



Barangaroo Stage 1B Public Domain

*State Significant
Development
Modification Assessment
(SSD 7944 MOD 1)*



October 2019

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Cover photo

Hickson Park Section D-D Plan (Source: Applicant)

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Glossary

Abbreviation	Definition
Applicant	Lend Lease (Millers Point) Pty Ltd
BDA	Barangaroo Delivery Authority
CBD	Central Business District
CIV	Capital Investment Value
Concept Plan	Approved Barangaroo Concept Plan for the redevelopment of the site (MP06_0162)
Consent	Development Consent
Council	City of Sydney Council
CPTMP	Construction Pedestrian Traffic Management Plan
Department	Department of Planning, Industry and Environment
EES	Environment, Energy and Science
EIS	Environmental Impact Statement
EPA	Environment Protection Authority
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
EP&A Regulation	<i>Environmental Planning and Assessment Regulation 2000</i>
EPI	Environmental Planning Instrument
ESD	Ecologically Sustainable Development
GSC	Greater Sydney Commission
INSW	Infrastructure New South Wales
LEP	Local Environmental Plan
LGA	Local Government Area
Minister	Minister for Planning and Public Spaces
RtS	Response to Submissions
SEARs	Secretary's Environmental Assessment Requirements
Secretary	Secretary of the Department of Planning, Industry and Environment
SEPP	State Environmental Planning Policy
SRD SEPP	State Environmental Planning Policy (State and Regional Development) 2011
SSD	State Significant Development
TfNSW (RMS)	Transport for New South Wales (Roads and Maritime Services)



Executive Summary

This report is an assessment of an application seeking to modify the State significant development (SSD) approval (SSD 7944) for the Stage 1B public domain and associated works at Barangaroo South and part of Barangaroo Central.

The application has been lodged by Ethos Urban on behalf of Lend Lease (Millers Point) Pty Ltd (the Applicant) pursuant to section 4.55(2) of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

The modification application seeks approval to make design changes across the public domain including raising the approved ground level of Hickson Park, refining the design of the public pier at Watermans Quay, and various design and aesthetic amendments across the site.

Engagement

The application was publicly exhibited between 20 June 2019 and 3 July 2019. The Department of Planning, Industry and Environment (the Department) received a total of seven submissions, comprising a submission from the City of Sydney Council (Council), five Government agencies and one public submission making comments.

Council initially objected to the proposal, raising concern about the reduced quality of materials and the proposed soil depths for trees.

Comments raised in the public submission include potential noise impacts from out-of-hours works, lighting and bats taking residence in the proposed Fig trees.

On 5 September 2019, the Applicant provided a Response to Submissions (RtS) which included additional information responding to the issues raised in submissions. The RtS was made publicly available on the Department's website and referred to Council. Council advised it was satisfied with the information provided and withdrew its objection, subject to conditions relating to public domain works.

Assessment

The key assessment issues associated with this modification relate to the proposed changes to Hickson Park, Watermans Cove, Watermans Quay, Wulugul Walk and Barangaroo Avenue. The Department has assessed the proposed changes to the public domain and considers the proposal is acceptable as:

- raising the level of Hickson park would allow it to better integrate with the future upgrade of Hickson Road
- the revised design of the public pier would assist in Watermans Cove being utilised for passive recreation and a range of events and activities
- the proposed changes to the pedestrian crossings would maintain pedestrian connectivity throughout the public domain and maintain the slow speed environment proposed for Barangaroo
- changes to the materials would improve the overall design and functionality of the public domain and result in less ongoing maintenance.

Summary

The Department considers the proposal is acceptable as it would improve the design and functionality of the Barangaroo public domain without adversely impacting upon the amenity, quality or safety of the public domain.

The Department considers the proposal is consistent with the Barangaroo Concept Plan, provides an improved design of the Barangaroo public domain and is therefore in the public interest.

The Department recommends the application be approved, subject to conditions.



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1. Introduction

This report is an assessment of an application seeking approval to modify State significant development (SSD) approval (SSD 7944) for public domain and associated works at Barangaroo South and part of Barangaroo Central.

The modification application has been lodged by Lendlease (Millers Point) Pty Ltd (the Applicant) pursuant to section 4.55(2) of the *Environmental Planning and Assessment Act 1979* (EP&A Act). The modification application seeks various design changes to the approved Stage 1B Barangaroo public domain.

1.1 Background

Barangaroo is located on the north-western edge of the Sydney Central Business District (CBD) within the City of Sydney local government area (LGA). Barangaroo has a total area of 22 hectares and has been divided into three distinct redevelopment areas (from north to south), comprising Headland Park (now known as Barangaroo Reserve), Barangaroo Central and Barangaroo South (**Figure 1**).



Figure 1 | The location of Barangaroo South (yellow shading) and Barangaroo Central (blue shading)
(Base source: Nearmaps)

The modification application relates to the Stage 1B public domain at Barangaroo South and Barangaroo Central around Buildings R4A, R4B and R5, the Crown Sydney Hotel Resort and land to the north and west of commercial Building C3 (**Figure 2**). The subject site comprises a total area of approximately 29,500 m². The purpose of the works is to continue and complete the public domain works program which commenced under the Stage 1A public domain proposal (SSD 6303). The approved works include construction of pedestrian lanes, vehicular streets, waterfront promenade, landscaping, lighting, and street furniture. The Stage 1A public domain works are now complete and the waterfront promenade is shown in **Figure 3**.



Figure 2 | The Stage 1B public domain approved under SSD 7944 (Source: Applicant)



Figure 3 | The waterfront promenade approved under SSD 6303 (Source: Applicant)

1.2 Approval History

On 11 September 2018, the Independent Planning Commission (IPC) approved SSD 7944 for the Stage 1B public domain and associated works within Barangaroo South and Barangaroo Central.

The consent approved the construction of public domain areas at Watermans Cove (including a public pier), Hickson Park, Watermans Quay, Wulugul Walk and a section of Barangaroo Avenue.

The consent also included site preparation works, ground treatments and finishes, landscaping, furniture and fixtures, lighting, wayfinding signage, civil and stormwater infrastructure and utility services. The approved development is shown at **Figure 3** and has not previously been modified.



2. Proposed Modification

On 6 June 2019, the Applicant lodged a modification application (SSD 7944 MOD 1) seeking approval, under section 4.55(2) of the EP&A Act, to make design and coordination changes at the site. The proposed modification includes:

Precinct within the Public Domain	Proposed Modification
Hickson Park (Figure 4)	• Raising the approved ground level of Hickson park by a maximum of 400 mm to integrate with future upgrade of Hickson Road • Increase in levels, according to the proposed raised levels of Hickson Road, including shallower entry ramps into the park and removal of associated handrails and tactile warning indicators • Remove a ramp and sandstone wall • Realignment of the main ramp entry into Hickson park from Watermans Quay • Paving material change from flush sandstone at the edges of the turf to the Hickson Road and Barangaroo Avenue pavement to the City of Sydney granite • Stone stairs changed to concrete • Sandstone bollards changed to precast concrete on western edge of park • Deletion of bollards at eastern edge of park • Remove City of Sydney Porphyry paver transitions, as per Condition B23 • Provision of additional temporary trees, as per Condition B29 • Increase shrub planting areas (and a representative reduction of porphyry paving) within the tree belt area in front of the residential towers • Relocation of temporary trees along western edge • Deletion of steps into the park along the interfaces with residential buildings • Minor bollard rearrangement on western edge of park • Minor changes to the upstand geometry of Barangaroo Bench • Minor furniture position adjustment to suit new planting areas • Brass handrails changed to Bronze to match Stage 1A public domain • Power point and water point location updates.
Watermans Cove (Figure 5)	• Adjustment in number of tiers from two to three, with the inclusion of a distinct upper level hard paved area to enable a range of future events and activities • Relocation of the large proposed fig tree in Watermans Cove into the northern raised planter • Change of geometry of Watermans Cove raised planters including removal of the timber backrest and seat, and replaced with concrete • Addition of up lights into circular tree gates • Addition of new light poles • Addition of ramps from upper to lower boardwalk • Stone steps changed to precast concrete

	• Precast concrete paving changed to granite paving as per Condition B22 • Brass handrails changed to Bronze to match Stage 1A • Porphyry paving stopped at the top of the last Southern stair • Minor bollards re-arrangement • Power point and water point locations updated • Remove two Celtis Australis trees at southern end of Watermans Cove.
Watermans Quay (Figure 6)	• Remove timber top for Watermans Quay raised planter seating • Raising of, and deletion of one pedestrian crossing at western end of Watermans Quay and Barangaroo Avenue • Remove porphyry paving to City of Sydney transition as per Condition B23 • Reduction in width of Watermans Quay main pedestrian crossing • Minor bollards re-arrangement.
Wulugul Walk (Figure 7)	• Porphyry paving (at the far North of Wulugul Walk) to interface with Barangaroo Central removed and amended to the same main proposed Wulugul Walk granite paver • Porphyry paving (at the far North of Wulugul Walk) to interface with Barangaroo Stage 1A removed and amended to the same main proposed Wulugul Walk granite paver • Removed drainage grates along the Porphyry band in Wulugul Walk, and drainage of paving and tree pits to match Barangaroo South Stage 1A public domain • Amendments to the sandstone fascia design to the western side of the Spirit of Tasmania Landing • Brass handrails changed to bronze to match Stage 1A public domain • Power point and water point locations updated.
Barangaroo Avenue (Figure 8)	• Additional smart poles along Barangaroo Avenue • Power point and water point locations updated.



Figure 4 | Hickson Park site plan including proposed modifications (Source: Applicant)



Figure 5 | Watermans Cove site plan including proposed modifications (Source: Applicant)



Figure 6 | Watermans Quay site plan including proposed modifications (Source: Applicant)



Figure 7 | Wulugul Walk site plan including proposed modifications (Source: Applicant)



Figure 8 | Barangaroo Avenue site plan including proposed modifications (Source: Applicant)



3. Strategic Context

Greater Sydney Regional Plan

The 'Greater Sydney Regional Plan – A Metropolis of Three Cities' sets out the NSW Government's 40-year vision and establishes a 20-year plan to manage growth for Greater Sydney and includes 10 directions. The Plan's key directions are to provide:

- a city supported by infrastructure – infrastructure supporting new developments
- a collaborative city – working together to grow a Greater Sydney
- a city for people – celebrating diversity and putting people at the heart of planning
- housing the city – giving people housing choices
- a city of great places – designing places for people
- a well-connected city – developing a more accessible and walkable city
- jobs and skills for the city – creating conditions for a stronger economy
- a city in its landscape – valuing green spaces and landscape
- an efficient city – using resources wisely
- a resilient city – adapting to a changing world.

The City of Sydney local government area is located within the Eastern Harbour City. The proposed development supports the directions and objectives of the Plan, in particular by:

- ensuring Greater Sydney is designed for people and is accessible and walkable to all
- ensuring Greater Sydney creates green spaces and landscapes
- ensuring Greater Sydney's harbour central business district is stronger and more competitive
- ensuring Greater Sydney attracts investment and business activity in centres
- ensuring Greater Sydney is a great place that brings people together.

Eastern City District Plan

The Greater Sydney Commission's (GSC) role is to coordinate and align planning to shape the future of Metropolitan Sydney. The GSC has prepared District Plans to inform local council and planning and influence the decisions of State agencies. The aim of the District Plans is to connect local planning with the longer-term metropolitan planning for Greater Sydney.

The Eastern City District Plan covers the City of Sydney LGA. The modification application is consistent with the Eastern City District Plan, in particular by creating and renewing great places, and growing a stronger and more competitive Harbour CBD through the orderly development and use of Barangaroo South and Barangaroo Central.

The Department's assessment of the original application found the proposal was consistent with the strategic planning context for the site. The Department has considered the proposed changes and is satisfied the proposal remains consistent with the strategic planning context for the site.



4. Statutory Context

4.1 Scope of Modifications

A consent authority may modify the consent if it is satisfied the proposed modification application meets the requirements of section 4.55(2) of the *Environmental Planning and Assessment Act 1979* (EP&A Act). An assessment of the proposed modification application against the requirements of section 4.55(2) of the EP&A Act is in **Table 1**.

Table 1 | Consideration of section 4.55(2) of the EP&A Act

Section 4.55(2)	Assessment
That the development to which the consent as modified relates is substantially the same development as the development for which consent was originally granted and before that consent as originally granted was modified.	The proposed modification does not alter the intended use of the site and is consistent with the overall design objectives. Therefore, the Department is satisfied the development is substantially the same development for which consent was originally granted.
That consultation has occurred with the relevant Minister, public authority or approval body and an objection has not been received.	The development does not require consultation with any other Minister, public authority or approval body. Notwithstanding, the Department has consulted the relevant State government authorities and City of Sydney Council in relation to the modification application (refer to Section 5 of this report).
The application has been notified in accordance with the regulations.	The application has been notified in accordance with the <i>Environmental Planning and Assessment Regulation 2000</i> (refer to Section 5 of this report).
Consideration of any submissions made concerning the proposed modification within the period prescribed by the regulations.	The Department has considered the submissions received during the exhibition period (refer to Sections 5 and 6 of this report).
Consideration of section 4.15(1) of the EP&A Act as are of relevance to the development application and the reasons given by the consent authority for the grant of the consent that is sought to be modified.	The Department has assessed the relevant matters for consideration under section 4.15(1) of the EP&A Act. Refer to Section 6 of this report.

The Department is satisfied the proposed modification is within the scope of section 4.55(2) of the EP&A Act and does not constitute a new development application. Accordingly, the Department considers the application should be assessed and determined under section 4.55(2) of the EP&A Act rather than requiring a new development application to be lodged.

4.2 Environmental Planning Instruments

The following Environmental Planning Instruments (EPIs) apply to the site:

- State Environmental Planning Policy (State and Regional Development) 2011
- State Environmental Planning Policy (State Significant Precincts) 2005
- State Environmental Planning Policy (Infrastructure) 2007
- State Environmental Planning Policy No. 55 – Remediation of Land

- Draft State Environmental Planning Policy for the Remediation of Land
- Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005
- State Environmental Planning Policy (Coastal Management) 2018
- Draft Environment State Environmental Planning Policy – Environment
- Other plans and policies:
 - Sydney Harbour Foreshore and Waterways Area DCP 2005.

The Department has assessed the proposed modification against the relevant provisions of these instruments and considers the modification can be carried out in a manner that is consistent with their aims, objectives and provisions. Refer to **Appendix C**.

The Department has also considered the proposal against the Concept Plan and considers it is consistent with its requirements. Detailed consideration of the proposal’s consistency against the Concept Plan is provided in **Appendix D**.

4.3 Consent Authority

The Minister for Planning and Public Spaces is the consent authority for the application under section 4.5(a) of the EP&A Act.

Under Schedule 2 (Barangaroo Site Delegations) of the Minister’s delegation dated 11 October 2017, the Executive Director, Compliance, Industry and Key Sites, may determine the application as:

- a political donation has not been made
- there are less than 25 public submissions in the nature of objections
- the delegate has formed the opinion that the development consent if modified would be generally consistent with the approved Barangaroo Concept Plan current at the time of determination
- the delegate has formed the opinion that any submission made about the application by Council has been considered in the assessment of the application.

4.4 Mandatory Matters for Consideration

The following are relevant mandatory matters for consideration:

- section 4.55(2) of the EP&A Act including relevant environmental planning instruments
- likely impacts of the development, including environmental impacts on both the natural and built environments, and social and economic impacts in the locality, the suitability of the site for the development, any submissions made in accordance with the Act and Regulation and public interest
- mandatory matters in the EP&A Regulation.

The Department has considered all of these matters in its assessment of the project, as well as the Applicant’s consideration of environmental planning instruments in its EIS as summarised in **Section 6** and **Appendix C**. The Department has also given consideration to the relevant provisions of the environmental planning instruments in **Appendix C**.



5. Engagement

5.1 Department's Engagement

In accordance with clause 10 of Schedule 1 of the EP&A Act and clause 118 of the *Environmental Planning and Assessment Regulation 2000* (EP&A Regulation), the Department exhibited the application from 20 June 2019 to 3 July 2019 on the Department's website, at the offices of the Department and at City of Sydney Council's offices.

The modification application was advertised in the Sydney Morning Herald and The Daily Telegraph on 19 June 2019. Previous submitters and surrounding land owners were notified of the modification application and invited to make a submission. The modification application was also referred to Council and relevant Government agencies.

5.2 Summary of Submissions

The Department received a submission from Council (outside the exhibition period), five Government agencies and one public submission making comments. The nature of the submissions is outlined below in **Section 5.3** and **Section 5.4**.

5.3 Key Issues – Government Agencies

The comments provided by each agency are provided in **Table 2** below.

Table 2 | Consideration of agency submissions

Government Agency	Comments
RMS	RMS reviewed the application and provided the following comments: • The proposed development will generate additional pedestrian movements in the area. Pedestrian safety is to be considered in the vicinity. • All proposed pedestrian crossings associated with the development should be referred to Council for assessment. • A Construction Pedestrian Traffic Management Plan (CPTMP) should be submitted in consultation with the TfNSW Sydney Coordination Office, Roads and Maritime Services and Council prior to the issue of any Construction Certificate.
OEH	OEH reviewed the application and concluded the modification does not contain biodiversity, natural hazards or Aboriginal Cultural Heritage issues that require additional information.
TfNSW	TfNSW advised it had no comments.
EPA	The EPA advised it had no comments.
Department of Defence	The Department of Defence provided a submission to the Department noting the application would not have any impact on the safety or efficiency of Defence facilities or operations and therefore had no concerns.
Sydney Water	Sydney Water advised it had no comments.

5.4 Key Issues – Council/Community

5.4.1 Council Key Issues

Council advised it objected to the proposed modifications and made the following comments:

Park Design Modifications

- Hostile vehicle attack barriers
Council noted the barriers against hostile vehicle attacks presented in April 2018 were a 'sculptural sandstone seating element and vehicle deterrent' using local sandstone. The design was to act as seating, public art and be a playful edge to Hickson Park. Council were originally unsupportive of the change of material to concrete blocks. Council also noted the need for hostile vehicle attack barriers has resulted in a proposed continuous wall, creating the impression the park is private space.
- Raising approved ground level up to 400 mm
Council originally did not support the proposed Hickson Park level changes on the basis of reduced pedestrian permeability and access and consider the temporary wall to Hickson Road impacts view corridors from Hickson Road to Darling Harbour.
- Soil Depths
Council were also concerned the level changes within Hickson Park would result in soil depths over 3000 mm in depth, noting the recommended maximum depth is 1500 mm. Council consider this would not result in aerobic soil and is not good practice.

Material changes throughout the parks and streets

Council requested additional information to justify the replacement of sandstone and timber features with lower quality materials. Council also made the following comments in regard to material changes:

- Timber seating to feature tree planters
Council requests public comfort is considered in relation to the proposed deletion of timber seating and inclusion of a concrete planter edge. Council were originally unsupportive of the deletion of timber seating and backrests around the Fig tree planters.
- Stairs
Council originally did not support the replacement of sandstone stairs with concrete along the Watermans Quay, Wulugul Walk and Boardwalk Park.

Available Soil Volume

Council noted the proposed plans result in 4 out of 25 tree trenches receiving the minimum 1000 mm depth required for trees on a slab.

Council requested the Applicant produce a public domain plan in consultation with Council's Public Domain Unit. Council also requested the Applicant consult with Council's Public Domain Unit to prepare suitable stormwater overland flow path calculations and design.

5.4.2 Community Issues

The Department received one public submission making comments and raised issues about the potential for out-of-hours construction works, low frequency construction noise impacts, light spill from Hickson Park and the proposed Fig Trees attracting a bat population.

5.5 Response to Submissions

Following the exhibition of the modification application, the Department placed copies of all submissions received on its website and requested the Applicant to provide a response to the comments raised in the submissions.

On 5 September 2019, the Applicant provided a Response to Submissions (RtS) on the comments raised during the exhibition of the modification application. In conjunction with the RtS report, the Applicant also provided an updated landscape drawings package and design report.

The Applicant noted minor revisions to the public domain design of Hickson Park were made including the removal of concrete bollards on eastern edge, amended layout of bollards on western edge and changes to the retaining wall height and seat height adjacent to the fig tree in the south-west corner.

The RtS was made publicly available on the Department's website and was referred to Council. Council advised it was satisfied with the RtS information and withdrew its objection subject to conditions relating to public domain works.



6. Assessment

6.1 Section 4.15(1) Matters for consideration

Under section 4.55(2) of the EP&A Act, the consent authority must consider the matters referred to in section 4.15(1) that are of relevance to the development. **Table 3** identifies the matters for consideration under section 4.15 of the EP&A Act that apply to the proposed modification.

Table 3 | Consideration of section 4.15(1) of the EP&A Act

Section 4.15(1) Matters for consideration	Department's assessment
(a)(i) any environmental planning instrument	The proposal complies with the relevant environmental planning instruments identified in Section 4 . Refer to Appendix C .
(a)(ii) any proposed instrument	Not applicable.
(a)(iii) any development control plan	Under clause 11 of the SRD SEPP, Development Control Plans (DCPs) do not apply to SSD. However, consideration has been given to the Sydney Harbour Foreshores and Waterways Area DCP at Appendix C .
(a)(iiia) any planning agreement	Not applicable.
(a)(iv) the regulations	The modification application satisfactorily meets the relevant requirements of the <i>Environmental Planning and Assessment Regulation 2000</i> , including the procedures relating to applications (Part 6), the requirements for notification (Part 6, Division 6) and fees (Part 15, Division 1AA) (refer to Section 5).
(b) the likely impacts of that development including environmental impacts on both the natural and built environments, and social and economic impacts in the locality,	The Department considers that any environmental impacts arising from the development has been assessed in Section 6 and mitigated by existing conditions of consent.
(c) the suitability of the site for the development	The site remains suitable for public domain.
(d) any submissions	The Department has considered the submissions received (refer to Section 5).
(e) the public interest	The Department considers the application to be in the public interest.

The Department has reviewed the modification application, the environmental assessment and conditions of approval for the original application, the submissions received and the Response to Submissions (RtS) and has separately considered each element of the proposal below.

6.2 Hickson Park Levels

Hickson Park/Hickson Road Interface

The modification application proposes to raise the approved ground level of the eastern side of Hickson Park by 400 mm in anticipation of the future upgrade of Hickson Road and to improve the area's stormwater management. The finished level of the footpath adjacent to Hickson Park is expected to increase by approximately 500 mm, and accordingly the levels in Hickson Park have been amended (**Figure 9**).



Figure 9 | The eastern side of Hickson Park with proposed level changes outlined in red (Source: Applicant)

Until Hickson Road is raised, the Applicant is proposing an interim design solution to manage its interface with Hickson Park (**Figure 10**). The interim solution proposes a low, 500 mm sandstone block wall to Hickson Road. The temporary solution will ensure the park will be developed to comply with the required deep soil volumes and be maintained until final road levels are constructed. Once Hickson Road is raised, the interim design solution will be removed, and a permanent design solution will be developed by Infrastructure NSW.

Council originally had concerns about raising Hickson Park behind a wall as it would reduce public permeability with Hickson Road and noted the continuous wall would restrict access for users and create the impression Hickson Park is a private space for residents only.

Council also requested the Applicant produce a Public Domain Plan in consultation with its Public Domain Unit to focus on the footways and interfaces with Hickson Road. The Applicant noted Infrastructure NSW is responsible for the design and construction of Hickson Road (including the footways that adjoin to Hickson Park) and will consult with Council during the planning process.

The Applicant advised the proposed levels at Hickson Park on the eastern edge were nominated by Infrastructure NSW to meet the raised levels of Hickson Road in the future. Consequently, the Applicant considers a temporary wall is required in this location due to the substantial difference between the proposed level of Hickson Park and the current level of Hickson Road. The Applicant notes Hickson Park will still remain

permeable and easy for pedestrians to access, with multiple entries and exits to and from Hickson Road whilst the interim design solution is in place.

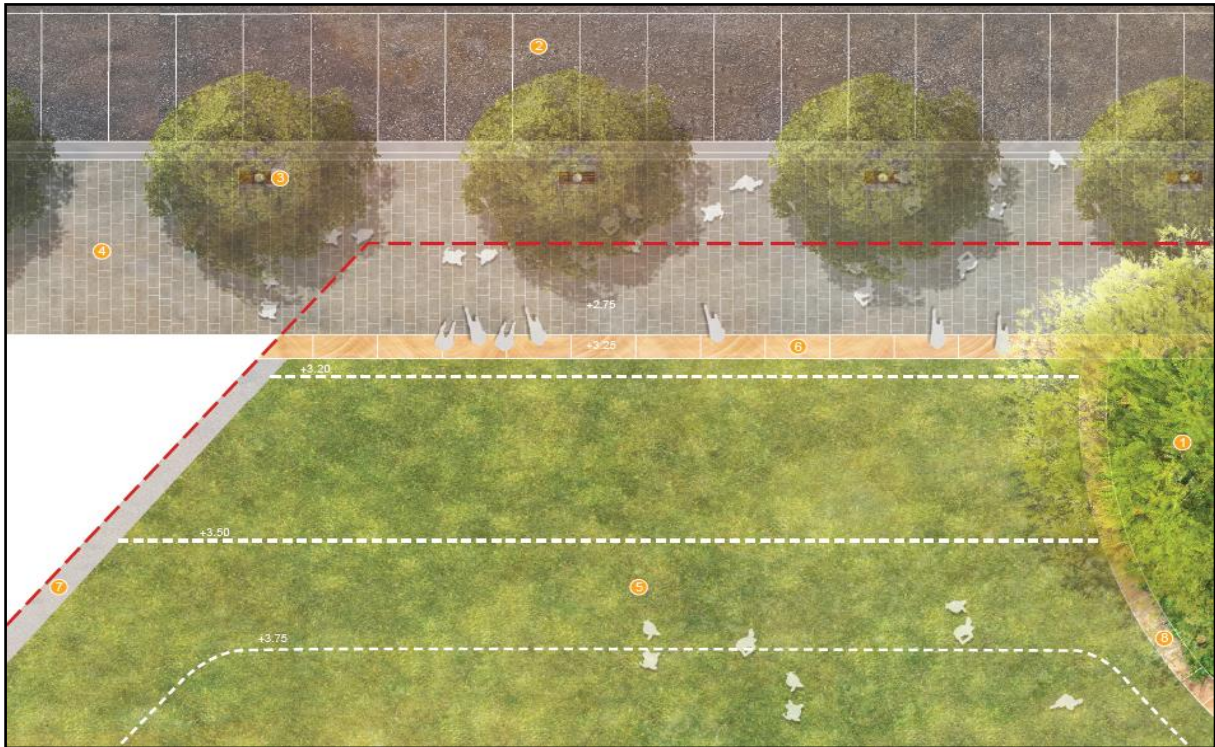


Figure 10 | A site plan of the interim design solution for the interface between Hickson Road and Hickson Park
(Source: Applicant)

The Department considers raising the level of Hickson Park is acceptable as it would allow the park to integrate with the future upgrade of Hickson Road. The Department also notes the raised levels will assist with stormwater management and supports the improved embellishment and enhancement of the public domain by maintaining minimum soil depths.

The Department also considers the interim design solution proposed by the Applicant to manage the interface between the park and Hickson Road is acceptable as it would only be a temporary measure, until the future Hickson Road upgrade is complete. Further, the Department notes while the temporary sandstone wall would restrict pedestrian access from Hickson Road, pedestrians can gain access from multiple other accessways located on the edges of the park. Hickson Park would therefore remain permeable and allow all pedestrians to move freely throughout the site.

The Department also notes Council raised no further concerns regarding this aspect of the proposal following the RtS.

The Department has also recommended a condition allowing the final design of the Hickson Road interface be amended in the event of any inconsistencies, subject to approval by the relevant road authority.

Hickson Park Soil Depth

Council originally raised concerns about increasing the level of the eastern side of Hickson Park as it would result in soil depths over 3000 mm, noting Council's recommended maximum depth is 1500 mm. Council considered this would result in anaerobic soil and is not good practice.

In the RtS, the Applicant noted Condition B3(1)(c) of the Concept Plan Approval (Mod 8) requires a deep soil zone in Hickson Park of at least 3000 mm. The Applicant proposes structural soil will be used to reduce the likelihood of anaerobic soil.

The Department accepts the proposal meets the requirements of Condition B3(1)(c) for a deep soil zone of at least 3000 mm and is satisfied the Applicant has established mitigation measures to reduce the likelihood of anaerobic soil occurring at the site.

The Department also notes Council raised no further concerns about this aspect of the proposal.

Precast Concrete Seats/Bollards

The original modification application sought to change the proposed sandstone bollards on the eastern and western edges of Hickson Park to precast concrete (**Figures 11 & 12**).

Council raised concerns the change of material to precast concrete will have little design finesse and the Applicant had not provided a justification for the reduction in quality of material, from sandstone to precast concrete.

The Applicant noted the change in material was required to better complement the paving (in grey tones) and strip drain, to increase long-term durability, reduce ongoing maintenance and ensure a high-quality appearance is maintained. Council subsequently reviewed the Applicant's RtS and accepted the proposed changes.

The Department considers the change of material to precast concrete to be acceptable due to the long-term benefits for the public domain including improved appearance, less ongoing maintenance and greater durability.



Figure 11 | Proposed precast concrete seats/bollards on western edge of Hickson Park (Source: Applicant)

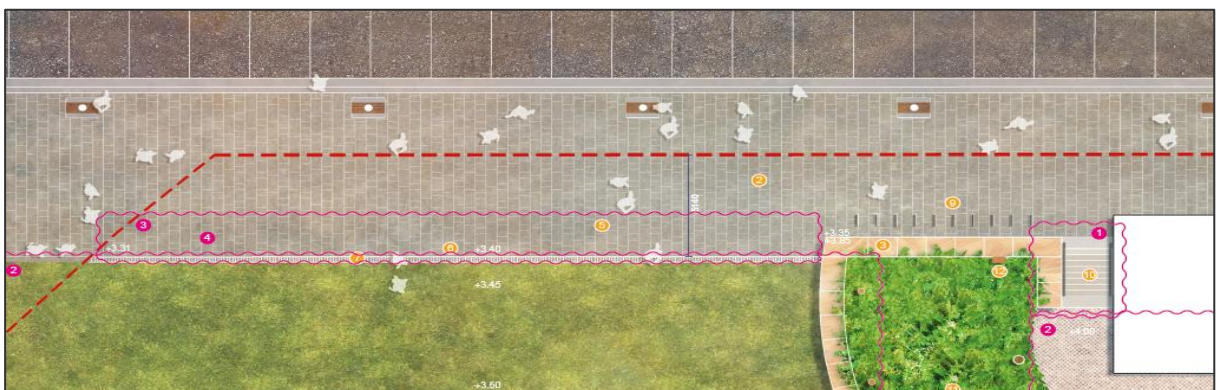


Figure 12 | Deletion of precast concrete seats/bollards on eastern edge of Hickson Park (Source: Applicant)

The Applicant also seeks to increase the spacing between the concrete seats/bollards on the western edge of Hickson Park by at least 1.2m in appropriate places (**Figure 11**). The Applicant notes this change would accommodate prams and wheelchairs and promote pedestrian accessibility into Hickson Park. The Applicant also notes the concrete seats/bollards on the eastern edge will be removed and any permanent seats/bollards will be implemented by Infrastructure NSW during the Hickson Road upgrade (**Figure 12**).

The Department supports the increased spacing as it will improve accessibility into Hickson Park from the west and positively contributes to the overall design of the public domain. Additionally, the Department supports the removal of the concrete seats/bollards from the eastern edge as this design consideration will be addressed in Infrastructure NSW's future Hickson Road upgrades.

Access to Hickson Park

The modification seeks to make changes to the public domain to improve accessibility of Hickson Park for pedestrians. The proposed realignment of the main ramp entry into Hickson Park from Watermans Quay will align the pedestrian thoroughfare with the proposed buildings and improve the visibility of the park entry. As a result of the future level changes for Hickson Road, a shallower entry ramp into the park and removal of handrails and tactile warning indicators are also proposed (**Figure 13**).

The removal of the ramp and sandstone wall along Building R5 and deletion of the minor steps into Hickson Park along interfaces with proposed residential buildings will substantially improve accessibility and permeability (**Figure 13**).

The Department considers the changes to the ramps and deletion of steps to Hickson Park are acceptable as the proposal is minor and would improve accessibility throughout the Barangaroo public domain.



Figure 13 | A site plan of the proposed shallower entry ramp and minor design changes identified as number 4 and removal of ramp and sandstone wall identified as number 5 (Source: Applicant)

Other Design and Aesthetic Changes

The proposed modification seeks to alter design and aesthetic aspects of Hickson Park to support the raising of levels to suit the future Hickson Road upgrade.

The Applicant proposes the stone stairs to access Hickson Park will be changed to precast concrete and the material used for paving at the edges of the turf to Hickson Road and Barangaroo Avenue will be amended from

flush sandstone to Council's granite paving. The modification proposes the removal of Council's paver transitions to meet Condition B23 of the original consent.

Minor vegetation design changes are also proposed in Hickson Park, including a general increase of shrub next to the proposed residential towers, additional temporary trees as per Condition B29, and the relocation of temporary trees on the western edge of the park.

Additionally, minor design changes to complement the level changes in Hickson Park include the upstand geometry of Barangaroo Bench, furniture position adjustment to suit new planting areas, brass handrails changed to bronze and power point and water point location updates are proposed.

The Department notes Council raised no concerns about any of the above design and aesthetic modifications.

The Department considers the proposed changes and increased planting will contribute positively to the design of Hickson Park and will adequately reduce the need for high maintenance and upkeep.

The Department therefore supports the design and aesthetic changes noting they will in part facilitate the raising of levels in Hickson Park to accommodate the future Hickson Road upgrade.

6.3 Watermans Cove

Watermans Cove Public Pier

The public pier at Watermans Cove was approved with two tiers and integrated seating (**Figure 14**). Following a process of design refinement, the Applicant proposes the number of tiers be increased from two to three and the surface material of the upper tier changed from timber to hard paving (stone) (**Figure 15**).

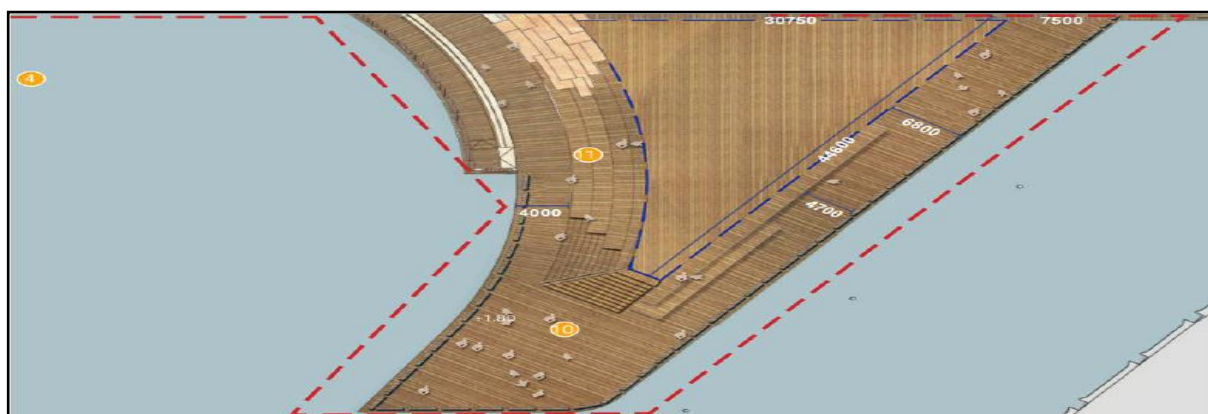


Figure 14 | The approved pier at Watermans Cove (Source: Applicant)

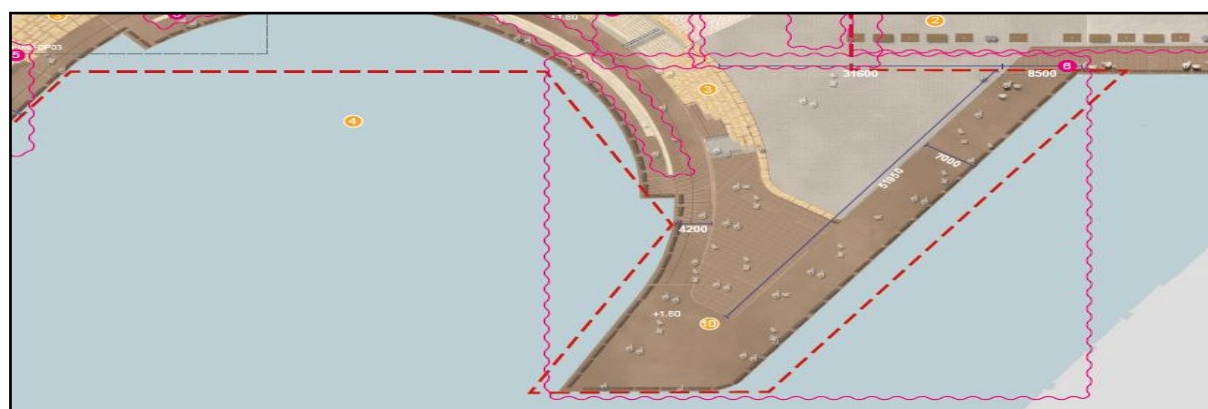


Figure 15 | The proposed pier at Watermans Cove (Source: Applicant)

The amendment to the number of tiers and hard paved upper level will assist with facilitating a range of events and activities in the future. The Applicant notes the overall envelope and extent of the pier over the Harbour is not proposed to change.

Council did not comment on this aspect of the modification application.

The Department notes the footprint of the public pier is not changing and considers the design refinement is minor and will assist in the pier being utilised for passive recreation and a range of events and activities.

Other Design and Aesthetic Changes

The proposed modification seeks to alter design and aesthetic aspects of Watermans Cove to support the refinement to the number of tiers at the public pier.

The Applicant proposes minor material changes in Watermans Cove, including the stone steps changed to precast concrete, minor bollard rearrangement, brass handrails changes to bronze and removal of porphyry paving at the top of the last southern stair to reflect other design features used in the public domain at Barangaroo. The modification also seeks to change the precast concrete paving to granite paving to satisfy Condition B22.

Council originally considered the substitution of sandstone stairs with precast concrete to be a poor outcome for a high-profile public space that will facilitate events and large public use year-round. In the RtS, the Applicant noted the change of the stairs to precast concrete would differentiate the path of travel from the adjacent sandstone bleacher seating, improve wayfinding and address durability and maintenance concerns. Council subsequently raised no issue with these changes.

The Department considers the change of material for the stairs will improve pedestrian access to Watermans Cove year-round.

The Applicant also proposes to change the geometry of the raised planters in Watermans Cove including the removal of the timber backrest and seat, replaced with concrete. Additionally, the modification seeks to relocate the large proposed Fig tree in Watermans Cove into the northern raised planter and also remove two Celtis Australis trees adjacent to Stage 1A public domain.

Further amendments to Watermans Cove area include additional lights into the circular tree grates, new light poles and ramps from the upper to the lower boardwalk and updated water points and power points.

The Department considers the minor changes to the raised planters and additional features will support the adjustment to three tiers at the public pier and improve pedestrian useability of Watermans Cove. The Department supports all the minor changes to Watermans Cove and notes they will improve the overall public domain experience for pedestrians.

6.4 Watermans Quay

Design and Aesthetic Changes

The Applicant proposes design and aesthetic changes to Watermans Quay, including a reduction to the size of the raised pedestrian crossing from 14.3 m to 9.3 m to align with the tree grates on either side of Watermans Quay. This would ensure pedestrian movement is not obstructed by the tree grates and provides a direct connection from the northern entry lobby of International Tower 1.

The Applicant also proposes the deletion of one pedestrian crossing at the western edge of Watermans Quay and Barangaroo Avenue. The Applicant notes this proposed change provides a consolidated design outcome due to the close proximity of the other approved pedestrian crossings.

TfNSW (RMS) noted all proposed pedestrian crossings associated with the development should be referred to Council for assessment. The Applicant responded to TfNSW (RMS) comment in its RtS stating an assessment of all pedestrian crossings was undertaken as part of the original SSD (SSD 7944) and determined to be acceptable. The Applicant notes the public domain design has been referred to Council for comment throughout the process.

The Department considers the change in the size of the raised pedestrian crossing would maintain the slow speed environment proposed for Barangaroo and will improve pedestrian connection throughout the public domain. The Department considers the deletion of the pedestrian crossing is acceptable given its proximity to two other pedestrian crossings on Barangaroo Avenue.

In respect of raising the pedestrian crossing and changing the dimensions, the Department notes Council raised no concerns and therefore recommends a condition requiring the revised design to meet the relevant RMS design specifications and be approved by the relevant road authority.

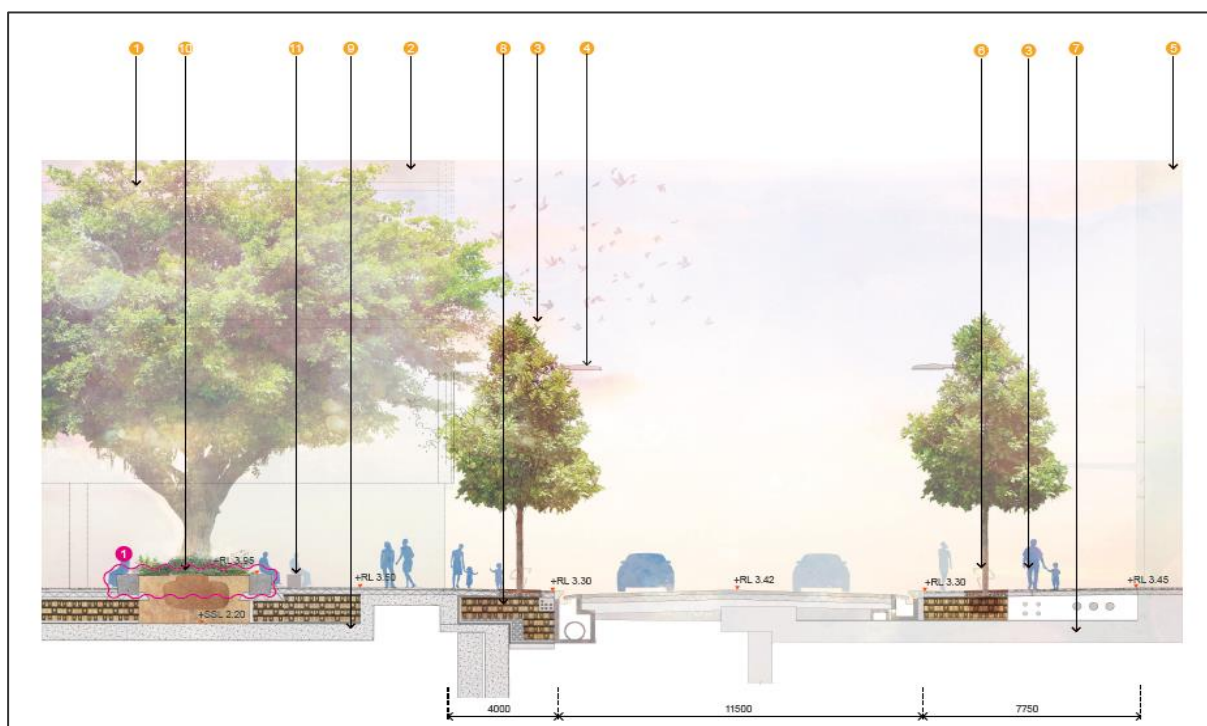


Figure 16 | Proposed removal of timber seating from raised planter in Watermans Quay identified as 1 (Source: Applicant)

The modification also proposes to remove the porphyry paving and replace with the City of Sydney transition paving as per Condition B23 of the consent, minor bollard realignment and removal of timber top from Watermans Quay raised planter seating.

Council was originally concerned with the deletion of timber seating in Watermans Quay, noting the Applicant had not provided an alternative design with comfort in mind and no details of the planter design have been provided.

In the RtS, the Applicant responded to Council's concerns noting the change of timber seating to precast concrete was due to concerns the collection of debris from the canopy of fig trees above would negatively impact the day-to-day aesthetic. Council subsequently reviewed the Applicant's RtS and noted its issues had been addressed.

The Department considers the change of material to precast concrete to be an adequate mitigation strategy to protect the seating from debris and will improve the overall amenity of the public domain at Watermans Quay.

6.5 Wulugul Walk

Design and Aesthetic Changes

The modification seeks to make design and aesthetic changes to Wulugul Walk, including the removal of the porphyry paving that interfaces with Barangaroo Stage 1A and Barangaroo Central, and change to the Wulugul Walk granite paver. The Applicant proposes drainage grates to be removed along the porphyry band in Wulugul Walk and paving and tree pits are to be changed to match Barangaroo South Stage 1A public domain.

The modification also seeks to change the sandstone fascia design to the western side of the Spirit of Tasmania Landing, change the brass handrails to bronze, and update power point and water point locations.

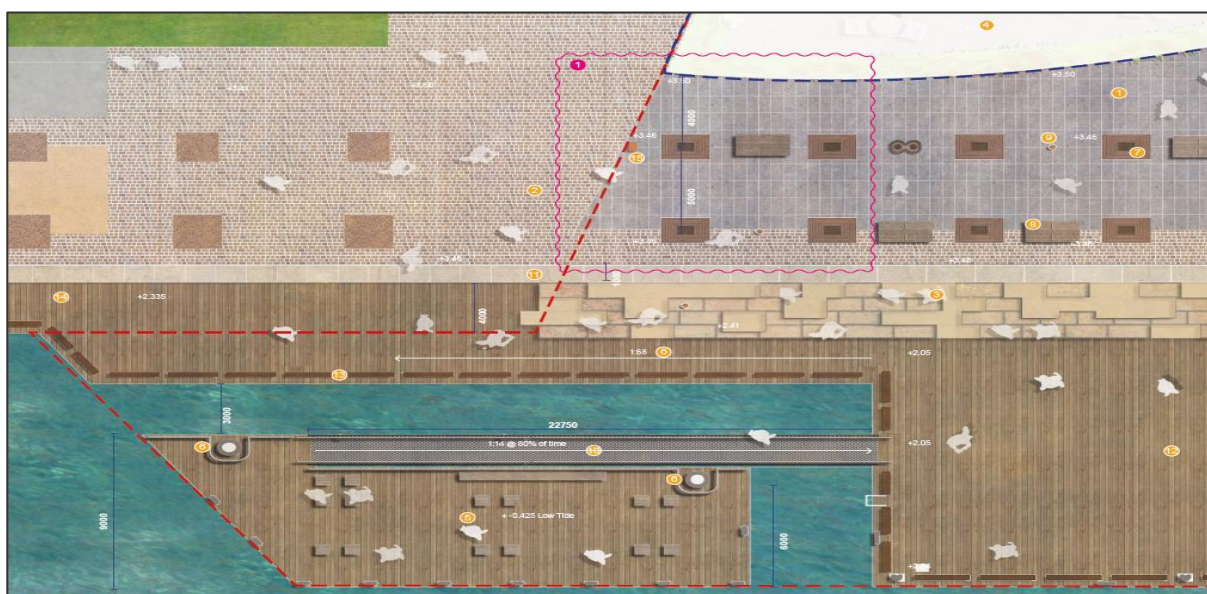


Figure 17 | Proposed removal of porphyry paving on Wulugul Walk identified as number 1 (Source: Applicant)



Figure 18 | Proposed removal of timber top for Spirit of Tasmania loading dock raised planter seating identified as number 1 (Source: Applicant)

The Department considers the modifications to porphyry paving, the sandstone fascia design and change of materials for the handrails located at Wulugul Walk to be minor and will ultimately provide consistency with the Stage 1A public domain. The Department notes the modifications will provide public benefit and improve the overall design and functionality of the site.

6.6 Barangaroo Avenue

The Applicant proposes modifications to the design and aesthetic of Barangaroo Avenue, including the location of additional smart poles and power point and water point locations updated.

The Department considers the modifications to be minor and will improve lighting and services in the public domain on Barangaroo Avenue.

6.7 Other Issues

Issue	Findings	Recommended Condition
Public Domain Conditions requested by Council	- Council requested a number of conditions be imposed relating to the Barangaroo public domain. - The Applicant has requested the conditions not be adopted as they were not imposed on the original consent. - The Department has undertaken a detailed assessment of the proposed conditions in Appendix B. - The Department is satisfied the conditions are already addressed by the original consent (SSD 7944) and/or are not relevant to the modification or are not required as the public domain will be owned and maintained by INSW.	No additional conditions or amendments are necessary.
Pedestrian Safety	- RMS noted the proposed development will generate additional pedestrian movements in the area and recommended a Construction Pedestrian Traffic Management Plan (CPTMP) be submitted in consultation with TfNSW Sydney Coordination Office (SCO), Roads and Maritime and Council, prior to issuing a Construction Certificate. - The Applicant notes the modifications to the public domain are not anticipated to generate additional pedestrian movements or give rise to pedestrian safety issues. - The Department agrees the proposal would not generate any significant increase in pedestrian movement as the public domain works are minor. - The Department also considers the development of a CPTMP will adequately manage any additional pedestrian movements associated with the modification. - The Department notes the CPTMP requested by RMS is already addressed in Condition C8 in the consent.	No additional conditions or amendments are necessary.
Available Soil Volume for Trees	- Council raised concerns that only 4 out of the proposed 25 tree trenches achieve the minimum 1000 mm depth required for trees on slab, many are only 750 mm in depth and some as little as 500 mm. - The Applicant notes the modification does not seek to amend any of the tree trenches as approved under SSD 7944 but acknowledged there was two errors in the drawings. Consequently, the diagram has been updated in the design report and demonstrates the correct and approved depths. - Additionally, the Applicant notes the reference to 500 mm depth in the drawing titled 'Available Soil Volume' refers to an overall depth of 1400 mm as it comprises both the depth beneath the concrete slab and	No additional conditions or amendments are necessary.

	- the raised planter. - The Department is satisfied the proposed modification does not seek to alter any of the originally approved tree trenches and the Applicant has rectified the errors in the drawings titled 'Available Soil Volume' in the design report	
Visual Impact and Views	- Modification B3(1)(b) of the Concept Plan requires that Hickson Park is to enable view corridors from Hickson Road to the Harbour. - The Applicant provided montages of three view corridors to the Harbour and notes views are not obstructed. - The Applicant undertook a comparative assessment of views to the Harbour and notes views are still achieved irrespective of the raised ground levels of Hickson Park and the interim design solution for the Hickson Road interface. - The Department agrees the proposed Hickson Park level change and interim design solution will not obstruct the view corridors from Hickson Road to the Harbour. - The Department considers the modification therefore is consistent with Modification B3(1)(b) of the Concept Plan (refer to Appendix D).	No additional conditions or amendments are necessary.
Stormwater Management	- Council requested the Applicant to consult with its Public Domain Unit to prepare suitable stormwater overland flow path calculations and design, drainage systems, on-site detention measures and stormwater quality assessments. - The Applicant noted stormwater modelling for the public domain has been undertaken and is included in the documentation comprising this modification application. - Further to this, the Applicant noted further stormwater modelling will be undertaken with Infrastructure NSW to align with the Hickson Road upgrade. - The Department considers the stormwater assessment undertaken by the Applicant appropriately manages stormwater in the public domain.	No additional conditions or amendments are necessary.
Noise impacts	- A public submission raised concerns about out-of-hours construction works and recommended that all mechanical equipment required to operate overnight is properly attenuated. - The Applicant notes a Noise Management Plan will be implemented for all works including out-of-hours operations. - Further to this, the Applicant notes the development and inclusion of noise reduction barriers, curtains and attenuating devices will minimize associated noise impact. - The Applicant notes notifications to the local community will continue for any noisy works to be undertaken and a community hotline will be established. - The Department notes the modification does not seek to undertake out-of-hours works and Condition C10 of the Consent requires the Applicant to prepare a Noise and Vibration Management Sub-Plan prior to the commencement of works. - The Department considers the Noise Management Plan and the inclusion of noise reduction barriers, curtains and attenuating devices will appropriately mitigate construction noise impacts.	No additional conditions or amendments are necessary.
Light spill	- A public submission raised concern about the proposed lighting for the area, specifically when viewed from an elevated position. - The Applicant notes there is no proposed modification to	No additional conditions or amendments are necessary.

the lighting in this application.

- The Department notes in respect of Barangaroo Avenue lighting, all lighting design is in accordance with Australian standards and is considered acceptable.

Bats

- A public submission raised concern about the number of proposed fig trees and the potential for the trees to encourage bats to take residence.
- The Applicant notes there are no additional fig trees proposed in this modification.
- The Department considers mitigation measures are not necessary as the number of fig trees are not increasing in this modification.

- No additional conditions or amendments are necessary.



7. Evaluation

The Department has reviewed the modification application, RtS, and all additional information, and assessed the merits of the proposal, taking into consideration advice from Council and Government agencies. Issues raised in public submissions have been considered and all environmental issues associated with the proposal have been thoroughly addressed.

The Department has considered all relevant matters under section 4.15 of the EP&A Act, and is satisfied that the development, as proposed to be modified, is substantially the same development as that originally approved.

The proposal would maintain the design integrity of the original proposal and would result in a satisfactory public domain outcome. While Council supports the proposal, it has recommended a number of conditions be imposed on the consent. The Department does not consider these conditions are necessary as they are either not relevant to the modification application or are covered by existing conditions of consent.

The Department has assessed the proposed changes to the public domain and considers the proposal is acceptable as:

- raising the level of Hickson park would allow it to better integrate with the future upgrade of Hickson Road
- the revised design of the public pier would assist in Watermans Cove being utilised for passive recreation and a range of events and activities
- the proposed changes to the pedestrian crossings would maintain pedestrian connectivity throughout the public domain and maintain the slow speed environment proposed for Barangaroo
- changes to the materials would improve the overall design and functionality of the public domain and result in less ongoing maintenance.

Therefore, the Department considers the application is in the public interest and should be approved, subject to the conditions.



8. Recommendation

It is recommended that the Executive Director, Compliance, Industry and Key Sites, as delegate of the Minister for Planning and Public Spaces:

- **considers** the findings and recommendations of this report;
- **determines** that the application SSD 7944 MOD 1 falls within the scope of section 4.55(2) of the EP&A Act;
- **accepts and adopts** all of the findings and recommendations in this report as the reasons for making the decision to grant approval to the application;
- **forms the opinion** that the development consent if modified would be generally consistent with the approved Barangaroo Concept Plan current at the time of determination;
- **forms the opinion** that any submission made about the application by Council has been considered in the assessment of the application;
- **agrees** with the key reasons for approval listed in the draft notice of decision;
- **modify** the consent SSD 7944; and
- **signs** the attached approval of the modification (**Appendix F**).

Recommended by:

Cameron Sargent
Team Leader
Key Sites Assessments

Recommended by:

Anthony Witherdin
Director
Key Sites Assessments



9. Determination

The recommendation is: **Adopted / Not adopted** by:

Sargeant

Anthea Sargeant

Executive Director

Compliance, Industry and Key Sites

11/11/19



Appendices

Appendix A – Documentation

The following supporting documents and supporting information to this assessment report can be found on the Department of Planning and Environment's website as follows:

1. Environmental Impact Statement
<https://www.planningportal.nsw.gov.au/major-projects/project/13816>
2. Submissions
<https://www.planningportal.nsw.gov.au/major-projects/project/13816>
3. Applicant's Response to Submissions
<https://www.planningportal.nsw.gov.au/major-projects/project/13816>

Appendix B – Community views for Draft Notice of Decision

Issue	Consideration
Preservation of Survey Marks (Council issue) Requesting survey plan identifying location of all permanent survey marks	<i>Assessment</i> - The Applicant notes there are no existing permanent marks within the site and no City of Sydney streets in this development. - The Applicant requests the condition is not adopted by the Department. - The Department agrees with the Applicant and considers a condition is not necessary for the preservation of survey marks given there is none within the site. <i>Recommended Conditions/Response</i> - No changes to the conditions are recommended.
Protection of Survey Infrastructure (Council issue) Requesting Applicant submit a statement to verify a survey has been carried out by registered surveyor	<i>Assessment</i> - The Applicant notes the current existing permanent marks are situated on Hickson Road, and external to the proposed works. - The Applicant notes future subdivisions of Barangaroo South Stage 1B will eventually place new permanent marks within the Stage 1B area. - The Applicant requests the condition is not adopted by the Department. - The Department agrees with the Applicant and considers a condition is not necessary for the protection of survey infrastructure as survey marks are located external to the proposed works. <i>Recommended Conditions/Response</i> - No changes to the conditions are recommended.
Public Domain Plan (Council issue) Requesting Applicant prepare a detailed public domain plan	<i>Assessment</i> - The Applicant notes the proposed condition for a public domain plan is not relevant as specific public domain works are covered as individual conditions in the original consent (SSD 7944). These include conditions relating to paving materials, road intersection and footpath design, trees and vegetation and lighting. - The Applicant notes the architectural drawings for the public domain modifications have been prepared by qualified and registered landscape architects Grant Associates. - The Applicant notes the public domain works will be undertaken in accordance with the approved plans as modified in this application. - The Applicant requests the Department does not adopt the condition requested by Council. - The Department agrees with the Applicant and considers a condition is not necessary for a public domain plan as the original consent (SSD 7944) already covers individual public domain works. <i>Recommended Conditions/Response</i> - No changes to the conditions are recommended.
Stormwater and Drainage – Major Development (Council issue) Requesting Applicant prepare a detailed drainage engineering design, calculations and design for the stormwater overland flow path	<i>Assessment</i> - The Applicant considers relevant stormwater and drainage conditions including a water and stormwater management sub-plan and Sydney Water requirements and compliance is addressed in the original consent (SSD 7944). - The Applicant notes the Stormwater Management and Civil Infrastructure Plan prepared by Cardno comprehensively addresses items proposed by Council. - The Applicant notes there is no proposed connection into the Council drainage system. - The Applicant requests the condition is not adopted by the Department.

- The Department notes the water and stormwater management sub-plan will be submitted to EPA and DPI for review and to the Department prior to the commencement of works.
- The Department agrees with the Applicant and considers an additional condition is not necessary for stormwater and drainage management as a condition requiring a water and stormwater management sub-plan and Sydney Water requirements and compliance is imposed in the original consent (SSD 7944).

Recommended Conditions/Response

- No changes to the conditions are recommended.

On-site Detention (Council issue)

- Requesting Applicant prepare detailed design of on-site detention

Assessment

- The Applicant notes no on-site detention basins are proposed for the development.
- The Applicant requests the condition is not adopted by the Department.
- The Department agrees with the Applicant and considers a condition is not necessary for on-site detention as there are no on-site basins proposed for the development.

Recommended Conditions/Response

- No changes to the conditions are recommended.

Stormwater Quality Assessment (Council issue)

- Requesting Applicant undertake stormwater quality assessment

Assessment

- The Applicant notes section 5 of the Stormwater Management and Civil Infrastructure Plan addresses water quality in the Barangaroo public domain and has been updated for the modification.
- The Applicant requests the condition is not adopted by the Department.
- The Department notes a condition requiring a stormwater quality assessment is not required in the original consent (SSD 7944).
- The Department agrees with the Applicant and considers a condition is not necessary for a stormwater quality assessment as the Applicant's Stormwater Management and Civil Infrastructure Plan appropriately addresses stormwater quality.

Recommended Conditions/Response

- No changes to the conditions are recommended.

Completion/ Works-As-Executed Documentation (Council issue)

- Requesting Applicant prepare a Works-As-Executed Survey

Assessment

- The Applicant requests the condition is not adopted by the Department.
- The Department notes a condition requiring a Completion/Works-As-Executed Documentation is not required in the original consent (SSD 7944).
- The Department considers a condition is not necessary for Completion/Works-As-Executed Documentation as the Applicant is not required to submit stormwater and drainage plans to Council and therefore the condition is not relevant.

Recommended Conditions/Response

- No changes to the conditions are recommended.

Public Domain Lighting (Council issue)

- Requesting a Public Domain Lighting Plan be prepared

Assessment

- The Applicant notes the original consent (SSD 7944) already imposes a condition requiring a lighting plan, which was prepared by Speirs & Major.
- The Applicant notes the City of Sydney Smart Poles are specified in the design, and all lighting design is in accordance with Australian standards.
- The Applicant requests the condition is not adopted by the Department.
- The Department agrees and considers an additional condition is not necessary for public domain lighting given a lighting plan is already

required.

Recommended Conditions/Response

- No changes to the conditions are recommended.

Road Network and Geometric Road Design (Council issue)

- Requesting detailed design and construction documentation for proposed public road system submitted

Assessment

- The Applicant notes the original consent (SSD 7944) requires they provide detailed design and construction documentation of all roads, intersections and footpaths.
- The Applicant requests the condition is not adopted by the Department.
- The Department agrees and considers an additional condition is not necessary for road network and geometric road design as it is already addressed in the original consent (SSD 7944) and is required to be approved by the relevant road authority.

Recommended Conditions/Response

- No changes to the conditions are recommended.

Proposed material changes for seats/bollards on eastern and western edge of Hickson Park (Council issue)

- Proposed low concrete blocks have little design finesse
- No justification provided by Applicant for the reduction in quality of materials and design

Assessment

- The Applicant notes the spacing between the concrete seats/bollards on western edge of Hickson Park will be increased to at least 1.2 m in appropriate places.
- The Applicant notes the concrete seats/vehicle deterrent bollards on the eastern edge of Hickson Park will be deleted.
- Any permanent vehicle deterrent measures will be implemented in the adjacent Hickson Road upgrade design to be undertaken by Infrastructure NSW.
- An interim design solution is proposed on the eastern edge of Hickson Park to accommodate for the Hickson Road level changes, consisting of a low 500 mm sandstone block wall.
- The Applicant provided a justification for the material change in their RtS stating precast concrete complements the paving (grey tones) and strip drain, increases long term durability, reduces ongoing maintenance and ensures a high-quality appearance is maintained.
- Council raised no further issues after reviewing the additional information in the RtS.
- The Department considers the change from sandstone to precast concrete to be valid due to the long-term benefits for the public domain including improved appearance, less ongoing maintenance and greater durability.
- The Department considers the spacing on the western edge of Hickson Park to be appropriate as it will improve accessibility into Hickson Park from the west.
- The Department considers the removal of the seats/bollards on the eastern edge to be acceptable and notes this design consideration will be addressed by Infrastructure NSW in the Hickson Road upgrade.

Recommended Conditions/Response

- No changes to the conditions are recommended.

Raising the approved ground level up to 400 mm (Council issue)

- Raising the park behind a wall reduces public permeability across the site and is suboptimal
- Access has been limited to plaza entrances near the residential buildings
- Continuous wall blocks

Assessment

- The Applicant notes the temporary wall is required at the eastern edge of the park due to the difference between the proposed level of Hickson Park and the level of Hickson Road in its current state and will also function as a vehicle deterrent.
- Once the adjacent Hickson Road upgrade works have been completed by Infrastructure NSW, the temporary wall will be removed and the entrance into Hickson Park will flush with the road.
- The Applicant notes that nevertheless, it is considered Hickson Park will remain permeable and easy for pedestrians to traverse, with multiple entries and exists available.

access for many users and creates the impression the park is a private space for use by residents Access points will create high areas of pedestrian traffic and increased friction between park users	- The Applicant states the access points to the park have been designed with enough width and pedestrian permeability and accessibility in mind, accommodating for high volumes of pedestrian traffic. - Council raised no further issues after reviewing the additional information in the RtS. - The Department considers the temporary wall as part of the interim design solution accommodates for the future level raise of Hickson Road and will remain permeable for pedestrians. - The Department is satisfied the temporary wall will act as a vehicle deterrent in the interim until the Hickson Road upgrade is undertaken, whereby Infrastructure NSW will provide a permanent design solution. <i>Recommended Conditions/Response</i> - No changes to the conditions are recommended.
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Increasing soil depths (Council issue) - Soil depths exceeding the maximum 1500 mm requirement - In areas, soil depth will be over 3000 mm which will result in aerobic soil and is not good practice	<i>Assessment</i> - The Applicant notes Condition B3(1)(c) of the Concept Plan Approval (Mod 8) requires a deep soil zone in Hickson Park of at least 3000 mm. - The Applicant proposes structural soil will be used to reduce the likelihood of anaerobic soil. - Council raised no further issues after reviewing the additional information in the RtS. - The Department considers the proposal to meet the requirements of Condition B3(1)(c) for a deep soil zone of at least 3000 mm. - The Department is satisfied the Applicant has considered mitigation measures to reduce the likelihood of anaerobic soil occurring. <i>Recommended Conditions/Response</i> - No changes to the conditions are recommended.
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Height of wall facing Barangaroo Avenue (Council issue) - Wall is up to 700 mm higher than the adjacent public domain - Potential impact on required view corridors from Hickson Road to Darling Harbour	<i>Assessment</i> - The Applicant notes the modification does not seek to amend the height of the retaining wall facing Barangaroo Avenue or affect any of the existing view corridors. - The footway on Barangaroo Avenue has an RL of 3.53. The highest point of the retaining wall on the south western corner of Hickson Park has an RL of 4.53, graduating to an RL of 3.9 on the northern side and an RL of 3.85 on the southern side. - The height of the sandstone seat inside the garden area has an RL of 4.20 and the concrete seats/bollards on the western edge have an RL of 3.98. - The Applicant notes further to consultation with Council, the highest point of the retaining wall will be reduced to an RL of 4.15 and the sandstone seat inside the garden area reduced to an RL of 4.15 for consistency. - The Applicant provided view impact studies and discussed how the view corridors will be maintained in section 4.3 of their modification report. - Council raised no further issues after reviewing the additional information in the RtS. - The Department considers the modification will not amend the height of the retaining wall on Barangaroo Avenue and the view corridors will not be affected. <i>Recommended Conditions/Response</i> - No changes to the conditions are recommended.
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Proposed deletion of timber seating to the signature feature fig tree planters (Council issue) Adequate justification not provided and	<i>Assessment</i> - The Applicant notes the modification does not seek to amend the timber seating on the precast concrete planters located in Watermans Cove. - However, timber seating on the precast planters located in the Spirit of Tasmania Landing and between the R4B and R5 residential buildings have been deleted due to concerns of the collection of debris from the canopy
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proposed design lacking in adequate public comfort levels - Proposal is a concrete planter edge and no details of planter provided - Feature trees located in Watermans Cove, Barangaroo Avenue, Spirit of Tasmania Loading Dock and Watermans Quay - Elsewhere, fig trees are in raised sandstone planters and Council timber benches proposed in streets	of fig trees above and the likely associated maintenance. - The Applicant notes timber bench seats with backrests and handrails are provided along the waterfront and in the streets. - Sandstone block seating is provided in Hickson Park and in Watermans Cove. - Council raised no further issues after reviewing the additional information in the RtS. - The Department considers the deletion of timber seating on the precast planters in the Spirit of Tasmania Landing and between R4B and R5 to be acceptable. - The Department considers the change of material to precast concrete to be an adequate mitigation strategy to reduce the likelihood of ongoing maintenance as a result of debris collection from fig trees. <i>Recommended Conditions/Response</i> - No changes to the conditions are recommended.
Substitution of sandstone stairs with concrete along Watermans Quay, Wulugul Walk and Boardwalk Park (Council issue) Poor outcome for a high-profile public space which facilitates events and large public use year-round	<i>Assessment</i> - The Applicant notes the stairs in Watermans Cove have been substituted from sandstone to precast concrete to differentiate the path of travel from adjacent sandstone bleacher seating, improve wayfinding for pedestrians and to address durability and maintenance concerns. - Council raised no further issues after reviewing the additional information in the RtS. - The Department considers the substitution to precast concrete to be justified as it will significantly improve wayfinding and reduce the likelihood for ongoing maintenance. <i>Recommended Conditions/Response</i> - No changes to the conditions are recommended.
Available soil volume (Council issue) Concerned only 4 out of 25 tree trenches proposed achieve the minimum 1000 mm depth required for trees on slab, many are only 750 mm in depth and some as little as 500 mm.	<i>Assessment</i> - The Applicant notes the modification does not seek to amend any of the tree trenches as approved under SSD 7944. - The Applicant acknowledges there was two errors in the diagram titled 'Available Soil Volume', which incorrectly showed a proposed reduction to the approved soil depths. Consequently, the diagram has been updated in the Design Report and demonstrates the correct and approved depths. - Additionally, the Applicant notes the reference to 500 mm depth in the drawing titled 'Available Soil Volume' refers to an overall depth of 1400 mm as it comprises of both the depth beneath the concrete slab and the raised planter. - Council raised no further issues after reviewing the additional information in the RtS. - The Department considers the modification to achieve the minimum 1000 mm depth required for trees on slab. - The Department is satisfied the Applicant has rectified any errors in the 'Available Soil Volume' in the Design Report. <i>Recommended Conditions/Response</i> - No changes to the conditions are recommended.
Stormwater management (Council issue) Requested the Applicant consult with Council's Public Domain Unit to prepare suitable stormwater	<i>Assessment</i> - The Applicant noted stormwater modelling for the public domain has been undertaken and is included in the documentation comprising their modification application. - Further to this, the Applicant noted stormwater modelling will be undertaken with Infrastructure NSW to align with the future Hickson Road

overland flow path calculations and design, drainage systems, on-site detention measures and stormwater quality assessments.	upgrade. - The Department considers the stormwater modelling undertaken by the Applicant addresses Council's concerns. <i>Recommended Conditions/Response</i> - No changes to the conditions are recommended.
Noise impacts (Community issue) Concerned with noise generated from out of hours works and recommends all mechanical equipment to operate overnight is properly attenuated.	<i>Assessment</i> - The Applicant notes a Noise Management Plan will be implemented for all works as per Condition C10 of the Consent. - Further to this, the Applicant notes the development and inclusion of noise reduction barriers, curtains and attenuating devices will minimise noise impacts. - The Applicant notes notifications to the local community will be distributed and a community hotline established. - The Department notes no out-of-hours works are proposed and considers the Noise Management Plan and the inclusion of noise reduction barriers, curtains and attenuating devices will mitigate associated noise impacts. <i>Recommended Conditions/Response</i> - No changes to the conditions are recommended.
Light spill (Community issue) Concerned with the lighting proposed for the area, specifically when viewed from an elevated position.	<i>Assessment</i> - The Applicant notes there is no proposed modification to the lighting in this modification. - The Department considers the modification does not seek to amend lighting in the public domain and notes in respect of Barangaroo Avenue lighting, the City of Sydney Smart Poles are specified in the design, and all lighting design is in accordance with Australian standards. <i>Recommended Conditions/Response</i> - No changes to the conditions are recommended.
Bats taking residence (Community issue) Concerned with the number of fig trees proposed will encourage bats to take residence and mitigation measures be put in place.	<i>Assessment</i> - The Applicant notes there are no additional fig trees proposed in this modification. - The Department considers mitigation measures are not necessary as the number of fig trees are not increasing in this modification. <i>Recommended Conditions/Response</i> - No changes to the conditions are recommended.

Appendix C – Statutory Considerations

Controls considered as part of the assessment of the proposal are:

- State Environmental Planning Policy (State and Regional Development) 2011
- State Environmental Planning Policy (State Significant Precincts) 2005
- State Environmental Planning Policy (Infrastructure) 2007
- State Environmental Planning Policy No. 55 – Remediation of Land
- Draft State Environmental Planning Policy for Remediation of Land
- Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005
- State Environmental Planning Policy (Coastal Management) 2018
- Draft Environment State Environmental Planning Policy
- Other Plans and Policies:
 - Sydney Harbour Foreshores and Waterways Area DCP 2005.

State Environmental Planning Policy (State and Regional Development) 2011 (SRD SEPP)

The SRD SEPP aims to identify development that is of State significance due to its size, economic value or potential impact. The SSD Approval was identified as State significant development under clause 3 of Schedule 2 of the SRD SEPP, as it had a Capital Investment Value in excess of \$10 million and is located at the Barangaroo site.

State Environmental Planning Policy (State Significant Precincts) 2005 (SSP SEPP)

The SSP SEPP aims to facilitate the redevelopment of important sites such as Barangaroo for the benefit of the State and provide for the development of major sites for a public purpose. Barangaroo is listed as a State Significant Site under Part 12 of Schedule 3 of the SSP SEPP.

The Department considers the modifications to be consistent with the SSP SEPP including the Barangaroo Concept Plan as further discussed in **Appendix D**.

State Environmental Planning Policy (Infrastructure) 2007 (ISEPP)

The ISEPP aims to facilitate the effective delivery of infrastructure across the State by improving regulatory certainty and efficiency, identifying matters to be considered in the assessment of development adjacent to particular types of infrastructure development, and providing for consultation with relevant government agencies about certain development during the assessment process.

Transport for NSW and Transport for NSW (Roads and Maritime Services) did not object to the modifications.

The Department considers the modified proposal to be consistent with the ISEPP.

State Environmental Planning Policy No. 55 – Remediation of Land (SEPP 55)

SEPP 55 aims to promote the remediation of contaminated land to prevent the risk of harm to human health and the environment. SEPP 55 requires the consent authority to consider whether the land is contaminated, and if so, whether the land is suitable for the purpose for the proposed development.

The Department considered the potential contamination issues in the assessment of the original application and concluded the approved development was consistent with the relevant provisions of SEPP 55 and as such, the site was suitable for the proposed use. As the modifications do not seek a change of use, the Department is satisfied the modified proposal would not raise any additional issues with regards to contamination.

Draft State Environmental Planning Policy for Remediation of Land (Draft SEPP Remediation)

The Draft SEPP Remediation proposes to better manage remediation works by aligning the need for development consent with the scale, complexity and risks associated with the proposed works. As the proposed works are not expected to result in any contamination issues, the Department considers the modification application would be consistent with the intended effect of the Draft SEPP Remediation.

Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005 (SHC SREP)

The SHC SREP provides planning principles for development within the Sydney Harbour catchment area, within which the site is located.

Table 1 | Consideration of the SREP

Criteria		Department's assessment	Compliance
Part 3 Foreshores and Waterways Area			
Clause 20 Matters for consideration	The matters referred to in Division 3 must be considered by the consent authority.	The Department has considered the relevant matters in Section 6.1 of this report.	Yes
Clause 21 Biodiversity, ecology & environmental protection	The consent authority must take into consideration the matters listed in the clause in relation to biodiversity, ecology and environmental protection.	The proposed modification would have no impact on biodiversity, ecology or the natural environment.	Yes
Clause 22 Public access to, and use of, foreshores and waterways	The consent authority must take into consideration the matters listed in this clause in relation to public access to, and use of, the foreshores and waterways.	The proposed modification will improve public access to the foreshores and waterways (refer to Section 6 of this report).	Yes
Clause 23 Maintenance of a working harbour	The consent authority must take into consideration the matters listed in relation to the maintenance of a working harbour.	The proposed modification will not impact on the maintenance of a working harbour.	Yes
Clause 24 Interrelationship of waterway and foreshore uses	The consent authority must take into consideration the matters listed in relation to the interrelationship of waterway and foreshore uses.	The proposed modification would not impact on waterway and foreshore uses.	Yes
Clause 25 Foreshore and waterways scenic quality	The consent authority must take into consideration the matters listed in relation to the maintenance, protection and enhancement of the scenic quality of foreshores and waterways.	The proposed modification to the public domain is well designed as discussed in Section 6 of this report. The scenic quality of foreshores and waterways will therefore be maintained.	Yes

Clause 26 Maintenance, protection and enhancement of views	The consent authority must take into consideration the matters listed in relation to the maintenance, protection and enhancement of views.	The proposed modification provides enhanced views to Sydney harbor from the public domain, through street corridors and Hickson Park. Further, the proposed modification would not result in any adverse impacts on views and vistas to and from key public places, landmarks or heritage items.	Yes
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Part 4 Strategic Foreshore Sites

Clause 40 Strategic Foreshore Areas	Development consent must not be granted for development on a strategic foreshore site unless there is a master plan for the site, and the consent authority has taken the master plan into consideration.	The Department considers that the proposal is consistent with the relevant land use and master planning provisions contained within the Concept Plan, as discussed in Appendix D .	Yes
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The Department considers the approved development is consistent with the relevant planning principles of SHC SREP and does not consider the proposed amendments would affect this consistency.

State Environmental Planning Plan (Coastal Management) 2018 (Coastal SEPP)

The Coastal SEPP seeks to balance social, economic and environmental interests promoting a coordinated approach to coastal management, consistent with the objectives of the *Coastal Management Act 2016*.

The Department considered the approved development was consistent with the relevant provisions of the Coastal SEPP and does not consider the proposed amendments would affect this consistency.

Draft State Environmental Planning Policy (Environment SEPP)

The Explanation of Intended Effect for the Environment SEPP was exhibited until 31 January 2018. The Environment SEPP proposes to simplify the planning rules for the protection and management of the natural environment by consolidating seven existing SEPPs, including the SHC SREP.

The relevant matters for consideration and the general provisions relating to Sydney Harbour are proposed to remain in accordance with those in the current SHC SREP and therefore the proposed development would be consistent with the intended effect of the Environment SEPP.

Sydney Harbour Foreshores and Waterways Area Development Control Plan 2005

The Sydney Harbour Foreshore and Waterways Area Development Control Plan complements the SHC SREP and provides more detailed design parameters for development within the foreshore area of Sydney Harbour.

The site is within the defined Foreshores and Waterways Area under the SHC SREP and is therefore subject to the controls in the DCP. The DCP includes aims and performance criteria in relation to ecological assessment, landscape assessment, and design guidelines for development within the area.

The Department's assessment in **Section 6** of this report has demonstrated the public domain works would not result in adverse visual impacts and would greatly enhance the character and amenity of the harbour foreshore.

The Department considers the proposed modification to be generally consistent with the DCP regarding landscaping, access to waterways, built form and visual impacts.

Appendix D – Consistency with the Concept Approval

In accordance with Clause 3B of Schedule 2 of *Environmental Planning and Assessment (Savings, Transitional and Other Provisions) Regulation 2017*, the Department has considered the proposed modification and is of the opinion the proposal is consistent with the Concept Plan. An assessment of the proposal against the applicable Concept Plan requirements, Modifications and Future Assessment Requirements of the Concept Approval is provided in **Table 1** below.

Consideration of the applicable Barangaroo Concept Plan Built Form Principles is provided in **Table 2** and Barangaroo Urban Design Controls in **Table 3**.

Table 1 | Consideration of the relevant requirements, Modifications and Future Assessment Requirements of the Concept Approval

Concept Approval	Department's comment
Term of Approval	
A4 Determination of Future Applications Determination of future applications is to be generally consistent with the terms of Concept Plan MP06_0162.	The proposal remains consistent with the terms of Concept Plan MP06_0162 (as modified by MOD 8).
Modifications to Concept Plan	
B3 Hickson Park	
1. Hickson Park is:	
a) shown in the map at appendix 1 and generally defined by the boundaries of Block 4A and 4B, Block 5 (as amended in B3(2) below), Hickson Road, Globe Street and Barangaroo Avenue;	<u>Approved</u> Refer to detailed assessment in Section 5 of SSD 7944 report.
b) to provide view corridors from Hickson Road to the harbour;	<u>Proposed</u>
c) to support large mature trees, including with the provision of at least 2,000 sqm of deep soil with a depth of at least 3 m;	The application does not obstruct view corridors from Hickson Road to the harbor, does not inhibit the growth of mature trees in any way, meets the concept plan requirement of 2,000 sqm of soil and will not decrease the variation of soil depths (3m) contemplated by the current approval.
d) not to be overshadowed by built form over more than an average of 2,500 sqm between the hours of 12:00 and 14:00 on the 21 June each year; and	
e) to be primarily comprised of soft landscaping, including extensive areas of grass.	
B3 Barton Street	
5. Barton Street is approved as a temporary road only and is subject to the future environmental assessment requirements in C8. Following the completion of the development of Block Y and the construction of Barangaroo Avenue, Barton Street shall be redesigned and returned as parkland and integrated to form part of Hickson Park. Any future application in respect of Hickson park shall ensure the design, construction and use of this area is public open space and parkland.	<u>Approved</u> Barton Street is no longer proposed. The area previously proposed as Barton Street now forms a part of Hickson Park.
	<u>Proposed</u> Barton Street is no longer proposed. The area previously proposed as Barton Street now forms a part of Hickson Park.
B3 Foreshore Promenade in the vicinity of Block Y	
6. The foreshore promenade along the western side of Block Y shall be designed, constructed and landscaped:	<u>Approved</u> Refer to detailed assessment in Section 5 of SSD 7944 report.
a) to its western most extent, as mapping in the SEPP amendment made on 28 June;	<u>Proposed</u> The modification is consistent with these

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| <ul style="list-style-type: none"> b) to read as public open space; and c) to include mature tree plantings and other soft landscaping elements and places to stop and sit. | <p>requirements.</p> |
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B4 Built Form

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| <ol style="list-style-type: none"> 1. A mixed-use development involving a maximum of 605,911m² gross floor area (GFA), comprised of: <ul style="list-style-type: none"> a) a maximum of 183,031m² of residential GFA of which a maximum of 154,000m² will be in Barangaroo South; b) a maximum of 76,000m² of GFA for tourist uses of which a maximum of 59,000m² will be in Barangaroo South; c) a maximum of 34,000m² of GFA for retail uses of which a maximum of 30,000m² will be in Barangaroo South; d) a maximum of 5,000m² of GFA for active uses in the Public Recreation zone of which 3,500m² will be in Barangaroo South; and e) a minimum of 12,000m² GFA for community uses. | <p><u>Approved</u>
Not applicable.</p> <p><u>Proposed</u>
Not applicable.</p> |
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B7 Community Uses

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| <ol style="list-style-type: none"> 1. At least 3,000 sqm of approved community uses shall be located within Barangaroo South, of which up to a maximum of 2,000 sqm of community facilities GF may be located on a public pier in a central location that engages with the public domain, subject to compliance with the future environmental assessment requirement C10 below. All community uses GFA is to be constructed prior to the final occupation of any building in Stage 1B. 2. The Applicant shall consult the City of Sydney in considering and determining the appropriate mixed and provision of community uses within Barangaroo South and outline the outcome of such consideration and consultation with the relevant project/development application. 3. Despite any other modification of this approval, a minimum of 2,000 sqm of community uses GFA must be provided within Block 6 and 7 (or other block approved by the Secretary and be of a type acceptable to the Secretary). | <p><u>Approved</u>
The Department was satisfied the community use requirements of Condition B7(1) of the Concept Plan were met. Refer to detailed assessment in Section 5 of SSD 7944 report.</p> <p><u>Proposed</u>
Not applicable.</p> |
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B12 Staging

Prior to the issue of any occupation certification within Block 4A or 4B, the foreshore promenade, pier, Watermans Cove and Hickson Park shall be constructed, landscaped and publicly accessible.

Approved
The application proposed to construct the public domain elements necessary to ensure the condition can be satisfied. Refer to detailed assessment in **Section 5** of SSD 7994 report.

Proposed
The modification proposes to construct the public domain elements necessary to ensure the condition can be satisfied.

Future Assessment Requirements

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| <ol style="list-style-type: none"> 1. This provision applies to the following development: <ul style="list-style-type: none"> a) The erection of a new building that will be greater than Reduced Level (RL) 57, b) The erection of a new building on a site greater than 1,500 square metres. | <p><u>Approved</u>
As the Department was unable to be satisfied of the design excellence of the public amenities building (concept form only), it recommended the public amenities building be subject to a separate</p> |
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| <ol style="list-style-type: none"> 2. The Proponent shall hold a design excellence competition for all development identified at (1) above. 3. The design competition brief shall be approved by the Director General or his delegate. 4. The Director General shall establish a design review panel for the design excellence competition(s) that will consider whether the proposed development exhibits design excellence. 5. The design review panel shall also be utilised for any significant changes to the Concept Plan, as determined by the Director General. 6. For the purposes of this modification, a design review panel means a three to five-member panel comprised of appropriately qualified design professionals, chaired by a registered architect. 7. Notwithstanding (2) above, the requirement for a design excellence competition may be waived if the Director General: <ol style="list-style-type: none"> a) certifies in writing that the development is one for which an architectural design competition is not required because of the excellence of the proposed design for the development concerned, and b) is satisfied that: <ol style="list-style-type: none"> i. the architect responsible for the proposed design has an outstanding reputation in architecture, and ii. necessary arrangements have been made to ensure that the proposed design is carried through to the completion of the development concerned. | <p>application. Refer to detailed assessment in Section 5 of this report.</p> <p><u>Proposed</u></p> <p>Not applicable.</p> |
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C4 Car Parking

1. The following maximum car parking rates shall apply to future development within the site:

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| <ol style="list-style-type: none"> a) Commercial: 1 space/600m² GFA b) Residential: <ul style="list-style-type: none"> - 1 bed/bedsit unit – 1 space/2 units - 2 bed unit – 1.2 spaces/unit - 3+ bed unit – 2 spaces/unit c) Other Uses: City of Sydney Council rates d) Hotel: City of Sydney Council rates or as otherwise approved by the relevant delegate of the Minister. | <p><u>Approved</u></p> <p>Not applicable.</p> <p><u>Proposed</u></p> <p>Not applicable.</p> |
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C7 Pedestrian Linkages, Activation of Streets and Public Domain

In developing detailed plans for the development blocks, "internal" or "through-site" links and internal public domain activity should not occur at the expense of achieving primacy in pedestrian activity and use. In addition, future applications shall comply with the following:

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| <ol style="list-style-type: none"> a) The detailed design of the promenade, in particular, the licenses areas are to promote visual and physical connectivity and legibility as a generous and inclusive public space; b) Generous through-site and activation to promote visual and physical permeability through the podium of the Residential R4A and R4B buildings within Block 4A, connecting Hickson Park to Watermans Cove; and | <p><u>Approved</u></p> <p>The Department considered the design provides excellent ground floor permeability and connectivity which effectively links to the Stage 1A area and connecting public transport nodes and reinforced the role of primary thoroughfares identified in the approved Concept Plan.</p> <p>The Department concluded the public domain would provide a highly accessible and safe environment for pedestrians. Refer to detailed assessment in Section 5 of this report.</p> <p><u>Proposed</u></p> <p>The proposed modifications will continue to provide highly accessible and safe pedestrian</p> |
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- c) Future applications shall maximise active interfaces of buildings to streets, through site connections and public open space, to encourage diversity and public access.
- linkages throughout the public domain.
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C10 Public Pier and future building and other building works over the water

- a) The public pier is to be located wholly within the site boundary and is to clearly define the southern edge of Watermans Cove without impeding the key view corridors between the water and CBD and along the foreshore.
- b) Any future building on the pier is to be low-scale, provide appropriate public access around the full perimeter of the pier and maximise visual permeability.
- c) The dominant use of the pier and any future structure on the pier is to be for community facility/ies in accordance with Modification B7. Any other uses proposed on the pier must demonstrate that they are complementary and ancillary to community facilities.
- d) Prior to the submission of any future application for the pier and/or future building and any other building works over the water, the Proponent is to consult with Transport for NSW and the Ferry Operator in relation to the following:
- i. The clearance between the northern face of the northern-most public ferry wharf and the public pier to ensure that the width proposed supports the entering and exiting of a ferry vessel without any impediment;
 - ii. Practical measures to be implemented to ensure adequate clearance is maintained between the pier and the northern-most public ferry wharf during construction and operation;
 - iii. The design of the future building on the public pier (location and orientation), including in relation to sight lines for ferry vessel masters, the proposed installation of southern fender piles and the scope of construction works to ensure that they do not impact on the construction and operation of the Barangaroo Ferry Hub and associated ferry navigation; and
 - iv. The design of any building works over the water.
- e) Any future development application/s for the public pier and/or future building and any other building works over the water is to include a:
- i. Navigation Impact Assessment. The assessment is to demonstrate that adequate clearance is maintained at all times during construction and operation and that the proposal will not adversely impact on ferry navigation and safety; and
 - ii. Demonstrate general compliance with the recommendations in the Royal Haskoning DHV Navigation Impact Assessment dated 19 September 2014 (MOD 8) and

Approved

The Department was satisfied the public pier complied with the requirements of this condition.

No building on the public pier was proposed as part of this application.

The Applicant advised it consulted with TNSW and Sydney Ferries in relation to the public pier.

A supplementary letter provided in the RtS demonstrated the application would comply with the recommendations of e(ii), subject to a condition of consent requiring a port hand lateral mark that is lit at night at the western edge of the public pier. The Department has recommended a condition accordingly.

Refer to assessment in **Section 5** of SSD7944 report.

Proposed

The Department is satisfied the design refinement to the public pier complies with the requirements of this condition. The number of tiers on the public pier is increasing from two to three to support community uses and events.

C11 Landscaped Areas

Where landscaped areas involving the planting of trees are proposed above basement car parking, the Proponent must ensure there is adequate soil depth to support mature scale trees. Trees selected for landscaping shall not include species that are declared a noxious weed under the Noxious Weeds Act 1993.

Approved

Refer to detailed assessment in **Section 5** of SSD 7944 report.

Proposed

The modification ensures adequate soil depth to support mature scale trees is achieved. Refer to detailed assessment in **Section 6** of this report.

Table 2| Consideration of the Barangaroo Concept Plan Built Form Principles

Built form principles	Department's Comment
1 City's New Western Façade To create an integrated new western frontage to the city centre, the slender ends of buildings (above podium level) are to be oriented to the waterfront.	<u>Approved</u> Not applicable. <u>Proposed</u> Not applicable
2 Hickson Road as a Boulevard Promote the scale of Hickson Road as a grand boulevard, buildings are to provide a consistent street wall definition to Hickson Road but with variegated massing heights along the street frontage. The corner to the park at R5 wraps around as a marker to Hickson Park and a bookend to Barangaroo South.	<u>Approved</u> The public domain would assist in Hickson Road becoming a boulevard. <u>Proposed</u> The modifications do not result in significant changes to Hickson Road.
3 Buildings to Define Streets To define the public space of the street, all building façades are to be set to the street alignment.	<u>Approved</u> The proposal provided the public space interfacing with buildings to define streets. <u>Proposed</u> The modifications do not result in any significant changes to the street façade alignment.
4 North South Pedestrian Connections Provide for greater pedestrian permeability through the blocks which relate to pedestrian desire lines. The primary focus are the north south pedestrian connections provided between blocks 2 to 4, Wulugul Walk and Barangaroo Avenue, and the more defined and enclosed Scotch Row at ground level which is not less than 6m wide and not less than 50% open to the sky and has a minimum clear height of 2 storeys. It is equally as important to provide east-west links through the main pedestrian walkways including Watermans Quay, Shipwright Walk, Mercantile Walk and	<u>Approved</u> The proposal provided primary pedestrian connections through the site delivering excellent ground floor permeability and accessibility between and around development blocks. This included the provision of the key pedestrian thoroughfares of Watermans Quay, Wulugul Walk and a part of Barangaroo Avenue.. <u>Proposed</u> The modifications do not result in any significant changes to pedestrian permeability at ground level.

Exchange Place.

5 Marking the City Frame

Continue a built form dialogue with the adjoining city, building heights across the site are in keeping with the rest of the city, with the highest form at the north of the precinct to complete the city frame and book-end the city's north western edge.

Approved

Not applicable.

Proposed

Not applicable.

6 Open Space Within Blocks

Create laneways, courtyards, walkways and parklands around the defined edges of building blocks.

Approved

The proposal comprised provision of open space between and around blocks 4A, 4B and Y of the Concept Plan and at ground level between tower forms.

To create a fine grain structure of laneways and streets permeating the blocks, as well as open space at podium level between the tower forms.

Proposed

The modifications do not result in any changes to open space within blocks.

7 View Sharing

Promote the equitable access to views towards the harbour, the built form is to be arranged to define the street corridors and to allow view corridors from the existing private buildings to the east.

Approved

The public domain provides equitable access to views towards the harbour through street corridors and Hickson Park from existing private buildings to the east.

Provide sky view corridors between residential towers from Napoleon Street, Bond Square and the Harbour Bridge.

Proposed

The modifications do not result in any changes to view sharing.

8 Orientation of Buildings

Create from a city scale and a bridge view a new city skyline silhouette formed by the gaps between the slender towers.

Approved

Provide optimum orientation and transparency across the site.

Not applicable.

The orientation of the tower buildings are to relate to the fanning principle, while the long façades are to be facing to the north. Buildings facing Hickson Road and the waterfront are to be generally orientated to the east and west to define the linear nature of the road and promenade.

Proposed

Not applicable.

Table 3 | Consideration of the Barangaroo Urban Design Controls

Urban Design Controls (Block Y)	Department's Comment
1 Building Mass and Location	
Objectives	
• To ensure building mass is appropriate within the envelope. • To ensure that a separate building mass is created below the primary hotel room floor plate component • To ensure building massing at the podium levels gives primacy to the use, enjoyment, accessibility and activation of the public domain and walkways around the promenade. • Allow balconies on towers including residential and/or tourist and visitor accommodation GFA to be partially enclosed without the need to include	Not applicable.

balcony floor area as GFA.

Standards

- Height of building mass shall increase northwards.
- Building mass is to taper to top of the building.
- General building orientation to minimize overshadowing of public domain and respond to key views towards the Harbour Bridge and Opera House.
- Within the maximum RL 40 podium massing the majority should be limited to a height of RL 34.6. Additional features and activities to be set back a minimum of 3m within envelope or not visible from street level.
- For residential and tourist and visitor accommodation development within a building with a height of 30m 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.

2 Ground Plane and Building Orientation

Objectives

- The orientation of the building relates to the “fan” principle.
- Optimise solar access to external public spaces.
- Emphasize accessibility of the public realm in and around the Hotel.

Standards

- Canopies and their support structures may protrude beyond the block boundary to provide shelter and comfort for users.
- The building orientation is to maximise sunlight to external public spaces.
- Functions at the lower levels of the building are to be open and inviting to the general public.
- Design and Structure to be a response to prevailing environmental conditions.
- Canopies and awnings shall not dominate or unreasonably impact on views and vistas towards the water or past the building, along public promenades.

Not applicable

3 Building Articulation

Objectives

- To establish an articulated, well proportioned building mass.
- To reduce the impact of the building’s mass above podium level.
- To ensure the building podium is well articulated and broken down into separate discernable elements.

Standards

- Tower form to express sustainability features such as access to natural light.
- Building elements are required to moderate environmental conditions and be designed to enliven facades.
- Ensure visual permeability from the parkland to the water at the north-east corner of the podium.
- In order to mitigate the visual perception of bulk the façade of the podium of any future building in Block Y are to be broken down into separate discernable elements, such that:

Not applicable.

- a) the southern podium façade is comprised of two major elements with an unbroken horizontal dimension of approximately 32.5m;

-
- b) the western podium façade is comprised of two major elements with an unbroken horizontal dimension of approximately 45m. The two façade elements are to be broken up by an approximately 7m wide recess which extends vertically for the full height of the podium; and
 - c) the eastern façade is to appear as 3 distinct, but visually related, elements.
-

4 Building Legibility

Objectives

- To ensure that constituent elements of the building are appropriately articulated.
- To ensure that the building elements and structure is legible at the base.

Standards

Not applicable.

- Building function may be expressed in massing and articulation.
 - The composition of the building envelope will clearly define a base, a middle and a top with well-balanced vertical and horizontal proportions.
 - Entries to be clear and perceptually evident.
-

5 Ground Floor Permeability and Accessibility of Public Realm

Objectives

- To provide permeability and accessibility through Barangaroo South.
- Continuation of Wulugul Walk.

Standards

- Public access around the Block is to be maintained on all edges.
- Building entries must be clearly articulated and be visible from the public domain.
- Building entries to establish a public sense of arrival.
- Secondary links open to public access providing additional routes between Barangaroo Avenue, Watermans Quay and the Waterfront.
- In order to provide an appropriately dimensioned unobstructed public promenade on the northern edge of Watermans Cove, any future building to be located in Block Y is to comply with the following setback controls from the northern edge of Watermans Cove:

Refer to detailed assessment in **Section 6** of this report.

- a) an average of approximately 27.5m to the ground floor facade (excluding any structures associated with any future ground floor licensed area); and
 - b) a minimum 18.5m to the outside edge of any vertical structure associated with any ground floor licensed area. This setback is to be unobstructed including by any ground level structures associated with any future ground floor licensed area.
-

6 Ensuring Quality of Rooftops

Objectives

- To ensure that the mass at the rooftop shall be expressed as a key architectural component.
- The architectural treatment of the roof and its form is to be designed, coordinated and sympathetic to the building.

Not applicable.

Standards

- Architectural treatment of exposed elements such as lift shafts, overruns
-

control rooms and any sustainability or architectural features shall contribute to the articulation of the roof.

- Exposed mechanical equipment is to be avoided.
 - Public access to the tower roof for viewing activities is encouraged where appropriate.
 - Rooftop terraces are to be landscaped.
-

7 Facades

Objectives

- To ensure the architectural quality of the facades.
- To articulate the buildings functions and massing with appropriate facade design and detailing.
- To ensure the facades contribute to the building's articulation and mass.
- To contribute to the "carbon neutral" aims for Barangaroo South.
- Enable the partial enclosures of balconies to provide private open space that is useable and has a high level of amenity.

Standards

- The choice of appropriate materiality for longevity, durability and flexibility. Materials such as steel, glass, concrete, timber and aluminium.
- Environmentally sustainable design is to be incorporated on all facades.
- Depth and layering of facades is to be achieved through relief, protrusions, materiality and arrangement.
- Facade components such as external shading and materiality shall be used to provide light and shade to the building.
- The glass wind balcony remains external open space and the wind screen design ensures permanent natural ventilation and cannot be fully enclosed or sealed from the weather.

Not applicable.

8 Active Ground Plane

Objectives

- Ensure an activated domain at street level.
- Ensure the openness and accessibility of building.
- Ensure priority pedestrian access to the waterfront.
- Maximise natural light penetration to ground level public spaces.

Standards

- Public uses, eg: food and beverage / dining to be located on the Ground Floor of the building with access to and from the public domain and waterfront.
- Building service areas and loading docks will only be located in the basements. No loading or deliveries will be provided at ground level.
- Public uses at the base may be enclosed or open spaces.
- 80% active ground floor frontage (inclusive of porte-cochère area and other public entry/exits.)
- Public domain ground plan levels within licensed areas shall be designed to promote openness and connectivity of the licensed area with the Public Domain.
- Seating in licensed area shall be directly accessible from and open to the public domain.

The proposed design and aesthetic modifications to the public domain continues to provide an active ground plane.

9 Signage

Objectives

- To ensure that the location, size, appearance and the quality of the signage on the building is appropriate.

Standards

- Signage is appropriate on podium, mid-rise and tower.
 - Signage is to be considered as part of the overall design of the building. Not applicable.
 - 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.
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Appendix E – Barangaroo Concept Plan – Planning History

Barangaroo Concept Plan (MP 06_0162)

The then Minister for Planning approved the Barangaroo Concept Plan (MP 06_0162) (Concept Plan) on 9 February 2007.

The Concept Plan allowed for:

- mixed use development involving a maximum of 388,300 m² of GFA contained within eight blocks on a total site area of 22 hectares (ha)
- approximately 11 ha of new public open space/ public domain, including a 1.4 km public foreshore promenade
- a maximum of 8,500 m² GFA for a passenger terminal and a maximum of 3,000 m² GFA for active uses that support the public domain within the public recreation zone
- built form design principles, maximum building heights and maximum GFA for each development block within the mixed use zone
- alteration of the existing seawalls and creation of a partial new shoreline to the Harbour
- retention of the existing Sydney Ports Corporation Port Safety Operations and Harbour Tower Control Operations, including employee parking
- an underground car park beneath the northern headland park, containing approximately 300 car parking spaces.

The capital investment value of the approved Concept Plan was \$1.5 billion with the generation of up to 16,000 operational jobs.

The following outlines the subsequent seven modification approvals to the Concept Plan:

MP 06_0162 MOD 1

On 25 September 2007, the then Executive Director, Strategic Sites and Urban Renewal, as delegate of the Minister for Planning, approved a minor modification to the Concept Plan to correct minor typographical errors and re-wording of the design excellence terms. This modification did not alter the maximum GFA or mix of uses.

MP 06_0162 MOD 2

On 16 February 2009, the then Minister for Planning approved a second modification to the Concept Plan to increase the GFA of commercial uses by 120,000 m² in Blocks 2, 3, 4 and 5, to a total overall GFA of 438,000 m². The modification increased the total maximum GFA for Barangaroo to 508,300 m² (an increase of 120,000 m² or 31 per cent over the whole site).

MP 06_0162 MOD 3

On 11 November 2009, the then Minister for Planning approved a third modification to the approved Concept Plan, generally meeting the requirements of the Concept Plan approval relating to the northern headland and northern cove, with other changes as follows:

- the reinstatement of a headland at the northern end of the site with a naturalised shape and form, including a build-up of height and a landscaped connection to physically link Clyne Reserve to allow direct pedestrian access from Argyle Place
- an enlargement of the northern cove to achieve a greater naturalised shape, form and edges (note this modification and the one above were required modifications in the terms of the original Concept Plan, contained in Modification B1 and B2, and following recommendations made in the jury report regarding the original winning competition scheme)

- the consequential re-alignment of Globe Street to turn right towards Hickson Road immediately south of the enlarged cove, rather than continuing north around the headland
- the consequential removal of development Block 8 and part of Block 7 and redistribution of the associated land use mix
- the demolition of three heritage items being the Sandstone Seawall, the Sydney Ports Harbour Control Tower, and the MWS & DB Sewage Pumping Station
- amendments to the Statement of Commitments relating to the preparation of relevant plans and strategies so that work can commence in stages.

This modification slightly reduced the approved GFA and mix of uses, with a resulting total GFA of 501,000 m².

MP 06_0162 MOD 4

On 16 December 2010, the then Minister for Planning approved a fourth modification to the Concept Plan. The modified Concept Plan provides for the following:

- a maximum of 563,965 m² mixed uses GFA, including residential, commercial and retail uses which includes:
 - a maximum of 128,763 m² of residential uses
 - a maximum of 50,000 m² of tourist uses GFA
 - a maximum of 39,000 m² of retail GFA.
 - a maximum of 4,500 m² of active uses GFA (3,000 m² of which will be in Barangaroo South)
 - a minimum of 12,000 m² of community uses GFA (10,000 m² of which will be in Barangaroo South)
- approximately 11 ha of new public open space/ public domain, with a range of formal and informal open space serving separate recreational functions and includes a 2.2 km public foreshore promenade
- built form principles, maximum building heights and 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 portion of the new shoreline to the Harbour.

In order to accommodate the changes made to the Concept Plan, Schedule 3 of Part 12 of the Major Development SEPP was concurrently amended. The amendment rezoned parts of the Barangaroo site and the adjoining areas from 'RE1 Public Recreation' and 'W1 Maritime Waters and Transport' to 'B4 Mixed Use' and 'RE1 Public Recreation'. Modifications to the distribution of GFA and building heights were also included in the amendment.

MP 06_0162 MOD 5

This modification was lodged in February 2011, and proposed modifications to clarify the outcomes with respect to the distribution of community uses GFA across the Barangaroo site, and to correct a number of minor typographical errors. This application was subsequently withdrawn on 22 March 2011.

MP 06_0162 MOD 6

This modification application proposed to modify the approved Concept Plan for Barangaroo South. The proposed modifications, as publicly exhibited, sought approval for the following:

- the realignment of the development block boundaries for Blocks 3, 4A and 4B
- revisions to the Urban Design Controls to reflect the changes to the Block boundaries for Blocks 3, 4A and 4B

- change the requirement for a 'minimum' of 12,000 m² of community uses GFA to be delivered to a 'maximum'
- allow architectural roof elements and building management units to be excluded from the maximum height limit definition
- specify the car parking rates for 'other' uses thus removing the requirement to comply with Council's current car parking rates.

On 25 March 2014, the Commission approved the application.

MP 06_0162 MOD 7

On 11 April 2014, the then Minister for Planning and Infrastructure approved a seventh modification to the Concept Plan to allow the construction, operation and maintenance of a concrete batching plant to supply concrete for the construction of future development under this Concept Plan at Barangaroo South.

MP 06_0162 MOD 8

On the 28 June 2016, the Commission approved an eighth modification to the Concept Plan, providing for the following modifications:

- increase in the maximum GFA from 563,965 m² to 594,354 m², and increase in maximum GFA contained in the development blocks from 549,465 to 579,354 m²
- increase in height from RL 170 m to RL 275 m and GFA from 33,000 m² to 77,500 m² for Block Y, increase in height from RL 41.5 m to RL 250 m and GFA from 8,150 m² to 86,979 m² for Block 4A
- decrease in height from RL 175 m to RL 107 m and GFA from 29,900 m² to 19,158 m² for Block 4B, decrease in height from RL 80 m to RL 25 m and GFA from 9,400 m² to 1,927 m² for Block 1, and deletion of Block 4C
- decrease in GFA from 209,213 m² to 197,280 m² for Block 2, and decrease in GFA from 142,669 m² to 129,934 m² for Block 3
- amend development block configurations for Block Y and Blocks 4A and 4B
- increase GFA outside of blocks from 14,500 m² to 15,000 m²
- amend GFA allocated for various land uses (residential, tourist, retail, active)
- amendment of Barangaroo site boundary, relocation of pier and reduction in the Southern Cove (now Watermans Cove)
- amendment of *Built Form Principles and Urban Design Controls*.

Appendix F – Notice of Modification

The Notice of Modification can be found on the Department's website as follows:

<https://www.planningportal.nsw.gov.au/major-projects/project/13816>