroo is one of the world's leading sustainable urban developments and Australia's first large-scale carbon neutral community.

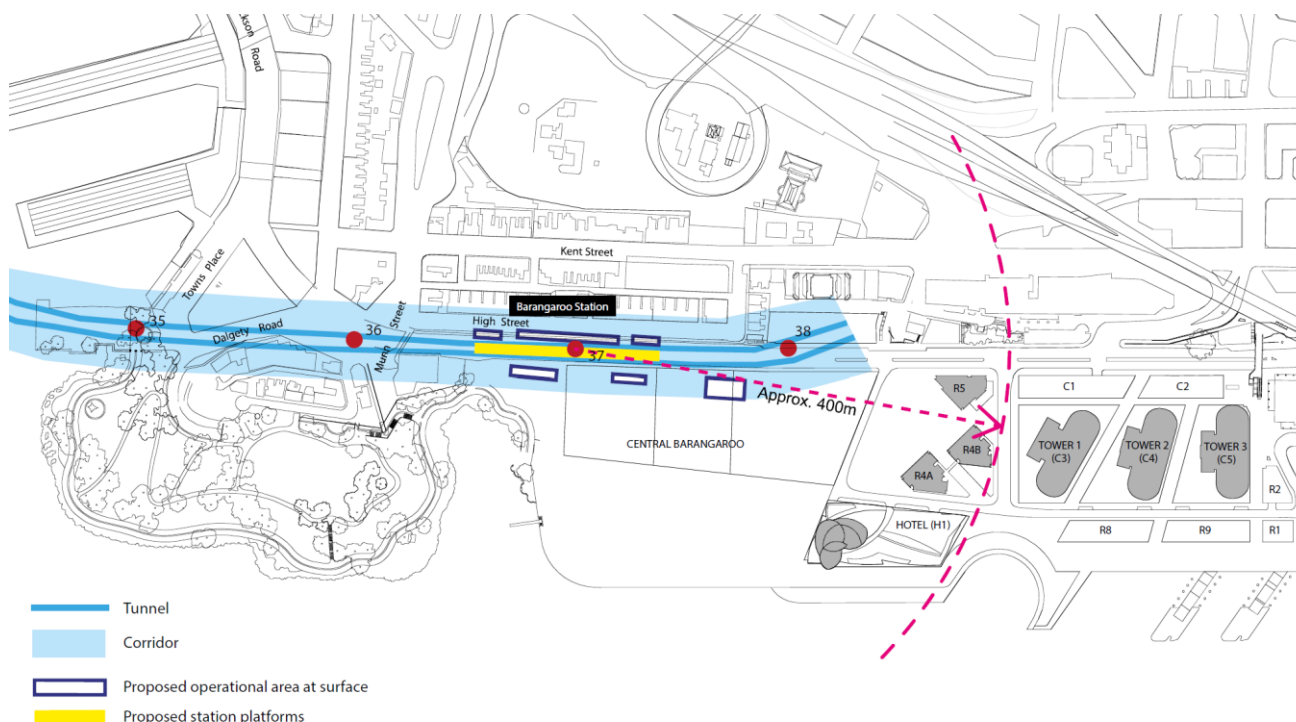
Based on the above strategic context, Barangaroo South is demonstrated to be an ideal location for increased residential density as it provides additional housing in an established precinct, without detracting from the existing character of the area. Residents are able to access rail, bus and ferry public transport, a range of employment options, retail and dining as well as significant public open space. Further to this, the world class energy, waste and water infrastructure ensures that residential density can be supported by sustainable mechanisms and contribute to creating a zero-carbon precinct.

## Sydney Metro

In recognition of the important strategic role that Barangaroo has in supporting residential and employment growth, the NSW Government announced in June 2015 that it would be constructing a new Metro Station at Central Barangaroo (refer to **Figure 2**). Sydney Metro is now Australia's biggest public transport project and presents a major opportunity to shape Sydney for generations to come and be a legacy for the evolving global city. Construction of the Barangaroo Metro Station is now underway, with Sydney Metro City & Southwest due for completion in 2024. Once complete, Sydney Metro will have capacity for a train every two minutes through the Sydney CBD in each direction.

The key objective of Sydney Metro is to move more people than ever before in a safe and reliable way, facilitating Sydney as a growing global city by providing opportunities to strengthen existing centres, revitalise communities and create great places. Consistent with the *SIS*, the NSW Government has been seeking to maximise the land use opportunities associated with Sydney Metro, support additional activity in the Sydney CBD, and drive a high level of patronage on the new metro rail. In turn, this will support the strategic direction of the *Greater Sydney Region Plan* and *Eastern City District Plan* to create a 30-minute city.

Accordingly, development at Barangaroo was reviewed by the NSW Government in the context of accommodating additional density in direct response to the provision of the Sydney Metro infrastructure, as well as recognising the strategic importance of the precinct for the Eastern City District, as discussed above.



**Figure 2 Proposed Barangaroo Metro station – approximate 400 metre radius to Barangaroo South is illustrated. (Operational areas are an all-encompassing word for any space required by Sydney Metro at surface level for items such as ticket gates, machines as well as infrastructure such as transformers, sub-stations, fire boosters etc.)**

Source: Sydney Metro City & Southwest – Chatswood to Sydenham

## Established Reputation of Barangaroo South

As Barangaroo South continues to be completed and occupied, it has developed a reputation as both a world-class precinct for residents, workers and visitors and an integral place of the urban framework of Sydney. Barangaroo has also become an international model for Government working with the Private sector to achieve exemplar outcomes in areas such as urban design, place making, environmental and social sustainability.

The development completed to-date includes two residential apartment buildings with high quality dining along the waterfront, three towers and two low scale buildings that accommodate a range of multinational and local businesses, as well as community and retail buildings/uses that provide services and amenities to meet the daily needs of residents, workers and visitors. These buildings have been integrated with sustainable energy, water and waste infrastructure that has set a benchmark for development around the world, and are complemented by public domain along the waterfront which will be further enhanced by the delivery of Hickson Park. In December 2019, the Commonwealth Government recognised Barangaroo as Australia's first Carbon Neutral precinct, further emphasising the established reputation of the place.

The S/S outlines that infrastructure investment should seek to 'achieve more with less' and prioritises integration of land and infrastructure planning. The objective of this is to ensure that population growth does not erode the amenity and character of existing communities, and that capital investment is integrated with land use plans to ensure that housing and jobs are delivered in priority locations. The proposed modification to Barangaroo South is consistent with this direction, as it leverages from a precinct with an established reputation to deliver additional residential density with access to transport infrastructure and in an urban renewal location that does not erode the amenity and character of existing communities. As a result of the size of the site and access to established and new infrastructure, the Barangaroo development is a rare and significant opportunity to create and grow a mixed use precinct in the Sydney CBD.

## 2.3 Planning Pathway

The Concept Plan Approval (MP 06\_0162) for Barangaroo was issued in accordance with Part 3A of the EP&A Act, which has since been repealed. Notwithstanding the repeal of Part 3A, the EP&A Act includes transitional provisions for Concept Plans and Project Applications approved under Part 3A to allow for modifications to be assessed and determined as though Part 3A had not been repealed.

Under Section 3C (1) of Schedule 2 of the Savings and Transitional Regulation, a Concept Plan may be modified in accordance with the provisions of section 75W of the EP&A Act as though this section had not been repealed.

Under Section 3BA(5) of the Savings and Transitional Regulation a Concept Plan may continue to be modified under section 75W, but only if the Minister is satisfied that:

- (a) the proposed modification is to correct a minor error, misdescription or miscalculation, or*
- (b) the proposed modification is of minimal environmental impact, or*
- (c) the project to which the concept plan as modified relates is substantially the same as the project to which the concept plan currently relates (including any modifications previously made under section 75W).*

In accordance with Section 3BA(5)(b) referred to above, the 'project to which the concept plan currently relates' refers to the Concept Plan as modified by previously approved modifications, the most recent being Mod 8.

Therefore, this Modification is made in accordance with the provisions of 75W(c) of the EP&A Act on the basis that the project is substantially the same as the project to which the Concept Plan currently relates, being Mod 8 (see further discussion at Section 7).

The proposed modification remains consistent with the approved Concept Plan as it will:

- Provide for additional dwellings to meet the housing needs of the Sydney LGA, in a central location that benefits from access to a range of public transport options
- Maintain the mix of uses approved under the Concept Plan
- Provide Key Worker Housing at Barangaroo South and off-site
- Provide high quality architecture and urban design
- Maintain the master plan principles and urban design approach established for Barangaroo South with only minor modifications made to height and floor area
- Have limited environmental impacts beyond those originally assessed and determined to be acceptable in the approved Concept Plan

## 2.4 Infrastructure NSW

Infrastructure NSW was established in July 2011 to assist the NSW Government in identifying and prioritising the delivery of critical public infrastructure for NSW. As of 1 July 2019, Infrastructure NSW is the State Government agency responsible for the development of Barangaroo and management of its public spaces. This involves maintaining control of the Barangaroo Concept Plan, and facilitating and administering the delivery of all development contemplated by the Concept Plan.

The NSW Government was the original proponent of the Barangaroo Concept Plan, which is the material instrument for delivering the vision for Barangaroo. It is therefore appropriate that in circumstances where changes to the Barangaroo Concept Plan (as approved) are contemplated, the NSW Government remains in control of that process as the proponent of any application(s) it deems necessary in order to holistically deliver the vision and objects of the *Barangaroo Act 2009* (transferred to Infrastructure NSW on 1 July 2019) (the Act) as set out in section 3 of the Act.

In light of the status of Central Barangaroo and the concurrent delivery of Barangaroo South and Crown Integrated Hotel Resort, it is also critical that Infrastructure NSW drive alignment between development occurring across the Precinct to ensure the overarching vision and objects of the Act are realised and that consistent and holistic cross-agency coordination on the Barangaroo Concept Plan is achieved.

This application to modify the Barangaroo Concept Plan and corresponding amendment to the planning controls for Block 4A and 4B is made in accordance with Infrastructure NSW's functions under Section 14 of the Barangaroo Act 2009 to achieve the objects set out in section 3 of the Act.

### 3 Objects of Act

*The objects of this Act are as follows:*

- (a) *to encourage the development of Barangaroo as an active, vibrant and sustainable community and as a location for national and global business,*
- (b) *to create a high quality commercial and mixed use precinct connected to and supporting the economic development of Sydney,*
- (c) *to facilitate the establishment of Barangaroo Reserve and public domain land,*
- (d) *to promote the orderly and sustainable development of Barangaroo balancing social, economic and environmental outcomes,*
- (e) *to create in Barangaroo an opportunity for design excellence outcomes in architecture and public domain design.*

### 14 Principal functions of Infrastructure NSW under this Act

(1) *Infrastructure NSW has the following functions under this Act:*

- (a) *to promote, procure, facilitate and manage the orderly and economic development and use of Barangaroo, including the provision and management of infrastructure,*
- (b) *to promote, procure, organise, manage, undertake, secure, provide and conduct cultural, educational, residential, commercial, transport, tourist and recreational activities and facilities at Barangaroo,*
- (c) *to develop and manage the Barangaroo Reserve and public domain so as to encourage its use by the public and to regulate the use of those areas,*
- (d) *to facilitate and provide for appropriate commercial activities within the Barangaroo Reserve and public domain that are consistent with their use for cultural, educational and recreational activities and the use and enjoyment of those areas by the public,*
- (e) *to promote development within Barangaroo that accords with best practice environmental and town planning standards, is environmentally sustainable and applies innovative environmental building and public domain design,*
- (f) *to liaise with Government agencies with respect to the co-ordination and provision of infrastructure associated with Barangaroo,*
- (g) *to undertake the delivery of infrastructure associated with Barangaroo or that relates to the principal functions under this Act of Infrastructure NSW.*

[emphasis added]

The NSW Government has a responsibility to optimise development potential and achieve the objects articulated under section 3 by exercising its functions per section 14. The proposed modification to the Barangaroo Concept Plan serves to optimise the overall Barangaroo Precinct, leveraging the project's successes to date while capturing unrealised opportunity to enhance undeveloped built form.

Infrastructure NSW will continue to collaborate with its delivery partners to ensure the right outcomes for the Precinct - as a whole - are achieved, and that density and land use is commensurate to and integrated appropriately with transport and infrastructure.

## 2.5 Barangaroo South Development Applications

The lodgement of Concept Plan (Mod 10) follows Project / Development Approvals within Barangaroo South for:

- The Bulk Excavation and Basement Car Park (Basement Car Park Approval) (MP10\_0023)
- Commercial Building C3 (MP11\_0044)
- Commercial Building C4 (MP10\_0025)
- Commercial Building C5 (MP10\_0227)
- Residential Buildings R8 and R9 (MP11\_0002)

- Commercial Building C4 Fitout of Levels 1 – 28 (SSD 12\_5582)
- Temporary Concrete Batching Plant (SSD 13\_5967)
- Remediation and land forming works (Block 4) - EPA declared area (SSD 5897)
- Stage 1B Basement (SSD 15\_6960)
- Stage 1A Public Domain (SSD 13\_6303)
- Stage 1B Public Domain (SSD 7974)
- Stage 1A Subdivision (SSD 6381)
- Stage 1A Subdivision – Phase 2 (SSD 7478)
- Stage 1A Subdivision – Phase 3 (SSD 8997)
- Retail Building R1 (SSD 6513)
- Retail Building R7 (SSD 6623)
- Commercial Building C1 (SSD 8529)
- Commercial Building C2 (SSD 6425)
- Crown Hotel Resort (SSD 6957)
- Residential Building R4A (SSD 6964) [determined 7 September 2017]
- Residential Building R4B (SSD 6965) [determined 7 September 2017]
- Residential Building R5 (SSD 6966) [determined 3 October 2019]

The latter three SSD applications for Residential Building R4A, Building R4B and Building R5 are of the most relevance to Mod 10. As outlined in Section 2.7 below, two of these SSD applications will require modification as a result of the approval of Mod 10.

A number of modifications to existing approvals are currently under assessment and are yet to be determined. A large number of smaller DAs for specific uses especially retail, fit-outs and signage have also been lodged and approved across the site.

## **2.6 Future Modifications to Other Approvals as a Result of This Modification**

### **2.6.1 SSD 6966 - Building R5 (Block 4B)**

SSD 6966 was approved on 3 October 2019 in accordance with the Concept Plan. An Amending DA will be lodged for Building R5 to amend the design to accommodate the additional GFA, as well as provide additional Key Worker Housing (KWH). Under Concept Plan Condition B11, the additional 8,000sqm proposed equates to an additional 184sqm of KWH within Building R5. This additional KWH will be accommodated with the proposed additional GFA to Building R5. In order to accommodate the additional GFA it is intended that there will be a minor adjustment to the floorplate which is within the approved Concept Plan envelope. The timeframe for this Amending DA will be dependent on the determination of this proposed modification.

### **2.6.2 SSD 6965 - Building R4B (Block 4A)**

SSD 6965 was approved for Building R4B on 7 September 2017 in accordance with the Concept Plan (as modified). An Amending DA will be lodged for Building R4B to increase the height and GFA, whilst maintaining the key elements of the approved building. The timeframe for this Amending DA will be dependent on the determination of this proposed modification.



## 2.7 Secretary's Environmental Assessment Requirements

This Section 75W has been prepared in accordance with the Director General's Requirements (now known as Secretary's Environmental Assessment Requirements or SEARs) issued for Modification 8. As the nature of the now proposed modifications are comparable (but on a lesser scale) to Modification 8, and the likely environmental impacts are similar, the Modification 8 DGRs continue to be relevant. **Table 2** provides a detailed summary of the individual matters that were listed in the DGRs and/or identifies where each of these requirements have been addressed in this report and the accompanying technical studies. Due to the relatively narrow scope of the proposed changes being limited to GFA increases on Block 4A and Block 4B and amendments to the Building R4B envelope, some of the DGRs in the table below are not relevant to the modification.

**Table 2 Director General's Environmental Assessment Requirements**

Director General's Requirements	Location in Report
General Requirements	
The modification application must include: An executive summary.	Page 5
A description of the existing and surrounding environment.	Section 4.0
A thorough description and justification of the proposal, including: <ul style="list-style-type: none"><li>A detailed justification for the increases in height, GFA and additional car parking;</li><li>Identification and analysis of alternatives, in particular for the hotel, and environmental impacts;</li><li>Description of the public benefits arising from the proposal; and</li><li>Relationship with the proposed changes to Barangaroo Central and the Headland Park.</li></ul>	Section 3.0 <ul style="list-style-type: none"><li>Section 2.2</li><li>Section 8.0</li><li>Section 8.11</li><li>Section 2.4</li></ul>
Consideration of any statutory provisions (see below).	Section 8.1
A detailed assessment of the key issues specified below, including: A description of the existing environment; and An assessment of the potential impacts of the modifications, including cumulative impacts.	Sections 4.0 and 8.0
Consideration of previous reviews, including the Sussex Penn Review into Barangaroo, and Government responses (where relevant).	N/A – this was assessed as part of Modification 8.
An amendment to the approved Statement of Commitments (where relevant).	Section 5.7
A conclusion justifying the proposal, taking into consideration the environmental impacts of the proposal, and the suitability of the site.	Section 9.0
Relevant EPI's, Strategies, Plans and Guidelines	
Address the provisions of State environmental planning policies, strategies, plans and guidelines that would apply as if those provision applied to the carrying out of the project, including the following:	Section 8.1 – NSW 2021, the Draft Metropolitan Plan for Sydney to 2031 and Draft Sydney City Sub-Regional Strategy have been superseded since these DGRs were issued. The current applicable strategic policies have been addressed.
State Environmental Planning policy (State & Regional Development) 2011;	
State Environmental Planning Policy (Major Development) 2005;	
State Environmental Planning Policy No 55 - Remediation of Land;	
State Environmental Planning Policy (Infrastructure) 2007;	
Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005 and Foreshores and Waterways DCP;	
NSW2021;	
Draft Metropolitan Plan for Sydney to 2031;	
Draft Sydney City Sub-Regional Strategy;	
Sydney City Centre Access Strategy 2013; and Sydney's Cycling Future 2013.	
Concept Plan and MD SEPP Modifications	
Outline in detail the proposed changes to the terms of approval of the Barangaroo Concept PlanMP06_0162 (as modified) and the MD SEPP, including heights, GFA, zoning, permissibility development blocks, land uses, and any other relevant controls that are being sought to be amended.	Section 5.0 and 6.0
All changes to heights, GFA, blocks, zoning, and public and private open space shall be numerically quantified in table form.	Section 5.1 – there is no change to public and private open space as result of the proposed modification
Urban Design, Development Controls & Land Uses	
Identify the alternative siting options that were considered, particularly for the hotel.	N/A No change is proposed to the siting of the buildings.
Prepare revised Built Form Principles and Urban Design Controls.	Section 5.8

Director General's Requirements	Location in Report
Consider land use, height, density, building blocks and envelopes, setbacks, topography, streetscape, shadowing, view corridors, ground floor permeability and connectivity, façade design, streets and lanes, public open space and private open space, and road hierarchy.	Section 8.2
The setbacks for the hotel from Sydney Harbour must be clearly quantified and justified.	N/A There is no modification to the hotel.
<b>Streetscape and Public Domain</b>	
Outline and justify the changes to the design and use of the streetscape and public domain.	N/A There are no changes to the streetscape and public domain.
Detail and justify the changes to the location, design and function of the Southern Cove and its pedestrian bridges.	N/A There are no changes to the public domain.
Outline and justify the changes to public spaces, streets and blocks.	N/A There are no changes to public spaces, streets and blocks.
Outline and justify the revised access hierarchy, including the relationship between streets, footpaths and buildings, including Hickson Road, Globe Street, and Transport Place.	N/A There is no change to the access hierarchy.
Detail the design and levels of the amended foreshore promenade.	N/A There are no changes to the foreshore promenade.
<b>Sydney Harbour</b>	
Detail the impacts on Sydney Harbour as a result of the changes to the foreshore promenade and pier, including its interaction with Barangaroo Central.	N/A There are no changes to the foreshore promenade.
Consider the impacts on boating traffic and safety, and the role of Roads and Maritime Services and the Harbour Master of the Port of Sydney.	N/A There are no impacts on boating and traffic safety.
<b>Visual Impact Assessment</b>	
A visual impact assessment must be undertaken. Refer to the attached Plans & Documents Section	Section 8.5
<b>Wind Impact Assessment</b>	
Modelling of the effects of the wind/airflow environment must be undertaken.	Section 8.7
<b>Transport Management, Traffic &amp; Car Parking and Vehicular Access</b>	
Undertake an assessment of the future transport needs associated with Barangaroo South, including a clear understanding of the travel task for all modes at different times of the day (peak, off-peak, and other peak periods relevant to the hotel/casino) and week for the mixed land uses; and confirmation or modification (with justification) to the AM and PM peak commute mode share targets for Barangaroo as outlined in the Barangaroo Integrated Transport Plan 2012.	N/A This assessment was undertaken as part of Modification 8 and the proposed modifications do not substantially alter the future transport needs of Barangaroo South. A supplementary TMAP has been provided that assesses traffic generation and the road network.
Analyse the operation of existing and future transport networks (all modes) to understand the implications for Barangaroo. The analysis of the future road network operations needs to focus on intersections in the north-west quadrant of the CBD in the vicinity of Barangaroo. In particular, address the road network in the King Street Wharf area to ensure that intersections such as Erskine Street and Lime Street and Lime Street itself are modified to cater for the different traffic demands that Barangaroo South will bring to the network.	N/A This assessment was undertaken as part of Modification 8 and the proposed modifications do not substantially alter the road network performance. A supplementary TMAP has been provided that assesses traffic generation and the road network.
Analyse car parking provision and how traffic generation (number of vehicles and time of access) will be managed in response to capacity limitations on the road network. The car parking breakdown shall identify all approved car parking numbers, and all potential car parking numbers across the whole of the Barangaroo site.	Section 8.8
Undertake a corridor model analysis of the road network, including an analysis of traffic generation and circulation, and service vehicle arrangements as a consequence of the	Section 8.8

Director General's Requirements	Location in Report
modification; and demonstrate the potential to accommodate additional vehicular movements (including private vehicles, buses, commercial traffic and cyclists) in the surrounding road network.	
Undertake an assessment of the public transport network and associated pedestrian linkages and demonstrate that additional people movements can be accommodated by the surrounding public transport network.	Section 8.8
Outline late night transport provision to support the hotel and casino.	N/A The hotel and casino do not form part of this modification.
Outline the timing and responsibility for delivering the transport network to serve Barangaroo.	N/A This assessment was undertaken as part of Modification 8 and is being delivered. The proposed modification does not alter these arrangements.
Prepare a comprehensive Traffic Management and Accessibility Plan, including an assessment of all of the above matters and: <ul style="list-style-type: none"> <li>cumulative regional traffic impacts, including but not limited to, local and regional intersections and road improvements, and vehicular access options;</li> <li>impacts from changes to Barangaroo Central and the Headland Park (Mod 9);</li> <li>amendments to accommodate future bus service provision on Hickson Road (in consultation with Transport for NSW);</li> <li>identify provision for taxi ranks and coach parking on site;</li> <li>the timing and cost of infrastructure works and identification of funding;</li> <li>package of travel demand management measures for workers, residents and visitors;</li> <li>emergency vehicle access arrangements; and</li> <li>proposed loading dock provisions and access arrangements to loading docks and car parks.</li> </ul>	Section 8.8
Outline provisions for water-based transport.	N/A Water-based transport does not form part of the modification.
<b>Pedestrian &amp; Cycle Access</b>	
Outline the future cycleway network and demonstrate direct cycle connections between Barangaroo South and the strategic cycleway network as outlined in the Sydney City Centre Access Strategy.	N/A – the proposed modification does not affect the future cycleway network.
Outline provisions for walking and demonstrate provision for direct walking connections.	N/A – the proposed modification does not affect approved pedestrian connections.
<b>Land Ownership</b>	
Detail land to be transferred/managed/owned.	N/A No change is proposed to land that is to be transferred, managed or owned.
<b>Social Impacts</b>	
Outline the social benefits and dis-benefits of the modification	Section 8.12
<b>Economic Impacts</b>	
Outline the economic benefits and dis-benefits of the modification.	Section 8.13
<b>Housing Strategy</b>	
An amended Housing Strategy is to be provided.	N/A There is no change to the Housing Strategy.
<b>Noise, Air and Odour Impacts</b>	
Identify potential air quality, noise and odour impacts, and appropriate mitigation measures.	Section 0
<b>Drainage and Stormwater</b>	
Outline drainage and stormwater management issues.	Section 0 and 8.16
<b>Utilities</b>	
Outline how the modification will be satisfactorily serviced for utilities.	Section 8.15
<b>ESD</b>	
Identify how the development will incorporate ESD principles.	Section 8.16
<b>Contamination</b>	



Director General's Requirements	Location in Report
Demonstrate compliance with the requirements of SEPP 55. If remediation works are required, the EIS must include a Remedial Action Plan (RAP).	N/A – compliance with SEPP 55 has been demonstrated as part of previous approvals. No further groundworks are required as a result of the modification.
<b>Prescribed Airspace for Sydney Airport and Sydney Observatory impacts</b>	
Identify any impacts of the proposal on the prescribed airspace for Sydney Airport.	Section 8.9
Undertake an analysis of potential sky view loss and resultant impacts on the functioning of the Sydney Observatory telescopes and astronomical sightlines.	Section 8.10
<b>Heritage</b>	
Undertake an assessment of the likely impacts of the development as modified on surrounding heritage and archaeological items (both on and off the site) and proposed conservation and mitigation measures, including the Millers Point Conservation Special Area, Observatory Hill and Walsh Bay.	N/A – the changes proposed do not alter the conclusions of previous heritage assessments undertaken for the development.
<b>Staging</b>	
Outline the staging of construction for the Barangaroo South project (as modified).	Section 8.14
<b>Consultation</b>	
Undertake an appropriate and justified level of consultation in accordance with Planning & Infrastructure's Major Project Community Consultation Guidelines October 2007. In particular, you should consult with City of Sydney Council, EPA and Sydney Airport.	Section 3.0
Undertake an appropriate and justified level of consultation with Transport for NSW. In particular consultation must include discussions around the timing for the provision of Globe Street and the intended opening of Wynyard Walk, and design, use and timing of Transport Place.	Section 3.0
<b>Updated Statement of Commitments</b>	
An updated Statement of Commitments shall be provided.	Section 5.7

### 3.0 Consultation

In accordance with the Modification 8 DGRs, consultation must be undertaken with relevant public authorities, City of Sydney and other key stakeholders. This section outlines the consultation that has been undertaken for proposed Mod 10.

The consultation enabled Infrastructure NSW to communicate the proposed modification to key stakeholders and provided the opportunity for stakeholders to identify issues that may require action prior to approval.

Following lodgement with DPIE, the application will be placed on public exhibition in accordance with the *NSW Environmental Planning and Assessment Regulation 2000*. During the public exhibition period stakeholders will have an opportunity to make submissions to the application which will be considered in the assessment process.

#### 3.1 Council and Agency Consultation

In accordance with the DGRs, the following consultation has been undertaken in relation to proposed Mod 10:

- NSW Department of Planning, Industry and Environment (DPIE): A number of meetings have been held between Infrastructure NSW and DPIE as part of ongoing consultation with respect to development occurring across the broader Precinct, and also specifically with regards to Mod 10.
- Transport for NSW (TfNSW) and Roads and Maritime Services (RMS): Infrastructure NSW met with TfNSW/RMS on 23 January 2020 to brief key personnel on proposed Mod 10. Infrastructure NSW is also continuing to work collaboratively with TfNSW to coordinate delivery of Sydney Metro with development and infrastructure at Barangaroo.
- City of Sydney Council (Council): Infrastructure NSW met with Council on 30 January 2020 to provide a briefing on the proposed Mod 10.
- Museum of Applied Art and Sciences - Sydney Observatory (MAAS): Infrastructure NSW met with MAAS on 30 January 2020 to provide a briefing on proposed Mod 10.
- Environmental Protection Authority (EPA): Infrastructure NSW spoke with a representative of the EPA on 29 January 2020 (via telephone) and subsequently issued information about the proposal to the EPA.
- Sydney Airports: Infrastructure NSW spoke with a representative of Sydney Airports on 29 January 2020 (via telephone) and subsequently issued information about the proposal to Sydney Airports.

#### 3.2 Community Consultation

Infrastructure NSW will consult with the community on Mod 10 during the exhibition period. The objectives of the consultation held during the public exhibition period will be to inform community members and stakeholders that Mod 10 is available for comment, and to collect feedback inform the Consultation Outcomes Report.

During the public exhibition period, a letterbox drop will be made to surrounding residents and businesses advising that Mod 10 is on public exhibition and inviting them to attend a community information drop-in session to learn more about the proposed modification from the project team. Meetings with key local stakeholders will also be held.

Infrastructure NSW is committed to keeping the community informed about the latest updates regarding Barangaroo, including construction milestone and application proposals. In line with this, Infrastructure NSW will continue community and stakeholder engagement on this planning modification and for any future modifications to the Concept Plan.

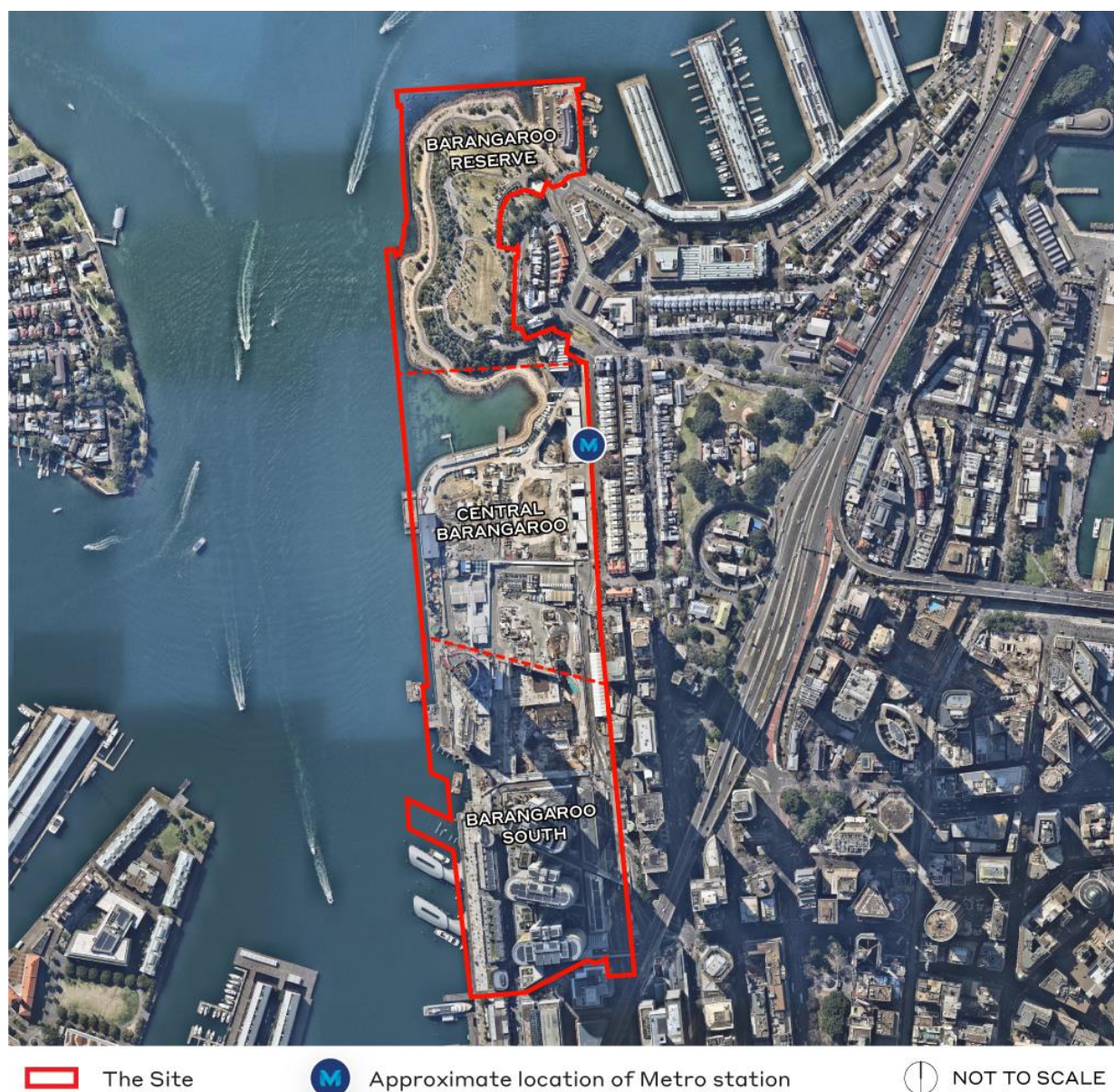
### 4.0 Site Analysis

#### 4.1 The Concept Plan site

Barangaroo is located on the north western edge of Central Sydney, bounded by Sydney Harbour to the west and north, the historic precinct of Millers Point (for the northern half), The Rocks and the Sydney Harbour Bridge approach to the east; and King Street Wharf to the south.

The Barangaroo Precinct has been divided into three distinct redevelopment areas (from north to south) – Barangaroo Reserve, Central Barangaroo and Barangaroo South. This modification relates to Barangaroo South only. An aerial photo of Barangaroo and its context is shown at **Figure 3**.

As shown by the aerial photo, Barangaroo Reserve is established, and since its delivery in 2015 continues to be recognised as a popular public place for the community. Barangaroo South is largely established in the southern portion of the site with significant commercial and retail buildings, residential, as well as the Ferry Wharf and waterfront public domain. The remaining northern areas of Barangaroo South are being planned or under construction, and include the proposed residential Building R4A, Building R4B and Building R5, the Crown Hotel Resort, and the approved Hickson Park and Watermans Cove to be completed in late 2020. The Barangaroo Metro Station is currently under construction within Central Barangaroo and targeted for completion in 2024. Planning for Central Barangaroo - located between the Barangaroo Reserve and Barangaroo South – is currently underway and will complete Barangaroo in its entirety as a world class place.



**Figure 3** Aerial photo of Barangaroo showing areas both established and under construction (Date: 1 September 2019 - red boundary is approximate only). This Modification relates to Barangaroo South only.

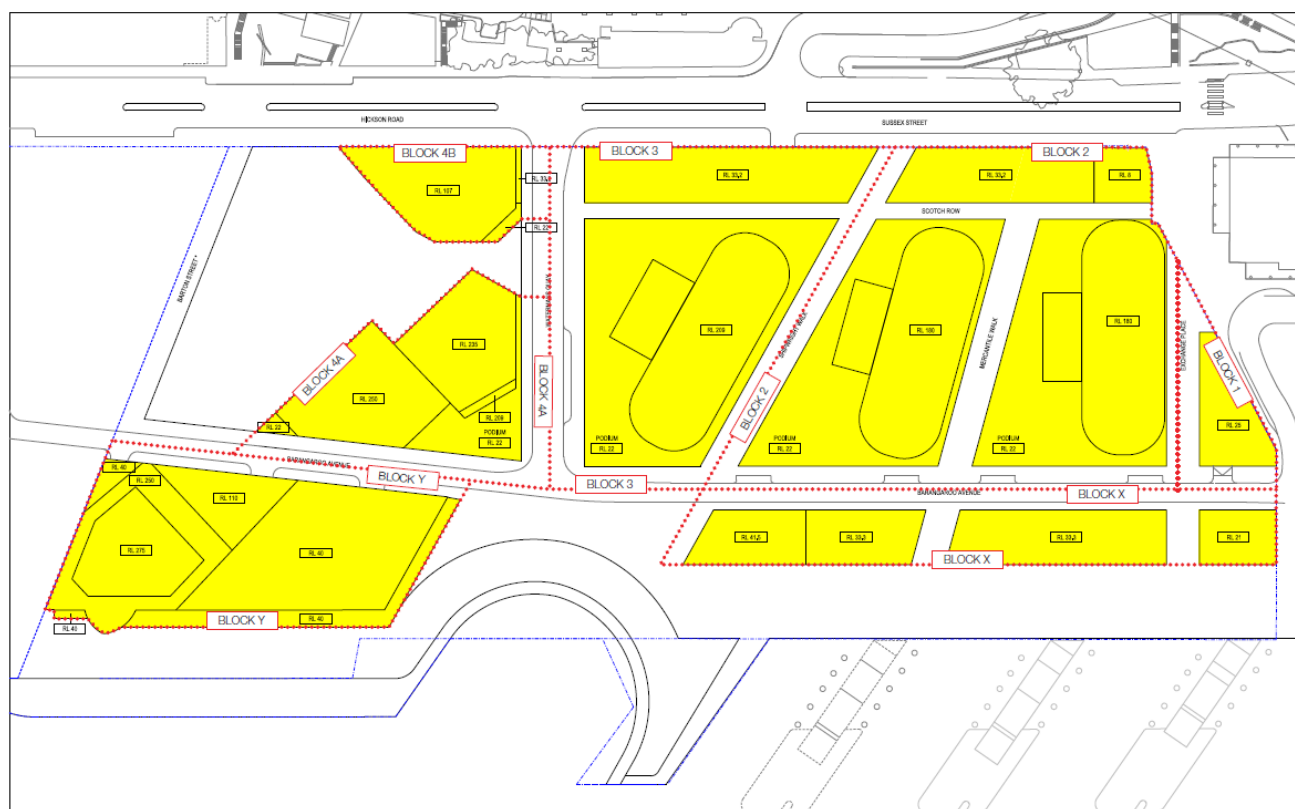
Source: Ethos Urban



## 4.2 Concept Plan Modification Area

This modification relates to Barangaroo South only, as identified in **Figure 1** above and **Figure 4** below, and does not propose changes to the Concept Plan as it applies to Barangaroo Reserve or Central Barangaroo.

The modification applies to a portion of Barangaroo South, being Block 4A and 4B. Block 4A is shown at **Figure 4** below and currently accommodates part of the construction site for the Stage 1B Basement (SSD6960) and associated Building R4A and Building R4B, which form part of the approved One Sydney Harbour development (SSD 6964 and SSD 6965). Block 4B accommodates Building R5 (SSD 6966) and part of the construction site for the Stage 1B Basement (SSD 6960).



**Figure 4** Location of Block 4A and 4B (with the proposed Mod 10 Building R4B envelope shown) Refer to Appendix B

Source: Lendlease Integrated Solutions

## 4.3 Legal Description

The site is legally described as:

- Lot 101 DP 1204946 (Barangaroo Reserve and Central Barangaroo)
- Lot 214 DP 1221076 (One Sydney Harbour and Crown Hotel Resort)
- Lot 205 DP 1204948 (Bicycle/Amenities)
- Lot 213 DP 1221076 (International Tower 1)
- Lot 201 DP 1204948 (International Tower 2)
- Lot 202 DP 1204948 (Central Chilled Water Plant)
- Lot 203 DP 1204949 (Recycled Water Plant)
- Lot 204 DP 1204948 (Embedded Network)
- Lot 211 DP 1217691 (International Tower 3)
- Lot 208 DP 1211553 (Retail within Residential Buildings R8 & R9)

- SP 91649 (Residential within Residential Buildings R8 & R9)

The proposed amendments to the Concept Plan are located in Lot 214 DP 1221076 which is owned by Infrastructure NSW. A site survey is provided at **Appendix A**.

#### 4.4 Existing Development

Development of the Barangaroo Precinct is significantly progressed, with the Barangaroo Reserve opening in 2015 and the southern part of Barangaroo South largely completed (refer to **Figure 3**). The buildings that are now occupied in Barangaroo South include:

- Buildings R8 and R9, which accommodates ground floor restaurants, retail and public amenities with residential apartments above.
- Commercial Buildings C3, C4 and C5, now known as the International Towers, which accommodate retail, food and drink premises, child care, recreational facilities, health services facilities and commercial floor space.
- Buildings R1 and R7, which accommodate retail, food and drink premises, commercial floor space, indoor recreational facilities, public amenities and health services facilities.
- Buildings C1 and C2, which provide commercial floor space and retail.
- Stage 1A Basement, providing parking, loading and shared services area and end of trip facilities for workers.
- Public Domain areas and the Ferry Wharf.

The Crown Hotel Resort is significantly progressed and construction of the Stage 1B Basement which services the residential Building R4A, Building R4B and Building R5 is underway. In addition to this, delivery of the Stage 1B public domain is also underway.

Barangaroo has already earned a reputation as a leading urban development, winning the Urban Development Institute of Australia's (UDIA) Excellence in Sustainability and Environment Technology and Excellence in Mixed Use Development (2018), the Property Council of Australia's Development of the Year award (2018), the Urban Taskforce's 'Australian Development of the Year' (2017), the NSW Planning Institute of Australia's President's Award (2018), as well as the International Architecture Award 2019, amongst other accolades. These awards recognise the high quality urban realm that is being created at Barangaroo, and reinforces the strategic role it plays in the Eastern City District. Barangaroo is committed to being a climate positive precinct and in late 2019, Barangaroo was awarded carbon neutral certification by the Commonwealth Government, becoming the first large scale urban precinct in Australia to achieve carbon neutrality and further emphasising Barangaroo's reputation as a global leader in sustainability.

## 5.0 Proposed Modification to Barangaroo Concept Plan

In the three years since the last modification to the Concept Plan was approved 2016, there have been substantial changes to the strategic planning framework as it relates to Barangaroo, and development of Barangaroo South has significantly progressed, with a number of buildings completed and occupied. The public domain and retail uses at ground level are also largely established and will continue to evolve and activate the streetscape as development at Barangaroo continues. In light of these changes to the strategic context, and notably the opportunity for city-wide transformation presented by the Sydney Metro, (see **Section 2.2**), the proposed modification seeks to increase the amount of residential floorspace in Building R4B and Building R5 to enhance the established precinct at Barangaroo South, which benefits from access to transport infrastructure, public open space and other amenities to meet the daily needs of residents and workers.

### 5.1 Overview of Proposed Modifications

The modification seeks to increase the residential GFA allocation for Block 4A and Block 4B by a total of 8,000sqm, amend the height of the Building Envelope Plan for Building R4B from RL 210 to RL 235 and align the timeframes for the delivery of KWH on and off-site.

To support the changes, the Concept Plan is proposed to be modified to:

- increase the Concept Plan maximum GFA for Block 4A from 86,979sqm to 92,629sqm;
- increase the Concept Plan maximum GFA for Block 4B from 19,158sqm to 21,508sqm;
- increase the Concept Plan residential maximum GFA of Block 4A from 86,166sqm to 91,816sqm;
- increase the Concept Plan residential maximum GFA of Block 4B from 18,287sqm to 20,637sqm;
- increase the Concept Plan maximum height on the Building Envelope Plan for R4B from RL 210 to RL 235, which is within the maximum height of RL 250 applying to Block 4A under the SSP SEPP. The approved Building Envelope Plan for Building R4A and Building R5 will remain unchanged;
- introduce an additional 3m setback to the south-western corner of R4B above RL 209, and align the timeframe for the delivery of Key Worker Housing (KWH) such that the total 3% of KWH (both onsite (in Barangaroo South) and offsite) will be completed by the later of the practical completion of Building R5 or the last occupation certificate of Building R5.

The proposed amendments to the Concept Plan are detailed in the proposed Envelope Plan for Building R4B (refer to **Appendix B**) and are described in further detail below.

The changes described above necessitate modifications to the existing Instrument of Approval, Statement of Commitments and Barangaroo South Built Form and Urban Design Controls for the Concept Plan, and the relevant provisions of the SSP SEPP (see Section 6).

### 5.2 Changes to Concept Plan Gross Floor Area

The proposed changes to the Concept Plan GFA are described by use and block in **Table 3** and **Table 4** below.

**Table 3 Proposed GFA Change by Use**

Use	Concept Approval Maximum GFA (m <sup>2</sup> )	Proposed Mod 10 Maximum GFA (m <sup>2</sup> )	Change (m <sup>2</sup> )
<b>Office Uses (Maximum)</b>	No maximum within the total approved maximum	No maximum within the total approved maximum	No Change
<b>Residential Uses (Maximum)</b>	183,031	191,031	+ 8,000
<b>Tourist Uses (Maximum)</b>	76,000	76,000	No change
<b>Retail Uses (Maximum)</b>	34,000	34,000	No change
<b>Active Uses in the RE1 Zone (Maximum)</b>	5000	5000	No change

Use	Concept Approval Maximum GFA (m <sup>2</sup> )	Proposed Mod 10 Maximum GFA (m <sup>2</sup> )	Change (m <sup>2</sup> )
Maximum GFA	594,354	602,354	+ 8,000 (+ 1.3%)

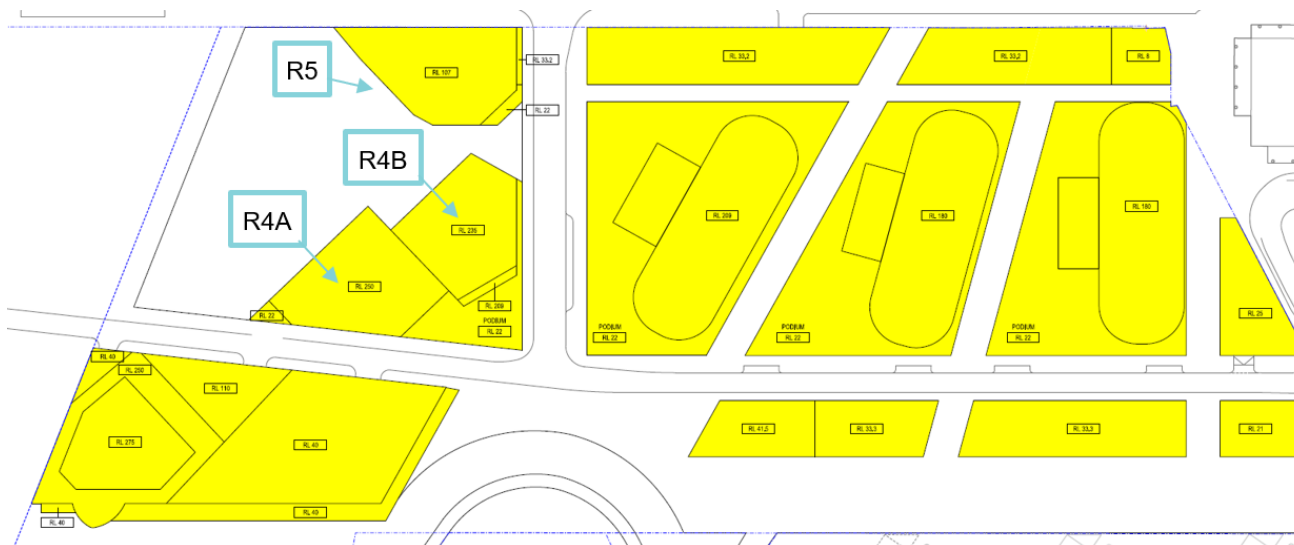
**Table 4** Proposed GFA Change by Development Block

Block	Concept Approval Maximum GFA (m <sup>2</sup> )	Proposed Mod 10 Maximum GFA (m <sup>2</sup> )	Change (m <sup>2</sup> )
Block 1	1,927	1,927	No change
Block 2	197,280	197,280	No change
Block 3	129,934	129,934	No change
Block 4A	86,979	92,629	+ 5,650
Block 4B	19,158	21,508	+ 2,350
Block X	18,908	18,908	No change
Block Y	77,500	77,500	No change
Block 5	29,688	29,688	No change
Block 6	3,000	3,000	No change
Block 7	15,000	15,000	No change
TOTAL	579,354	587,354	+ 8,000

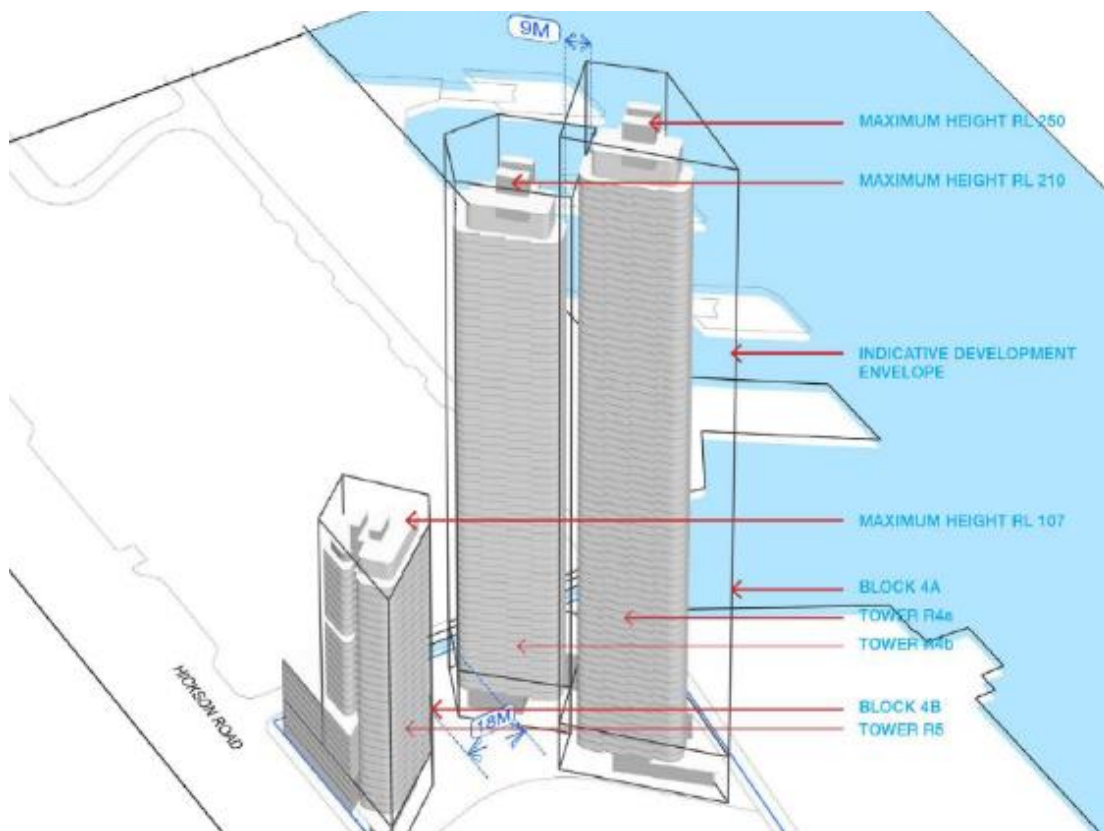
### 5.3 Changes to Block 4A and Building R4B Envelope

#### 5.3.1 Height

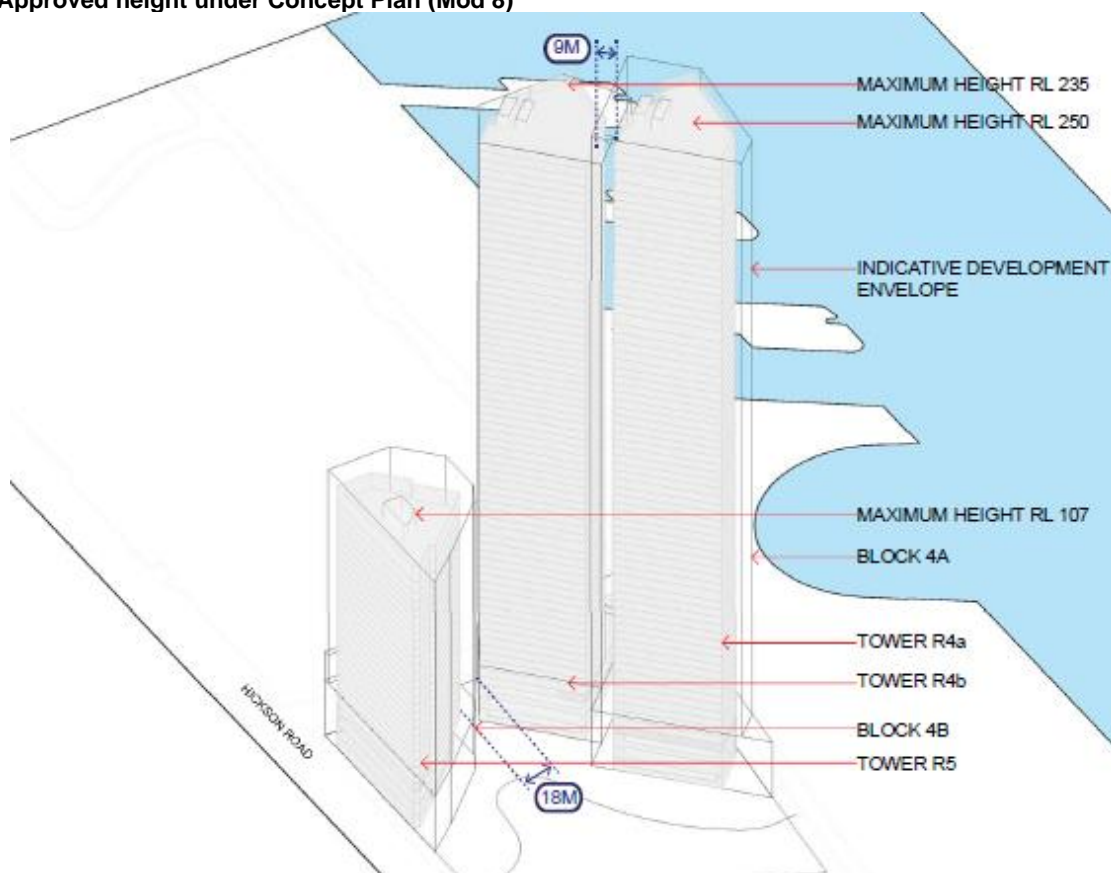
Block 4A comprises two residential buildings, known as Building R4A and Building R4B. Under the SSP SEPP, Block 4A has a maximum height of RL 250. No change to the maximum permissible height under the SSP SEPP is proposed, however it is proposed to amend the Building Envelope Plan under the approved Concept Plan to increase the height of Building R4B from RL 210 to a maximum of RL 235. The proposed modified height will still remain below the maximum height control of RL 250 under the SSP SEPP and is therefore consistent with the maximum height approved for Block 4A as illustrated at **Figure 5** and **Figure 6** below. No change is proposed to Building R4A, which remains at RL250.

**Figure 5** Proposed Building R4B envelope (see Appendix B for revised Building Envelope Plan)

Source: Lendlease Applied Insight



Approved height under Concept Plan (Mod 8)



Proposed height

Figure 6 Comparison of approved and proposed height of Building R4B



### 5.3.2 Setback

A 3m setback is proposed at RL 209 and above on the south-western corner of Building R4B to maintain visual connectivity from Central Sydney through to Block Y (Crown Hotel Resort).

### 5.3.3 Gross Floor Area

Block 4A has a maximum approved GFA of 86,979sqm which is split across Buildings R4A and R4B. Building R4B will accommodate an additional 5,650sqm of residential GFA, resulting in a total Block 4A GFA of 92,629sqm which represents a 6% increase.

## 5.4 Changes to Block 4B

### 5.4.1 Gross Floor Area

Block 4B has a maximum approved GFA of 19158sqm. Building R5 will accommodate an additional 2,350sqm of residential GFA, resulting in a total Block 4B GFA of 21,508sqm which represents a 12% increase. This increase can be accommodated within the approved Building Envelope Plan.

## 5.5 Delivery of Key Worker Housing

As part of the development of the approved KWH in Building R5, Lendlease has consulted with a number of community housing providers (CHPs) to understand how the operational requirements of KWH influences the design. KWH in Building R5 has been designed to meet the operational requirements of these CHPs and to minimise operational costs.

The Concept Plan Statement of Commitment 34 (SOC 34) currently requires Lendlease to provide on-site KWH at, or before, practical completion of 75% of Barangaroo South residential GFA. Condition B11 of the Concept Plan requires the offsite KWH to be provided prior to the issue of any Occupation Certificate (OC) for Block 4A (Building R4A and Building R4B), Block 4B (Building R5) or Block Y (Crown Hotel Resort). The timing for delivery is proposed to be altered to align with the construction program for Barangaroo South, with no other changes proposed. At this point in time Building R5, which contains the KWH, is proposed to be the final building to be completed in at Barangaroo South, due to the site construction planning responding to access constraints resulting in a sequence of delivery from waterfront (west) to Hickson Road (east) (Refer to Staging Plan at Appendix R). Therefore, adjusting the timing of this Commitment responds to the sequence of precinct delivery.

The process for providing the offsite KWH is lengthy and involves management by the Community Housing Provider (CHP). The selected CHP needs to identify and obtain a suitable site within 5km of Barangaroo South or elsewhere in the City of Sydney LGA. Once acquired, the CHP will need to obtain development approval and then complete construction of the project. Given the whole development process (site acquisition, planning approval and delivery) is within the control of the CHP more time is required to enable delivery by a CHP.

Accordingly, it is proposed to align the timeframe for delivery of KWH both on and offsite such that it will be completed prior to the later of the practical completion of Building R5 or the last occupation certificate of Building R5. The revised SOC 34 and Concept Plan condition continues to require the delivery of KWH with no changes to this proposed.

Overall, the amount of KWH required by the Concept Plan will continue to be provided proportionate to the amount of residential GFA approved for Barangaroo South (i.e. equivalent to 3% of residential GFA in Barangaroo South), and will result in additional KWH GFA.

## 5.6 Proposed Modifications to Instrument of Approval

The proposed modifications to the Concept Plan detailed above require amendments to the Terms of Approval in Schedule 2 of the Instrument of Approval.

### A1 Development Description

*Concept approval is granted only to the carrying out of the development solely within the Concept Plan area as described in the documents titled "East Darling Harbour State Significant Site Proposal, Concept Plan &*

*Environmental Assessment (Volume 1 & 2)" prepared by JBA Urban Planning Consultants & SHFA (dated October 2006), amended by Barangaroo Part 3A Modification Report (Volume 1 & 2) prepared by MG Planning Pty Ltd & SHFA (dated June 2008), amended by Barangaroo Part 3A Modification Report – Headland Park and Northern Cove prepared by MG Planning Pty Ltd on behalf of Sydney Harbour Foreshore Authority and dated January 2009, and amended by Barangaroo South Concept Plan Modification and Major Development SEPP Amendment Environmental Assessment Report prepared by JBA Urban Planning Consultants (dated August 2010), and amended by Barangaroo Concept Plan Section 75W Modification prepared by JBA Urban Planning Consultants (dated May 2013), and amended by Barangaroo Concept Plan Section 75W Modification prepared by JBA Urban Planning Consultants (dated October 2013) and as amended Barangaroo Concept Plan Section 75W Modification (MOD 8) prepared by JBA Urban Planning Consultants (dated March 2015), **INSERT EAR**, including:*

(1) A mixed use development involving a maximum of **594,354 602,354** sqm gross floor area (GFA), including:

- (a) a maximum of ~~183,031~~ **191,031** sqm of residential GFA of which a maximum of ~~154,000~~ **162,000** sqm will be in Barangaroo South;
- (b) a maximum of 76,000 sqm of GFA for tourist uses of which a maximum of 59,000 sqm will be in Barangaroo South;
- (c) a maximum of 34,000sqm of GFA for retail uses of which a maximum of 30,000 sqm will be in Barangaroo South;
- (d) a maximum of 5,000 sqm of GFA for active uses in the Public Recreation zone of which 3,500 will be in Barangaroo South; and
- (e) a minimum of 12,000sqm GFA for community uses.

*Note: the GFA detailed above is amended by Modification B4(4) below.*

- (2) Approximately 11 hectares of new public open space/public domain, with a range of formal and informal open spaces serving separate recreational functions and including an approximate 2.2km public foreshore promenade.
- (3) Built form design principles, maximum building heights and GFA for each development block within the mixed use zone.
- (4) Public domain landscape concept, including parks, streets and pedestrian connections.
- (5) Alteration of the existing seawalls and creation of a partial new shoreline to the harbour.
- (6) Construction, operation and maintenance of a concrete batching plant to supply concrete for construction of future development under this Concept Plan at Barangaroo South.
- (7) No approval is granted or implied for the future use of a heliport and/or a helipad.

**Reason For Modification:** To reflect increased GFA, see Section 5.2.

#### **B4 Built Form**

(1) Approval is given to a mixed use development involving a maximum of **594,354 602,354** sqm gross floor area (GFA), including:

- a) A maximum of ~~183,031~~ **191,031** sqm GFA for residential uses of which a maximum of ~~154,031~~ **162,031** sqm may be located in Barangaroo South;
- b) A maximum of 76,000 sqm GFA for tourist uses of which a maximum of 59,000 sqm may be located in Barangaroo South;
- c) A maximum of 34,000 sqm GFA for retail uses of which a maximum of 30,000 sqm may be located in Barangaroo South;
- d) A maximum of 5,000 sqm GFA for active uses in the Public Recreation zone (3,500sqm of which will be in Barangaroo South); and
- e) A minimum of 12,000sqm GFA for community uses.

(2) Despite A1 (1) and B4(1) above, future development applications are not to exceed the GFA, maximum residential GFA and building heights specifically identified in table (2)(a) below.

	GFA (sqm)	Residential GFA Max (sqm)	Height (Max AHD)	Height above existing ground level (m)
Block 1	1,927		RL 25	23
Block 2	197,280		RL 180	178
Block 3	129,934	10,515	RL 209	207
Block 4A	<del>86,979</del> 92,629	<del>86,166</del> 91,816	RL 250	248
Block 4B	<del>19,158</del> 21,508	<del>18,287</del> 20,637	RL 107	173
Block X	18,908	16,463	RL 41.5	39.5
Block Y	77,500	22,600	RL 275	273
Block 5	29,688	15,000	RL 34	32
Block 6	3,000	-	RL 29	27
Block 7	15,000	14,000	RL 35	33
Total	<del>579,354</del> 587,354	<del>183,031</del> 191,031		

(3) Notwithstanding B4(2) above, future development applications for buildings within Blocks 2, 3, 4A and 4B and Y, may accommodate a redistribution of GFA (but not in excess of the total GFA for those blocks) resulting from the Urban Design Controls identified in Modification B9.

(4) Wintergardens may be excluded from the maximum residential and tourist GFA stipulated for Blocks 4A, 4B and Block Y in the Table above, subject to compliance with the revised Built Form Principles and Urban Design Controls required to be prepared in accordance with Modification B9(4) below.

**Reason For Modification:** To reflect increased GFA, see Section 5.2.

#### B5. Revised Design Principles

(1) Future applications in Barangaroo South are to demonstrate consistency with the Built Form Principles and Urban Design Controls ~~within the Supplementary Urban Design Statement by Rogers Stirk Harbour + Partners (February 2015 INSERT) as amended by the required modifications as outlined in Modification B9.~~

**Reason For Modification:** The Built Form Principles and Urban Design Controls submitted with this Modification reflect the final consolidated set that was approved by the Secretary in accordance with B9(1) and have subsequently been updated to reflect the changes in the subject Modification.

#### B9. Envelope Amendments and Built Form Controls

##### ~~Barangaroo South~~

~~(1) The Built Form Principles and Urban Design Controls prepared by Rogers Stirk Harbour + Partners (February 2015) for Barangaroo South are required to be modified in accordance with Modifications B9(2)–B9(6) below. A final consolidated set of the Built Form Principles and Urban Design Controls shall be provided to the Secretary prior to the determination of any SSD application for new above ground Buildings on Block Y incorporating all of the required modifications set out in Modification B9(2)–B9(6).~~

~~(2) The draft Barangaroo South Design Guidelines (draft guidelines) prepared by JBA dated September 2015 shall be reformatted and consolidated into the revised set of Built Form Principles and Urban Design Controls referred to in Modification B9(1) above. In this regard, the design solutions in the draft guidelines shall be revised and restructured to incorporate objectives and design standards for the controls within each development Block in accordance with the format for the existing Built Form Principles and Urban Design Controls prepared by Rogers Stirk Harbour + Partners (February 2015) for Barangaroo South. The provisions relating to Blocks 1, 2, 3 and X may be retained in their current form.~~

##### ~~Envelope Amendments~~

~~(3) The urban design controls are to be amended as follows:~~

~~a) Block Y is to be amended in accordance with Modification B3 and B4(4) above; and~~

**~~b) Block 4A is to be modified to include generous through-site links to promote visual and physical permeability through the podium of the Residential 4A and 4B Buildings connecting Hickson Park to Watermans Cove.~~**

#### **Wintergardens**

**~~(4) The final consolidated Urban Design Controls are to include the following objectives and standards for wintergardens for Block 4A, 4B and Y:~~**

- ~~a) Building Mass and Location Objective: Allow balconies on towers including residential and /or tourist and visitor accommodation GFA to be partially enclosed without the need to include balcony floor area as GFA.~~**
- ~~b) Building Mass and Location Standard: Applies to residential and tourist and visitor accommodation development within a building with a height of 30 metres or more; the maximum private external balcony area must not exceed 15% of the GFA of the apartment or tourist and visitor accommodation room to which the balcony is connected; and the bulk of the building is no greater than it would be if balconies were not partially enclosed.~~**
- ~~c) Residential Amenity Objective: Enable the partial enclosure of balconies to provide private open space that is usable and has a high level of amenity.~~**
- ~~d) Residential Amenity Standard: the glass wind screen must be designed so the balcony remains external open space; and the wind screen design ensures permanent natural ventilation and cannot be fully enclosed or sealed from the weather.~~**

#### **Signage**

**~~(5) The final consolidated Urban Design Controls are to include the following additional standard for signage for Blocks 4A, 4B and Y:~~**

- ~~a) Signage Standard: Each development application submitted for the erection of a new building/s is to include as a minimum a description and illustration of intended signage location/s and form. Where detailed signage proposals are not included in the works proposed in a development application for the erection of new buildings, actual sign approvals will be subject to separate Development Applications.~~**

#### **Urban Design Controls- Figures**

**~~(6) All figures/diagrams shall be updated to incorporate the above modifications as necessary and shall be incorporated into revised set of Built Form Principles and Urban Design Controls required to be submitted to the Secretary for approval in accordance with Modification B9(1) above.~~**

**Reason For Modification:** The Built Form Principles and Urban Design Controls were amended in accordance with Condition B(9) (1)-(6) and were approved by the Secretary on 27 April 2017. As such this condition has been satisfied. The controls submitted with this modification incorporate the proposed changes.

#### **B11. Key Worker Housing**

Key worker housing for Barangaroo South shall be provided generally in accordance with Statement of Commitment **34 35** and comprise at least:

- a) 2.3% of residential GFA on site, within Barangaroo South; and
- b) at least an additional 0.7% of the residential GFA on Barangaroo South, or its equivalent development value (but comprising at least a minimum of 1,740sqm of residential GFA), to be provided:
  - i. offsite, but within 5 km of the site, or elsewhere within the City of Sydney LGA;
  - ii. as a mix of unit sizes, including at least 40% of the GFA allocated to dwellings comprising 2 or more bedrooms;
  - iii. prior to the later of the practical completion of Building R5 or the last occupation certificate of Building R5e **for Blocks 4A, 4B and Y.**

**Reason For Modification:** See Section 5.3. It is noted that despite the increase in GFA within Block 4A, no change is required to the minimum off site KWH in this condition as the 1,740sqm continues to exceed 0.7% of the revised total residential GFA. The amendment to the Statement of Commitment number is required to reflect that the numbering of these commitments has changed as a result of a typographical error in the MOD 8 approval, which duplicated the numbering.

## 5.7 Revised Statement of Commitments

The proposed changes to the delivery timing of the Key Work Housing outlined in Section 5.5, along with Condition B11 which amended the Commitment, necessitate the following amendments to Statement of Commitment 34:

**34 35.** *A total of 3% of residential floor space on Barangaroo South is to be allocated to key worker housing provision, and is to be provided at or before ~~the later of the practical completion of Building R5 or the last occupation certificate of the Building R5~~ **practical completion of 75% of Barangaroo South residential GFA**.*

- 2.3% of the total 3% may be located in Barangaroo South, or at another location outside Barangaroo South and within the City of Sydney LGA area. Selection of any location outside Barangaroo South is to be at the discretion of the Community Housing Provider, with Lendlease agreement, to which the commitment has been allocated to own and manage.
- Should the existing 2.3% key worker housing provision be located at a location outside of Barangaroo South, Lendlease will transfer a monetary contribution to the Community Housing provider equivalent to the difference of the independently verified value offered by the Provider, and the independently verified cost of providing the required floor space for Key Worker Housing at Barangaroo South, ~~at a time to coincide with practical completion of 75% of Barangaroo South residential floor space.~~
- The remaining 0.7% of the total 3% is to be located outside of Barangaroo South and within the City of Sydney LGA area. Selection of any location outside Barangaroo South is to be at the discretion of the Community Housing Provider, with Lendlease agreement, to which the commitment has been allocated to own and manage. Lendlease will transfer a monetary contribution to the Community Housing provider equivalent to the difference of the independently verified value offered by the Provider, and the independently verified cost rate in (b) above, ~~at a time to coincide with practical completion of 75% of Barangaroo South residential floor space.~~

**Reason For Modification:** See Section 5.3 A consolidated version of the Statement of Commitments is provided at **Appendix S**. We note that due to previous modifications made to the Statement of Commitments as part of Modification 8, the numbering of some of the commitments has changed to reflect the now consolidated list of commitments.

## 5.8 Barangaroo South Built Form and Urban Design Controls

The Barangaroo South Built Form Principles and Urban Design Controls have been revised to reflect the proposed amendments to Building R4B (see **Appendix C**). Where changes have been made to the text, deletions are shown in **bold strikethrough** and insertions are shown in **bold italics**. The changes are detailed below:

- Change to the graphics for Block 4A and 4B to reflect the increased height of Building R4B on pages 24 - 29;
- Update to the 'indicative buildings' to reflect the Renzo Piano Building Workshop design which is now approved on the site on pages 24 – 29;
- Amending Block 4A + 4B, Control 1, Building Mass and Location, Standard 2 on page 24 as follows:

*Towers in Block 4A shall have a ~~minimum of 30m~~ **minimum of 15m** variation in height.*

## 6.0 State Significant Precincts SEPP Amendment - Explanation of Intended Effect

The Barangaroo site is listed as a State Significant Site in Part 12 of Schedule 3 of the SSP SEPP. The SSP SEPP zones the land and provides maximum building heights and GFA restrictions for each of the nominated development blocks.

A SEPP Amendment is requested to reconcile the SSP SEPP planning provisions with the proposed modification. Specifically, it is requested that the SSP SEPP Gross Floor Area Map be amended to:

- Increase the maximum permissible GFA within Block 4A from 94,740m<sup>2</sup> to 100,390m<sup>2</sup>.
- Increase the maximum permissible GFA within Block 4B from 20,970m<sup>2</sup> to 23,320m<sup>2</sup>.

**Appendix D** illustrates the proposed SEPP Map amendments.

No increase is required to the maximum permissible height controls contained in the SEPP. The proposed modifications to the building height within Block 4A of Barangaroo South comply with the building limit of RL250 applying under the SEPP.

The effect of the proposed GFA amendment will allow for additional residential floorspace to be accommodated within Block 4A and 4B. This additional density will contribute to the overarching objective for Barangaroo South to enhance the growth and positioning of Sydney as a premier economic, cultural and living centre of the Asia-Pacific region.<sup>3</sup>

---

<sup>3</sup> It is noted that the difference between the maximum SSP SEPP GFA and the Concept Plan GFA for Block 4A is a reflection that additional GFA was provided in the SSP SEPP to accommodate GFA associated with wintergardens (enclosed balconies). In accordance with the definition of 'gross floor area' in the *Standard Instrument – Principal Local Environmental Plan*, a wintergarden would be counted as GFA for the purpose of the SSP SEPP. Condition B4(4) of the Concept Plan permits wintergarden areas to be excluded from GFA, to recognise that wintergardens are proposed to facilitate usable outdoor space and should not be restricted on the basis of a GFA control. Whilst the Concept Plan GFA reflects this distinction, the applicable definition of GFA under the SSP SEPP requires wintergardens to be counted as GFA. Accordingly, it is proposed to increase the maximum permissible GFA under the SSP SEPP to ensure compliance. No additional GFA beyond the proposed 8,000sqm is required for the purposes of wintergardens as part of this SEPP amendment, as the current provision is sufficient to accommodate any additional wintergarden area that may be proposed.



## 7.0 Substantially the Same Development

Under Section 3C(1) of Schedule 2 of the *Environmental Planning and Assessment Regulation (Savings, Transitional and Other) 2000*, a Concept Plan may continue to be modified under Section 75W pursuant to a request lodged on or after the cut-off date (whether or not the project is or has ceased to be a transitional Part 3A project), but only if the Minister is satisfied that the project to which the concept plan as modified relates is substantially the same as the project to which the concept plan currently relates (including any modifications previously made under Section 75W).

This Modification is made in accordance with the provisions of 75W(c) of the EP&A Act on the basis that the project is substantially the same as the project to which the Concept Plan currently relates, being the Concept Plan as modified, up to and incorporating Mod 8.

The consideration of whether a project as proposed to be modified is substantially the same as that which was approved requires a qualitative and quantitative assessment of the degree change proposed relative to the approval.

A quantitative and qualitative comparison of the approved Concept Plan and Mod 10 is provided below to demonstrate that Mod 10 is 'substantially the same'. That is, Mod 10 is essentially or materially the same as the approved Concept Plan. The qualitative and quantitative assessment includes a comparison of the environmental, strategic, and physical features of the approved Concept Plan and Mod 10.

### The Approved Concept Plan and Proposed Modification

In determining whether the proposed modifications constitute a project that is substantially the same for which approval has been granted, it is necessary to consider the nature of the approval granted under the Concept Plan.

The approved Barangaroo Concept Plan as described in Condition A1 Development Description incorporates the following:

- A mixed use development involving a maximum of 594,354sqm of gross floor area (GFA) including:
  - A maximum of 183,031sqm of residential GFA of which a maximum of 154,000sqm will be located in Barangaroo South;
  - A maximum of 76,000 sqm of GFA for tourist uses of which a maximum of 59,000sqm will be in Barangaroo South;
  - A maximum of 34,000 sqm of GFA for retail uses of which a maximum of 30,000sqm will be in Barangaroo South;
  - A maximum of 5,000sqm of GFA for active uses in the Public Recreation zone of which 3,500sqm will be in Barangaroo South;
  - A minimum of 12,000sqm GFA for community uses.
- Approximately 11 hectares of new public open space/public domain, with a range of formal and informal open spaces, including a 2.2km public foreshore promenade.
- Built form design principles, maximum building heights and maximum GFA for each development block within the mixed use zone.
- Public domain landscape concept, including parks, streets and pedestrian connections.
- Alteration of the existing seawalls and creation of a partial new shoreline to the harbour.
- Construction, operation and maintenance of a concrete batching plant to supply concrete for construction of future development under this Concept Plan at Barangaroo South.
- No approval is granted or implied for the future use of a heliport and/or helipad.

The proposed modification seeks only minor modifications to the approved parameters outlined above, as follows:

- A quantitative change to the maximum approved GFA, with an increase of 8,000sqm or 1.3% of the total GFA.
- A quantitative change to the maximum approved residential GFA with an increase of 8,000sqm or 4.3% of the total residential GFA.
- A quantitative change to the maximum building height within part of Block 4A by a total of 25 metres, or 12% of the original height.

No change is proposed to the approved range of uses, built form design principles or other key elements which define the Barangaroo South precinct, including Barangaroo South.

In addition to the above the approved Concept Plan incorporates the guiding principles for the precinct as set out in the Rogers Stirk Harbour + Partners Master Plan, as well as the Barangaroo South Built Form and Urban Design Controls. The key design principles articulated in the Master Plan are as follows:

- Framing Sydney
- Extend the Grid
- The Fan
- A Place for the Future, Spaces, A Mixed Use Community
- Connections
- Gateways and Marker

The proposed modification does not result in any alteration to these established Master Plan principles and will further enhance the following principles:

- Framing Sydney: the proposed modification strengthens the relationship between Building R4A and Building R4B, creating a pair of 'sibling' towers that define the skyline.
- The Fan: the proposed modification does not have any impact on 'the fan' principle, maintaining all view corridors through the site whilst enabling additional residential density.
- A Place for the Future, Spaces, A Mixed Use Community: the proposed modification will provide additional housing to accommodate the growing population, and further enhance the established mixed use community at Barangaroo South.

Utilising these key design principles, the Barangaroo South Built Form and Urban Design Controls further define the key development parameters for each block within Barangaroo South through a series of refined built form principles, noted as follows:

- City's New Western Façade
- Hickson Road as a Boulevard
- Buildings to Define Streets
- North South Pedestrian Connections
- Marking the City Frame
- Open Space Within Blocks
- View Sharing
- Orientation of Buildings

These built form principles are maintained and continue to be complied with by this proposal, ensuring that the modification results in a built form that is consistent with the intent of the approved Concept Plan. The minor changes proposed to the Controls are to reflect the additional height (and respond to administrative matters approved through the Renzo Piano Building Workshop (RPBW) design under SSD's 6964, 6965 and 6966), and do not substantially alter any of the key design principles.

As outlined in **Section 5**, the proposed modification seeks to increase the height of Building R4B through amendments to the maximum height for Block 4A. Whilst this modification results in a quantitative change to the approved development parameters, this change results in an increase of only 1.3% of the total approved GFA under the Concept Plan. The additional GFA can be accommodated within the approved Building Envelope Plan for Building R5. The additional GFA for Building R4B will be accommodated within the proposed additional 25 metres of height, which is minor in the context of the existing approved height (being a 12% increase of that building). It is noted that the SSP SEPP already provides a maximum of RL 250 for Block 4A. Qualitatively, the proposed modification does not change any of the essential features of the approved Barangaroo Concept Plan, as it remains a mixed use development across eight development blocks with significant public domain. Further discussion of how the proposed modification is substantially the same is provided below.



## Quantitative Comparison of the Concept Approval and Modification

The proposal is substantially the same development, in a quantitative sense, as that originally approved as it maintains the following physical elements of the approved Concept Plan:

- approximately 11 hectares of new public open space;
- a Foreshore promenade 2.2km in length connection Walsh Bay to King Street Wharf;
- a layout derived from the long north south dimension of the site;
- a street pattern that integrates with Walsh Bay, Millers Point, King Street Wharf and the Western Grid of the City;
- the introduction of harbour water into the site in the new coves modulating what was an industrial linear harbour edge;
- a public domain framework that incorporates a foreshore promenade, a new cove, parks, squares and civic places, streets and pedestrian connections;
- two primary streets: a new north south local road (Barangaroo Avenue) proposed to provide local access, serve cyclists and acts as a significant pedestrian promenade fronting new buildings; and an existing street (Hickson Road) providing a collector level road function;
- a number of east west secondary streets that connect between Hickson Road and Barangaroo Avenue;
- a variety of pedestrian walkways that create permeability within the urban blocks between the streets;
- the zoning across the site that provides for B4 Mixed Use and RE1 Public Recreation;
- the maximum building heights within Development Blocks 1, 2, 3, 4B, X, Y, 5, 6 and 7; and
- active uses in the public domain including a variety of small buildings and structures. providing for a high quality urban environment and optimising amenity for workers, visitors and residents.

The main physical differences from a planning perspective between the approved Concept Plan and Mod 10 are limited to the following:

- An increase in the total approved GFA to be accommodated within the Barangaroo site of 8,000sqm, representing an overall increase in GFA of only 1.3%. The increase in GFA is very minor in comparison to the overall site GFA and strengthens the achievement of the original strategies discussed further below.
- An increase in the residential GFA of 8,000sqm. The increase equates to a 4.3% increase of residential GFA on the Barangaroo site, and is therefore considered minor relative to the GFA proposed for the site. This increases the maximum residential proportion by 2% and will still result in Barangaroo being a predominantly non-residential precinct. It is noted that these numbers include the approved residential GFA within Block 3 (10,515sqm), which will never be delivered as a result of Building C1 being developed for a commercial use.
- An increase in the maximum permitted building height of Building R4B from RL210 to RL235. Notwithstanding the increase, the towers maintain the approved built form relationship, with varying heights that step up from Hickson Road towards the landmark hotel building.

## Qualitative Comparison of the Concept Approval and Modification

The modification retains the essential elements of the Concept Approval as detailed below.

### Strategic Planning elements

The modification retains the following strategic planning elements of the approved Concept Plan:

- The overall range of land use types to be provided on the site, namely the creation of a new predominantly commercial focused CBD precinct that also incorporates residential, retail, tourist, community and recreation uses.
- The overall urban structure and public domain concept, namely at least 50% of the Precinct being provided as public open space concentrated along the foreshore and headland, with the southern portion of the site comprising mixed use development.

- The concept for the street and pedestrian connectivity and integration with the western edge of the CBD.
- The Project Urban Sustainability Framework (economic, environment and community).
- The Project principles for competitiveness, sustainability and liveability.
- The approved Concept Plan Economic Strategies.
- The approved Concept Plan Community Strategies.
- The approved Concept Plan Environment Strategies.

The above items are fundamental elements of the approved strategic development outcomes for Barangaroo, and are significant to the extent that they encapsulate the underlying purpose of the project as a whole, and also the manner in which the project is intended to be implemented by the NSW State Government and its development partners over time. The items above provide for Barangaroo to deliver:

- an entirely new and significant commercial precinct for the Sydney CBD with a critical mass of works and diverse types of commercial floor space that will create commercial growth opportunities for the Sydney CBD and reinforce Sydney's competitiveness in the Pacific Rim;
- sufficient housing and community and social infrastructure into the precinct to assist in creating a vibrant community that connects to the existing CBD;
- benchmark leadership in environmentally sustainable design; and
- provision of a significant foreshore promenade link, significant waterfront open space for locals and workers, and cultural community facilities for residents, workers and visitors.

Importantly, there are no differences between the approved Concept Plan and the modification that affect the fundamental strategic planning elements of the approved development outcomes for Barangaroo that are identified above.

Whilst the modification proposes a physical and quantitative change, the overreaching objectives of the planning framework established by the approved Concept Plan, which provides for the delivery of the following, remains unchanged:

- Large floor plate commercial buildings that are in high demand amongst major tenant organisations and difficult to achieve within the existing Sydney city footprint.
- Conditions which allow the opportunity to capture regional and global headquarters and conversion into net investment and employment growth with significant long-term benefits to the State and its economy.
- Opportunity for a new high value economic cluster to emerge based on existing strengths in the global economy.
- A mixed use precinct at Barangaroo that reads as an organic extension of the existing CBD, offering a distinctly contemporary expression of urbanity with an emphasis on sustainability, walkability and village life.
- Sufficient housing and community related infrastructure into the precinct to reinforce the knitting of Barangaroo into the mainstream Sydney life and commerce.
- Hotel facilities that will attract patronage to the precinct on a "counter cyclical" basis to the commercial office space to add vibrancy to the area and to add to the range, diversity and availability of communal spaces for people in the precinct to meet, interact and collaborate as an extension to the workplace.
- Higher density development focussed towards the southern end of the site, linking into existing higher density development at King Street Wharf and the western edge of the CBD. The scale of development will reduce towards the northern end of the site, where built form meets Barangaroo Reserve.

## Impacts

The proposed modification will not result in any significant environmental impacts, as assessed in detail in **Section 8**. In summary:

- The proposed modification respects and strengthens the key built form and urban design principles established by the current Master Plan.
- The proposed modification will allow for buildings that achieve the objectives of both *State Environmental Planning Policy 65 – Design Quality of Residential Flat Buildings* (SEPP 65) and the Apartment Design Guide.
- There is no significant additional overshadowing as result of the proposed height and GFA adjustments. The additional height will not impact on any of the view corridors approved as part of Mod 8 and will result in only minor impacts on views to the sky from surrounding vantage points.
- The proposed modifications to the Building R4B envelope remain within the approved lateral building envelope and only seeks to increase the height of the building. This results in minimal additional impacts to private views from those already approved.
- The proposed increase in height is not expected to result in any significant impacts on the wind conditions for the previously tested trafficable areas in the public domain at ground level or on the podium of Buildings R4A, R4B or R5.
- There will be no additional traffic impacts, and parking and access arrangements remain satisfactory.
- Impacts on Sydney Observatory are limited due to existing conditions that compromise the visibility of constellations.
- Other potential environmental impacts in relation to sustainability, infrastructure and services, stormwater, noise and vibration and air quality can be suitably managed.
- The proposed modification will have positive social and economic impacts, and not impact on the public benefits already established at Barangaroo.

## Summary

The modification to provide additional GFA and height at Barangaroo to support and strengthen the implementation of the above parameters is minor in nature and clearly within the scope of the development concept as contemplated and approved. Therefore, the actual quantum of GFA proposed is of lesser significance in this circumstance than is the question of whether or not the resultant development will nonetheless deliver upon the underlying objectives of the Barangaroo Concept Plan, as approved.

Having regard to the essential and material components of the approved development, and the consideration of the commonalities and differences above, we consider that Mod 10 is substantially the same as the Concept Approval.





## 8.0 Environmental Assessment

This section of the report assesses and responds to the environmental impacts of the Concept Plan (Mod 10) proposal.

### 8.1 Relevant EPIs, Strategies, Plans and Guidelines

The relevant strategies, environmental planning instruments, policies and guidelines that apply to the site and proposed development are addressed in **Table 5**.

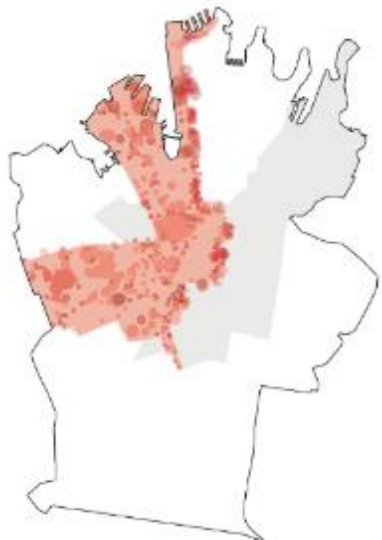
**Table 5 Assessment against relevant strategies, EPIs, policies and guidelines**

Plan	Assessment
<b>Strategic Plans</b>	
NSW Premier's Priorities	The NSW Premier's Priorities represent the key policy priorities for the NSW Government, replacing the former NSW 2021 plan. The priorities outline the NSW Government's vision and objectives for the State's near-term future and are intended to guide all government action. The priorities set a series of targets designed to rebuild the economy, deliver quality government services, improve infrastructure, strengthen our local environment and communities and improve governance structures. The proposed modifications will not prevent achieving any of the current NSW Premier's Priorities, which primarily relate to social policy, green infrastructure and improving the public service.
Greater Sydney Region Plan	<p>The <i>Greater Sydney Region Plan</i> is the overarching strategy for growing and shaping the Greater Sydney Area. It sets a 40-year vision (to 2056) and establishes a 20-year plan to manage growth and change for Greater Sydney in the context of social, economic and environmental matters. The plan was finalised and adopted in March 2018 and seeks to strengthen Sydney as a metropolis of three cities – the western parkland city, central river city, and the eastern harbour city. The Plan provides 10 key directions supported by 40 objectives that inform the District Plans, Local Plans and Planning Proposals which follow in the planning hierarchy. An assessment against the key directions is provided below.</p> <div>  <p><b>A city supported by infrastructure</b></p> <ul style="list-style-type: none"> <li>The modification seeks to provide additional residential density in an area that benefits from high quality infrastructure, in particular the future Sydney Metro as well as existing train, ferry and bus connections.</li> </ul> </div> <hr/> <div>  <p><b>A collaborative city</b></p> <ul style="list-style-type: none"> <li>This direction acknowledges that managing the competing needs of the city requires all levels of government, industry and the community to work together and identifies Collaboration Areas where multiple stakeholders will work together to support future growth. Barangaroo is not located within a Collaboration Area.</li> </ul> </div> <hr/> <div>  <p><b>A city for people</b></p> <ul style="list-style-type: none"> <li>The modification will facilitate additional residential density in a location that benefits from close proximity to employment, public open space and transport infrastructure.</li> </ul> </div> <hr/> <div>  <p><b>Housing the city</b></p> <ul style="list-style-type: none"> <li>The proposed modification will facilitate additional residential dwellings, including KWH dwellings, to assist in meeting housing demand. The Region Plan outlines that affordable rental housing targets for new development will be between 5 – 10% of new residential floorspace, subject to preparation of detailed Affordable Rental Housing Target Schemes for specific areas. The Concept Plan for Barangaroo precedes these strategic documents, which has resulted in a site-specific affordable rental housing target for KWH that will continue to be applied.</li> </ul> </div>

Plan	Assessment
	<div data-bbox="437 293 600 456"> </div> <div data-bbox="632 286 847 315"><b>A city of great places</b></div> <div data-bbox="632 324 1342 483"> <ul style="list-style-type: none"> <li>The site is located in proximity of concentrated employment opportunities, retail, education and entertainment opportunities as well as significant public open space. Development at Barangaroo South provides a number of the 'elements of great places', such as 'streets as places for people', 'universal design', 'human scale' and the proposed modification will seek to leverage off this.</li> </ul> </div> <hr/> <div data-bbox="437 517 600 680"> </div> <div data-bbox="632 510 852 539"><b>A well connected city</b></div> <div data-bbox="632 548 1342 656"> <ul style="list-style-type: none"> <li>Barangaroo South benefits from train, bus, ferry and cycle connections, as well being only 400m from a future Sydney Metro Station. The additional residential density proposed will benefit from this connectivity, contributing to achieving the '30-minute city.'</li> </ul> </div> <hr/> <div data-bbox="437 712 600 875"> </div> <div data-bbox="632 705 903 734"><b>Jobs and skills for the city</b></div> <div data-bbox="632 743 1342 822"> <ul style="list-style-type: none"> <li>The proposal is consistent with the objective to create high amenity, high density residential precincts in the eastern city, which enhances the competitiveness of the Harbour CBD.</li> </ul> </div> <hr/> <div data-bbox="437 898 600 1061"> </div> <div data-bbox="632 896 860 925"><b>A city in its landscape</b></div> <div data-bbox="632 934 1297 1041"> <ul style="list-style-type: none"> <li>The proposed modification does not affect the approved public domain or landscaping, which provides a significant amount of public open space and tree canopy throughout the Barangaroo precinct.</li> </ul> </div> <hr/> <div data-bbox="437 1088 600 1252"> </div> <div data-bbox="632 1086 794 1115"><b>An efficient city</b></div> <div data-bbox="632 1124 1355 1283"> <ul style="list-style-type: none"> <li>Barangaroo is a carbon neutral precinct, providing energy efficient buildings and infrastructure and offsetting remaining emissions in accordance with the Commonwealth Government Climate Active Carbon Neutral Scheme.. The proposed modification will not prevent the continued achievement of this target, and will provide additional residential density in an ecologically sustainable development.</li> </ul> </div> <hr/> <div data-bbox="437 1308 600 1471"> </div> <div data-bbox="632 1305 782 1335"><b>A resilient city</b></div> <div data-bbox="632 1344 1350 1426"> <ul style="list-style-type: none"> <li>The environmental initiatives implemented through the development contribute to enhanced environmental outcomes and seek to mitigate impacts related to climate change.</li> </ul> </div>
Eastern City District Plan	<p>The <i>Eastern City District Plan</i> underpins the <i>Greater Sydney Region Plan</i> and sets the 20-year vision for the District through 'Planning Priorities' that are linked to the Region Plan. The proposed modification is consistent with a number of these priorities, as follows:</p> <ul style="list-style-type: none"> <li>Planning for a city supported by infrastructure.</li> <li>Providing housing supply, choice and affordability, with access to jobs, services and public transport.</li> <li>Creating and renewing great places and local centres, and respecting the District's heritage.</li> <li>Growing a stronger and more competitive Harbour CBD.</li> <li>Delivering integrated land use and transport planning and a 30-minute city.</li> <li>Reducing carbon emissions and managing energy, water and waste efficiently.</li> </ul> <p>The Eastern City District Plan explicitly recognises that Barangaroo has provided much-needed supply in commercial office space and that it forms part of the Harbour CBD Innovation Corridor, which should be grown to capitalise on opportunities to deliver precincts with high levels of amenity, that are close to transport connections and proximity to affordable and diverse housing options. The proposed modification is consistent with this direction, seeking to provide additional residential dwellings in a growing employment</p>

Plan	Assessment
	precinct with superior connections to transport infrastructure and other recreation and cultural amenities.
Draft Sydney Local Strategic Planning Statement	<p>The draft Sydney Local Strategic Planning Statement (LSPS) establishes planning priorities to achieve the City of Sydney's vision of being 'Green, Global and Connected'. The proposed modification is consistent with a number of these planning priorities, as follows:</p> <ul style="list-style-type: none"> <li>• <b>Movement for walkable neighbourhoods and a connected city:</b> precinct planning should focus on providing daily needs within a 5 – 10 minute walk, providing mass transit and transport services and ensuring land uses match mobility investment. The proposed modification seeks to capitalise on the investment in Sydney Metro at Barangaroo South, which will provide a Metro station that will increase connectivity for future residents. The draft LSPS specifically identifies Barangaroo as a precinct that will benefit from the Sydney Metro transport infrastructure, and a place that already benefits from pedestrian and cycling connections to access daily needs.</li> <li>• <b>Align development and growth with supporting infrastructure:</b> the proposed modification seeks to leverage the significant investment in infrastructure that has already taken place at Barangaroo, including in relation to ecologically sustainable development measures for energy, water and waste management, as well as the provision of improved transport and pedestrian linkages.</li> <li>• <b>Supporting community wellbeing with social infrastructure:</b> the Barangaroo precinct provides open space, as well as community and cultural facilities, for the benefit of the existing and future residential community. The proposed modification will facilitate additional residential dwellings in close proximity to existing and planned social infrastructure.</li> <li>• <b>Creating great places:</b> Barangaroo delivers design excellence and high amenity in the built environment, as has been demonstrated through the delivery of public domain, residential dwellings and retail in the Stage 1A precinct of Barangaroo South. The delivery of the remainder of Barangaroo South, including Hickson Park, Waterman's Cove and surrounding public domain bounded by the One Sydney Harbour towers, will further contribute to establishing a high quality precinct and the proposed modification seeks to leverage from this.</li> <li>• <b>New homes for a diverse community:</b> the proposed modification will facilitate the delivery of additional residential dwellings, providing additional housing types and the delivery of additional KWH onsite within Barangaroo South.</li> <li>• <b>Creating better buildings and places to reduce emissions and waste and use water efficiency:</b> Barangaroo is a carbon neutral precinct. ESD strategies and targets and climate positive commitments established for the project will continue to be implemented and will allow additional residential dwellings to benefit from this innovative approach to ESD.</li> </ul> <p>In addition to these planning priorities, the draft LSPS identifies Barangaroo within the Innovation Corridor (Innovation Corridor map extract below) and notes that development in these areas can leverage the dense economic activity and global outlook of Central Sydney, and significant investment in transport infrastructure. A priority for City of Sydney Council is to continue the growth of the Innovation Corridor, and the proposed modification will assist with this growth by providing additional residential density.</p>



Plan	Assessment
	
State Infrastructure Strategy – Building Momentum 2018 - 2038	<p>The State Infrastructure Strategy 2018 – 2038 (SIS) responds to the forecast population growth of an additional four million people living in Sydney by 2056 and the metropolis of three cities proposed by the Greater Sydney Region Plan. The strategic directions for infrastructure investment seek to ‘achieve more with less’ and prioritises integration of land and infrastructure planning.</p> <p>Barangaroo South delivers on the strategic directions set out in the SIS, integrating high density residential development in a location with access to transport infrastructure and in an urban renewal location that does not erode the amenity and character of existing communities. The proposed modification remains consistent with these strategic directions, seeking to leverage from the existing infrastructure to provide residential density in appropriate location.</p>
Sydney City Centre Access Strategy	<p>The Sydney City Centre Access Strategy establishes a framework and plan for transforming and improving Sydney’s transport system to enable easy access to Sydney’s centre and make the city centre more attractive and a place where people wish to spend more time. The Modification remains consistent with this strategy in that it:</p> <ul style="list-style-type: none"> <li>• provides additional residential uses in close proximity to other high employment areas,</li> <li>• increasing the number of people living in close proximity to their place of work;</li> <li>• provides potential for key transport connections such as pedestrian and cycle networks; and</li> <li>• supports the provision of more public transport services along the western fringe of Sydney’s CBD.</li> </ul>
Sydney’s Cycling Future	<p>Sydney’s Cycling Future outlined the way the NSW Government seeks to plan, prioritise and provide for cycling in Sydney. The proposed modification will continue to support the objectives of Sydney’s Cycling Future.</p>
<b>State Planning Instruments</b>	
State Environmental Planning Policy (State and Regional Development) 2011	<p>Barangaroo is identified as a State Significant Site under Schedule 2 of the State and Regional Development SEPP. The relevant provisions of the State and Regional Development SEPP including those contained within Schedule 2 will continue to apply.</p>
State Environmental Planning Policy (State Significant Precincts) 2005	<p>Barangaroo is identified as a State Significant Precinct under Schedule 3 of the SSP SEPP. A number of provisions relating to the Barangaroo site are included in Schedule 3 of the SEPP. The proposed modification necessitates changes to the SSP SEPP (refer to Section 6.0). These changes to the SSP SEPP maps are included at <b>Appendix D</b>. As outlined throughout this report, the proposed changes relate to Block 4A and the Building R4B within Block 4A and Building R5 within Block 4B only.</p>
State Environmental Planning Policy (Infrastructure) 2007	<p>The State Environmental Planning Policy (Infrastructure) 2007 (Infrastructure SEPP) applies to the whole of NSW and is relevant to development on the Barangaroo Site. The proposed modifications do not alter the application of the Infrastructure SEPP to the Barangaroo Site.</p>

Plan	Assessment
	Future applications for development will need to be assessed against the relevant provisions of the Infrastructure SEPP, which may include an assessment of any potential impacts to the interim Metro Corridor or Metro Station Extent or assessment by RMS for traffic generating development.
State Environmental Planning Policy No 55 - Remediation of Land	The proposed modification does not trigger the provisions of SEPP 55. Assessment of contamination has been completed as part of previous modifications to the Concept Plan and other development approvals.
State Environmental Planning Policy 65 – Design Quality of Residential Flat Buildings	The proposed modifications will facilitate residential buildings that will achieve the objectives of State Environmental Planning Policy 65 – Design Quality of Residential Flat Buildings (SEPP 65) and the Apartment Design Guide (ADG). It is noted that the approved SSD 6965 for Building R4B and SSD 6966 for Building R5 were assessed as achieving a high level of residential amenity in accordance with the ADG, and it is expected that this will be maintained and improved as a result of the proposed modification.
Sydney Regional Environment Plan (Sydney Harbour Catchment) 2005	Barangaroo is located within the boundaries of the Sydney Harbour Catchment and as such is subject to the provisions of Sydney Regional Environment Plan (Sydney Harbour Catchment) 2005 (Sydney Harbour REP). Within the Sydney Harbour REP, Barangaroo is identified as being within the Foreshores & Waterways Area Boundary. Part 3, Division 2 (Clause 20-27) of the Sydney Harbour REP refers to matters which are to be taken into consideration by consent authorities before granting consent for development. The proposed modification is consistent with the matters for consideration set out in Part 3, Division 2 and does not result in any change to assessment against this SEPP carried out as part of previous modifications. In particular, the modifications to the built form do not result in any substantial view impacts and have sought to protect and enhance views and vistas established as part of Modification 8. A detailed assessment of views and visual impact is provided at Section 8.5 and 8.6.
Draft State Environmental Planning Policy (Environment)	The Draft State Environmental Planning Policy (Environment) consolidates the provisions of the Sydney Regional Environment Plan (Sydney Harbour Catchment) 2005 and broadly retains and transfers the existing provisions to the proposed draft SEPP. These provisions are assessed above. Minor updates are made to the definition of 'working harbour' to clarify that this may include a range of recreational, transport, tourism and commercial uses, as well as other modifications that are not relevant to the proposed modification relating to waterway zones, heritage and critical habitat.
Sydney Harbour Foreshores and Waterways Area Development Control Plan 2005	The proposed modifications remain consistent with the assessment against the DCP undertaken as part of Modification 8. In particular: <ul style="list-style-type: none"> <li>• There will be no impacts on the ecological quality of Sydney Harbour.</li> <li>• The Concept Plan will continue to provide for a landscaped setting along the waterfront.</li> <li>• The Concept Plan will avoid any conflicts between land uses and waterways.</li> <li>• The Concept Plan will continue to facilitate public access along the foreshore.</li> </ul>

## 8.2 Built Form and Urban Design

### Master Plan

As part of Mod 8, RHSP refined its Master Plan for Barangaroo South. The RSHP Barangaroo South Master Plan established the key design principles that have guided the evolution of the Masterplan and detailed development within it. Assessment against these principles is summarised below:

- **Principle:** Framing Sydney  
**Response:** The alignment of heights between Building R4A and Building R4B will create a paired composition that enhances the contribution to the Sydney skyline.
- **Principle:** Extend the Grid  
**Response:** The proposed modification has no impact on the extension of the grid.
- **Principle:** The Fan  
**Response:** The proposed modification supports 'the fan' principle, which creates view corridors through the precinct. The additional gross floor area is either contained wholly within the existing R5 Building Envelope Plan or added to Building R4B above the defined view corridors, ensuring that view lines are maintained.
- **Principle:** A Place for the Future, Spaces, A Mixed Use Community

**Response:** The proposed modification will provide additional residential floorspace to accommodate the forecast population growth. Future residents will benefit from a high quality precinct that exhibits urban design and architectural excellence and has access to a range of services and amenities.

- **Principle: Connections**

**Response:** The proposed modification leverages off the existing connections made by the Master Plan, enabling future residents to connect to employment and services within the precinct, as well as to other localities that are accessible by walking, cycling or public transport.

- **Principle: Gateways and Markers**

**Response:** The modified built form will further enhance the 'gateways and markers' concept, enhancing the legibility of the built form through a staggering of building heights from a low point at Building R5 to a high point at the Crown Hotel Resort.

The proposed modification therefore continues to respect, and in fact strengthen, the key built form and urban design principles established by the RSHP Master Plan for the site, particularly the 'fan' principle which sits and orients buildings to ensure distribution of built form across the site and create view corridors.

The revised height to the Building Envelope Plan of Building R4B also allows for a built form outcome that is more closely matched in scale to Building R4A, allowing the built form to read as a paired composition. Building R4A and Building R4B share the same geometrical alignment that is determined by the radial 'fan' geometry of the Master Plan, further strengthening the rationale for the two buildings to be a pair of 'sibling' towers.

In addition to this, Building R4A and Building R4B have considerably smaller footprints and are closer together than any other towers in the precinct. In combination with Building R4A, the Building R4B tower with the proposed height increase will continue to define a dramatic spatial context for proposed Hickson Park.

The major change to the Building R4B envelope is the height, with no substantial changes in plan. The additional GFA proposed for Building R5 will be accommodated within the approved Building Envelope Plan (see **Appendix B**).

#### **Built Form Principles and Urban Design Controls**

As part of the preparation of the Master Plan RHSP also prepared Built Form Principles and Urban Design Controls to guide the detailed design of the future development within the Concept Plan Blocks.

No substantial changes are proposed to the Built Form and Urban Design Controls that apply to Block 4A, with the exception of a change to Control 1 Building Mass and Location to respond to the proposed increase in height (and administrative amendments to the controls to reflect the RPBW design which is now approved on the site). The revised Built Form and Urban Design Controls at **Appendix C** reflect this amendment.

No changes are proposed to Controls 2-9 for Block 4A and 4B which relate to Streetwall Establishment, Building Articulation, Building Legibility, Ground Floor Permeability, Rooftops, Facades, Active Streetfronts and Signage. The Modification will therefore continue to provide urban design and built form controls that achieve a high-quality urban design and architectural outcome consistent with the Concept Plan Approval.

It is noted that the modified height of Building R4B (RL 235) remains under the maximum approved height for Block 4A (RL 250). As part of its assessment of Concept Plan (Mod 8) the Department of Planning and Environment, Design Advisory Panel and the Planning Assessment Commission did not raise concern with the height of Block 4A. The assessments collectively conclude that:

- the block is located at the edge of the CBD and adjacent to existing tall buildings; and
- the proposed building heights would not appear out of place in this context.

Increasing the height of Building R4B by 25m therefore does not result in any additional height beyond the maximum that was assessed for the Concept Plan (Mod 8), and will continue to provide an appropriate height in its context.

## Review by Rogers Stirk Harbour + Partners (RSHP) and Renzo Piano Building Workshop

An Urban Design Statement has been prepared by the Barangaroo South Master Plan Architect's, RSHP (see **Appendix E**). The RHSP Statement confirms that the design intent of the approved Master Plan is preserved with the proposed modification, and the increase in height does not conflict with or undermine any of the approved built form principles of the Master Plan approved under Modification 8. In particular, the RSHP statement notes that:

- By bringing the relative heights of Building R4A and Building R4B closer together through the envelope amendment there will be a commonality of alignment vertically, whereby they will read as a singular entity; a pair, together similar in scale to the adjacent commercial tower.
- Together, in this aligned form, the towers will retain their place as one part of the composition of buildings ascending in height towards H1 at RL275 and would therefore remain in compliance with the spirit of the master plan.
- Additionally, reading as a singular entity, the towers will better set off the landmark tower H1 and possibly more clearly express the fan geometry of the master plan.
- The proposed change to Building R5 remains within the approved Building Envelope Plan and will continue to maintain building separation and the 'fan' principle.

In addition to this, the revised height still achieves the Master Plan principle of "The towers ascend in height, from the lowest tower at Hickson Road to the pinnacle of the Landmark Hotel." The proposed modification is also consistent with Control 1, Standard 1 in the Urban Design Controls for Block 4A and Block 4B, which states that "The height of the towers within the block shall be varied and ascend in height from east to west".

The arrangement of the three towers in plan respects the master plan 'fan' principle which seeks to create a radial building arrangement within the precinct and the tower heights have been staggered according to the master plan concept that enshrines a hierarchical ascendancy of tower heights that rise from Hickson Rd in the east and reach the highest point at Block Y on the Harbour foreshore. This is consistent with the 'gateways and markers' principle, which seeks to create landmark buildings that define the precinct.

An Architectural Design Statement (see **Appendix F**) has also been prepared by international architects, Renzo Piano Building Workshop (RPBW), as the appointed Architects for One Sydney Harbour (Building R4A, Building R4B and Building R5). Notably, RPBW conclude that the proposed modifications will:

- work within the framework that was defined by the RSHP Master Plan (as per Modification 8);
- enable a height transition between the stepped forms of the International Towers development to the south and the Crown Hotel Resort tower to the north;
- maintain the hierarchy of forms within the One Sydney Harbour development;
- assist with defining a dramatic spatial context for Hickson Park;
- create an alignment between the façade geometry of Building R4B and Building R5; and
- create a greater degree of architectural tension between Building R4A and Building R4B.

### 8.3 Residential Amenity

The proposed modifications will facilitate residential buildings that will achieve the objectives of *State Environmental Planning Policy 65 – Design Quality of Residential Flat Buildings* (SEPP 65) and the *Apartment Design Guide* (ADG). It is noted that the approved SSD 6965 for Building R4B and SSD 6966 for Building R5 were assessed as achieving a high level of residential amenity in accordance with the ADG, and it is expected that this will be maintained and improved as a result of the proposed modification.

By virtue of their location and access to open space, Sydney Harbour, employment opportunities, transport infrastructure and retail amenity, all apartments at Barangaroo have a very high level of residential amenity. In particular, the proposed modification to Building R4B will provide additional residential dwellings at the upper levels, which will receive high levels of sunlight and therefore improve the number of apartments and therefore overall percentage that benefit from solar access. The building envelope of Building R4B was deliberately oriented northwards to maximise solar access, as well views to Sydney Harbour. The additional GFA in Building R5 has the potential to provide for larger apartments, thereby delivering additional residential amenity above and beyond that currently approved.

To ensure high quality residential buildings, the future Amending DA for Building R4B and Building R5 will continue to be designed in accordance with the design quality principles of SEPP 65 and the recommended design criteria set out in the ADG.

## **8.4 Overshadowing**

Shadow Diagrams have been produced by Virtual Ideas (refer to **Appendix G**) and illustrate the impact of additional shadow cast as a result of the proposed increased height to Building R4B. As there is only a minor change proposed to the floorplate of Building R5 the approved shadow impacts assessed as part of Mod 8 remain unchanged for Building R5.

The shadowing analysis has been prepared for hourly intervals between 9am and 3pm at the solstices (June 21 and December 21) and the equinoxes (March 21 and September 21) and compares the existing CBD, approved Concept Plan indicative building shadows and the proposed Concept Plan (Mod 10) indicative building shadows.

Notwithstanding the above, the updated shadow analysis illustrates that the impact of the height increase does not result in any significant additional shadow on key public domain areas. The revised Shadow Diagrams illustrate that there are minor portions of additional shadow cast, however these predominantly fall on Sydney Harbour, roads or areas of the CBD already in significant shadow.

### **March 21**

The March shadow diagrams demonstrate some additional shadowing of the waters of Darling Harbour from the additional height during mid-morning, however, again a significant portion of the waters also receive direct sunlight throughout the day for use by recreational boat users. There is a minor increase in shadow cast on Wulugul Walk at 12pm. This shadow only covers a small area of the public domain at a time when other sections of the foreshore are in full sun and only occurs for a short period. After 1pm, which is within the typical lunch break, the shadow has moved. The Wulugul Walk waterfront areas of the public domain with seating are also already partially shaded by the existing harbour and waterfront structures.

### **June 21**

The shadow analysis indicates that some additional shadowing will occur on the Pyrmont Bay private wharf and the roof of the existing commercial and residential buildings on the wharf between 9am and 10am. The shadow over these locations is fast moving, and by 10am the additional shadow falls on the water of Darling Harbour. There is no additional shadow cast from the modified envelope for the remainder of the study period, which shows that the shadow impacts of the increased height are consistent with those already approved.

### **September 21**

The September shadow diagrams demonstrate some additional shadowing of the waters of Darling Harbour from the additional height, however, again a significant portion of the waters also receive direct sunlight throughout the day for use by recreational boat users. An increased portion of Barangaroo Ferry Wharf is in shadow on September 21 from 10am, however this falls on the roof of the wharf and is completely removed by 11am. At 1pm, a portion of additional shadow falls on Hickson Road, however this does not affect any key public domain areas.

### **December 21**

The December shadow diagrams also demonstrate some additional shadowing of the waters of Darling Harbour from the additional height, however these additional shadows have moved by 12pm and allow the waters to receive direct sunlight throughout the afternoon. In addition to this, there is a minor portion of additional shadow cast on Watermans Cove at 12pm, however this has moved by 1pm and is likely to provide some respite during the hotter part of the day in summer.

## **Summary and Conclusion**

Overall, it is considered that the shadowing impacts of proposed Concept Plan (Mod 10) are acceptable and not significantly greater than the approved Concept Plan given that:



- There is no additional shadowing on key public domain areas at midwinter;
- The water of Darling Harbour maintains significant direct daylight hours during the key recreational middle of the day boating period;
- Solar access to open space within the Barangaroo South site is maintained, with minor impacts on Watermans Cove on December 21 and Wulugul Walk on March 21;
- Properties to the east and west are unaffected by additional shadowing; and
- The afternoon shadow cast by the built form of proposed modification will largely fall within the shadow of the approved Concept Plan or within existing shadows cast by buildings in Sydney's CBD.

## 8.5 Visual Impact

A Visual Impact Report has been prepared by Virtual Ideas to assess the impact of the proposed modification (refer to **Appendix H**). The visual analysis is made in comparison to those impacts previously analysed and approved as part of Modification 8 and assesses the overall impact of the Barangaroo Concept Plan as proposed to be modified.

### Methodology

The key public domain views analysed are the same as those analysed in Modification 8 and provide representative views for 3 categories of views, as follows:

- **From the water:** Vantage points 11 (Darling Harbour - Pyrmont Bridge), 12 (Ballaarat Park), 13 (Pyrmont Park Pier Jones Bay Wharf), 14 (Balmain East), 15 (Darling Harbour), 16 (Blues Point), 17 (Opera House Western Forecourt), 18 (Cremorne Point);
- **From public open space:** As above, and in addition vantage points 7 (Millers Point Observatory Hill), 8 (Clyne Reserve), 9 (Munn Reserve), 20 (Watsons Bay); and
- **From key streets:** Vantage points 1 (Hickson Road), 2 (Kent Street – corner of Margaret Street), 3 (Shelley Street from King Street bridge), 4 (Lime Street), 5 (High Street), 6 (Gas Lane), 10 (Sydney Harbour Bridge), 19 (Gladesville Bridge).

The vantage points selected for analysis in each of the categories of views provide representative views from all relevant directions, and from several positions within the visual catchment in relation to each category of view. They also provide for close as well as distant views.

The photomontage images for each of the identified public domain views were taken at ground level (pedestrian eye level) to indicate what a pedestrian will see when travelling through or within the general vicinity of the site.

Photomontage images have been produced using a range of lens sizes between 17 and 40mm. Overlays (crop markers) showing longer lenses (35 mm and 50mm) have been included for each photomontage image to illustrate the effect of a longer lens. The Visual Impact Photomontage Methodology Report concludes that the methodology adopted during the preparation of the exhibited photomontages is considered acceptable practice and it is consistent with the methodology used in the visual impact photomontage images submitted and approved as part of Concept Plan Modification 8.

### Assessment

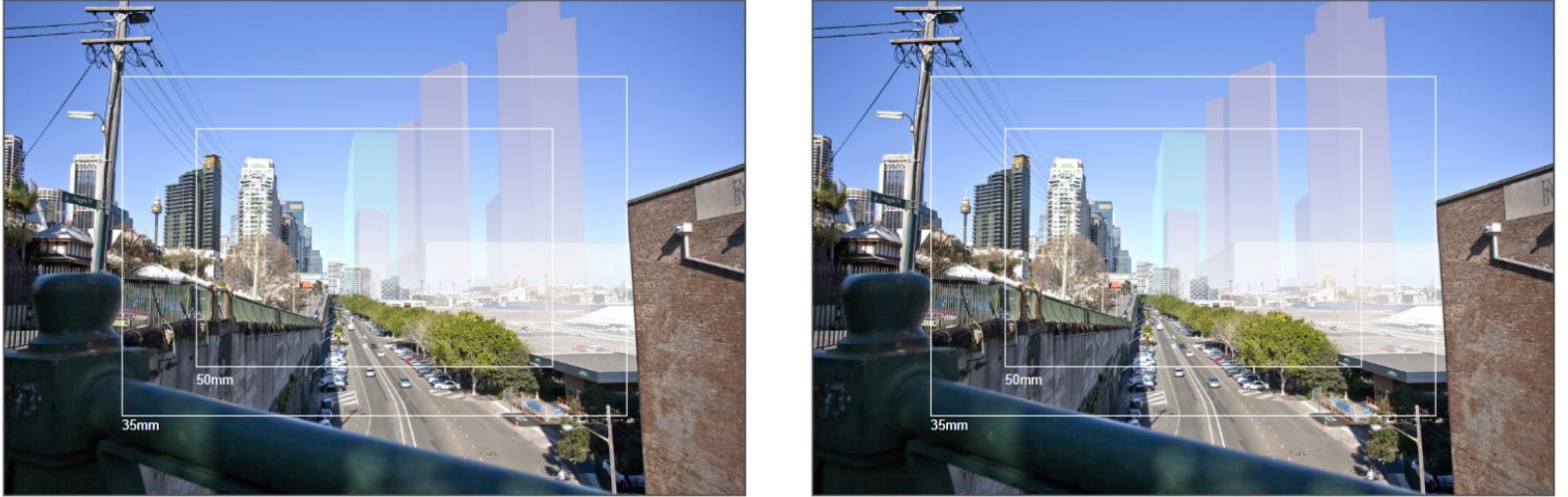
The built form and urban design principles for Barangaroo South, as presented through the evolution of the Concept Plan, have always sought to preserve significant public domain streets corridors, as well as to protect and reinforce views to and from key public domains spaces, and significant heritage buildings and structures within the public domain. In particular, 'the fan' principle was a key planning principle for the siting of buildings in Modification 8 to maximise view corridors and view sharing through the site. The proposed modification has no impact on the siting of buildings and maintains the fan principle to ensure that view corridors are maintained through the site.

The additional height to the Building Envelope Plan for Building R4B will not impact on any of the view corridors approved as part of Mod 8 and will result in only minor impacts on views to the sky from surrounding vantage points. Where the additional height results in encroachment on the sky view, these impacts are not significantly greater than the approved view impacts and are generally integrated with the existing skyline of high rise buildings, or not readily perceptible due to the distance. A comparison of the approved and proposed view impacts is outlined at



**Table 6** below and illustrates that the proposal will not result in any substantially different impacts to what is approved under Mod 8. The comparison below shows the impacts of the approved and proposed envelopes; however, the detailed building design will provide articulation to mitigate and further reduce visual impacts.

**Table 6 Comparison of approved and proposed view impacts**



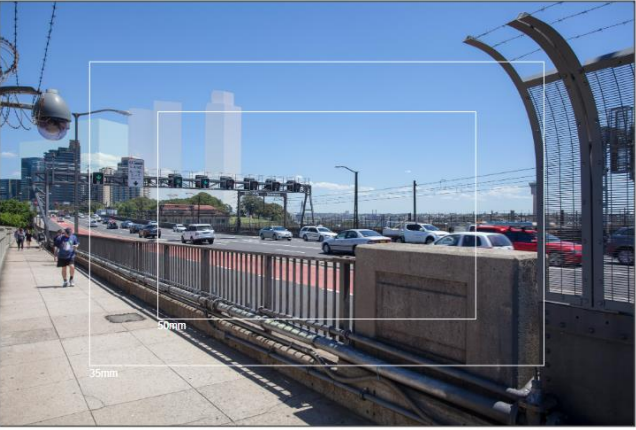
Reference	Public domain view	Approved Visual impact – Modification 8	Extent of change – Modification 10	Comparison of approved envelope (left) and proposed envelope (right)
1	Hickson Road	High	Additional height encroaches on sky view, however is largely concealed by Building R4A and does not significantly alter the existing impact.	 <p>Image showing massing of the Approved Concept Plan Amendment (Mod 8)</p> <p>Image showing massing of the Proposed Concept Plan Amendment (Mod 10)</p>
2	Kent Street	Medium	N/A – not visible.	
3	Shelley Street	Low	N/A – not visible.	
4	Lime Street	Low	N/A – not visible.	
5	High Street	Medium-High	Additional height encroaches on sky view, however does not significantly alter the existing impact.	

				<p>Image showing massing of the Approved Concept Plan Amendment (Mod 8)</p>	<p>Image showing massing of the Proposed Concept Plan Amendment (Mod 10)</p>
6	Gas Lane	Medium	No change.	<p>Image showing massing of the Approved Concept Plan Amendment (Mod 8)</p>	<p>Image showing massing of the Proposed Concept Plan Amendment (Mod 10)</p>



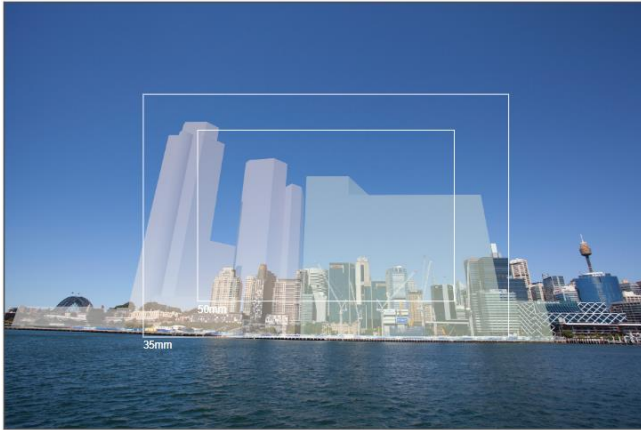
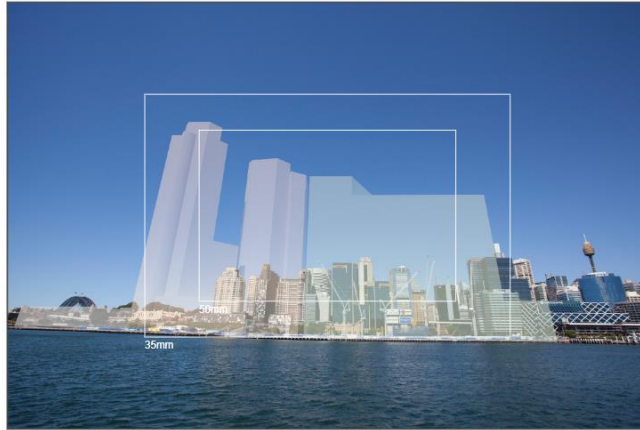


7	Millers Point (Observatory Hill)	High	Additional height encroaches on sky view, however does not significantly alter the existing impact.	 <p>Image showing massing of the Approved Concept Plan Amendment (Mod 8)</p>	 <p>Image showing massing of the Proposed Concept Plan Amendment (Mod 10)</p>
8	Clyne Reserve	Medium	Additional height encroaches on sky view, however does not significantly alter the existing impact.	 <p>Image showing massing of the Approved Concept Plan Amendment (Mod 8)</p>	 <p>Image showing massing of the Proposed Concept Plan Amendment (Mod 10)</p>

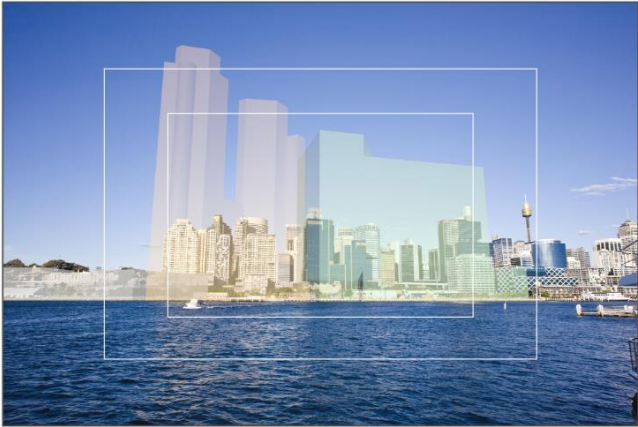
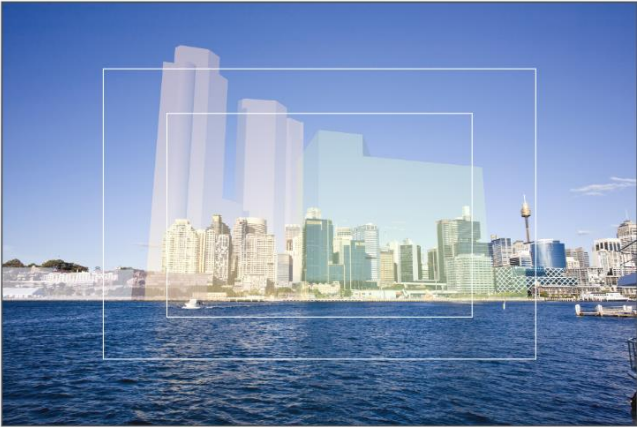
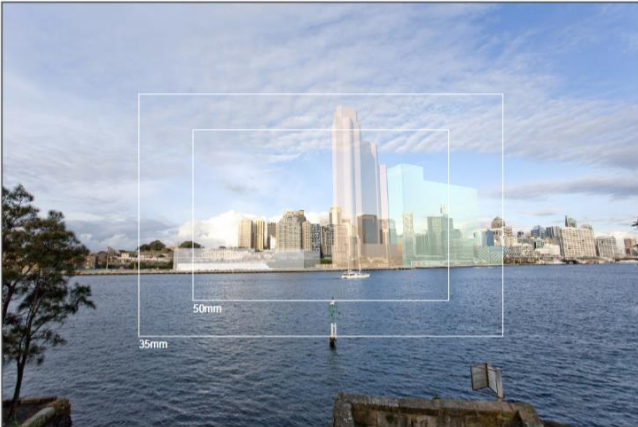
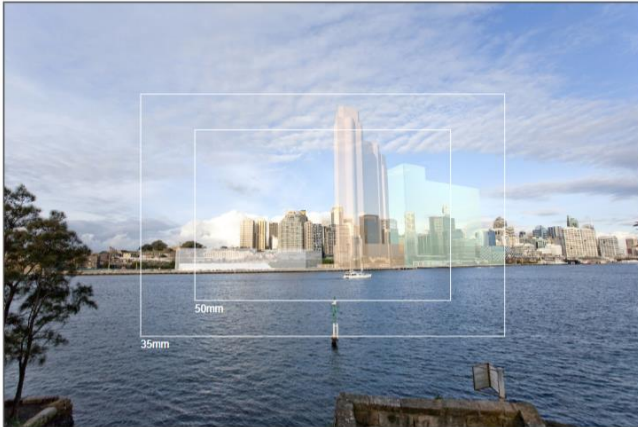
Note: The Harbour Control Tower has been demolished since the original photos were taken.

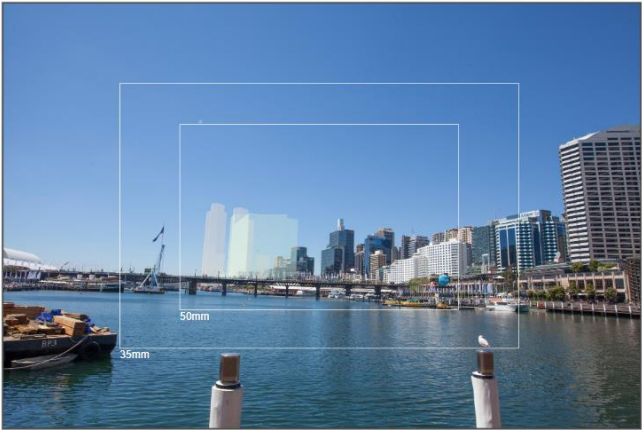
9	Munn Reserve	Medium	Additional height encroaches on sky view, however does not significantly alter the existing impact.		
10	Sydney Harbour Bridge	Medium	Additional height encroaches on sky view, however does not significantly alter the existing impact.		



11	Darling Harbour (Pyrmont Bridge)	Medium	No change.	 <p>Image showing massing of the Approved Concept Plan Amendment (Mod 8)</p>	 <p>Image showing massing of the Proposed Concept Plan Amendment (Mod 10)</p>
12	Ballaraat Park	Medium	Additional height encroaches on sky view, however is integrated into the skyline.	 <p>Image showing massing of the Approved Concept Plan Amendment (Mod 8)</p>	 <p>Image showing massing of the Proposed Concept Plan Amendment (Mod 10)</p>

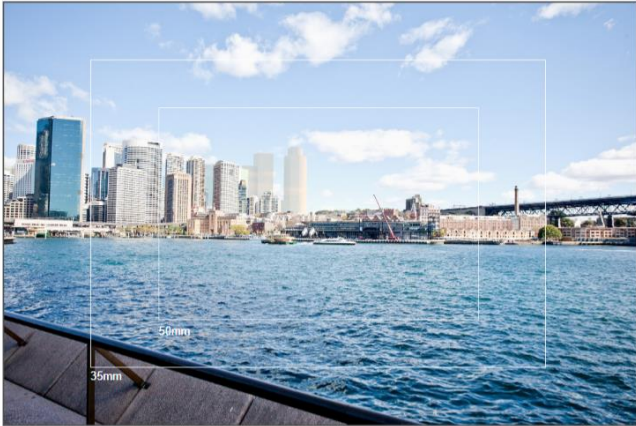
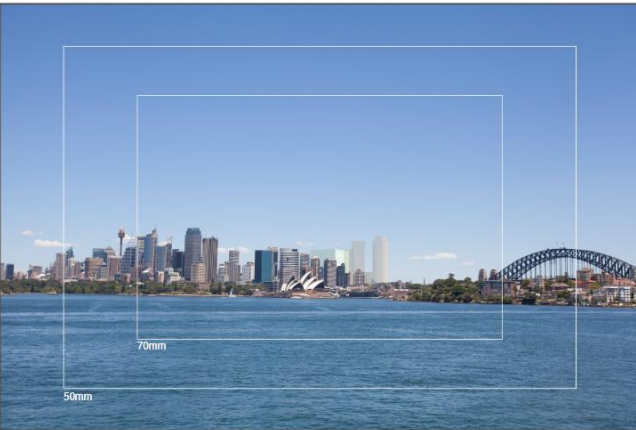






13	Pymont Park Pier	Medium	Additional height encroaches on sky view, however is integrated into the skyline.		
14	Balmain East	Medium	Additional height encroaches on sky view, however is largely concealed by Building R4A in the foreground.		

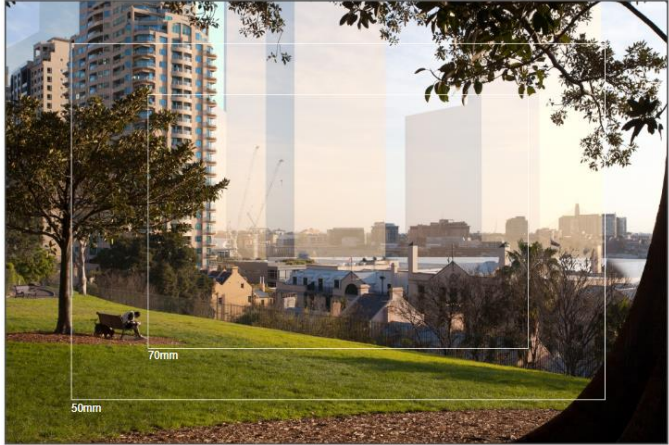
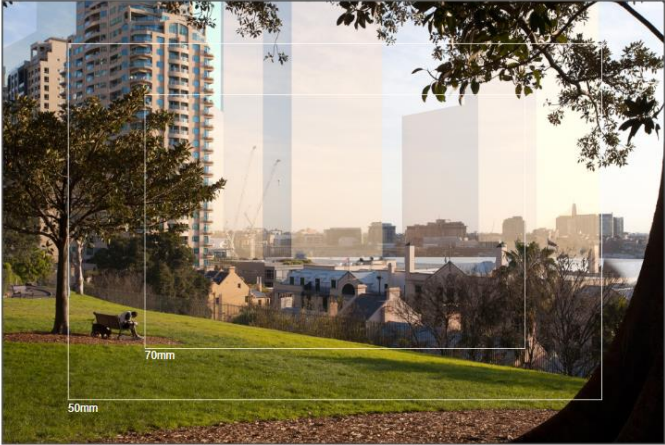
15	Darling Harbour	Medium -High	Additional height protrudes above the International Towers Sydney, however does not block any significant sky view due to the taller Building R4A behind.		
16	Blues Point	Medium	Additional height encroaches on sky view, however the impact is negligible due to the distance and integration with the skyline.		

Note: The Harbour Control Tower has been demolished since the original photos were taken.



17	Opera House Western Forecourt	Medium	Additional height encroaches on sky view, however is integrated into the skyline of existing high rise buildings.		
18	Cremorne Point	Medium	Additional height encroaches on sky view, however the impact is negligible due to the distance and integration with the skyline.		

19	Gladesville Bridge	Low	Additional height encroaches on sky view, however is largely concealed by Building R4A in the foreground and is not readily perceptible due to the distance.		
20	Watsons Bay	Low	Additional height encroaches on sky view, however the impact is negligible due to the distance and integration with the skyline.		

21	Sydney Observatory	Medium	No change.	 <p>Image showing massing of the Approved Concept Plan Amendment (Mod 8)</p>	 <p>Image showing massing of the Proposed Concept Plan Amendment (Mod 10)</p>
----	--------------------	--------	------------	--	--



## 8.6 Private View Loss

Consistent with other Modifications, a revised View Analysis of the proposed Modification's impact on the existing residential units on Kent Street including the properties of Highgate, Georgia, Stamford Marque and Stamford on Kent has been undertaken (see **Appendix I**).

The view analysis adopts the methodology utilised and accepted as part of Modification 4, where the private view impact analysis measured that a reasonable level of uninterrupted views could be achieved where there was an angle of 54 degrees or greater. This uninterrupted 54 degree viewing angle has therefore continued to be utilised through subsequent modifications to the Concept Plan.

The Concept Plan has always sought to arrange the built form to achieve the principle of view sharing, which aims to promote equitable access to views towards the harbour, arranging the built form to define street corridors and to allow view corridors from the existing private buildings to the east. The proposed modification has no impact on the view corridors that have been established from the private buildings on Kent Street through to the harbour, with private view loss primarily limited to the sky. In this context, the loss of views to the sky are not considered to be of the same value as maintaining significant views to the harbour or view corridors through the site.

In their assessment and determination of Mod 8, the Planning Assessment Commission (PAC) concluded:

*The Department acknowledges the potential for view loss from four nearby residential blocks including Highgate; Georgia; Stamford Marque and Stamford on Kent. The Commission is satisfied with the Department's visual assessment of the Proponent's implications on visual impacts concluded, 'that the results are largely unchanged from MOD 4 and the proposed modification application continues to promote view sharing'. The Commission acknowledges that view loss would occur as a result of the Barangaroo development, however, accepts the Department's assessment that the proposed view loss under MOD 8 is not significantly greater than what was previously approved.*

The proposed modifications to the Building R4B envelope remain within the approved lateral building envelope and only seeks to increase the height of the building. This results in minimal additional impacts to private views from those already approved, as demonstrated in the View Analysis and described below,

As the existing residences on Kent Street sit below RL 210, the increase in building height above that RL only impacts on views of the sky from those dwellings and has no impact on views to water or other significant features. The additional GFA for Building R5 can be accommodated entirely within the approved Building Envelope Plan, and therefore will not result in additional view loss above the approved Concept Plan.

Overall, the results show that the oblique views from the Kent Street residential buildings are not impacted by the proposed modifications. There is a minor loss of sky view for the Highgate, Georgia and Stamford Marque on Level 25, however an uninterrupted oblique view range of 54 degrees is maintained for all oblique viewing angles across all viewpoints.

In light of the above, the proposed modification continues to achieve a reasonable balance between the protection of private views in the delivery of a new urban precinct on the foreshore of Sydney Harbour. As there is no change to the siting of the buildings, the modification maintains an uninterrupted viewing angle of 54 degrees or more for all identified residences as established in the approved Concept Plan.

## 8.7 Wind

A Wind Assessment has been prepared by Windtech (refer to **Appendix J**) and considers the potential impacts of the additional height and GFA on the pedestrian wind environment. Based on previous assessment, that included detailed wind tunnel testing for the One Sydney Harbour development, the proposed increase in height is not expected to result in any significant impacts on the wind conditions for the previously tested trafficable areas in the public domain at ground level or on the podium of Building R4A, Building R4B or Building R5. In addition to this, the additional floorspace to Block 4B for Building R5 will not result in any significant impact on the wind conditions for the previously tested trafficable areas at the ground level or within trafficable elevated areas. The results of previous wind assessments and mitigation measures remain applicable, such as the wind mitigation measures included in the approved public domain and One Sydney Harbour building consents.



## 8.8 Transport Management and Accessibility

A Supplementary Transport Management and Accessibility Plan (TMAP) has been prepared by JMT Consulting (refer to **Appendix K**) and addresses traffic and parking impacts as a result of the additional residential floorspace proposed. The Supplementary TMAP continues to be underpinned by the TMAP prepared by the NSW Government in 2008, which outlined rates for calculating population, parking and trip generation.

### Traffic Generation and Road Network Impacts

The proposed increase in residential floor space would result in a small increase in traffic generation, as follows:

- AM peak hour: 11 additional trips.
- PM peak hour: 9 additional trips.

However, the updated traffic generation results show that there will be an overall reduction in trips compared to Modification 8 as a result of:

- Greater certainty about bus trips on Hickson Road as a result of updated route operations, which are less than the number assumed as part of the Modification 8 assessment.
- Updated RMS traffic generation rate guidelines, as well as RMS traffic surveys undertaken at a residential building in St Leonards adjacent to a transport interchange.

Overall, expected traffic generation is as follows:

- AM peak hour: 214 trips, which is 86 less than Modification 8.
- PM peak hour: 162 trips, which is 55 less than Modification 8.

As a result, the road network will operate at an improved level when compared to that previously assessed as part of Modification 8.

### Parking

The modification does not propose any changes to the approved car parking rates and would allow for approximately 80 – 100 car parking spaces. The car parking rates approved under the Concept Plan are maximum rates, and the allocation of car parking spaces within the Stage 1B Basement would be subject to separate approval under the respective detailed SSD applications.

### Public Transport

Public transport services considered as part of Modification 8 remain unchanged and capable of servicing the additional residential demand, with the exception of the introduction of a Sydney Metro station. The station at Barangaroo will provide a station entry within 400 metres of the residential development, and will provide residents with high capacity public transport services to connect to Sydney Metro North, City and Southwest. At full capacity, Sydney Metro services are expected to operate every two minutes in each direction under the Sydney CBD, providing for a capacity of more than 40,000 passengers per hour. It will provide future residents of Barangaroo a connection to key employment centres such as Central Station, North Sydney, St Leonards and Macquarie Park.

Passenger demand forecasts prepared by Transport for NSW indicates that the Barangaroo metro station will act as a 'destination station' on the Sydney Metro network – with 900 customers entering the station and around 6,525 customers exiting station during the morning peak hour in 2036. Therefore the additional public transport trips associated with the 8,000sqm increase in residential GFA proposed under Mod 10 of the Barangaroo Concept Plan could be accommodated at this station, given residents will be travelling in the 'counter-peak' direction. The Metro station is expected to open in 2024 and will be capable of supporting high density residential development.

## 8.9 Prescribed Airspace for Sydney Airport

An assessment of the proposal's potential impact on the prescribed airspace for Sydney Airport has been undertaken by AvLaw and a report detailing this assessment and findings is provided at **Appendix L**. AvLaw has identified the Sydney Airport prescribed airspace, the requirements for airspace envelopes and the relevant flight procedures. An assessment of the proposed modifications has then been carried out in light of these requirements

and procedures and finds that the proposed additional height will not result in any adverse impacts on airspace operations.

The increased height to the Building Envelope Plan for Building R4B will result in a further penetration of the Obstacle Limitation Surface and PANS-OPS and require further approval through the Commonwealth Department of Infrastructure, Transport, Cities and Regional Development. Given that the additional height for Building R4B will be of a similar height as that of Building R4A, and will be shielded by the approved Crown Hotel Resort, there is no foreseen issue with obtaining aviation approval for Building R4B (as proposed to be modified).

Building R5 is not considered an obstacle from an aeronautical perspective as its height is below that which the prescribed airspace commences.

## 8.10 Sydney Observatory Impacts

The University of New South Wales Unisearch has undertaken an analysis of potential sky view loss resulting from Concept Plan (Mod 10) and the potential impact on the functioning of the Sydney Observatory astronomical sightlines (refer to **Appendix M**). This analysis identifies the astronomical sightlines and functions of Sydney Observatory, and then provides an assessment of the Concept Plan (Mod 10) built form and the potential impact on these sightlines.

Concept Plan (Mod 8) resulted in the Building R4A, Building R4B and the Crown Hotel Resort building envelopes blocking a number of constellations visible from Sydney Observatory for a portion of the year. As part of Concept Plan (Mod 8), the PAC and Department of Planning and Environment found that:

*The Department undertook an assessment of the potential impact to the Observatory's operations and concluded that "the obstruction of a number of constellation viewable from Sydney Observatory for a portion of the year is acceptable". The Department accepted the Proponent's argument that the Sydney Observatory had shifted in its primary purpose from being a scientific centre to being one for recreation and education. The Commission supports the Department's recommended condition which requires a Lighting and Light Spill Strategy for any future application to ensure light spill is contained in the most efficient manner.*

A further assessment has been undertaken by UNSW Unisearch to understand the impact of increasing the height for the Building Envelope Plan for Building R4B in terms of the conclusions established in the Mod 8 analysis, the assessment concludes that:

- Three of the sky objects of interest are affected by the additional height of Building R4B in that the overall potential observation time is reduced from approximately mid-August until the beginning of October. However, the seeing conditions for the part of the sky immediately above Building R4B will generally be poor due to the low altitude of the Sydney Observatory, light pollution from nearby bright sources such as the Harbour Bridge and the effects of smog and humidity. As a result, observing conditions are not ideal and the image quality would be poor on most nights.
- From August until early October the viewing opportunity from the Observatory is reduced, however Unisearch reports that on most nights the objects of interest are only obscured for part of an observing session. As such the viewing schedule could be appropriately rearranged to avoid this time period.

With respect to the proposed GFA adjustment for Block 4B for Building R5, this would not have any impact on the Sydney Observatory.

## 8.11 Public Benefits

The proposed amendments to the Concept Plan will deliver the following specific public benefits:

- Provision of additional housing in a location that is identified as strategically important and is in close proximity to the new Sydney Metro infrastructure, which will provide increased connectivity and is consistent with strategic priorities set out in the *Greater Sydney Region Plan*, *Eastern City District Plan* and *State Infrastructure Strategy*.
- Provision of additional housing in a location with exceptional place-based amenity that is supported by the infrastructure that has, and is being delivered at Barangaroo, including:

- Public open space: access to some of Sydney’s best public open space including Barangaroo Reserve and the Wulugul Walk waterfront, as well as the future Hickson Park, Waterman’s Cove and Public Pier.
- Community and retail uses: daily needs are met by the provision of world class food and dining, shops, child care, medical and allied health services as well as recreation facilities.
- Public and active transport: one of the best serviced areas of Australia for public transport, the site has the Barangaroo Ferry Wharves, a future Sydney Metro station, and buses on Hickson Road, as well as access to Wynyard Station which includes access to heavy rail, buses and light rail all easily accessible via Wynyard Walk.
- Employment opportunities: residents have unparalleled access to Central Sydney, Australia’s largest commercial centre and concentration of employment opportunities.
- Green infrastructure: Barangaroo is Australia’s first carbon neutral urban precinct, and also one of the most sustainable precincts in the world. It is supported by innovative ESD measures, including centralised water cooling, embedded electricity networks, recycled water treatment plants and on-site renewable energy generation.
- Due to the increase in residential GFA, the provision of Key Worker Housing will also proportionally increase in accordance with the percentage required by Condition B11 of the Concept Plan.
- Opportunity to further increase the living amenity of the apartments within Building R5, through the GFA adjustment to Block 4B which allows for larger apartments.

The proposed modification will also continue to facilitate the broader public benefits of the overall Barangaroo development. A selection of these benefits include:

- Regeneration of a derelict and inaccessible waterfront into a vital and vibrant mixed use precinct, open to the public 24 hours a day.
- Provision of public domain on the Barangaroo South site as works in kind, including new bridge pedestrian connections over Hickson Road and the creation of Waterman’s Cove.
- Continued commitment by Infrastructure NSW and the Barangaroo South developer, to deliver high quality public art and activations as detailed in the Barangaroo Public Art & Cultural Plan.
- Amelioration of the under capacity drainage network and flooding issues in the northern part of the City through construction of major trunk drainage in Hickson Road (complete).
- Upgrade of Hickson Road to address flooding issues, create improved public-private interfaces on both sides of the street, and to improve landscape and public amenity. The works will also include additional bicycle parking, car parking and space for taxis.
- Contributions of 1% of the cost of development are paid by the developer.
- The Concept Plan provides for a minimum of 12,000sqm of Community Uses spread throughout the entire Barangaroo area with at least 3,000sqm in Barangaroo South (complete).
- Significant employment opportunities have been created both during and post construction. In particular, development of the site by Lendlease has involved the creation of the Barangaroo Skills Exchange (BSX), which is a joint initiative of Lendlease and the Western Sydney Institute of TAFE.

Development being delivered within Barangaroo South has been referenced extensively by State and Commonwealth Government Agencies in generating increased local and international investment in NSW and Australia and is specifically identified in the State Government’s Plan for Growing Sydney as having a significant role in achieving the strategic direction to make the Sydney CBD internationally competitive.

## 8.12 Social Impacts

The Barangaroo development will continue to provide a quality living and working environment accommodating a range of facilities benefiting the social, health, cultural and recreational needs of the existing and future communities.

A number of social considerations were addressed as part of the original assessment of the Concept Plan and subsequent modification applications, including identifying the following positive social impacts:

- More housing close to employment and infrastructure with high amenity.
- Greater activation of Barangaroo outside of business hours.
- Increased provision of Key Worker Housing.

These positive social impacts continue to be relevant to the proposed modification, and the outcomes of these assessments are largely unchanged for this modification. The proposed modification will maintain the mix of housing types and tenures provided in Barangaroo South. The modification will continue to provide benefits through the inclusion of Key Worker Housing, including:

- Social equity and inclusion.
- Social mix and diversity.
- Housing the global city workforce.
- International best practice in medium and high density housing design.

Consistent with the state and local strategic planning strategy for the Eastern District and Sydney LGA, the proposed modification will enable the delivery of increased residential dwellings close to public transport, employment opportunities and high quality public open space, which is expected to create further positive social impacts. In addition to this, the increased residential GFA will also result in the provision of additional KWH dwellings, to assist in providing affordable housing close to the CBD.

### 8.13 Economic Impacts

Barangaroo has established itself as a world-class financial district that has set the benchmark for large scale, carbon neutral precincts. The employment opportunities are supported by a mix of uses, including residential apartments offering a high level of amenity, retail, services, community facilities and public open space.

Barangaroo South will continue to generate significant economic and employment opportunities during and post-construction, and will provide significant new commercial, residential, tourist, and retail floor space in the western part of the CBD. The overall development generates significant economic and employment opportunities, delivering on the strategic priorities for the Harbour CBD.

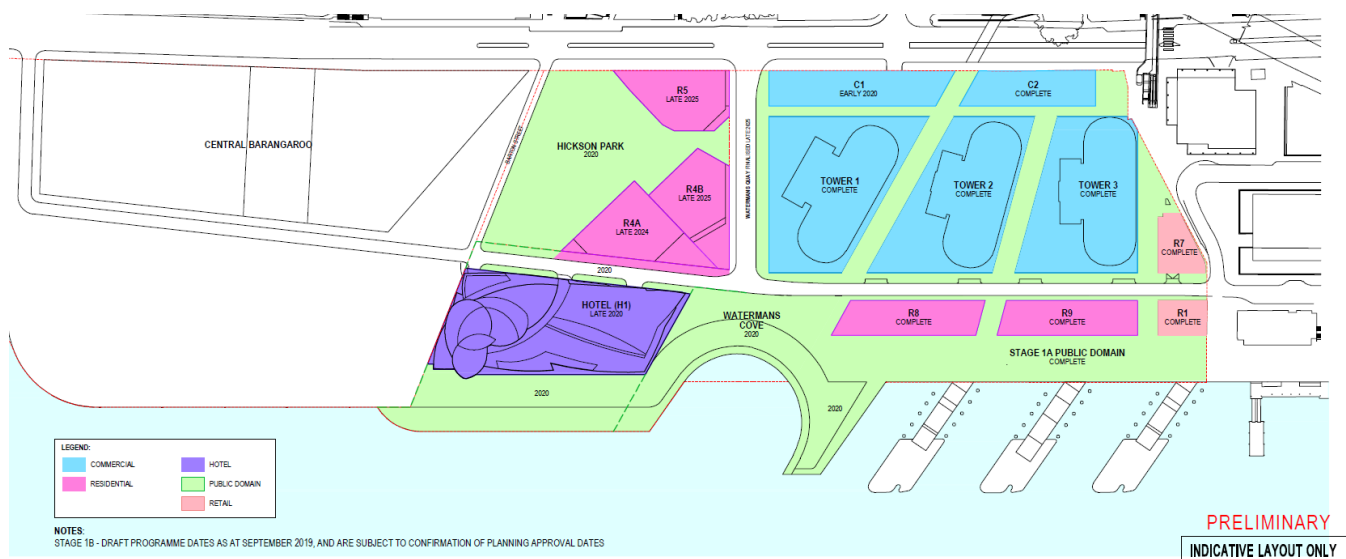
The increased residential GFA proposed will result in a positive economic impact to Sydney and NSW by leveraging from existing infrastructure within and in proximity to Barangaroo and co-locating homes close to jobs and public transport options, which will contribute to achieving the targets set out in the Greater Sydney Regional Plan and Eastern District Plan. In particular, the additional residential GFA will support the growth of the Harbour CBD Innovation Corridor by providing additional floorspace for housing to accommodate workers.

### 8.14 Indicative Staging

The general staging arrangement for completion of development within Barangaroo South is as follows:

- Building C1 (Daramu House): early 2020.
- Crown Hotel Resort: late 2020.
- Barangaroo South Public Domain (Hickson Park, Watermans Quay, Barangaroo Avenue, Wulugul Walk, Watermans Cove and the Public Pier): 2020.
- Building R4A: late 2024.
- Building R4B: late 2025.
- Building R5: late 2025.

The above timeframe is illustrated in the indicative staging plan at **Figure 7**. This strategy is indicative and subject to further refinement during the detailed design of each stage.



**Figure 7** Indicative staging plan for Barangaroo South and associated public domain. Refer to Appendix R for clarity.

Source: Lendlease

## 8.15 Sustainability

The proposed modification is capable of achieving the ESD targets and sustainability strategy already established for Barangaroo South as detailed in the Sustainability Report at **Appendix Q**. The Barangaroo South project will continue to meet its aims to deliver a sustainable and climate positive precinct, with low operational energy consumption, reduced potable water use, minimisation of waste to landfill and appropriate materials selection while at the same time maintaining a high level of indoor environmental quality through appropriate mechanical design, façade configuration and materials selection.

The Barangaroo South precinct has adopted and will continue to develop sustainability initiatives such as the district cooling plant, on-site renewables strategy and precinct recycled water plant. These initiatives are essential to ensure the precinct achieves the many sustainability and climate positive targets set such as:

- Minimising operational energy consumption to ensure a viable carbon neutral precinct.
- Having the capacity to export more water than imported potable water to ensure a positive water impact.
- Zero waste aspiration including significant diversions of construction and operational waste from landfill.
- 20% reduction in embodied carbon (cradle to gate) not including tenant fit outs.
- On site renewables generating an amount of electricity equal to the public realm and recycled water treatment plant electricity use.
- Green Star Design and As-Built ratings for all eligible buildings within the precinct.

The proposed modification will address the sustainability commitments included in the Statement of Commitments of the approved Concept Plan. There is no alteration proposed to the sustainability targets or commitments approved previously under Mod 4, Mod 6, Mod 7 and Mod 8.

The Concept Plan Mod 10 application will increase the GFA for the precinct, however the following targeted commitments remain:

- 6 Star Green Star Design & As Built for all eligible Commercial buildings.
- 5 Star Green Star Design & As Built for all eligible Residential buildings.
- 5 Star NABERS Base Building Energy for all eligible Commercial buildings when modelled with a standard tenant profile.

- A precinct capable of being Water Positive.
- On site renewables generating an amount of energy equal to the public realm and recycled water treatment plant energy use.

The proposed modification to the Concept Plan will not impact the sustainability aspirations set for the Barangaroo South precinct. The precinct wide sustainability initiatives such as the district cooling plant, on-site renewables strategy and precinct recycled water plant are supported within this modification. These initiatives are essential to ensure the precinct achieves the many sustainability objectives.

### 8.16 Infrastructure, Utilities and Services

Comprehensive infrastructure management is provided for Barangaroo South, including measures that support the sustainability initiatives as discussed above under 8.15. The existing and planned infrastructure, utilities and services connections are capable to service the precinct as proposed to be modified. The utility servicing strategy developed for Modification 8 therefore remains adequate for the proposed Modification. Refer to **Appendix N** for further details.

As noted above under 8.15 the sustainability commitments provided for Barangaroo South, are also supported by the infrastructure initiatives and will remain under the proposed Modification.

### 8.17 Other Environmental Impacts

An assessment of the other impacts of the modification have been undertaken by the relevant specialist consultants and are appended to this EAR as set out in **Table 7** below.

**Table 7 Summary of other technical assessments**

Impact	Consultant	Summary	Reference
Stormwater	Cardno	No change is required to the approved stormwater infrastructure, which is currently under construction.	<b>Appendix N</b>
Navigation impact	-	There is no impact as a result of the proposed modification and the assessment undertaken as part of Modification 8 remains unchanged.	N/A
Noise and Vibration	Wilkinson Murray	Noise and vibration impacts will not be intensified during construction and remain capable of complying with the site-specific operational noise criteria.	<b>Appendix O</b>
Air Quality	AECOM	There will be no adverse additional air quality impacts as result of the proposed modification.	<b>Appendix P</b>
Contamination	-	There is no impact as a result of the proposed modification and the assessment undertaken as part of Modification 8 remains unchanged.	N/A
Heritage and Archaeology	-	There is no impact as a result of the proposed modification and the assessment undertaken as part of Modification 8 remains unchanged.	N/A
Marine Ecology	-	There is no impact as a result of the proposed modification and the assessment undertaken as part of Modification 8 remains unchanged.	N/A
Housing Strategy	-	There is no update proposed to the Housing Strategy.	N/A



## 9.0 Conclusion

This section 75W modification application seeks amendments to the approved Concept Plan (MP06\_0162) relating to height and gross floor area of Building R4B in Block 4A, gross floor area of Building R5 in Block 4B and the delivery of KWH.

The proposed modifications predominantly relate to increased height and density for Building R4B and increased density in Building R5 to provide increased housing in a location that will benefit from the future Sydney Metro transport infrastructure.

Having regard for the environmental, strategic, and physical commonalities and differences between the approved Concept Plan and Mod 10, the Minister can be satisfied that the project to which the Concept Plan as modified relates is substantially the same as the project to which the Concept Plan currently relates. Whilst the proposed modification results in a minor quantitative change to the approved GFA, this modification does not significantly alter the essential features of the approved Concept Plan and will remain substantially the same development.

The proposed modification is justified for the following reasons:

- The Concept Plan (as proposed to be modified) will remain consistent with the relevant provisions of the *Greater Sydney Region Plan*, the *Eastern City District Plan*, the *State Infrastructure Strategy*, the draft Sydney Local Strategic Planning Statement and the State Environmental Planning Policies (as amended) applying to the site.
- The provision of additional residential floorspace will benefit from existing employment, transport, public open space, retail and other services, providing a high amenity precinct that will support the growth of the Barangaroo precinct and wider Innovation Corridor on the western edge of the Harbour CBD.
- The proposed built form will further strengthen the key design principles of the Master Plan, allowing for the defining built form characteristics to be maintained and improved.
- Barangaroo South will be a leading sustainable precinct through the implementation of a range of ESD measures targeting energy consumption, water use and minimisation of waste. Utilising the benefits of the sustainability initiatives to support additional residential density is appropriate and will continue to contribute to the sustainability objectives set out in the District Plan.
- The approved SSD 6965 for Building R4B and SSD 6966 for Building R5 demonstrates that the development will achieve a high level of residential amenity, and the proposed modification will provide for an envelope that can support a future amendment to Building R4B and Building R5 that will continue to achieve a good degree of residential amenity in accordance with the objectives of SEPP 65 and the ADG.
- The modification supports a range of social and economic benefits, associated with the increased residential floor space, including a proportionate increase in the provision of Key Worker Housing onsite. The proposal also does not detract from the existing public benefits provided by Barangaroo.

Based on the preceding assessment within this Environmental Assessment Report and the accompanying technical reports, it has been determined that there are limited environmental impacts beyond those originally assessed and determined to be acceptable in the approved Concept Plan. The potential environmental impacts associated with Concept Plan (Mod 10) are manageable and do not require additional mitigation measures.

In light of these planning merits, it is recommended that the Concept Plan modification be approved in accordance with the submitted plans and revised Statement of Commitments (**Appendix S**).

