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FINAL

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Department of Planning and Environment

Statement of Validity

Development Application Details	
Applicant name	DPT & DPPT Operator Pty Ltd
Applicant address	Level 51 MLC Centre 19 Martin Place Sydney NSW 2000
Land to be developed	241-249 Wheat Road, Cockle Bay
Proposed development	Concept Proposal for redevelopment of Cockle Bay Wharf as described in Section 3.0 of this Environmental Impact Statement
Prepared by	
Name	Harry Quartermain
Qualifications	BA(Hons), MA URP, MPIA, MRTPI
Address	173 Sussex Street, Sydney
In respect of	State Significant Development - Development Application for redevelopment of Cockle Bay Wharf, Darling Harbour
Certification	
	I certify that I have prepared the content of this EIS and to the best of my knowledge:
	it is in accordance with Schedule 2 of the Environmental Planning and Assessment Regulation 2000;
	all available information that is relevant to the environmental assessment of the development to which the statement relates; and
	the information contained in the statement is neither false nor misleading.
Signature	
Name	Harry Quartermain
Date	1/11/2017

1.0 Executive Summary

DPT Operator and DPPT Operator is the current long-term leaseholder of Cockle Bay Wharf (from the NSW Government and leased by Property NSW (PNSW)), and is in the process of seeking consent for renewing and redeveloping the Site. The Site sits within the western edge of Sydney CBD, which stretches from Barangaroo in the North through to Central Park in the South. This Site is at the centre of significant urban transformation in Sydney.

Ethos Urban has been engaged by the leaseholders of Cockle Bay Wharf to provide planning and place making advice for the redevelopment of the Site since 2014. A Stage 1 State Significant Development Application (SSDA) and accompanying Environmental Impact Statement (EIS) was lodged on 2 December 2016 with the Department of Planning and Environment (the Department), and publicly exhibited from 15 December 2016 until 2 February 2017. As a result of the items raised during the exhibition period the co-owners elected to address items raised by amending the Concept Proposal (now referred to as Cockle Bay Park); key amendments include:

- Consolidation of publicly accessible open space to the north of the Site;
- Improved direct access between the CBD and the waterfront;
- Upgrade the Druitt Street connection;
- Better integration of the Site with the Crescent Garden to improve permeability;
- Relocation of the tower further south;
- Further increase of tower setbacks to the foreshore;
- Reduce the height and bulk of the tower envelope; and
- Reduce the scale of the podium at the Pyrmont Bridge and Druitt Street connections.

This report will summarise the items raised during the exhibition period, and provide a detailed and considered response to each item. In addition, the report will summarise the design development process undertaken since the public exhibition of the original EIS and assess the environmental impacts of the amended Concept Proposal.

2.0 Introduction

A State Significant Development Application (SSDA) and accompanying Environmental Impact Statement (EIS) in support of an application for SSD for a Concept Proposal for the redevelopment of 241 – 249 Wheat Road, Cockle Bay in Darling Harbour (the Site) was lodged on 2 December 2016 with the Department, and publicly exhibited from 15 December 2016 until 2 February 2017 (this is referred to in this EIS as the 'original EIS'). As a result of the items raised during the exhibition period the co-owners elected to address items raised by amending the Concept Proposal.

This amended EIS provides a summary of the items raised during the exhibition period, and provide a detailed and considered response to each item. In addition, it will summarise the design development process undertaken since the public exhibition of the original EIS and assess the environmental impacts of the amended Concept Proposal. It is submitted to the Department pursuant to Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

The Site is located within the Darling Harbour precinct which is identified as a State Significant Site in Schedule 2 of State Environmental Planning Policy (State and Regional Development) 2011. As the amended Concept Proposal will have a capital investment value of more than \$10 million it is declared to be State Significant Development (SSD) for the purposes of the EP&A Act.

This amended EIS has been prepared by Ethos Urban on behalf of DPT and DPPT Operator Pty Ltd and is based on the amended Concept Proposal Architectural Drawings and Design Report prepared by Francis Jones Morehen Thorp Architects (FJMT) and other supporting technical information appended to the report (see Table of Contents).

This report describes the Site, its environs and the proposed development, and provides an assessment of the proposal in terms of the matters for consideration under Section 79C(1) of the EP&A Act. The amended Concept Proposal includes amended plans which are submitted to the Department of Planning and Environment in accordance with Clause 55 of the *Environmental Planning and Assessment Regulation 2000* (EP&A Regulation). The amended Concept Proposal including changes to address matters raised in the submissions.

This amended EIS has been prepared in accordance with the requirements of Part 4 of the EP&A Act, Schedule 2 of the EP&A Regulation, and the Requirements of the Secretary of the Department of Planning and Environment for the preparation of the amended EIS.

This amended EIS should be read in conjunction with the supporting information and plans appended to and accompanying this report.

2.1 Overview of the Proposed Development

The proposal relates to a Concept Proposal (in accordance with Section 83B of the EP&A Act) and for the redevelopment of Cockle Bay Wharf and the surrounding area.

The amended Concept Proposal establishes the planning and development framework which will be the basis for the consent authority to assess future detailed development proposals. The amended Concept Proposal includes:

- up to 15,000m² of publicly accessible open space;
- new retail outlets, including new food and beverage destinations;
- new cultural and entertainment destinations; and
- a new commercial office tower.

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

- Demolition of existing site improvements, including the existing Cockle Bay Wharf, pedestrian bridge links across the Western Distributor, and obsolete monorail infrastructure;
- Building envelopes;
- Land uses across the Site;
- A maximum Gross Floor Area (GFA) across the Cockle Bay Wharf of up to 75,000m² for commercial development, up to 14,000m² for retail (including food and beverage) development and up to 15,000m² of open space;

- Up to 150 car parking spaces; and
- Urban Design, Open Space and Built Form Guidelines to guide future development and publicly accessible open space.

2.2 Background to the Development

The Site, along with much of the Darling Harbour Area is owned by the NSW Government and managed on behalf of NSW Government Property by Property NSE (PNSW). DPT and DPPT Operator Pty Ltd (the Proponent) controls the long-term lease (until 2088) on the Site, and also of the adjacent Darling Park site.

The Darling Park site is a successful premium grade office precinct located on the west of the Sydney CBD, the associated Crescent Garden, located to the west of the three existing Darling Park towers, is a key area of open space in this part of the city.

The Proponent has recognised a number of key issues with the existing layout of the Darling Park and Cockle Bay precinct, these being:

- The existing Cockle Bay Wharf building is not well integrated with the city as the Western Distributor freeway currently acts as a barrier to separate this area from the CBD;
- Critical pedestrian links from the CBD to Darling Harbour via Druitt Street and Market can be improved;
- Despite being publicly accessible, the existing Darling Park Crescent Garden is not well utilised; and
- The existing Cockle Bay Wharf building is becoming outdated and is not in keeping with the future of Darling Harbour area as a vibrant and modern entertainment and tourist destination.

The Cockle Bay precinct is at risk of being left behind and is undermining the significant investment being made in Darling Harbour that will see it return to the world stage as a destination for events and entertainment.

Accordingly, the Proponent is taking a carefully considered and staged approach to the complete revitalisation of the Site and its surrounds.

2.3 Objectives of the Development

The envisaged development, which will be facilitated by the amended Concept Proposal, will:

- Provide new access routes between the city and the ICC Sydney / Darling Harbour Live precinct;
- Provide significant publicly accessible open space;
- Refresh the pedestrian access from the CBD to Darling Harbour via Druitt Street;
- Support the Sydney economy by providing a new premium commercial building;
- Refresh and renew an existing entertainment and tourist destination; and
- Reconnect the city with the Darling Harbour waterfront and the Darling Park Crescent Garden.

2.4 Analysis of Alternatives

A number of options were considered during the development of this application, these options are explained below.

2.4.1 Do Nothing

Not developing the Site was considered. This option would not allow the identified lack of connectivity and legibility between the CBD and Darling Harbour to be addressed. Doing nothing would also not allow the existing Cockle Bay Wharf building to be upgraded to better integrate with the modern Darling Harbour Live precinct. As this option would not allow the project objectives to be met, it was not considered further.

2.4.2 Northern Tower Option

The original EIS included consideration of a number of different built form options to accommodate the proposed commercial floor space (refer to the Architectural Design Report at **Appendix C**) including:

- One mid-rise building;
- Two mid-rise buildings; and
- One high rise tower.

By restricting the footprint of the built form to one tower, and locating that tower to the north of the site (adjacent to Pyrmont Bridge), the quantum of floor area is able to be provided within the development without significantly affecting private views or views from existing and future public areas and areas of publicly accessible open space. This option informed the previously exhibited design. Although the resulting tower would be taller than the other considered options and therefore visible from a greater distance, the potential impacts of the envelope on neighbouring buildings and open areas in the vicinity of the Site was considered to be improved and manageable.

The previously exhibited Concept Proposal included a single commercial tower located in the north of the Site, a lower scale commercial building to the south of the Site and a landbridge that crossed the Western Distributor. The exhibited Concept Proposal would have facilitated:

- A maximum Gross Floor Area (GFA) of up to up to 85,000m² for commercial development, up to 25,000m² for retail development and up to 12,000m² of publicly accessible open space.
- A tower to a height of approximately RL 235m;
- A podium to a height of RL31m;
- A landbridge to a height of RL19m; and
- Up to 200 vehicle car parking spaces.

Whilst the exhibited Concept Proposal offered many benefits the location of the tower at the northern end of the Site was found to interrupt the Pyrmont Bridge/CBD view corridor and limited the scale, legibility and quality of open space within the Site.

2.4.3 Central Tower Option

As a result of feedback during exhibition a number of amendments were made to the Concept Proposal including the relocation and refinement of publicly accessible open space areas. The primary open space within the Site has been consolidated and moved to the north with the tower being moved south to the centre of the Site. The amendment will facilitate the creation of a large and consolidated open space that feels more public than the exhibited design.

The relocation of the tower further south mitigates concerns of the impact to the Pyrmont Bridge/CBD view corridor and has resulted in a reduction of the tower height by 40 metres to (among other things) accommodate the solar access plane to Tumbalong Park. Overall the scale of the amended Concept Proposal has reduced with the Central Tower Option to facilitate:

- A maximum Gross Floor Area (GFA) of up to up to 75,000m² for commercial development, up to 14,000m² for retail development and up to 15,000m² of publicly accessible open space.
- A tower to a height of approximately RL 195m;
- A podium to a height of RL29m;
- A landbridge to a height of RL19m; and
- Up to 150 vehicle car parking spaces.

Consultation with the residents of the Astoria Building, undertaken in the first phase of the project, was supportive of the northern tower option given its limited impact on views between the two existing Darling Park towers. There was a clear preference that no views were affected. It is acknowledged that the proposed revision to the location of the tower will cause additional view impacts for residents of the Astoria building. These impacts are assessed within the View and Visual Impact Assessment at **Appendix G**.

Based upon improvements possible to the publicly accessible open space and the broader benefits that amended Concept Proposal provides to workers, visitors and tourists, the Central Tower option is the preferred option and has been assessed within this EIS.

Requirement	Location in	Environmental Assessment
<p>operation of the staged development;</p> <ul style="list-style-type: none"> demonstrate how the proposed development responds to industry best practice sustainable building principles and improves environmental performance through energy efficient design, technology and renewable energy; and provide an integrated Water Management Plan, including an assessment of water demand, alternative water supply, and proposed end uses of potable and non-potable water, water sensitive urban design and water conservation measures. 		
<p>3. Development Staging</p> <p>The EIS shall set out the staging of the proposed redevelopment including timing of public domain works and pedestrian connections to the CBD and interim land use opportunities on parts of the site awaiting development.</p> <p>The EIS shall also set out those parts of the development subject to future applications, including works outside of the site boundaries and the Darling Harbour site identified in State Environmental Planning Policy (State and Regional Development) 2011.</p>	Section 4.11	Appendix Y
<p>4. Land Use</p> <p>The EIS shall address the proposed land use mix, compliance with the objectives of the Darling Harbour Development Plan No. 1 and demonstrate how the proposal will enhance the tourist, recreational, entertainment, cultural and commercial character of Darling Harbour.</p>	Section 7.4.2	N/A
<p>5. Design Excellence, Built Form and Public Domain</p> <p>The EIS shall:</p> <ul style="list-style-type: none"> demonstrate the process for achieving design excellence and how the proposed envelope will deliver design excellence in the future stage/s; 	Section 4.7	Appendix C
<ul style="list-style-type: none"> address design excellence of the building and public realm, with specific consideration of the overall site layout, siting and design, orientation, connectivity, activation, open spaces and edges, overshadowing, facades, massing, setbacks and building articulation; 	Section 4.2, 4.6, 7.6, 7.7	Appendix C and Section 4.0 of Appendix B of the original EIS
<ul style="list-style-type: none"> address the height, bulk and scape of the development within the context of the locality including a comprehensive options analysis for the built form, exploring a range of heights, tower locations and built forms, with justification of the selected option based on a thorough consideration of the benefits and potential impacts of each option; 	Section 2.4, 7.6	Appendix C and Section 2.0, 4.1 of Appendix B of the original EIS
<ul style="list-style-type: none"> address how the proposal fits with the existing context and current and future desired character of Darling Harbour through the development of urban design and public domain guidelines; 	Section 4.2	Appendix C and Section 3.0 of Appendix B of the original EIS
<ul style="list-style-type: none"> address and respond to comments and recommendations from SHFA's Design and Development Advisory Panel; 	Section 4.10. 3.0, 6.0	Appendix C
<ul style="list-style-type: none"> provide a framework for public domain and public access upgrades across the site and address opportunities to enhance connections with Darling Harbour, the Sydney CBD and Barangaroo; 	Section 4.2, 7.9, 7.15	Appendix C and Appendix O
<ul style="list-style-type: none"> address the relationship of the public domain with the renewal of marine 	Section 7.25	Appendix C and

Requirement	Location in	Environmental Assessment
structures being undertaken by SHFA, including opportunities and constraints;		Appendix O
<ul style="list-style-type: none"> demonstrate how the proposal identifies and is well integrated into key pedestrian desire lines to the surrounding area and critical pedestrian, tourist and commuter links between SICEEP, Darling Harbour, Barangaroo, Pyrmont and the Sydney CBD; and 	Section 7.15	Appendix C and Appendix O
<ul style="list-style-type: none"> provide a detailed visual impact analysis, which considers the impact of the proposal when viewed from the public domain and key vantage points surrounding the site, including the Sydney CBD, Pyrmont, Darling Harbour and Pyrmont Bridge, including an assessment of any view loss impacts. 	Section 7.8	Appendix G
6. Environmental Amenity		
The EIS shall examine and address:		
<ul style="list-style-type: none"> solar access, 	Section 7.7	Appendix C
<ul style="list-style-type: none"> acoustic impacts (construction and operational), 	Section 7.12	Appendix L
<ul style="list-style-type: none"> reflectivity, 	Section 7.13	Appendix M
<ul style="list-style-type: none"> overshadowing of public places (including The Boulevard, Tumbalong Green, the foreshore walk and the proposed Town Hall Square) and nearby existing and proposed residential uses, 	Section 7.7	Appendix C
<ul style="list-style-type: none"> wind, 	Section 7.14	Appendix N
<ul style="list-style-type: none"> view loss, 	Section 7.8	Appendix G
<ul style="list-style-type: none"> visual privacy, 	Section 7.19	-
<ul style="list-style-type: none"> emissions (including the Cross City Tunnel Vent Stack and Darling Park Tunnel), 	Section 7.23	Appendix Z
<ul style="list-style-type: none"> noise and vibration impacts to the surrounding area. 	Section 7.12	Appendix L
7. Heritage	Section 7.16	
The EIS shall:		
<ul style="list-style-type: none"> provide a detailed Heritage Impact Statement (HIS) that identifies and addresses the impacts of the proposal: <ul style="list-style-type: none"> on any archaeology protected under the Heritage Act 1977 on the heritage significance of the site and adjacent area, including any built and landscape heritage items, conservation areas, views or settings, and in particular Pyrmont Bridge on places, items or relics of significance to Aboriginal and non-Aboriginal people against any endorsed conservation management plans for heritage items in the vicinity of the site address opportunities for heritage interpretation within the public domain. 		Appendix Q Appendix R Appendix S Appendix T
8. Transport and Accessibility (construction and operation)	Section 7.11	Appendix I1
The EIS shall include a Traffic and Transport Impact Assessment providing an assessment of the following:		
<ul style="list-style-type: none"> current daily and peak hour vehicle, public transport, pedestrian and bicycle movements, together with the cumulative impacts of existing, proposed and approved developments in the area, and existing traffic and transport 		

Requirement	Location in	Environmental Assessment
<p>facilities provided on the road network located adjacent to the proposed development;</p> <ul style="list-style-type: none"> operation of existing and future transport networks including the light rail, ferry and bus networks and the CBD and South East Light Rail (CSELR) and their ability to accommodate the forecast number of trips to and from the development; estimated total daily and peak hour trips likely to be generated by the proposed development, including vehicle, public transport, pedestrian and bicycle trips; existing and future performance of key roads and intersections providing access to the site (including Harbour Street, Market Street and the Western Distributor), and any road/intersection upgrades required to accommodate the development. using modelling and analysis supported by RMS; measures to be implemented to encourage users of the development to make sustainable travel choices, including walking, cycling, public transport and car sharing, such as the provision of end-of-trip facilities for workers and visitors; appropriate provision of on-site bicycle parking, and how bicycle provision will be integrated with the existing bicycle network; details and justification for the proposed number of car parking spaces addressing consistency with relevant parking codes; site access requirements; likely future servicing requirements; road safety assessment for any proposed advertising signage, and-lighting displays and reflectivity in visible on roads; and 		
<ul style="list-style-type: none"> likely peak hour construction and servicing vehicle movements and access arrangements and the impacts of this traffic and the cumulative impact from surrounding development sites on the local road network and potential conflicts with other road users. 	Section 7.22	Appendix I2
<p>9. Western Distributor The EIS shall:</p> <ul style="list-style-type: none"> provide an analysis and justification for the development over the Western Distributor (including the road reserve) and Wheat Road, including consideration of pedestrian desire lines between the CBD and Darling Harbour, benefits of providing an additional access point and potential impacts; and address the impact of development on the structural stability of the Western Distributor, horizontal and vertical clearances and the ability for Roads and Maritime Services to carry out improvement works. 	<p>Section 7.11.4, 7.20</p> <p>Section 7.11.4, 7.20</p>	<p>Appendix K Appendix J1 Appendix W Appendix B</p> <p>Appendix J1 Appendix K Appendix W Appendix B</p>
<p>10. Drainage, Flooding, Climate Change and Sea Level Rise The EIS shall:</p> <ul style="list-style-type: none"> identify and address the potential flood risk from groundwater, wastewater, stormwater, acid sulphate soils and sea level rise on the site; and include proposals to mitigate any potential impacts, such as opportunities for water sensitive urban design within the public domain and landscaping and any other water conservation measures. 	Section 7.24	Appendix AA
<p>11. Utilities The EIS shall:</p> <ul style="list-style-type: none"> in consultation with relevant agencies, address the existing capacity and any augmentation requirements of the development for the provision of utilities, including staging of infrastructure; and provide details of how infrastructure assets of various utility stakeholders will 	Section 7.21	Appendix X

Requirement	Location in Environmental Assessment	
be protected or relocated during the demolition and construction of the project.		
12. Construction Management The EIS shall provide a preliminary construction management plan which: <ul style="list-style-type: none"> identifies if any cranes will be required to operate within the Obstacle Limitation for Sydney Airport and if any separate approval is required; identifies management measures for potential impacts of construction on surrounding areas, such as noise and vibration, air quality and odour impacts, dust emissions, water quality, stormwater runoff, groundwater seepage, soil pollution and construction waste; and outlines a community consultation, notification and complaints handling strategy. 	Section 6.2.11 Appendix 7.12, 7.22, 7.23	Appendix Y Section 6.3.3 of Appendix Y
13. Contributions and/or Voluntary Planning Agreement The EIS shall address the provision of public benefit, services, infrastructure and any relevant contribution requirements to be agreed with SHFA, including opportunities to provide community uses, start up office space or other public benefits within the development.	Section 4.12	N/A
14. Pre-submission consultation statement The EIS must include a report describing pre-submission consultation undertaken, including consultation with the local community, issues raised during that consultation and how the proposal responds to those issues.	Section 3.0, 5.0, 6.0	Appendix E and Appendix T of the original EIS

2.6 Planning Approvals Status

This SSDA is made under section 83B of the EP&A Act and seeks approval for the Concept Proposal for the entire Site.

More specifically this Concept Proposal includes establishing land uses, gross floor area, building envelopes, publicly accessible open space concept, pedestrian and vehicle access and circulation arrangements and associated car parking provision.

A detailed development application (Stage 2 DA) will follow and will seek approval for the detailed design and construction of all or specific aspects of the proposal in accordance with the approved staged development application.

The Department provided the Secretary's Environmental Assessment Requirements (SEARs) to the applicant for the preparation of an Environmental Impact Statement for the proposed development on 23 June 2016. This report has been prepared having regard to the SEARs as relevant.

2.7 Other Approvals

In addition to the approvals noted elsewhere in this document, additional approvals will be required in order to permit the proposed development to occur. These approvals may include, but are not limited to:

- Sydney Harbour Foreshore Authority Regulation under clause 4 (for commercial activities and uses in Darling Harbour);
- Roads Act 1993 (including Section 138 approvals) for works above a public road;
- Protection of the Environment Operations Act 1997 (including environmental protection licences) for undertaking potentially polluting „scheduled“ activities;
- Sydney Water Act 1994 under Section 73 (compliance certificate):
- Referral to NSW Roads and Maritime as a „Traffic Generating Development“ in accordance with State Environmental Planning Policy (Infrastructure) 2007;
- Application for a Controlled Activity licence under the Water Management Act 2000 for any aquifer interference required as a result of piling activities (this can be undertaken as Integrated Development). It is noted that no referral is required to the NSW Office of Water, as Sydney Harbour is not considered „waterfront land“ for the purposes of the Water Management Act 2000;
- Referral to NSW Heritage Office under Heritage Act 1977 for works to State-listed Pyrmont Bridge; and
- Referral to the Foreshore and Waterways Planning and Advisory Committee in accordance with Schedule 2 of the Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005, required for any works required below the Mean High Water Mark.

These additional approvals, and any other which may be required, will be sought at the appropriate time.

3.0 EIS and Exhibition Process

The Environmental Impact Statement (EIS) in support of the State Significant Development Application (SSDA 16_7684) for the Concept Proposal for the redevelopment of the Cockle Bay Wharf Site was publicly exhibited for a period of fifty (50) days inclusive between 15 December 2016 and 2 February 2017.

Public exhibition occurred in accordance with the requirements of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

Fifty one (51) submissions were received in response to the public exhibition of the EIS, including submissions made by government authorities and agencies, and the public, as follows:

- Government Authorities and Agencies – 8
- Members of the Public – 43

The key items raised can be broadly grouped into the following categories:

- Built form;
- Overshadowing;
- Views;
- Traffic generation and parking;
- Pedestrian access;
- Heritage;
- Social, community and health impacts;
- Economic impacts;
- Consultation;
- Amenity;
- Planning framework; and
- Open space upgrades.

In responding to and addressing the range of matters raised by government authorities and agencies, and the public, the proponent engaged a further range of experts to undertake a design excellence review process to help shape the amendments that are now proposed to the amended Concept Proposal (outlined further at **Section 3.0**).

A considered and detailed response to submissions has been provided in the accompanying documentation, with the key items outlined above expanded on in **Section 5.0** and **Appendix A** and **B**. The amended Concept Proposal that is outlined and assessed within this amended EIS includes amended plans which are submitted to the Department of Planning and Environment in accordance with Clause 55 of the EP&A Regulation.

4.0 Amendments to the Concept Proposal

This section outlines the changes that have been made to the Concept Proposal in consideration to the submissions received during the exhibition of the EIS.

4.1 Design Review Process

Following receipt of the submissions made during the public exhibition of the EIS, the proponent convened a highly experienced design committee. The committee held a number of charrette workshops to help shape the amendments that are now proposed to the Concept Proposal.

The design committee comprised representatives from each of the co-owners along with the following experts:

- **Architecture and Urban Design** –FJMT
- **Urban Design** – Tony Caro Architecture
- **Public Domain** – Aspect Studio
- **Pedestrian Modelling** – SpaceSyntax
- **Public Art and Cultural Contribution** – FutureCity
- **Technology Integration** – ARUP digital
- **Planning** – Ethos Urban

The design committee was convened by Brendan Blakely (Elton Consulting). Design committee meetings were held on the following dates:

- 6 April 2017: consultant briefing and introduction to the project.
- 12 April 2017: refinement of project vision and objectives, understanding the site constraints and opportunities.
- 19 April 2017: initial solutions and discussion of ideas.
- 27 April 2017: design workshop
- 4 May 2017: design workshop
- 11 May 2017: development of design principles.

The design committee allowed the Concept Proposal to be tested, with refinements and revisions made to the development envelope to address the opportunities and constraints of the Site, and respond to public and agency submissions.

4.2 Design Principles

The exhibited EIS included the following design principles, against which the then-proposed building envelope was designed:

1. **Improve connectivity between the City and Darling Harbour:** the development should address the existing separation/disjoin of Darling Harbour from the CBD by the Western Distributor and improve access for all users, as well the permeability and legibility of the western CBD via the Drutt Street and Market Street connections.
2. **Increase access to open space:** the development should provide an enlarged and improved open space which can be dedicated within a Stage 2 application to a range of uses, including green spaces, footpaths, activity areas, and alfresco dining.
3. **Renew existing buildings:** the development should provide retail, restaurant and recreation space to replace those proposed to be demolished within the existing Cockle Bay Wharf building. The replacement retail, restaurant and recreation areas should be in keeping with the recently revitalised Darling Harbour precinct and fit for the future users of the Darling Harbour waterfront.
4. **Support the Central Sydney Economy:** the development should support the Sydney CBD's role as a key economic driver by facilitating a significant commercial building.
5. **Enhance the Waterfront:** the development should exhibit Design Excellence and not detract from the important role of the Site within the context of the Darling Harbour waterfront.

Since the exhibition, and in consideration of the submissions received, the design review process led to the expansion of design principles into three sections as follows:

- **Urban Design Principles;**
- **Open Space Design Principles; and**
- **Built Form Design Principles.**

These principles define the design objectives for the Site and have informed the amended Concept Proposal. The amended built form envelope (described at **Section 4.6**) has been developed from these principles and forms the basis of the amended Concept Proposal. The revised design principles are outlined in more detail by FJMT at **Appendix C** and are summarised below.

Urban Design Principles

- Reconnect the city to the harbour;
- Reconnect Pyrmont Bridge to Market Street;
- Enhance the waterfront;
- Contribute to the cultural experience of Darling Harbour;
- Create a new publicly accessible open space on the waterfront;
- The open space is to be significant in size and location;
- Solar access to publicly accessible open spaces;
- Preserve and enhance public vistas;
- Enhance the Druitt Street connection;
- Preserve the heritage value of Pyrmont Bridge;
- Enjoyment of major public events;
- Improve connectivity and wayfinding;
- Consider the future removal of the Western Distributor; and
- Private view sharing.

Open Space Design Principles

- Create a new publicly accessible open space;
- City scale for Pyrmont Bridge and Market Street connection;
- Enhance the waterfront experience;
- Permeable and diverse;
- Connect to the water;
- Upgrade the promenade;
- Reimagine the Crescent garden;
- Clarity of public and private space; and
- 24-hour access to Darling Harbour.

Built Form Design Principles

- Setbacks;
- Tower separation;
- Tower address;
- Western Distributor constraints;
- Relationship to existing built form;
- Tumbalong Park Amenity;
- Future Town Hall Square overshadowing;
- Cockle Bay waterfront overshadowing;
- Residential solar access;
- Tower form;
- Impact on skyline;
- Human scale; and
- Wind impacts.

4.3 Key Design Changes

The design principles informed the following key revisions to the amended Concept Proposal:

- Moving the tower further south;
- Increase tower setbacks;
- Reduce the bulk of the tower envelope;
- Reduce the tower height;
- Reduce the envelope size;
- Reduce the podium scale at the Pyrmont Bridge and Druiitt Street connections;
- Opening the city to the harbour;
- Consolidated and clear publicly accessible open space;
- Direct access between open space and the waterfront;
- Upgrade the Druiitt Street connection; and
- Integration with Crescent Garden.

The key elements to the amended Concept Proposal are representatively shown at **Figure 1** below and discussed further by FJMT at the Architectural Design Report at **Appendix C**. An indicative artist's impression of the buildings facilitated by the amended Concept Proposal is provided at **Figure 2**.

Please note that all plans, diagrams, images and graphics within this report and the supporting documentation (excluding the amended Concept Proposal Envelope Plans prepared by FJMT for which are the proposed Stage 1 DA approval drawings) are indicative only and have been included to communicate the intent of the amended Concept Proposal, including representative building shapes, forms, locations, layouts and relationships. It is proposed that these representations, together with acceptance of the building envelopes and massing, and associated design principles, will then be used to inform the competitive design process to follow the Stage 1 SSD Determination. Design Excellence outcomes will form the basis of the Stage 2 SSDA, which will be separately exhibited to the proposal.

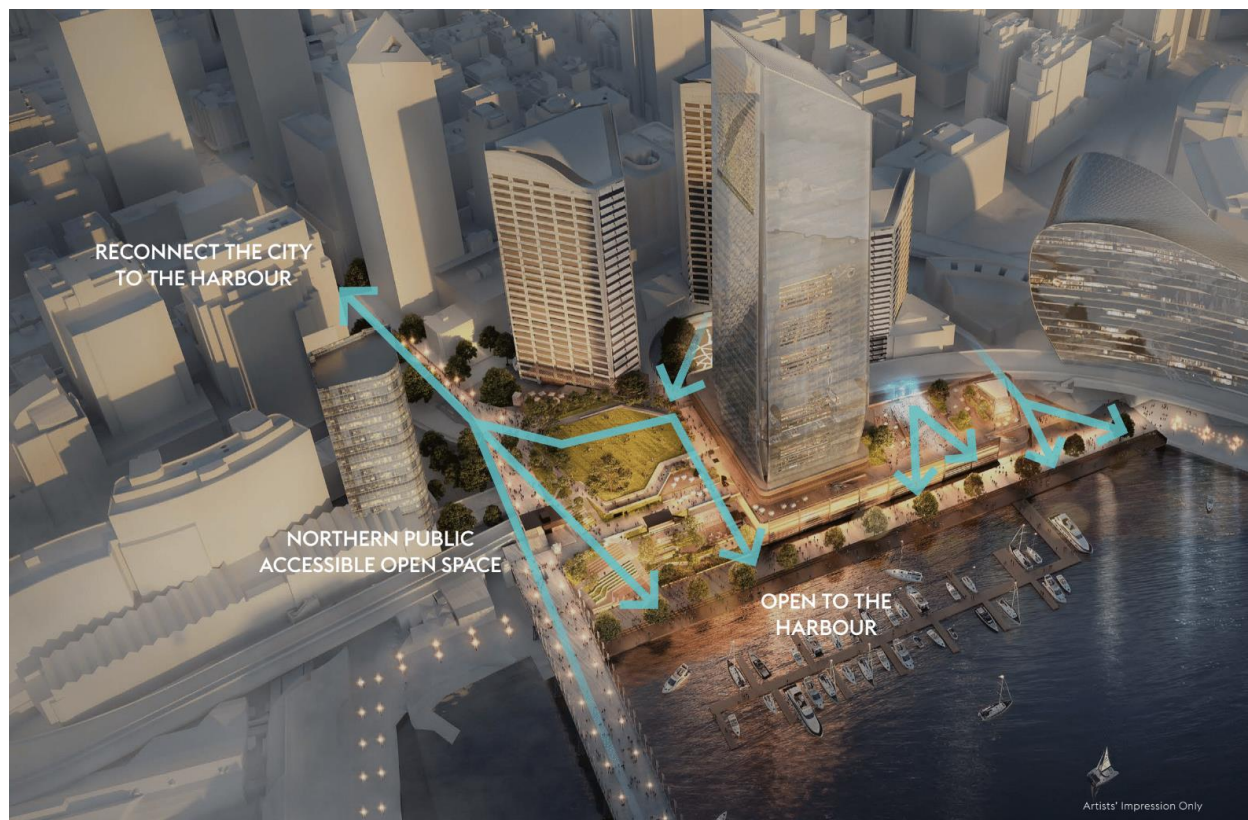


Figure 1 – Diagram of key elements

Source: FJMT



Figure 2 - Artist impression (subject to the outcome of the competitive design process) (note that the adjacent building (right of image) is not part of this development).

Source: FJMT

4.4 Amended Site Area

The amended Concept Proposal includes an amended site area as shown at **Figure 3** below.

The legal description of the Site is shown at **Table 2** below. The land is owned by the NSW State Government and administered for PNSW (formerly Sydney Harbour Foreshore Authority). A long-term lease exists between PNSW and the proponent, which includes most of the Site. The long-term lease expires in 2088. The Site has a total area of 24,900m² and is irregularly shaped. A survey plan is located at **Appendix F**.



Figure 3- Exhibited and amended Site Area

Source: Nearmap and Ethos Urban

Table 2 - Legal Description of the amended Site

Lot and DP	Owner	Lessee
Lot 10 DP801770	Sydney Harbour Foreshore Authority	DPPT operator Pty Ltd and DPT Operator Pty Ltd
Lot 17 DP 801770	Sydney Harbour Foreshore Authority	DPPT operator Pty Ltd and DPT Operator Pty Ltd
Lot 19 DP 801770	Sydney Harbour Foreshore Authority	DPPT operator Pty Ltd and DPT Operator Pty Ltd
Lot 30 DP 1007434	Sydney Harbour Foreshore Authority	N/A
Lot 32 DP 1007434	Sydney Harbour Foreshore Authority	N/A
Lot 33 DP 1007434	Sydney Harbour Foreshore Authority	N/A
Lot 34 DP 1007434	Sydney Harbour Foreshore Authority	N/A
Lot 35 DP 1007434	Sydney Harbour Foreshore Authority	N/A
Lot 37 DP 1007434	Sydney Harbour Foreshore Authority	N/A
Lot 42 DP 864696	Sydney Harbour Foreshore Authority	DPPT operator Pty Ltd and DPT Operator Pty Ltd
Lot 50 DP 1009561	Place Management NSW	DPPT operator Pty Ltd and DPT Operator Pty Ltd
Lot 56 DP 1009561	Sydney Harbour Foreshore Authority	N/A
Lot 60 DP 1009964	Sydney Harbour Foreshore Authority	DPPT operator Pty Ltd and DPT Operator Pty Ltd
Lot 61 DP 1009964	Sydney Harbour Foreshore Authority	N/A
Lot 63 DP 1009964	Sydney Harbour Foreshore Authority	N/A
Lot 64 DP 1009964	Sydney Harbour Foreshore Authority	N/A
Lot 65 DP 1009964	Sydney Harbour Foreshore Authority	DPPT operator Pty Ltd and DPT Operator Pty Ltd
Lot 11 DP 1125890	Sydney Harbour Foreshore Authority	N/A
Lot 2 DP 1048307	Sydney Harbour Foreshore Authority	Ausgrid
Lot 1010 DP 1147364	Sydney Harbour Foreshore Authority	N/A
Lot 2 DP 1199026	Sydney Harbour Foreshore Authority	N/A

4.5 Numerical Overview

Table 3 below provides a summary of numerical information relating to the exhibited Concept Proposal and outlines how this has changed within the modified scheme. It should be noted that Gross Floor Area (GFA) has been calculated in accordance with the definitions provided in the Standard Instrument – Principal Local Environmental Plan.

Table 3- Numerical Overview

Component	As Previously Exhibited	Amended Concept Proposal
Site Area	21,900m ²	24,900 m ²
Area		
Commercial (GFA)	• Up to 85,000m ²	• Up to 75,000 m ²
Retail (GFA)	• Up to 25,000m ²	• Up to 14,000 m ²
Open Space (m ²)	• Up to 12,000m ²	• Up to 15,000 m ²
Maximum Height:		
Tower	• RL 235m	• RL 195m
Deck	• RL 19m	• RL 19m
Podium	• RL 31m	• RL 29m
Setbacks		
Tower Setbacks	• Average setback of at least 8m and a minimum 3m from lease boundary/foreshore promenade.	• Average tower setback of at least 8m and minimum tower setback of 6m from lease boundary/eastern edge of the foreshore promenade.
Podium Setback	• Podium envelope aligns with the lease boundary on Ground. Podium articulation zone extends 3m west of existing lease line from level 1 – 3.	• Podium envelope aligns with the lease boundary on Ground. Podium articulation zone extends 3m west of existing lease line from level 1 – 3. • Note: The extent of the podium articulation zone (along the length of the foreshore) has reduced to increase Pyrmont Bridge setback. Concept Proposal includes consideration for the width of the boardwalk to increase by 5m expanding the foreshore width.
Car Spaces	Up to 200	Up to 150

4.6 Building Envelope

The amended Concept Proposal establishes a building envelope and areas for specific land uses. The key revisions to the envelope are outlined below.

4.6.1 Relocation and Refinement of Open Space

The Site has a great deal of potential to provide an excellent area of new publicly accessible open space, located conveniently between the Sydney CBD and the Darling Harbour waterfront. The exhibited EIS did not provide specific detail about the potential for provision of open space within the Site, deferring this to Stage 2 following a competitive design excellence process. Since the exhibition of the EIS, the future open space areas within the Site have been re-examined, relocated and refined providing greater detail at Stage 1 to better demonstrate the potential available in the competitive design process for well resolved publicly accessible open space.

The primary open space provided within the Site has been shifted to the north; the principal advantages are as follows:

- It will facilitate the creation of a large and consolidated open space that is more useable and more clearly 'public' in nature;
- It will allow for better solar access throughout the day, leading to a more useable open space that provides a greater level of amenity for the users of the open space and provides better connections between CBD and Harbour;
- It will enable a more direct connection from the CBD to the waterfront; and
- The co-location of the open space with the State heritage-listed Pyrmont Bridge allows for an enhanced interface with the heritage asset and allows for improved passive views to, and past, the bridge from new open space.

The indicative design outlined in the Architectural Design Report (**Appendix C**) presents design solutions for open space within the Site. The indicative design is shown at **Figure 4**, including:

- a new publicly accessible open space at the north of the Site that spans the Western Distributor (refer to **Figure 5**);
- terraced gardens with views over the harbour and steps down to the waterfront (refer to **Figure 6**);
- an active podium rooftop that could include outdoor spaces for outdoor dining, exercise, significant public art, ongoing exhibitions and programmed events (**Figure 7**);
- an expanded waterfront boardwalk promenade; and
- a reimagined Druitt Street pedestrian bridge that may feature playful and practical materials and lighting.

The amended Concept Proposal will provide highly utilised, connected, permeable and activated space that is well connected with city streets, Pyrmont Bridge and the waterfront through direct pedestrian connections. The final design is subject to the outcome of the competitive design process.

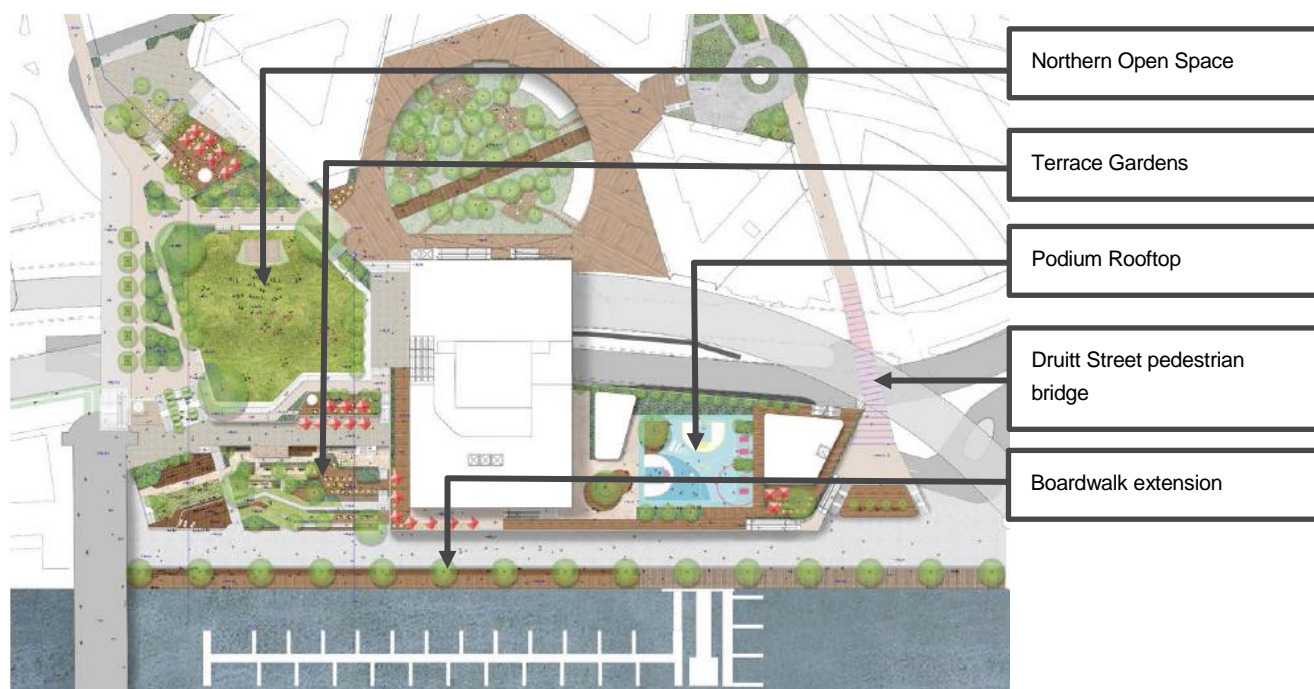


Figure 4 - Indicative open space layout (subject to the outcome of the competitive design process)

Source: FJMT



Figure 5 - Indicative view from the new northern publicly accessible open space toward Pyrmont Bridge and Pyrmont (subject to the outcome of the competitive design process)

Source: FJMT



Figure 6 - Artists impression of the terrace garden adjacent to the waterfront (subject to the outcome of the competitive design process)

Source: Aspect



Figure 7 - Artists impression of the podium rooftop (subject to the outcome of the competitive design process)

Source: Aspect

4.6.2 Publicly Accessible Open Space

As noted above, the open space provided within the amended Concept Proposal has been refined and relocated. The exhibited EIS documented up to 12,000m² of open space that was to be provided within the Site. A large proportion of that open space was to be located within an area south of the tower and west of the Crescent Garden, which could be interpreted as being partially privatised and enclosed in nature.

The amended Concept Proposal facilitates a variety of types and sizes of open space totalling up to a maximum of 15,000m² reflecting both a redesign and consolidation of the publicly accessible open space areas. The revised location allows for an area of consolidated open space with improved solar access and improved appreciation of Pyrmont Bridge and Darling Harbour from the Site.

Figure 8 and **Figure 9** provide an indicative potential outcome of the amended Concept Proposal, showing the northern open space crossing the Western Distributor, connection to the waterfront and Pyrmont Bridge (subject to the outcome of the competitive design process).

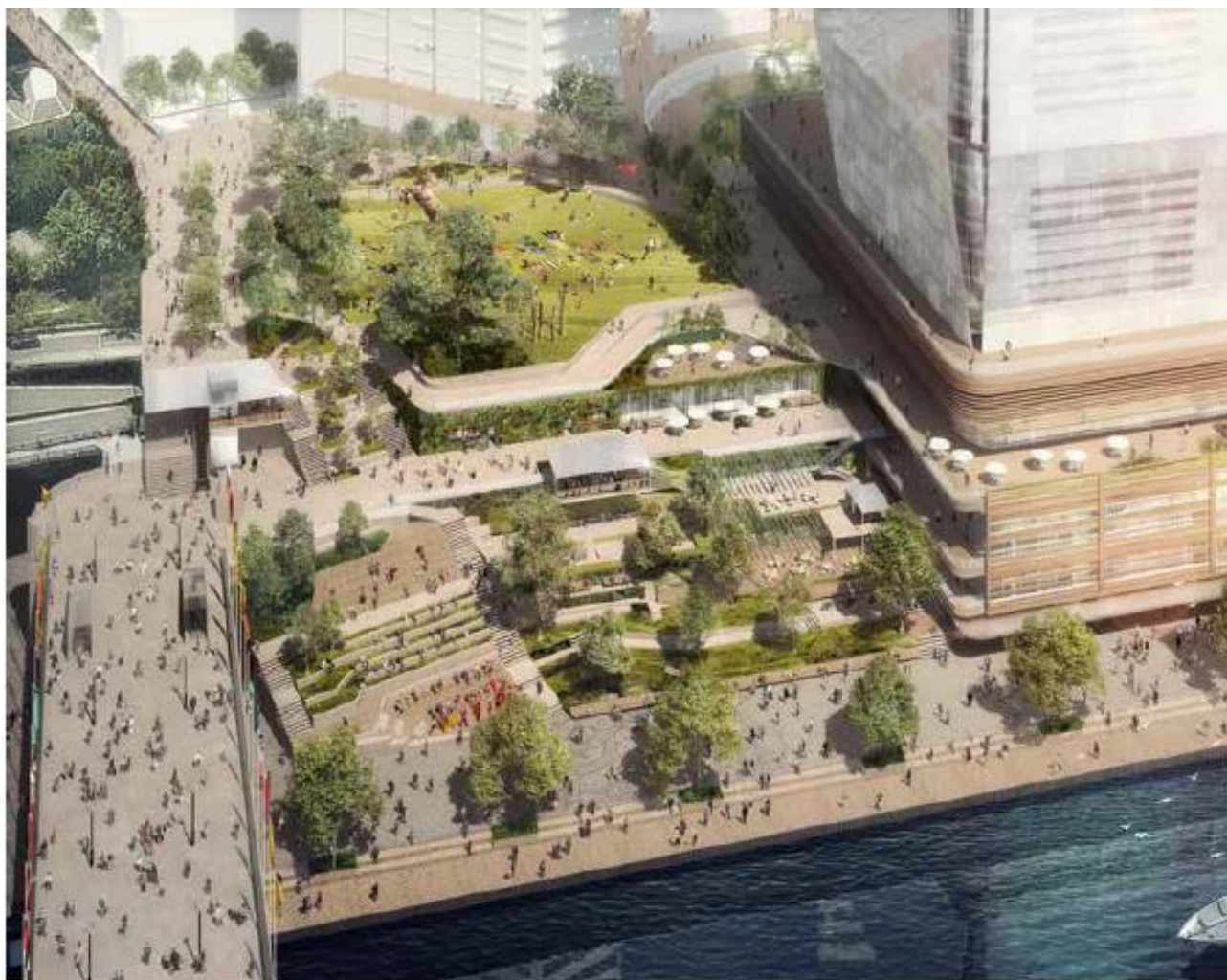


Figure 8 – New open space and indicative waterfront (subject to the outcome of the competitive design process)

Source: Aspect



Figure 9 - Section showing the landbridge over the Western Distributor and relationship to the water (subject to the outcome of the competitive design process)

Source: FJMT

4.6.3 Relocation of Tower

The tower element within the amended Concept Proposal has been relocated further south to allow space for the open space to move to the north (**Figure 10**). The impact of this relocation is that the overall height of the tower has reduced as the new location is more affected by the solar access plane to Tumbalong Park.

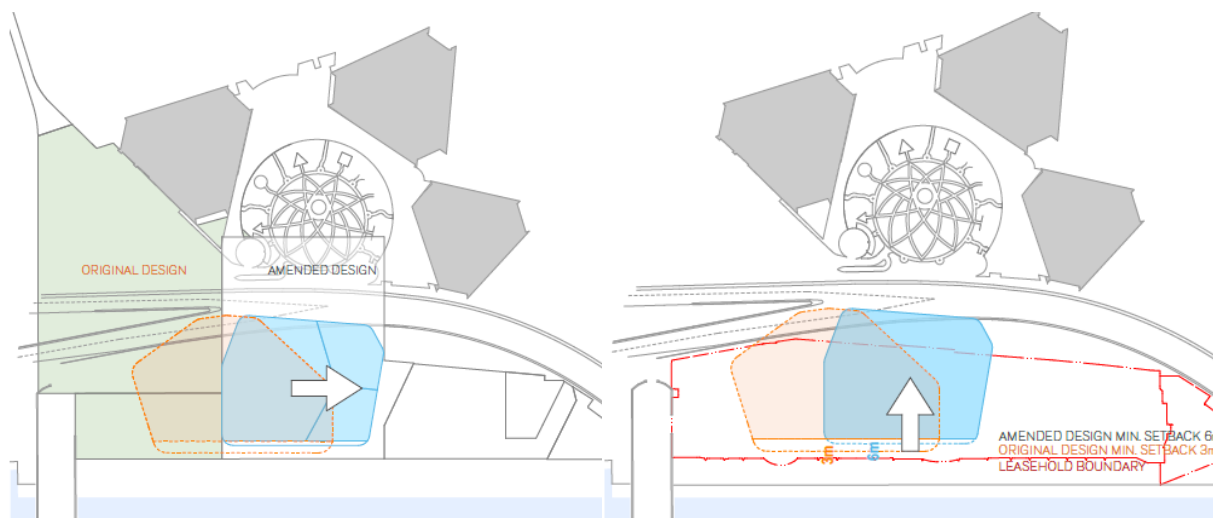


Figure 10 - Relocation of tower

Source: FJMT

4.6.4 Amended Building Envelope

The envelope of the amended Concept Proposal has significantly reduces and now provides:

- a maximum building tower height of RL195m (**Figure 11**) reduced by 40 metres;
- a maximum podium of RL19 (Podium Deck) and RL29m (Southern Pavilion) and landbridge height of RL19m;
- the tower envelope footprint has also reduced from 3,890m² to 3,575m² (noting that the floor plate of any building within the envelope would be further reduced by the proposed built form controls) (**Figure 11**); and
- the overall volume of the envelope has also reduced by 153,000m³ (16 percent) (**Figure 12** and **Figure 13**).

Approval is sought to also allow the Stage 2 SSDA to incorporate architectural roof features above the maximum building tower height subject to appropriate conditions, similar to Clause 5.6 'Architectural roof features' in the Standard Instrument and the *Sydney Local Environmental Plan 2012*.

The tower setback will continue to provide an average setback of at least 8m and will now include an increased minimum 6m setback from the lease boundary. The podium setback extent has been revised consistent with the amended plans. The existing width of public thoroughfare along the foreshore promenade is maintained for the full length of the Site.

The amended Concept Proposal includes provision for the existing on-water structures (boardwalk) to be extended to potentially cover the entire length of the Site frontage, thereby increasing the overall width of public thoroughfare past the Site and address perceived pre-existing capacity issues in the precinct.

The amended Concept Proposal's setbacks to Pyrmont Bridge to the north and to 'The Ribbon' development at the south have also been increased.

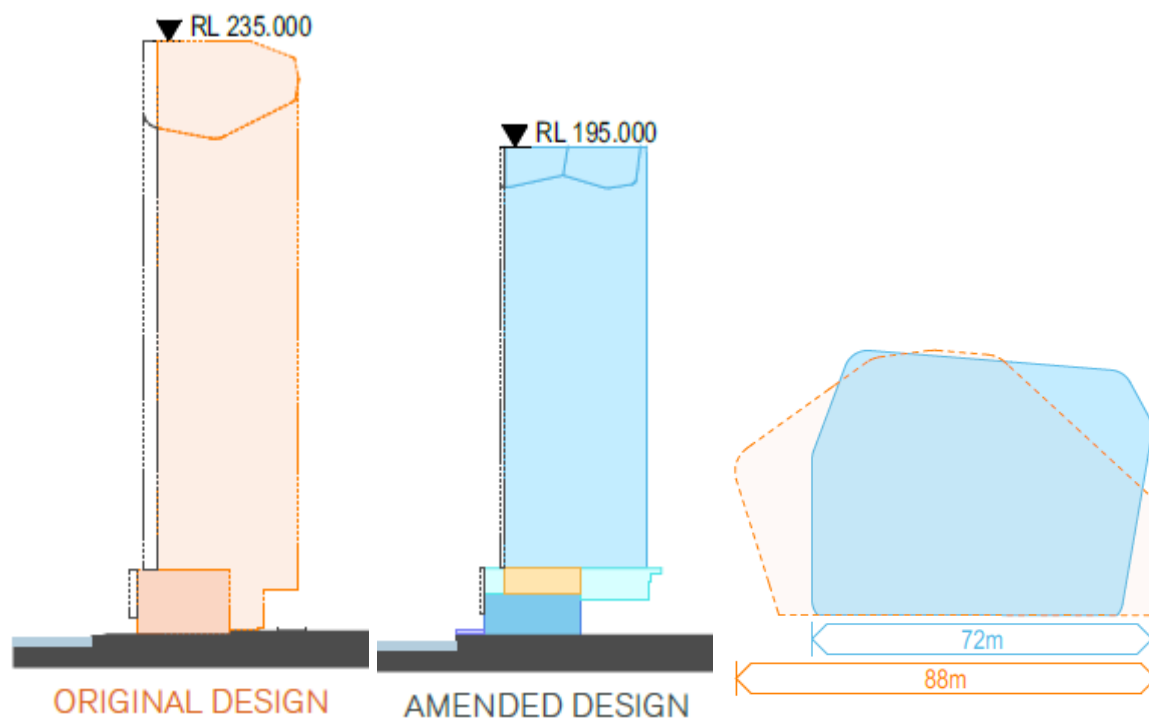


Figure 11 – Reduction in height (left) and envelope footprint reduction (right) (red original, blue proposed)

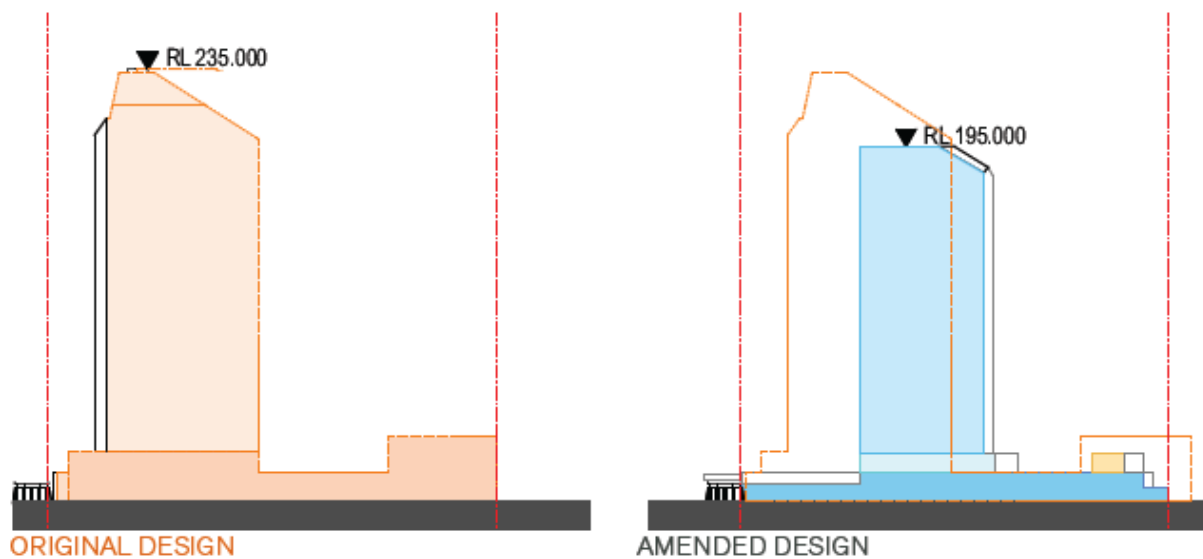


Figure 12 - Reduction in scale

Source: FJMT

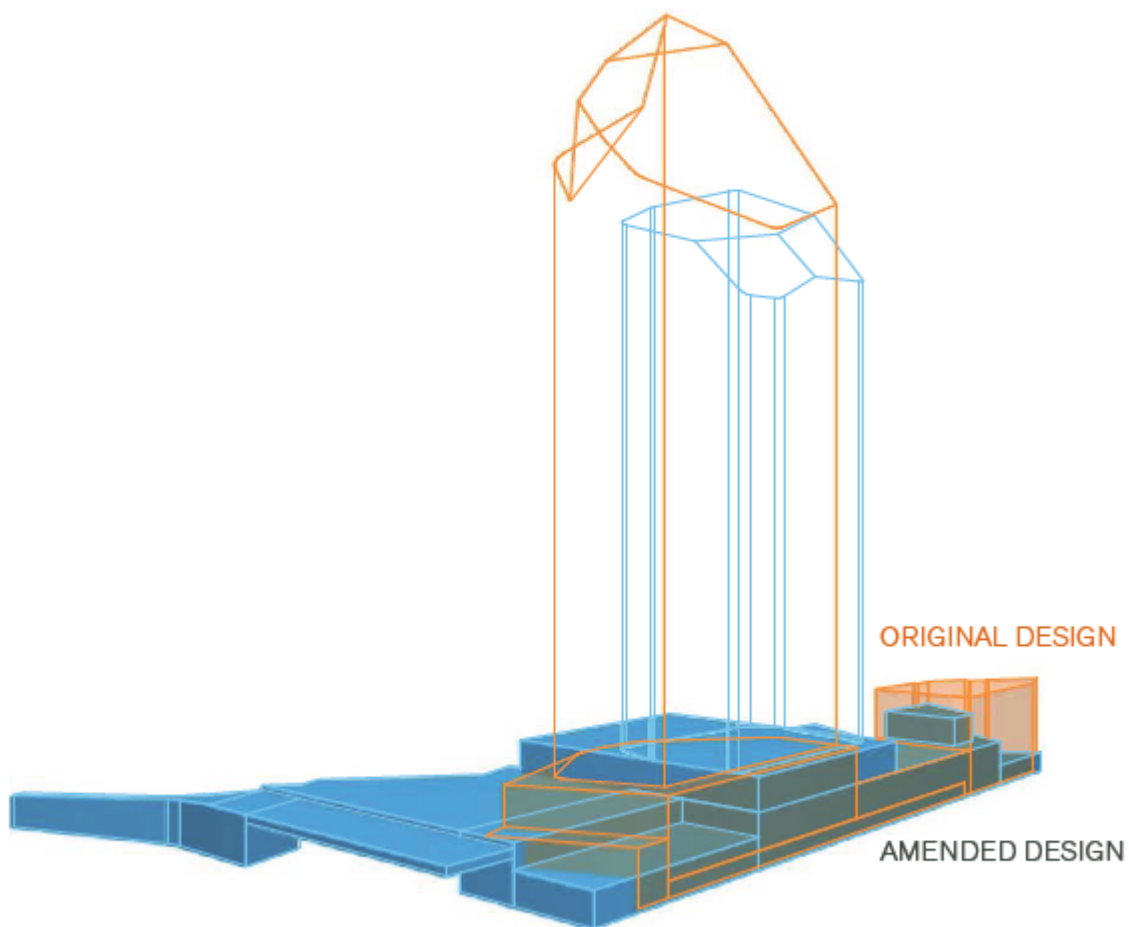


Figure 13 - Envelope reduction comparison

Source: FJMT

4.6.5 Land Use

No change is proposed to the mix of land uses within the amended Concept Proposal. The quantity of each land use has reduced while provision of open space has increased as shown in **Table 3**. An updated description of each of the land uses provided within the amended Concept Proposal is provided below.

Commercial

The amended Concept Proposal allows for up to 75,000m² of commercial floor space. This is reduced from the 85,000m² that was in the exhibited EIS. Commercial floor space will be located within the proposed tower form in the centre of the Site. The envisaged commercial floor area accommodated within the proposed building envelope will accommodate a Premium Grade commercial building.

Retail

The amended Concept Proposal allows for up to 14,000m² of retail floor space. This is reduced from the 25,000m² that was in the exhibited EIS. The location of the retail offering within the Site is broadly consistent with the exhibited Concept Proposal.

As with the exhibited EIS, the intent of the development is to refresh and enhance the existing retail offering at the Site, improving the existing retail experience and attract new people to the area by creating a precinct that is more in keeping with the renewed, diverse and modern, character of Darling Harbour.

4.7 Proposed Design Excellence Strategy

The proponents are committed to following a design process that will ensure that any building constructed in accordance with the amended Concept Proposal unambiguously exhibits design excellence in the broadest sense, including in urban design, landscaping, environmental design and sustainability, architectural design, engineering ingenuity, digital design, and workplace and human centric design, as well as place making and positive community outcomes. To this end a design excellence process will be followed that generally accords with the requirements of the *Director General's Design Excellence Guidelines (2010)*.

The proponents are world leaders in the realisation of global workplaces and city making spaces and their strong commitment to achieving design excellence is evidenced by its multitude of award winning developments, many of which are the result of design competitions including:

- Wynyard Place, Brookfield (Design Alternatives Process undertaken generally in accordance with the City of Sydney Design Excellence Policy)
- AMP Capital's Quay Quarter (City of Sydney Design Excellence Strategy)
- Brookfield's 237 St Georges Terrace, Perth (Master Builders Bankwest Excellence in Construction Award)
- GPT's 530 Collins Street, Melbourne (Australia's most Sustainable Development undertaken within an existing building, PCA Innovation and Excellence awards)
- 111 Eagle Street, Brisbane (GPT)
- GPT's Wollongong (Central Commercial Architecture: National Award Australian Institute of Architects)
- AMP Circular Quay (AIA Award for Enduring Architecture)

The Design Excellence approach proposed to be adopted by the proponent intends to follow a robust process that includes the selection of a world class design team that have a demonstrated capability to achieve excellence in the design of publicly accessible open space, waterfront development, commercial and retail precincts that are culturally and creatively activated within a harbour-front context.

The proponent is committed to design excellence and engaging a highly esteemed and skilled jury. All Jury members chosen will be well known to the Department of Planning; with Jury members, including the Chairperson, appointed by the proponent in consultation with the Department. Jury members are to:

- Represent the public interest;
- Be appropriate to the type of development proposed;
- Include registered architects with significant urban design experience;

- Include only persons who have expertise and experience in the development, design and construction professions and related industries.
- The Chairperson of the Jury will have expertise in architecture and urban design, and be a recognised proponent of design excellence in NSW.

The proponents appreciate the need for whole-of-site design approach in order to integrate all elements as part of the fundamental design. This approach is supported and has informed the approach of seeking a competition for all components of the development rather than separating out podium or public domain elements from the commercial and retail elements.

Despite this, the proponent intends to draft a Competitive Design Process Strategy that can allow for flexibility of outcome should separate architect entries demonstrate the best outcomes for different elements of the site (e.g. the podium/public domain as distinct from the commercial and retail elements). In this instance, the proponent would be open to award the design competition to two separate firms to develop the respective components. This will be further detailed in the Competitive Design Process Strategy.

The Competitive Design Process Strategy, along with a Competitive Design Process Brief will be submitted for endorsement by the DP&E following the determination of this application.

4.8 Parking

The exhibited EIS provided 200 car parking spaces within the Site. This has been reduced by 25 percent to a maximum of 150 car spaces within the amended Concept Proposal.

4.9 Wheat Road

Wheat Road is proposed to be reconfigured and closed through the Site. All ingress to the Site will be via a new connection from Harbour Street to Wheat Road (at the northern end of the Site). Egress from the Site will be at the northern end of the Site (car park, loading docks and set down pick up area) to Shelley Street (via Wheat Road north) and at the southern end of the Site (car park only) to Harbour Street (left turn only). Suitable access will be maintained for adjacent owners at all times.

4.10 Owners Consent

It is noted that PNSW has advised the Department that they do not object to the continued assessment of the amended Concept Proposal. It is expected that PNSW will provide landowners consent to the Department prior to determination of the amended Concept Proposal.

4.11 Development Staging

An Indicative Staging Strategy is included within the Preliminary Construction Management Plan, included as **Appendix Y**. Although future development applications would be accompanied by a detailed staging plan, at this stage the intent of the development is to:

- Maintain pedestrian access from the CBD to the waterfront throughout the development;
- Arrange suitable traffic diversions for any required road closures; and
- Separate pedestrians from development sites with appropriate hoarding.

Development of the Site would be facilitated by a future Stage 2 (detailed) DA. It is currently anticipated that proposed development works would be delivered within a number of concurrent construction phases. This will allow the envisaged overbridge and the envisaged tower to be delivered concurrently, thereby expediting delivery of the precinct and reducing the disruption caused by the construction process. This will be confirmed within the Stage 2 application.

The indicative construction management plan demonstrates that existing improvements on the Site would be demolished from south to north. Access from the CBD to Cockle Bay would be able to be maintained, either via the Market Street bridge, or via the Druiitt Street bridge.

4.12 Contributions

The applicant is responsible for a lease of the Site from NSW Government Property (through PNSW). The proposed development will be undertaken in accordance with the applicant's lease, which includes a financial contribution.

In addition to the financial contribution paid to the NSW Government under the applicant's lease of the Site, significant upgrades to the open space both within, and surrounding, the Site will be facilitated by the amended Concept Proposal.

Although details of the significant upgrades proposed will be finalised within the Stage 2 development application, the open space upgrades related to the proposed overbridge and improved pedestrian access will cost the applicant tens of millions of dollars. The upgrades will include a new urban park space, new public art, and ongoing maintenance of the new space. Details of the proposed upgrades will be provided in the future Stage 2 application.

A number of potential land uses are possible on the Site, some of which would provide a community benefit. These potential community benefits could include space for childcare facilities, start-up offices, open space activations, public art or a number of other options. The details of future land uses proposed on the Site will be provided as part of the detailed design within the Stage 2 Development Application.

5.0 Consultation

The proponent undertook extensive consultation with community and stakeholders in preparation for the original EIS. The findings of engagement activities was summarised in the Pre-submission Stakeholder and Community Engagement Report prepared by Newgate Engage (Appendix T of the original EIS).

A Supplementary Consultation Report has been prepared by Newgate Engage (**Appendix E**). The report provides a summary of community and stakeholder engagement activities that have occurred following exhibition of the original EIS. The report outlines key items raised during consultation and the proponent's consideration of these.

Following exhibition of the EIS and review of the submissions received by the public and government agencies the proponent has met with a number of neighbours including:

- A range of tenants in the existing Darling Park towers;
- Merlin Entertainment; and
- Astoria Tower (newsletters and phonecalls); and
- Grocon (IMAX Theatre), as proponent of the Ribbon project.

The proponent has also met with the following State and local government agencies:

- Office of the Minister of Finance ;
- Office of the Minister of Property;
- NSW Road and Maritime Services;
- The Department of Planning and Environment;
- The Sydney Harbour Foreshore Authority ;
- The Office of the Minister for Planning;
- Transport for NSW, CBD Coordination team; and
- Property NSW.

As outlined at **Section 4.0** as a result of the items raised during the exhibition period the co-owners elected to address concerns raised by amending the Concept Proposal. The amended Concept Proposal will be re-exhibited providing the public and agencies an opportunity to provide valued feedback. Following submission of the amended EIS a community and stakeholder engagement program will be undertaken by Newgate that will include:

- A newsletter distribution to over 2,000 local residents, local businesses and community groups, offering to meet with anyone interested in the proposal.
- Phone calls to all people who previously enquired about the Stage 1 DA and to community group leaders.
- Meetings with interested residential project neighbours and body corporates.
- Meetings with interested local businesses, including:
 - Cockle Bay Wharf tenants ;
 - Merlin Entertainment;
 - Grocon;
 - Helm Bar;
 - the International Convention Centre Sydney ;
 - Harbourside Shopping Centre/Mirvac;
 - Darling Quarter Management; and
- Meetings with interested local community groups, following the mail/email out of the project newsletter.
- The development of a project website will provide an online base for all information. All engagement collateral and activities will guide community members and stakeholder to this website.
- Astoria Tower residents will be offered a view impact analysis for property owners, to document the anticipated change in views and supplement the computer generated images in the current visual impact assessment.

6.0 Key items and Proponents Response

6.1 Overview

This section of the report provides consideration of the following key items raised by the Department, government agencies and authorities and by the public during the public exhibition of the SSDA, being:

- Built Form;
- Overshadowing;
- View Loss;
- Traffic Generation and Parking;
- Pedestrian Access;
- Heritage;
- Social and Public Benefits;
- Economic;
- Consultation;
- Amenity Impacts
- Planning Framework; and
- Open Space Upgrades.

Consideration of each of the individual submissions raised during the exhibition is provided in the **Appendix A** and **Appendix B**.

An overview of the parties who made submissions and their key items for consideration is provided below. Other items which require further assessment, such as assessments against statutory policies and plans are considered in **Section 7.0**.

6.1.1 Government Authorities and Agencies

Eight (8) submissions were received from Government agencies and authorities in response to the exhibition of the EIS. Specifically, responses were received from:

- Department of Planning and Environment (the Department);
- Place Management NSW (PNSW);
- Roads and Maritime Services (RMS);
- Transport for NSW (TfNSW);
- City of Sydney Council (Council);
- Office of Environment and Heritage (OEH);
- Heritage Council of New South Wales (the Heritage Council); and
- Environment Protection Authority New South Wales (EPA NSW).

6.1.2 Members of the Public

A total of 37 submissions were received from members of the public in response to the exhibition.

6.2 Key items

This section provides an overview of the key items raised by the submissions, along with consideration from the proponent in relation to each item. Detailed consideration to each submission can be found in **Appendix A** for the submissions received from members of the public, and within **Appendix B** for submissions received from government agencies.

6.2.1 Built Form

Item Summary

The built form of the proposed building was raised several times in submissions by Council and the public. These submissions centred on the following items:

- Local context – the proposed 235 metre tower was considered out of character with neighbouring buildings. The bulk of the building was recommended to be reduced to a scale that is more compatible with adjoining buildings and situated away from Pyrmont Bridge.
- The podium envelope – the western frontage of the podium (of 200m in length and up to 3-5 storeys in height) requires breaking up and better articulation.
- Relationship to the waterfront – the building's setback to the waterfront was requested to be increased.

Consideration

In consideration of the above points the proponent notes:

- The built form that will be possible within the envelopes provided by the Concept Proposal has been amended since the exhibition of the EIS with an overall reduction in the bulk and scale of the proposal. An assessment of the impacts of the amended Concept Proposal has been undertaken and can be located in **Section 7.0** of this document.

Context

- The amended Concept Proposal provides a proportional relationship to the existing buildings of Darling Park in consideration of height, separation and breadth so the precinct can be read as a cohesive whole. Building height and scale is further discussed at **Section 7.6**.
- The Concept Proposal has been amended since the exhibition of the EIS with an overall reduction in scale, including:
 - a 40 metre (17 percent) reduction in the height of the tower from RL235m to RL195m;
 - reduction in commercial GFA by 10,000m² (12 percent);
 - a reduction in retail GFA from 25,000m² to 14,000m² (44 percent);
 - reduction in the tower envelope footprint from 3,890m² to 3,575m² (8 percent); and
 - the overall volume of the envelope has reduced by 153,000m³ (16 percent).
- In addition to the reduction in height and GFA, any building facilitated by the amended Concept Proposal is subject to a maximum occupation of 60 percent of the tower envelope and further assessment as part of the Stage 2 DA. Resolution of detailed building design including articulation will be provided as part of the Stage 2 DA.

Podium

- The existing height of the Cockle Bay Wharf building is approximately RL19m, which is the proposed height of the podium deck envelope. Accordingly the proposed podium at Level 3 will be of a similar scale to the existing development on Site which is considered acceptable.
- The amended Concept Proposal has revised the bulk and massing of the podium envelope to strengthen its relationship to the public domain and Pyrmont Bridge. This has been achieved through the following amendments:
 - reduce the volume of the Southern pavilion by reducing the height from RL31m to RL29m with the introduction of a minimum setback of between 8.5m and 9.5m from the lease boundary;
 - increase the setback to the southern side of Pyrmont Bridge from 2m to 65m at Level 2 of the Podium;
 - provide a new 44m (east-west) separation between the northern podium envelope (above Level 1) and the waterfront;
 - reduce the length of the podium articulation zone along the foreshore from 209 metres to 144 metres, reducing the overall podium volume;
 - include provision to extend the boardwalk (5m wide) which would further increase the spatial relationship between the podium and waterfront; and
 - consolidate publicly accessible open space adjacent to Pyrmont Bridge.

Waterfront Relationship

- The Concept Proposal will not reduce the width of the existing foreshore promenade, and any expansion of the foreshore promenade (including completion of the timber waterfront boardwalk) undertaken concurrently with the development will provide an expansion of pedestrian capacity and an opportunity to enhance and improve the pedestrian experience and engagement with the waterfront.

6.2.2 Overshadowing

Item Summary

The submissions that were received during the exhibition of the EIS raised concerns about the overshadowing of the following areas:

- Tumbalong Park;
- The Foreshore Promenade;
- Pyrmont Bridge;
- Cockle Bay;
- Future Town Hall Square; and
- Private Residences.

Consideration

In consideration of the above points the proponent notes:

- The built form that will be possible within the building envelopes provided by the Concept Proposal has been amended since the exhibition of the EIS to reduce overshadowing impacts. The built form design principles adopted by the amended Concept Proposal include avoiding any overshadowing of Tumbalong Park and minimising overshadowing to public areas, including the potential future Town Hall Square. The impact of any overshadowing of public spaces will be offset by the provision of high quality open space created by the amended Concept Proposal.
- An assessment of the solar access and overshadowing impacts have been undertaken and can be located in **Section 7.7** of this document. The amendments to the design of the Concept Proposal will create a significant new open space that will enjoy solar access throughout the day. The Concept Proposal will facilitate a future development that will enhance the public domain and provide better access to the foreshore of Darling Harbour.

6.2.3 View Loss

Item Summary

In relation to view loss, the received submissions raised the following points:

- the Concept Proposal will have an unacceptable view impact from key public view points, including Pyrmont Bridge;
- the Concept Proposal will be an overly dominant feature in Darling Harbour that would obstruct views to the Sydney CBD; and
- the Concept Proposal will have an impact upon the views from local residences.

Consideration

In consideration of the above points the proponent notes:

- The built form that will be possible within the building envelopes provided by the Concept Proposal has been amended since the exhibition of the EIS in consideration of feedback and submissions. An assessment of the impacts of the amended Concept Proposal has been undertaken and can be located in **Section 7.0** of this document.
- The exhibited EIS assessed a Concept Proposal did not block any views from apartments at 222 – 228 Sussex Street. To consolidate open space to the northern part of the Site and improve views from Pyrmont Bridge and Market Street the tower has been relocated to the south; accordingly the amended Concept Proposal has more significant view impact on the apartments in this building. An updated Visual and View Impact Analysis (VIA) is provided as **Appendix G**, which provides an assessment of the impact on the views from the apartments at 222 – 228 Sussex Street.
- A VIA of the Concept Proposal was provided with the exhibited EIS (refer to Appendix X of that document). The VIA undertaken at that time considered the visual impact of the Concept Proposal on views from identified public areas. Following the amendments to the Concept Proposal now proposed, the VIA has been updated to consider the impacts of the amended Concept Proposal on public views, including views to the Sydney skyline. The updated VIA is provided in **Appendix G**.
- The arrangement of the Concept Proposal that was assessed within the exhibited EIS had been designed to protect as far as possible the east-west views between the city and Darling Harbour. Compared to the exhibited Concept Proposal, the amended Concept Proposal has a less significant view impact on east-west views along Market Street as the tower has been relocated to the south and away from Market Street, further, the introduction of a significant area of publicly accessible open space adjacent to Pyrmont Bridge will create a strong link between the Sydney CBD and Darling Harbour and act as an interface between the two areas, encouraging pedestrian movement and activating the public domain. An updated VIA is provided as **Appendix G**.
- The updated VIA (**Appendix G**) demonstrates that this concept proposal will not only be consistent with the CBD skyline, but will also benefit the visual landscape of the area by delivering a landmark building that will demonstrate design excellence with the envelope providing the conditions for a competitive design process to proceed. The provision of new publicly accessible open spaces will visually and physically connect pedestrians to and from Darling Harbour with the CBD.
- Any building facilitated by the Concept Proposal will be developed following a competitive design excellence process and will therefore have a beneficial impact upon the city skyline. It is anticipated that the Concept Proposal will revitalise Cockle Bay and improve the coherence and permeability of the public domain by creating new open spaces and reconnecting physical and visual links between the Sydney CBD and Darling Harbour.

6.2.4 Traffic Generation and Parking

Item Summary

In relation to traffic and parking, the received submissions raised the following points:

- Traffic congestion – the addition of car spaces will contribute to existing traffic congestion; and
- Wheat Road – existing congestion will be exacerbated by the reduced capacity of Wheat Road.

Consideration

In consideration of the above points the proponent notes:

- Wheat Road is proposed to be reconfigured and closed through the Site with all ingress and egress via a new connection to Harbour Street. RMS has indicated their support for the proposed road reconfiguration (refer to **Section 7.11**).
- An updated Traffic and Parking Assessment Report assessing the impacts of the amended Concept Proposal is provided as **Appendix I1**. In summary the local street network will continue to operate at a good level of service with minimal change to traffic flows on Wheat Road north and south of the Site. Traffic is further discussed at **Section 7.11**.
- As outlined in the exhibited EIS, future development of the Site will provide car parking in line with the *Sydney Local Environmental Plan 2012* (the LEP). Using the formula provided by the LEP the proposed development

could provide a maximum of 498 parking spaces (420 commercial and 78 retail spaces). The exhibited Concept Proposal provided only 40 percent of the number of spaces allowed by the LEP. The Concept Proposal therefore complies with the LEP if it were to apply to the Site. Notwithstanding the above, the amended Concept Proposal has further reduced car spaces by 25 percent to 150 spaces, which is significantly fewer than would be permitted by the LEP and the previous 200 spaces requested.

6.2.5 Pedestrian Access

Item Summary

In relation to pedestrian access, the received submissions raised the following points:

- Pedestrian amenity - more towers in the area are making pedestrian movement along Pyrmont Bridge less pleasurable;
- Pedestrian connection - the pedestrian connections through the Site should be identified; and
- Wayfinding.

Consideration

In consideration to the above points the proponent notes:

- The amended Concept Proposal will facilitate the reconnection of the city to the harbour through the creation of a new public accessible open space that spans the Western Distributor. It will encourage walking through improved permeability, wayfinding, ramps and footpaths and vastly improves the local ambience and the quality of the pedestrian experience. Pedestrian stairs will provide quick, convenient, and intuitive routes activated by landscaping and significant public art that ensure the pedestrian experience is more pleasurable than the existing situation.
- The amended Concept Proposal greatly improves public access through the Site with more permeable and direct travel paths that reflect desire lines of travel that would make the journey more direct including travel time savings of 1.34 min between the CBD and the waterfront and 0.47 min between the CBD and Pyrmont. The experience will also be improved with pedestrians able to traverse the open space area proposed north of the tower and with wayfinding through the tower (refer to the Pedestrian Assessment at **Appendix O**).
- The key connections facilitated by this Concept Proposal include:
 - a direct connection between Market Street and the waterfront (without needing to cross through private land or double back);
 - reconnection of the direct Pyrmont Bridge and Market Street connection; and
 - improvements to the Drutt Street pedestrian bridge.

Please refer to the Architectural Design Report provided at **Appendix C** for more information.

- The Concept Proposal presents a significant opportunity to improve wayfinding at the street level and allows for additional benefits to be realised through the co-location of the future open space and Pyrmont Bridge, and also through relocating the open space to the north of the Site, thereby maximising solar access. Specific wayfinding measures will be included within the Stage 2 DA and will be a key component included in the competitive design process brief.
- The commercial building has now been relocated further south, preserving and enhancing the view corridor between Pyrmont Bridge and Market Street.

6.2.6 Heritage

Item Summary

In relation to heritage, the submissions raised the following points:

- It is suggested that the proposal does not respect the heritage values of Pyrmont Bridge;
- A maritime archaeology statement is requested to be produced; and
- The Aboriginal Due Diligence Report provided within the EIS is not considered a substitute for an Aboriginal Cultural Heritage Assessment.

Consideration

In consideration of the above points the proponent notes:

- The amended Concept Proposal has increased the podium setback to Pyrmont Bridge, including a minimum 65m north – south setback above Level 1 (previously two metres). An updated Heritage Impact Statement has been prepared by Weir Philips and is provided as **Appendix S** which found the proposal would not have an adverse impact on the heritage value of Pyrmont Bridge.
- The amended Concept Proposal will not block existing view corridors towards Pyrmont Bridge. The amended Concept Proposal will facilitate the development of a new open space located adjacent to Pyrmont Bridge, from which views from Pyrmont Bridge can be enjoyed. In addition, the connection between Market Street and the Bridge will have a profoundly positive impact on the significance of the Bridge as it will restore its original approach path and allow the bridge to re-establish its role as a direct link between the City and Pyrmont.
- A Maritime Archaeology Assessment has been prepared and is provided at **Appendix R**. Assessment of Maritime Archaeology is provided at **Section 7.16.2**.
- GML Heritage has clarified that the original EIS labelled the Aboriginal Due Diligence Report incorrectly which has led to confusion over the appropriateness of the original report. GML has confirmed the Aboriginal Heritage Due Diligence Report is consistent with the request made by the Office of Environment and Heritage (OEH) and whilst an Aboriginal Cultural Heritage Assessment is not provided, the Aboriginal Heritage Due Diligence Report has been prepared in accordance with OEH guidelines for Due Diligence. Consistent with the level of detail provided in a Stage 1 DA, it is the first stage in a process of assessing the potential for the Site to contain Aboriginal heritage sites, places, objects and/or values and whether these would be impacted by the future development.

6.2.7 Social and Public Benefit

Item Summary

In relation to social and public benefit, the submissions raised the following points:

- Public utility – the proposal will restrict the use of Darling Harbour as a meeting point for cultural and historical events; and
- Social infrastructure and public benefit – the proposal will provide insufficient social infrastructure and public benefit.

Consideration

In consideration of the above points the proponent notes:

- The amended Concept Proposal will facilitate new publicly accessible open space, together with landscaping and improved permeability. It will strengthen the role that Darling Harbour plays as a meeting point for cultural and tourist events and it will provide increased opportunities for people to meet and attend events. An updated Vision Statement is provided at **Appendix D** which provides more details.
- The amended Concept Proposal will facilitate a future development that will have tangible social and public benefits including:
 - Providing engaging reasons for the vast numbers of workers and visitors in Darling Harbour and the CBD to come to Cockle Bay Wharf, spend time there and return;
 - Further diversify Cockle Bay Wharf as a destination that offers more than just retail;
 - Put Cockle Bay Park firmly on Sydney's cultural map through partnerships and brand association;

- Contribute to Darling Harbour's legacy of popular culture, thus strengthening the entire precinct value;
- Provide a key, new destination as part of the Nature and Culture Walk from Pyrmont, Darling Harbour, Barangaroo to Walsh Bay and Circular Quay;
- The opportunity to become a new cultural meeting point;
- Increased wellness and productivity through provision of active and passive spaces;
- Increased waterfront activation;
- Opportunities for the inclusion of public art;
- Opportunities for cultural activation; and
- Connection of public transport links to the waterfront.

6.2.8 Economic Impacts

Item Summary

In relation to economic impacts, the submissions raised the following points:

- Commercial incentive – the concept proposal prioritises commercial gain over social needs; and
- Employment and economic growth – the concept proposal will generate jobs and become a key economic driver for the precinct.

Consideration

In consideration of the above points, the proponent notes:

- The Concept Proposal will facilitate a future development that will have economic benefits including:
 - Significant investment in a strategic site that will result in social attractors and improved connectivity, generating significant economic and social returns and contributing to the vitality of 'global' Sydney;
 - Encourage retention of business tenants who want to be located within a key cultural destination in the CBD as an attractor to their employees;
 - Improved connectivity will assist in growing economic activity east of the Western Distributor;
 - Improve public access will increase the pedestrian catchment from 400m radius to 800m radius, effectively quadrupling the catchment of people visiting the area and improving social and business connections that can be made by the precinct;
 - Provide more incentive for visitors and tourist to go to Cockle Bay and the CBD, with increased potential for local spending, resulting in job growth;
 - The amended Concept Proposal has concentrated on providing an open space area that feels more 'public' rather than feeling partially privatised;
 - Amenity provided by the new publicly accessible open space will have a positive impact on surrounding property values and returns; and
 - Publicly accessible open space will provide health and wellness benefits to high value workers in Sydney CBD, reducing sickness and absenteeism, lowering stress and in turn reducing overall cost to the NSW health system.
- The amended Concept Proposal will facilitate the future development of significant new publicly accessible open space, together with landscaping and improved pedestrian connections which is a significant public benefit that will only be facilitated by the delivery of the commercial building. It will strengthen the role that Darling Harbour plays as a meeting point for cultural and tourist events, indeed it will provide increased opportunities for people to meet and attend events. An updated Vision Statement is provided as **Appendix D** which provides more details.
- The Concept Proposal is estimated to generate 500 jobs per annum in construction and 10,000 operational jobs across retail and commercial sectors. The development will be a key economic driver for the Darling Harbour precinct.

6.2.9 Consultation

Item Summary

In relation to public consultation, the submissions raised the following points:

- Public influence – public feedback has not been considered or incorporated into the proposal; and

- Until a publicly exhibited master planning process has been undertaken and approved for the Darling Harbour area, the development should not be approved.

Consideration

In consideration of the above point the proponent notes:

- The proponent consulted with the local community during the preparation of the EIS. A Pre-submission consultation report was prepared by Newgate Communications and was exhibited as Appendix T of the EIS.
- Since the exhibition of the EIS the proponent has undertaken further engagement to inform the amended Concept Proposal (refer to **Appendix E**). This is further detailed at **Section 5.0** of this report.
- The concept proposal has been amended significantly in consideration to community feedback received during exhibition of the EIS. This includes a significantly reduced building envelope and tower location, as well as the relocation, refinement and increased provision of open space.
- The proponent has engaged with PNSW during the preparation of the amended Concept Proposal. Engagement and discussion with PNSW will continue throughout the design development phase. In preparation of the amended Concept Proposal the proponent also convened an extensive and experienced design review process and charrette workshops to help shape the amendments that are now proposed to the Concept Proposal. The design review process led to the design principles to be reviewed and expanded into three sections as follows:
 - Urban Design Principles;
 - Open Space Design Principles; and
 - Built Form Design Principles.

These principles define the design objectives for the Site is the basis of the amended Concept Proposal. The built form envelope (described at **Section 4.6** of this report) has been developed based on these principles and forms the basis of the proposal. The revised design principles are outlined in more detail by FJMT at **Appendix C**.

- The amended Concept Proposal is consistent with the PNSW Framework for Landowners Consideration of State Significant Development. An assessment of the framework is provided at **Section 7.4.3**.
- Currently there is no masterplan that applies to the Site. This application has been made with reference to the relevant statutory plans and policies that apply to the Site as well as current and known development applications that will redefine the area. The Darling Harbour Development Plan (DHDP) is the principal planning instrument applicable to the Darling Harbour area, and more specifically the Cockle Bay Wharf Site. It provides a broad framework for development, principally through identifying permissible uses. The DHDP does not provide controls for building height, floor space ratio or setbacks within Darling Harbour. Accordingly, the Concept Proposal has been designed to respond to the Site's opportunities and constraints as outlined by FJMT within the Architectural Design Report (**Appendix C**) and the design principles from the design excellence review process as enunciated in the FJMT Design Report will feed into the competitive design process brief. An updated assessment of the amended Concept Proposal against these is also provided in **Section 7.0** of this document.

6.2.10 Amenity Impacts

Item Summary

In relation to amenity impacts, submissions raised the following points:

- The Concept Proposal has a scale that does not relate to Darling Harbour or the pedestrian environment and will detract from the public domain by contributing to wind and shadows; and
- The Concept Proposal will be unsympathetic to the waterfront.

Consideration

In consideration of the above points the proponent notes:

- The amended Concept Proposal will facilitate improved amenity through provision of generous new publicly accessible open spaces (up to 15,000m²) that will open up to the harbour to create visual and physical connections to the water. This is a significant improvement to the existing situation where Cockle Bay Wharf is hemmed in by the Western Distributor which acts as a barrier between the waterfront and the CBD.

- The tower has been relocated further south. The revised location allows for an area of consolidated open space with improved solar access and improved appreciation of Pyrmont Bridge and Darling Harbour from the Site.
- The amended Concept Proposal includes provision and recommendation to extend the existing timber boardwalk along the foreshore promenade. It will not reduce the width of the existing foreshore promenade, and any expansion will increase pedestrian capacity providing an opportunity to enhance pedestrian experiences and engagement with the waterfront.
- A Wind Impact Assessment of the Concept Proposal has been prepared by Cermak Peterka Petersen (CPP) and is included as **Appendix N**. Wind impact is addressed at **Section 7.14**. In summary, the assessment concludes that any potential wind impacts to pedestrian comfort in the public domain can be mitigated through the implementation of design features.
- An assessment of the solar access and overshadowing impacts have been undertaken and can be located in **Section 7.7** of this document. The amendments to the design will create a significant new open space that will enjoy solar access throughout most of the day. The Concept Proposal will facilitate a future development that will enhance the public domain and provide better access and solar access to the foreshore. By freeing up large sections of the Site at ground level for quality open spaces, the concept proposal will result in an increase in choices of available open spaces locally.
- The amended Concept Proposal has altered the extent of the podium envelope, particularly in relation to Pyrmont Bridge, where a minimum 65m setback is now provided at Level 2. This area is waterfront proposed to feature a landscaped terrace that will provide a green connection to the waterfront and promenade, effectively connecting the new northern open space above the Western Distributor and the waterfront. The amended Concept Proposal is a significant improvement on the existing situation and will be more sympathetic to the waterfront.

6.2.11 Planning Framework

Item Summary

In relation to the relevant strategic planning framework, the submissions raised the following points:

- Strategic planning guidelines – the concept proposal is not subject to a comprehensive strategic plan;
- Planning controls – the concept proposal should not be assessed until proper controls were put in place for the Darling Harbour precinct;
- Ownership – public ownership of the Site is important;
- Draft Central Sydney Planning Strategy 2016 – the concept proposal is not consistent with the principles of this strategy;
- Development standards – no specific development standards apply to the Site; and
- Height limit – the concept proposal exceeds the 156m Obstacle Limitation Surface for Sydney Airport.

Consideration

In consideration of the above points the proponent notes:

- The proponent has engaged with landowners PNSW during the preparation of the amended Concept Proposal. Engagement and discussion with PNSW will continue throughout the development application and detailed design development phases of the project. In preparation of the amended Concept Proposal the proponent convened an extensive and experienced design process and charrette workshops to help shape the amendments that are now proposed to the Concept Proposal. The design review process led to the design principles to be reviewed and expanded into three sections as follows:
 - Urban Design Principles;
 - Open Space Design Principles; and
 - Built Form Design Principles.

These principles define the design objectives for the Site and are the basis of the amended Concept Proposal. The built form envelope (described at **Section 4.6** of this report) has been developed based on these principles and forms a key element of this proposed amended Concept Plan. The revised design principles are outlined in more detail by FJMT at **Appendix C**.

- The public and government agencies have been consulted as part of the State Significant Development Application process. Feedback from submissions raised during the exhibition of the proposal have informed amendments to the Concept Proposal including reducing and relocating the building envelope volume and

increasing and consolidating publicly accessible open space in the northern part of the Site which will result in a significant new space directly connecting the harbour and CBD.

- The Site of the Concept Proposal will remain under government ownership and will continue to be subject to a leasing arrangement. No strata subdivision is proposed.
- The Draft Central Sydney Planning Strategy is a draft strategic planning document that has not been formally exhibited and which largely applies to land identified within the Sydney LEP, within Central Sydney. While the subject Site is outside this area, the Concept Proposal has considered the Strategy as part of the original EIS. It is largely consistent with key elements of the Strategy in that:
 - it will promote employment growth and capacity in the CBD with the delivery of up to 75,000m² of employment generating floor space;
 - the design positively responds to the context of the Site;
 - it will improve pedestrian connectivity between the CBD and Darling Harbour;
 - it will expand on the network of public spaces in central Sydney;
 - it will enable greater appreciation of heritage listed Pyrmont Bridge;
 - it will renew and revitalise the Cockle Bay Wharf precinct;
 - it will not materially impact solar access and overall amenity of Town Hall Square and Tumbalong Park; and
 - it will provide up to 15,000m² of new open space in the Sydney CBD.
- The DHDP is the principal planning instrument applicable to the Darling Harbour area, and more specifically the Cockle Bay Wharf Site. It provides a broad framework for development, principally through identifying permissible uses. The objectives of the DHDP are to encourage the development of a variety of tourist, educational, recreational, entertainment, cultural and commercial facilities, and to set out those uses which are deemed permissible. The Concept Proposal is consistent with these objectives.
- The DHDP does not provide controls for building height, floor space ratio or setbacks within Darling Harbour. Accordingly, the Concept Proposal has been designed to respond to the Site's opportunities, constraints and recent planning context of the revitalisation of Darling Harbour and other foreshore lands, as outlined by FJMT at the Architectural Design Report at **Appendix C**.
- A separate OLS and PANS-OPS approval from the Sydney Airport Corporation will be requested at the appropriate time.

6.2.12 Open Space Upgrades

Item Summary

In relation to the proposed open space upgrades, the submissions raised the following points:

- The proposed podium would extend over vital public open space to the South of the existing Druiitt Street footbridge.

Consideration

In consideration of the above points the proponent notes:

- The amended Concept Proposal will facilitate the future development of up to 15,000m² of new publicly accessible open space, together with landscaping and improved pedestrian connections which will greatly improve the diversity and offering of open space in the precinct.
- The provision of future open space will be a subject of the Stage 2 detailed development application. The design of future open space will be guided by the Architectural Design Report (**Appendix C**), the Vision Statement (**Appendix D**), and has been guided by the design review processes outlined in **Section 4.1** to ensure that the future open space exhibits design excellence and meets the needs of future users of the open space.
- The Concept Proposal has been amended in consideration to submissions received during the exhibition of the EIS and the extent of the podium at the south of the Site has been reduced to provide increased separation to the Ribbon Hotel of 30-60 metres. It is noted that a landing to the Druiitt Street pedestrian bridge is proposed between the podium and Ribbon Hotel, in the same location as the existing Druiitt Street stairs.
- The amended Concept Proposal provides additional detail to define and improve the connection between Darling Harbour and the CBD via the Druiitt Street pedestrian bridge. Please refer to the Architectural Design Report provided at **Appendix C** for more information.

7.0 Environmental Assessment

This section contains an assessment of the environmental effects of the amended Concept Proposal as described in the preceding chapters of this report and within the EIS for SSD 16_7684, which was exhibited between December 2016 and February 2017.

Under Section 79C(1) of the EP&A Act, in determining a development application the consent authority should take into account a range of matters relevant to the development including the provisions of environmental planning instruments; impacts of the built and natural environment, the social and economic impacts of the development; the suitability of the Site; and whether the public interest would be served by the development.

7.1 Secretary's Environmental Assessment Requirements

Environmental Assessment Requirements for this application were issued by the Department of Planning and Environment (DP&E), on behalf of the Secretary, in June 2016. In October 2017, after reviewing a draft of this EIS, the DP&E confirmed that these SEARs remain relevant to the amended Concept Proposal.

The assessment of the environmental impacts of the amended Concept Proposal has been undertaken in accordance with the SEARs that were received at this time.

The amended proposal does not significantly impact on any matters of National Environmental Significance as defined under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). As such, no separate approval under the EPBC Act is considered necessary.

7.2 Statutory Compliance

7.2.1 State Significant Development

The EP&A Act establishes a specific assessment system to consider projects classed as State Significant Development (SSD). As noted, the amended Concept Proposal the subject of this DA is classed as SSD.

Section 83B of the EP&A Act relates to concept development applications. A concept development application is one that sets out concept proposals for the development of a site, and for which detailed proposals for separate parts of the site are to be the subject of subsequent development applications.

This development application is a Staged SSD Development Application (DA), comprising a Concept Proposal for the entire Site. A staged development application is commonly referred to as a 'Stage 1 Development Application' or a 'Concept Proposal'. These terms are used interchangeably throughout the consultant reports, but should be interpreted to mean 'concept development application' (for the purposes of section 83B of the EP&A Act) in each instance.

Section 83D of the EP&A Act provides that while any consent granted on the determination of a concept development application for a site remains in force, the determination of any further development application in respect of that site cannot be inconsistent with that consent.

This EIS has examined and considered, to the fullest extent possible, all matters affecting or likely to affect the environment by reason of the proposed development and those matters relevant to a concept development application. The EIS also provided an assessment of the Concept Proposal against the objects of the EP&A Act. No amendment proposed to the Concept Proposal within this amended environmental impact statement affects the assessment of the Concept Proposal against the objects to the EP&A Act that was undertaken at that time.

7.3 Compliance with Planning Policies

The proposed Concept Proposal is generally consistent with the provisions of the relevant planning policies identified in the SEARs, as detailed in the following sections and other supporting technical information appended to the report.

The proposal's consistency with the relevant strategies, policies and guidelines as set out in the SEARs is addressed at **Table 4** below.

Table 4 - Consistency with relevant strategies, policies and guidelines

Instrument/Strategy	Comments
Strategic Plans	
NSW Long Term Transport Masterplan	<p>The proposal addresses the objectives of this Plan given it will:</p> <ul style="list-style-type: none"> • Boost walking and cycling usage by providing a more permeable, connective and direct linkage between Darling Harbour and the CBD; • Through such interface improvements, improve sustainability and promote growth in the proportion of travel by active modes; • Provide a sustainable Premium Grade commercial office building in a highly accessible location; and • Assist in unclogging the CBD by supporting a reduced reliance on vehicular connections between surrounding employment and tourism hubs.
Sustainable Sydney 2030	<p>The proposal is in accordance with the Strategy in that it will:</p> <ul style="list-style-type: none"> • Help to reinforce the Sydney CBD as the heart of 'Global Sydney' – new and high-class commercial floor space additions will contribute to the improvement of the CBD's economic competitiveness against other interstate and international centres; • Strengthen Sydney's status as a global visitor destination by improving the connectivity and public domain between major CBD transport nodes and activity hubs, and the tourism and cultural infrastructure around Darling Harbour (particularly to the future Sydney International Convention, Exhibition & Entertainment Precinct); • Enhance the attractiveness and viability of inner-city walking and cycling as a means of transport; and • Support new development through the provision of high quality, green open space.
Sydney Development Control Plan 2012	<p>Part 2, clause 11 of the <i>State Environmental Planning Policy (State and Regional Development)</i> confirms that development control plans do not apply to State Significant Development Applications. The Sydney DCP therefore does not apply to the proposed development.</p>
Sydney Streets Design Code and Sydney Streets Technical Specification	<p>The proposed development is a Concept Proposal, which seeks consent for a building envelope and certain land uses. A future Stage 2 DA will ensure that future development on the Site meets the relevant technical requirements of this guideline.</p>
SICEEP Urban Design and Public Realm Guidelines (published by Infrastructure NSW)	<p>The Concept Proposal will increase the open space by up to 15,000m². The newly created publicly accessible open space will be designed to respond to the recent developments within Darling Harbour that have been guided by the SICEEP Urban Design And Public Realm Guidelines. An indicative Landscape Plan has been provided by FJMT within the Architectural Design Report at Appendix C. Detailed plans will be provided with the State 2 DA. This guideline is a non-statutory document.</p>
SHFA's Darling Harbour Public Domain Manual 2015	<p>The Concept Proposal will facilitate a future development that will increase the open space by up to 15,000m². Newly created publicly accessible open space will be treated as Public Domain and the future design of the open space will give consideration to SHFA's <i>Darling Harbour Public Domain Guidelines</i>. An indicative Landscape Plan has been provided by FJMT within the Architectural Design Report at Appendix C. Detailed plans will be provided with the Stage 2 DA.</p>
Development Near Rail Corridors and Busy Roads - Interim Guideline	<p>The proposed development is a Concept Proposal, which seeks consent for a building envelope and certain land uses. A future Stage 2 Development Application will ensure that future development on the Site meets the requirements of this guideline.</p>

Instrument/Strategy	Comments
Guide to Traffic Generating Developments	Schedule 3 of <i>State Environmental Planning Policy (Infrastructure) 2007</i> established development that should be referred to the RMS as a Traffic Generating Development. As the development facilitated by the proposed building envelope will deliver a commercial building with a floor area of more than 15,000m ² it will be a development to which this policy applies and will therefore be referred to the RMS.
Sydney City Centre Access Strategy	With walking the predominant mode of transport throughout the city centre, the proposal is consistent with the Strategy in that it will improve the safety, amenity and capacity for CBD based pedestrian journeys. Enhancing the access between Darling Harbour and Market and Druiitt Streets, the proposal will also better connect tourists and workers to Town Hall Station, future light rail stops along George Street, and a future metro station on Pitt Street. This will contribute to the growth of public transport patronage and the modal split of travel away from private car usage. A future Stage 2 Development Application will ensure that future development on the Site meets the requirements of this guideline.
The NSW Government Planning Guidelines for Walking and Cycling;	The proposal will improve walkability and cycle access across the City, offer a more legible and coherent connection between the CBD and Darling Harbour, and support a reduced reliance on private vehicles. A future Stage 2 Development Application will ensure that future development on the Site meets the requirements of this guideline.
Sydney's Light Rail Future	The proposed development is a Concept Proposal, which seeks consent for a building envelope and certain land uses. A future Stage 2 Development Application will ensure that future development on the Site meets the requirements of this guideline.
Sydney's Cycling Future	The proposed development is a Concept Proposal, which seeks consent for a building envelope and certain land uses. A future Stage 2 Development Application will ensure that future development on the Site meets the requirements of this guideline.
Sydney's Walking Future	The proposed development is a Concept Proposal, which seeks consent for a building envelope and certain land uses. A future Stage 2 Development Application will ensure that future development on the Site meets the requirements of this guideline.
NSW Bicycle Guidelines	The proposed development is a Concept Proposal, which seeks consent for a building envelope and certain land uses. A future Stage 2 Development Application will ensure that future development on the Site meets the requirements of this guideline.
City of Sydney Waste Minimisation in New Developments 2005	The proposed development is a Concept Proposal, which seeks consent for a building envelope and certain land uses. A Preliminary Construction Management Plan has been prepared by Multiplex and is provided as Appendix Y . That document provides an overview of the waste minimisation practices that will be put in place during the construction process. A future Stage 2 Development Application will ensure that future development on the Site meets the requirements of this guideline.
Interim Construction Noise Guideline	The proposal has been assessed with consideration of the Interim Construction Noise Guideline at Appendix L and Section 7.12 of this report.
CPTED	CPTED principles are addressed in Section 7.26 of this report. The proposed development is a Concept Proposal, which seeks consent for a building envelope and certain land uses. Further assessment of the future development against CPTED principles will be undertaken within the Stage 2 DA.
Heritage Council Guidelines Assessing the Significance of Archaeological Sites and Relics	The Heritage Council Guidelines are addressed in Appendix Q, R, S, T and Section 7.16 of this report.

Instrument/Strategy	Comments
Heritage Council Guideline on Heritage Curtilages, 1996	The Heritage Council Guidelines are addressed in Appendix Q, R, S, T and Section 7.16 of this report.
Heritage Council Guideline, Design in Context – guidelines for infill development in the Historic Environment, 2005	The Heritage Council Guidelines are addressed in Appendix Q, R, S, T and Section 7.16 of this report.
Healthy Urban Development Checklist	The proposal responds to the Healthy Urban Development checklist to present an opportunity to revitalise and renew Cockle Bay Wharf to better connect the city and Harbour and encouraging pedestrian connectivity and physical activity. The proposed use is consistent with the locality and would result in increased open space and the ability for city workers visitors to enjoy Darling Harbour and the waterfront.
Waste Classification Guidelines	The proposed development is a Concept Proposal, which seeks consent for a building envelope and certain land uses. A Preliminary Construction Management Plan has been prepared by Multiplex and is provided as Appendix Y . That document provides an overview of the waste minimisation practices that will be put in place during the construction process. A future Stage 2 Development Application will ensure that future development on the Site meets the requirements of this guideline.

7.3.1 A Plan for Growing Sydney

A Plan for Growing Sydney is the key Strategic Planning document for Metropolitan Sydney. The Plan sets the foundation for achieving region-wide outcomes in relation to the economy and employment centres and corridors; housing and transport; environment; parks and implementation and governance. The goals which support the overarching vision for Sydney to become a strong Global city and a great place to live are:

- A competitive economy with world-class services and transport;
- A city of housing choice with homes that meet our needs and lifestyles;
- A great place to live with communities that are strong, healthy and well connected; and
- A sustainable and resilient city that protects the natural environment and has a balanced approach to the use of land and resources.

A Plan for Growing Sydney outlines that action is needed to make available sufficient office space capacity in the Sydney CBD in 10 to 14 years. The CBD will need to expand its capacity by redeveloping existing buildings and growing upwards.

The plan notes that Sydney's appeal to international investment and skilled workers is driven by the diversity of activities which surround the commercial core. Providing a mix of commercial and retail activity, arts and culture, public spaces and parks contribute to Sydney's Global city reputation.

The Site is part of Sydney's Cultural Ribbon as shown on **Figure 14**. The cultural ribbon provides buildings and parks such as the War Memorial, Royal Botanic Gardens, Sydney Opera House on the eastern side of the city and connects to the emerging post-industrial cultural facilities on the western side of the city. The ribbon also includes the Walsh Bay Arts Precinct, Barangaroo and Darling Harbour. All of these venues are important to Sydney's tourism and entertainment economy contributing to the CBD being Australia's pre-eminent tourist destination.

The inter-relationship of these vibrant cultural facilities along a renewed urban foreshore will generate great social, economic and community benefits and will add to Sydney's reputation as a Global city.

The Concept Proposal is consistent with the Plan for Growing Sydney in that it aims to:

- Contribute to the strengthening of "Global Sydney" as a centre for economic, and cultural activity;
- Provide a mix of commercial and retail uses to contribute to Sydney's Global city reputation;
- Increases connectivity and activation with the Cultural Ribbon;

- Provide employment opportunities during the construction and operation period of the proposed development;
- Supporting existing and new public transport infrastructure, as well as providing employment within close proximity to existing services and facilities;
- Contributes to the Darling Harbour Live Entertainment Precinct and The Cultural Ribbon; and
- Revitalises and improves the amenity of Cockle Bay, attracting development and business and creating a vibrant centre where people want to spend time.



Figure 14 - The Cultural Ribbon, the Site marked with a star

Source: A Plan for Growing Sydney

7.4 Compliance with Environmental Planning Instruments

An assessment of the Concept Proposal against the relevant Environmental Planning Instruments (EPIs) was provided within the EIS. Although the amended Concept Proposal does not affect the compliance of the development with these EPIs and updated assessment is provided below in **Table 5**.

Table 5 - Summary of consistency with relevant Strategies, EPIs, Policies and Guidelines

Instrument / Strategy	Comment
SEPP (State & Regional Development)	Pursuant to the SEPP a project within the Darling Harbour Development Area will be SSD if it has a capital investment value (CIV) of \$10 million or more. The proposed development has a CIV of over \$10 million, and is therefore identified as SSD and considered to be development of State and/or Regional Significance. This EIS has accordingly been prepared in support of the DA.
SEPP (Infrastructure)	The proposed development triggers consultation with NSW Roads and Maritime Services (RMS) under the provisions of Schedule 3 of the SEPP as the proposed Concept Proposal will

Instrument / Strategy	Comment
	generate, over 15,000m ² of commercial floorspace. Future Stage 2 DAs may also require referral to relevant infrastructure providers and assessment against the Development Near Busy Roads Guideline.
SEPP 55 (Remediation of Land)	Clause 7 of SEPP 55 specifies that a consent authority must not consent to the carrying out of any development on land unless it has considered whether land is contaminated and if the land is contaminated, it is satisfied that the land is/can be suitable for the proposed development. A Preliminary Site Investigation Report has been prepared for the Site by Coffey and is included at Appendix V . The Assessment has been summarised in Section 7.18 of this revised environmental assessment. In summary, as future development of the Site will involve little or no excavation, the Preliminary Site Investigation considers that the Site can be made suitable for the continued commercial and retail uses.
Draft SEPP (Competition)	The proposed Concept Proposal is consistent with the aims of the Draft SEPP (Competition) in that it will promote economic growth and competition within NSW.
Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005	The SREP applies to the Site. The Site is not zoned under the SREP, however is located within the City Foreshores Area Strategic Foreshore Site and is also within the Foreshores and Waterways area. Compliance is further discussed in Section 7.4.1 below. If Land-Water Interface Works are proposed under a Stage 2 DA, that application will require referral to the Foreshore Committee in accordance with Schedule 2 of the SREP. Consideration of Visual Impact principles in the SEPP is included in the updated VIA at Appendix G .
Sydney Local Environmental Plan 2012	Sydney Local Environmental Plan 2012 does not apply to the Site. The principle planning instrument is the Darling Harbour Development Plan No. 1 addressed below.
Darling Harbour Development Plan No 1	The amended Concept Proposal remains consistent with the provisions of the DHDP. An assessment of the Concept Proposal against the DHDP is provided at Section 7.4.2 below.

7.4.1 Sydney Harbour Catchment REP

The Site is identified within the following areas under the *Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005* (SREP):

- the Sydney Harbour Catchment Area;
- the Foreshores & Waterways Area Boundary; and
- the City Strategic Foreshores Area.

Part 3, Division 2 within the SREP refers to matters which are to be taken into consideration by consent authorities before granting consent for development.

Table 6 illustrates the amended Concept Proposal's consistency with the relevant provisions and matters for consideration set out in clauses 20 to 27 of the SREP.

Table 6 - Consistency with the relevant provisions of the SREP (Sydney Harbour Catchment) 2005

Relevant matters for consideration	Comment
Biodiversity, ecology and environment protection	The proposed development is a Stage 1 Development Application, which seeks consent for a building envelope and certain land uses. A future Stage 2 Development Application will ensure specific measures are implemented to manage stormwater runoff and water quality. Increases in the quantity and quality of vegetation within the Site will be facilitated by the proposed development, resulting in a net improvement on the Site. Specific details will be assessed as part of the subsequent Stage 2 Development Applications and could form a condition on the Stage 1 consent.
Public access to, and use of, foreshores and waterways	<p>The Concept Proposal will facilitate significant upgrades and improvements to the access and usability of the foreshore. Currently access to the foreshore from the Sydney CBD is severed by the Western Distributor motorway. The Concept Proposal would introduce a new landbridge over the Western Distributor at Market Street and introduce improved amenity and wayfinding along the Druiitt Street pedestrian bridge. The amended Concept Proposal will therefore unambiguously improve public access to the foreshores and waterways from the Sydney CBD.</p> <p>Through the relocation and refinement of the proposed publicly accessible open space (refer to Section 4.6) the amended Concept Proposal enhances public use of the foreshore. The open space that is facilitated by the amended concept proposal will provide a valuable space for the public to enjoy vistas over Darling Harbour and Cockle Bay.</p> <p>The amended Concept Proposal will enhance the Druiitt Street pedestrian bridge improving pedestrian connections to the southern part of Cockle Bay from the CBD.</p> <p>The extension and augmentation of the promenade that is provided for within the Concept Proposal (as amended and as previously exhibited) enhances and the ability of the public to use the foreshores and waterways.</p>
Maintenance of a working harbour	The Concept Proposal does not relate to 'working waterfront' land, therefore no 'working harbour' uses will be lost because of the proposed development.
Interrelationship of waterway and foreshore uses	The extension and augmentation of the promenade that is provided for within the Concept Proposal (as amended and as previously exhibited) enhances and the ability of the public to use the foreshores and waterways.
Foreshore and waterways scenic quality	<p>The proposal is consistent with the context of the city and its function as a centre for business, adjacent to the waterfront. The visual impact of the Concept Proposal is assessed within Section 7.8 and in Appendix G.</p> <p>Through the relocation and refinement of the proposed publicly accessible open space (refer to Section 4.6) the amended Concept Proposal enhances public use of the foreshore. The open space that is facilitated by the amended concept proposal will provide a valuable space for the public to enjoy vistas over Darling Harbour and Cockle Bay.</p>
Maintenance, protection and enhancement of views	<p>Through the relocation and refinement of the proposed publicly accessible open space (refer to Section 4.6) the amended Concept Proposal provides opportunity for enhancement of public views from a new area of publicly accessible open space located right on the water's edge. The open space that is facilitated by the amended concept proposal will provide a valuable space for the public to enjoy vistas over Darling Harbour and Cockle Bay.</p> <p>The visual impact of the Concept Proposal is assessed within Section 7.8 and in Appendix G. Although private views from residences are affected by the amended Concept Proposal, on balance and considering the significant public benefit derived from the location of the new open space and the enhancement of public vistas, the impact on private views is acceptable and</p>

Relevant matters for consideration	Comment
	the principles of view sharing are met.
Boat storage facilities	Boat storage facilities are not proposed as part of the proposed development.
Development in the vicinity of heritage items.	Heritage is addressed at Section 7.16 of this EIS and at Appendices P, Q, R and S . The redevelopment of the area that will be facilitated by the Concept Proposal offers an opportunity for the heritage of this area to be better interpreted within the future development of the precinct. This will be further explored in future Stage 2 development(s).

7.4.2 Darling Harbour Development Plan No.1

The DHDP is the principal planning instrument applicable to the Darling Harbour area, and more specifically the Cockle Bay Park Site. It provides a broad framework for development, principally through identifying permissible uses.

The objectives of the DHDP are to encourage the development of a variety of tourist, educational, recreational, entertainment, cultural and commercial facilities, and to set out those uses which are deemed permissible. The amended Concept Proposal is consistent with these objectives.

The proposed development is a Concept Proposal that seeks approval for building envelopes, within which a mix of uses will be permissible. The proposed use is commensurate with its CBD fringe location and its relationship with the new world-class convention and exhibition centres within Darling Harbour.

The amended Concept Proposal will facilitate a future development application, which will enhance the tourist, recreational, entertainment, cultural and commercial character of Darling Harbour and provide a new world-class retail and commercial building.

The mix of leisure, business and tourism uses has been proposed to ensure a development that supports and is complementary to existing precinct activity seven days a week and therefore helps to contribute to the ongoing activation of the Darling Harbour precinct.

Future development within the Site (as facilitated by the amended Concept Proposal) will provide an opportunity for more people to make use of the existing and proposed recreational, entertainment, cultural and commercial facilities in the area.

A summary of the permissibility of uses proposed as part of the Concept Proposal, illustrative design scheme, and other potential permissible uses under the DHDP is provided with **Table 7** below.

Table 7 - Consistency with Darling Harbour Development Plan No. 1

Component	Darling Harbour Development Plan No. 1	Permissible?
Demolition	Clause 8 of DHDP - the renovation or demolition of a building or work may not be carried out except with a permit being obtained as a permissible use.	Yes
Commercial Building	Clause 6 (d) of DHDP - Schedule 1 includes 'commercial premises' (includes retail uses) as a permissible use.	Yes
Public domain improvements	Clause 6 (a) of DHDP includes development for the purposes of recreational facilities as a permissible use Clause 6 (c) of DHDP includes development for the purposes of beautifying the landscape as a permissible use. Clause 6 (d) of DHDP – Schedule 1 includes 'parks and gardens' as a permissible use. Clause 6 (e) of DHDP includes development for any purpose incidental or subsidiary to permitted development as a permissible use.	Yes

Component	Darling Harbour Development Plan No. 1	Permissible?
Retail premises	Clause 6 (d) of DHDP – Schedule 1 includes, ‘commercial premises (other than premises used for pawn broking or other forms of moneylending)’, ‘professional consulting rooms’, ‘child care centre’, ‘recreation facilities’, ‘refreshment rooms’, ‘shops’, and ‘theatre restaurants’ as permissible uses.	Yes
Car parking	Clause 6 (d) of DHDP – Schedule 1 includes ‘car parking stations’ as a permissible use. Clause 6 (e) of DHDP includes development for any purpose incidental or subsidiary to permitted development as a permissible use.	Yes
Signage e.g. wayfinding, building identification, event signage	Clause 6 (a) of DHDP includes development for the purposes of tourist, educational, recreational, entertainment, cultural facilities or commercial facilities as a permissible use. Clause 6 (c) of DHDP includes development for the purposes of beautifying the landscape as a permissible use. Clause 6 (e) of DHDP includes development for any purpose incidental or subsidiary to permitted development as a permissible use.	Yes
Extension/ Augmentation of infrastructure	Clause 6 (d) of DHDP – Schedule 1 includes ‘public utility undertakings’ and ‘utility installation’ as a permissible use. Clause 6 (e) of DHDP includes development for any purpose incidental or subsidiary to permitted development as a permissible use.	Yes

7.4.3 Darling Harbour Framework for Landowners Consideration of State Significant Development

The Darling Harbour Framework for Landowners Consideration of State Significant Development (the Framework) provides the principles and criteria that PNSW utilises to consider providing its landowners consent for SSDA's. The amended Concept Proposal's consistency with the four principles of the Framework is provided at **Table 8** below.

Table 8 - Consistency with Darling Harbour PNSW Framework

Principle/Criteria	Comment
4.1 Natural and Cultural Heritage	
Protect, enhance and interpret Darling Harbour's natural and cultural heritage.	
1. Identify, protect and enhance European and Aboriginal heritage including the working harbour, past industrial land use and aboriginal heritage	European and Aboriginal heritage is addressed at Section 7.16 of this EIS and at Appendices P, Q, R and S . The redevelopment of the area that will be facilitated by the amended Concept Proposal offers an opportunity for the heritage of this area to be better interpreted within the future development of the precinct. This will be further explored in future detailed (Stage 2) DA.
2. Safely enhance and improve harbour interaction and leverage the unique setting on cockle bay	The amended Concept Proposal will facilitate new publicly accessible open space that will open up to the harbour to create visual and physical connections to the water. It leverages the unique setting at Cockle Bay to provide landscaped and elevated views of the water from the CBD and Pyrmont Bridge that will greatly improve the diversity and offering of open space in the precinct. Expansion of the foreshore boardwalk will further improve the pedestrian interaction with the harbour, and increase event capacity along the foreshore. It will enhance safety through lighting, wayfinding and increased activation of the site, improving casual surveillance.

Principle/Criteria	Comment
3. Protect the generous and open character of the foreshore and public spaces in and around Darling Harbour	The design principles support the creation of an open and green environment. The amended Concept Proposal will increase the provision of publicly accessible open space within the precinct including new open spaces and the extension of the foreshore boardwalk (refer to Section 4.6.2). The proposed bulk and massing of the amended Concept Proposal includes height reductions and building setbacks to protect the open character of the foreshore and adjacent public spaces (refer to Section 4.6.4).
4. Promote a coordinated foreshore experience to Darling Harbour and beyond	<p>The project team has coordinated with a range of stakeholders to ensure the amended Concept Proposal is well integrated with Darling Harbour and beyond (refer to Section 5.0). Through the Design excellence process the amended Concept Proposal will facilitate a building that will feature elements to lift the profile of Darling Harbour and complement and enhance current and proposed Darling Harbour uses.</p> <p>The foreshore experience at the ground plane of Cockle Bay will retain and improve the retail uses that exist currently, improving activation. The uses proposed are consistent with the DHDP and will facilitate a future development application, which will enhance the tourist, recreational, entertainment, cultural and commercial character of Darling Harbour and provide a new world-class retail and commercial destination.</p> <p>The mix of leisure, business and tourism uses has been proposed to ensure a development that supports and is complementary to existing precinct activity seven days a week and therefore helps to contribute to the ongoing activation of the Darling Harbour precinct.</p> <p>The amended Concept Proposal will facilitate the reconnection of the city to Darling Harbour and beyond through the creation of new direct pedestrian pathways to the waterfront and improvements to the Druitt Street pedestrian overpass. It will encourage walking through improved permeability and increased day and night time activation.</p>

4.2 Orderly and Economic Development

Unlock opportunities to intensify activity and renew ageing infrastructure and underutilised sites with a balanced approach that protects the legacy of Darling Harbour for future generations.

1. Renew ageing assets and develop land to its potential, while expanding and enhancing the public domain and publicly accessible space	The amended Concept Proposal will revitalise the existing Cockle Bay Wharf offering and will further diversify Cockle Bay Park as a destination that offers more than just retail. It will facilitate new publicly accessible open space together with landscaping and improved permeability that will strengthen the role Darling Harbour plays as a meeting point for culture and tourist events.
2. Balance the scale of development with the benefits it brings to the people of NSW	<p>The amended Concept Proposal will facilitate up to 15,000m² of publicly accessible open space and will provide new and enhanced pedestrian connections that will reconnect the CBD and Darling Harbour. This open space area has been scaled to balance with the proposed scale of the tower form. Proposed improvements include reconnecting Pyrmont Bridge and Market Street; a direct connection from Market Street to the waterfront, improvements to the Druitt Street overpass and consideration of an expanded boardwalk platform on the foreshore. In return the amended Concept Proposal will facilitate a high quality commercial building that will exhibit design excellence (refer to Section 4.7).</p> <p>The amended Concept Proposal includes many benefits to the people of NSW including:</p> <ul style="list-style-type: none"> • New publicly accessible open space; • Improved accessibility and repair of the severed connection between the CBD and Darling Harbour; • Improved pedestrian connections and wayfinding; • Increased day and night time activation; • revitalisation of the precinct as a dynamic and activated world-class

Principle/Criteria	Comment
	<p>destination;</p> <ul style="list-style-type: none"> • high quality retail and entertainment offering catering for local and tourist markets contributing to the entertainment and retailing experience of Darling Harbour; • opportunities for more activated ground level public domain spaces and greater opportunities for event spaces, contributing to the entertainment and tourism values of Darling Harbour; • additional viewing opportunities from publicly accessible areas; • relieve identified pedestrian flow bottle-necks, such as on New Year's Eve; and • job creation throughout the construction phase and operation of the development.
3. Provide facilities to service and support the international convention and exhibition centre and darling harbour's international competitiveness as a preferred destination for conferences and events	The amended Concept Proposal will strengthen the role that Darling Harbour plays as a meeting point for cultural and tourist events, indeed it will provide increased opportunities for people to meet and attend events. It will complement the International Convention Centre (ICC) by becoming a dynamic and activated world-class destination offering high quality retail and entertainment. It will improve connections between the CBD and Darling Harbour that will shorten journey times between the ICC and CBD.
4. Create a comfortable, distinctive urban precinct with engaging edges, interfaces and places to dwell and occupy	The amended Concept Proposal will facilitate a comfortable and dynamic precinct including large landscaped publicly accessible open spaces that will become a new destination where people will want to spent time. The detailed design of these spaces will be resolved as part of the detailed (Stage 2) DA and Design Excellence process.
5. Increase pedestrian and visual permeability through the precinct	<p>The amended Concept Proposal will provide a connected, permeable and activated space that is well connected with city streets, Pyrmont Bridge and the waterfront through direct pedestrian connections.</p> <p>The amended Concept Proposal provides a proportional relationship to the existing buildings of Darling Park and has been located to the centre of the Site to ensure important view corridors through the precinct are maintained.</p>
6. Create improved access and visibility to the precinct to draw attraction from surrounding districts and the CBD	<p>The amended Concept Proposal will facilitate the reconnection of the city to Darling Harbour through the creation of new and more direct pathways across the Western Distributor and improvements to the Druitt Street pedestrian overpass.</p> <p>It will facilitate new publicly accessible open space, together with landscaping and improved permeability. It will strengthen the role that Darling Harbour plays as a meeting point for cultural and tourist events and it will provide increased opportunities for people to meet and attend events.</p>
7. Promote high quality design for buildings, infrastructure and the public domain	The detailed design of the building, infrastructure and provision of future open space will form part of the subsequent detailed (Stage 2) DA. The design will be guided by the Design Principles (Appendix C), the Vision Statement (Appendix D), and by the design excellence processes outlined in Section 4.7 to ensure that the future design exhibits design excellence.
8. Promote sustainable building design and place making outcomes	Details relating to ESD initiatives will be available during the detailed design process at Stage 2. Arup (Appendix H) outlines a wide variety of sustainability initiatives, which may be proposed within the detailed (Stage 2) DA.

Principle/Criteria	Comment
4.3 Land Use, Activities and Identity	
Foster a mix of uses that broadens the appeal of Darling Harbour and capitalises on its natural and built assets, reinforcing its role as a destination for cultural experiences and events, and as a place for the day-to-day life of the local community.	
1. Support land use and activities that activate and drive the success of the precinct, and provide for the diverse needs and experiences of the people of NSW	<p>The amended Concept Proposal will enhance the tourist, recreational, entertainment, cultural and commercial character of Darling Harbour and provide a new world-class retail and commercial building.</p> <p>The mix of leisure, business and tourism uses has been proposed to ensure a development that supports and is complementary to existing precinct activity seven days a week and therefore helps to contribute to the ongoing activation of the Darling Harbour precinct.</p>
2. Provide an inspiring meeting place that fosters innovation and creativity	The amended Concept Proposal will facilitate new publicly accessible open space, together with landscaping and improved permeability that will strengthen the role that Darling Harbour plays as a meeting point for cultural and tourist events. It will provide increased opportunities for the inclusion of public art and cultural activation and offers landscaped spaces adjoining Darling Harbour with active and passive areas for recreation. These unique spaces will foster innovation and creativity in the way Darling Harbour is used and appreciated.
3. Increase the intensity and mix of complementary uses	The mix of leisure, business and tourism uses has been proposed to ensure a development that supports and is complementary to existing precinct activity. An assessment of the proposal with respect to the Darling Harbour Development Plan is provided at Section 7.4.2 .
4. Reinforce and extend the provision of short stay accommodation to service and support the ICC	Whilst no accommodation is provided within the site the future development will offer retail and publicly accessible open space that will complement short stay accommodation service providers and those visiting the ICC.
5. Promote greater levels of activity that cater for the needs and preferences of the local residential, office worker and visitor catchment	<p>Overall the proposal will facilitate greater levels of activity by providing improved retail offering within the Site and provision of large publicly accessible open space that will attract greater number of visitors to the Site. Further activation opportunities include:</p> <ul style="list-style-type: none"> • Providing engaging reasons for the vast numbers of workers and visitors in Darling Harbour and the CBD to come to Cockle Bay Wharf, spend time there and return; • Further diversify Cockle Bay Wharf as a destination that offers more than just retail; • Put Cockle Bay Park firmly on Sydney's cultural map through partnerships and brand association; • Provide a key, new destination as part of the Nature and Culture Walk from Pyrmont, Darling Harbour, Barangaroo to Walsh Bay and Circular Quay; • The opportunity to become a new cultural meeting point; • Increased wellness and productivity through provision of active and passive spaces; • Increased waterfront activation; • Opportunities for the inclusion of public art; and • Opportunities for cultural activation
6. Support and encourage social participation in culture, events and festivals	<p>The amended Concept Proposal presents significant opportunity to strengthen the role that Darling Harbour plays as a meeting point for cultural and tourist events. It will improve pedestrian access and will increase the capacity of the foreshore by extending the boardwalk. It will also introduce a direct connection between the CBD and waterfront improving access to events and festivals in Darling Harbour.</p> <p>The publicly accessible open space provide a platform for permanent and temporary programming at key points that will make Cockle Bay Park a recognisable cultural destination. This includes permanent public art commissions embedded within the landscape and site-wide temporary</p>

Principle/Criteria	Comment
	programming. The publicly accessible open space elements of the site will be able to operate in an 'event mode' providing a unique place to enjoy and celebrate the events Darling Harbour is known for.
7. Ensure future development does not impact the ongoing role of Darling Harbour as a forum for major events, entertainment and the night time economy	The proposal is largely contained within the existing footprint of the Cockle Bay Wharf building and extends over underutilised land crossing the Western Distributor. It will complement and strengthen the role of Darling Harbour as a forum for events and entertainment. It will enhance the tourist, recreational, entertainment, cultural and commercial character of Darling Harbour and provide a new world-class retail and commercial building.
8. Improve accessibility to existing and proposed public transport	By improving existing pedestrian connections and introducing new direct links between the CBD and Darling Harbour the amended Concept Proposal will improve accessibility to public transport connections on the eastern side of the Site.
9. Promote connectivity and pedestrian linkages to, and through, the precinct	The proposal will reconnect the CBD and waterfront which is currently severed by the Western Distributor. It will improve the connection between Pyrmont Bridge and Market Street; introduce a direct link from Market Street to the waterfront and will enhance the Druiitt Street pedestrian overpass, improving permeability to and through the Site.

4.4 Public Domain and Urban Structure

Create a compelling, comfortable and distinctive public realm that is integrated with the surrounding urban areas, and maximises the function, attractiveness and utilisation of the waterfront and public space in the precinct.

1. Create a spectacular and inviting place for leisure and celebration	The provision of future open space will be a subject of the detailed (Stage 2) DA. The design of future open space will be guided by the Architectural Design Report (Appendix C), the Vision Statement (Appendix D), and has been guided by the design review processes outlined in Section 4.1 to ensure that the future open space exhibits design excellence and meets the needs of future users of the open space.
2. Provide a secure, smart, safe and universally accessible place	<p>The proposed development is a Concept Proposal, which seeks consent for building envelopes and specific land uses. The detailed (Stage 2) DA will fully consider the principles of Crime Prevention through Environmental Design in the detailed design phase ensuring the project delivers a secure and safe building.</p> <p>The Design Excellence process outlined at Section 7.5 will ensure the future building is a 'smart' in its design and features. Sustainability initiatives are outlined at Section 7.10.</p> <p>Morris Goding Accessibility Consulting (Appendix P) confirms that compliance with statutory requirements with respect to Site access and common area access can readily be achieved.</p>
3. Increase the amount of green, publicly accessible public domain	The amended Concept Proposal facilitates a variety of types and sizes of open space up to 15,000m ² which is a significant increase in publicly accessible open space in the precinct.
4. Provide contemporary, high quality public domain, and an improved water's edge experience	The Design Excellence process (outlined at Section 7.5) will ensure the publicly accessible open spaces are contemporary, high quality and will improve the water's edge. This is reflected in the Design principles that underpin the amended Concept Proposal (as outlined at the Architectural Design Report at Appendix C). The proposal will introduce new open space that will feature a landscaped terrace that will provide a green connection to the waterfront and promenade, effectively connecting the new northern open space above the Western Distributor and Darling Harbour water's edge. This is a significant improvement on the existing situation where the foreshore is largely hemmed in by the Cockle Wharf

Principle/Criteria	Comment
	Building and is severed from the CBD by the Western Distributor.
5. Provide a diversity of public domain experiences, including sanctuary spaces, that encourage people to linger and dwell	The detailed design of future open space will be a subject of the detailed (Stage 2) DA. The design of future open space will be guided by the Architectural Design Report (Appendix C), the Vision Statement (Appendix D), and has been guided by the design review processes outlined in Section 4.1 to ensure that the future open space exhibits design excellence and meets the needs of future users of the open space.
6. Provide a green, shady experience that offers respite from summer heat	
7. Improve the quality, capacity and convenience of public domain connections to the surrounding urban areas, and reduce the isolating effect of infrastructure around Darling Harbour	The amended Concept Proposal has enabled the consolidation of a large landscaped open space that is more useable being located adjacent to the key pedestrian paths between the CBD and harbour, greatly improving the quality of the pedestrian experience. As outlined at Section 6.15 new connections will improve journey times by up to 1.34 minutes. It provides an opportunity to enhance the movements to and from Cockle Bay Park and Darling Harbour.

7.5 Design Excellence

As outlined in **Section 4.7** of this document, the proponent is committed to a robust competitive design process that will be carried out generally in accordance with the *City of Sydney Design Excellence Policy 2012*.

7.6 Built Form

The amended Concept Proposal will provide a built form that is responsive to the context and characteristics of the Site, including existing built form, the relationship to Darling Harbour, surrounding views and vistas, maintenance of sunlight to key open spaces, location of new open spaces and the location of the Site at the edge of the CBD.

As illustrated in Section 1.3 and Section 3.6 of the original Architectural Design Report submitted as Appendix C of the original EIS, precedent exists within the immediate locality (Barangaroo), and within the wider CBD area (Circular Quay), to demonstrate that in a situation where the Sydney CBD and the Harbour foreshore directly interface, additional height can be accommodated appropriately.

As noted in Section 2.0 of the Architectural Design Report provided as Appendix C of the original EIS, the centre of Darling Harbour has previously accommodated low-scale development to create a “valley floor” feel. It is noted that recent development consents in the area (notably the Ribbon development, adjacent to the Site, the SICEEP precinct and Barangaroo) indicates that this Valley Floor principle has evolved to accommodate changes in the local built form that include taller buildings.

Further, as the Site is located on the edge of Darling Harbour and provides an interface with the Sydney CBD, the height and scale of the building that will be facilitated by the amended Concept Proposal is considered to be appropriate for this location and provides an important gateway and marker for entry to the CBD.

The DHDP does not provide controls for building height, floor space ratio or setbacks within Darling Harbour. Accordingly, the Concept Proposal has been designed to respond to the Site’s opportunities, constraints and context as outlined by FJMT at the Architectural Design Report at **Appendix C** and which was arrived at during a design review process

The design review process (discussed at **Section 4.1**) was undertaken by relevantly experienced experts that have informed the proposed amended height and scale of the proposal. As noted in the Architectural Design Report the amended envelope reaches a height that provides a proportional relationship to the existing buildings of Darling Park in consideration of height, separation and breadth so the precinct can be read as a cohesive whole. Built form principles that have been adopted following the design review and that have informed the proposed envelope include but are not limited to:

- **Setbacks:** Maintain an 8m area weighted average setback from the property lease line on the western side of the tower with a 6m minimum;
- **Envelope Utilisation:** The maximum tower envelope utilisation is 60 percent. This will result in a tower that is significantly smaller than the envelope;
- **Tower separation:** Provide adequate tower separation between the new tower and the existing towers at Darling Park to preserve the amenity of the existing and new towers and to facilitate view sharing for these buildings and for buildings in the streets beyond. Minimum tower separation: 12m;
- **Relationship to existing built form:** Consider the existing Darling Park tower forms including separation, height and breadth, so that the combined development reads as a cohesive whole;
- **Overshadowing:** minimise shadowing impacts and adopt the Tumbalong Park sun plane; and
- **Cockle Bay waterfront shadowing:** Avoid mid-winter lunchtime overshadowing of the Cockle Bay waterfront.

The existing buildings of Darling Park feature towers with a width between 50m-60m. The amended Concept Proposal will facilitate a building approximately 50m-60m wide providing a tower that is consistent with the predominant built form in the locality (**Figure 15**). The girth of the building is driven by market demand for commercial floor plates of a certain size.

Major tenants in recent times have preferred to occupy larger campus-style floor plates. Recent examples of this include Darling Quarter and Australian Technology Park. These larger floor plate lower rise layouts allow flexibility of design in interactions spaces, including atria and the like, which allow the seamless co-mingling of staff across spaces – with both easy visual and spatial connections in a low rise large floor plate format. The taller office tower, whilst more efficient for space and density on scarce land resources, has its challenges when it comes to the interaction and mingling required for an advanced and technological workforce.

Many tenants are experiencing exponential increases in collaboration spaces (including meeting rooms, break out spaces, and social interaction, flexible spaces) in addition to the standard desk/screen space. Some tenants have reported a 20-25% increase in demand for such additional spaces in the past two to three years. Tenants have advised that traditional desk-to-worker ratio numbers need to be re-thought and tenant requirements and floor plates need to consider these expansive requirements for collaboration spaces. Tenants have advised that despite the challenges, the vertical stratification in towers can be designed to encourage collaboration through, at minimum, atrium, voids and inter connected stairs.

What this points to is the need for floor plates of sufficient size (recent feedback has indicated floor plate dimensions of between 1,750m² and 2,350m² GFA or larger) to manage:

- Tenant and team interaction on a single floor through variety of spaces including traditional desk space and collaboration spaces;
- Tenant and team interaction between floors, with enough space built into the building envelope to accommodate potentially expansive atrium, voids and inter connected stairs.
- Tenants demanding the need for expansive “3rd spaces”. i.e spaces not directly leased or tenanted but spaces made available by the landlord for all tenants to use and interact within

As noted above, the current tenant market is seeking floor plate dimensions of between 1,750m² and 2,350m² GFA or larger. These dimensions are consistent with the commercial floor plates within the existing Darling Park tower 1 and 2, which provide 1,900m² GFA on each floor.

The height of the envelope reaches 195m; this is one third taller than the tallest Darling Park towers providing a proportional height relationship. The tower also responds to the sun angle plane that extends from Tumbalong Park ensuring the proposed development would not overshadow Tumbalong Park and the children’s playground.

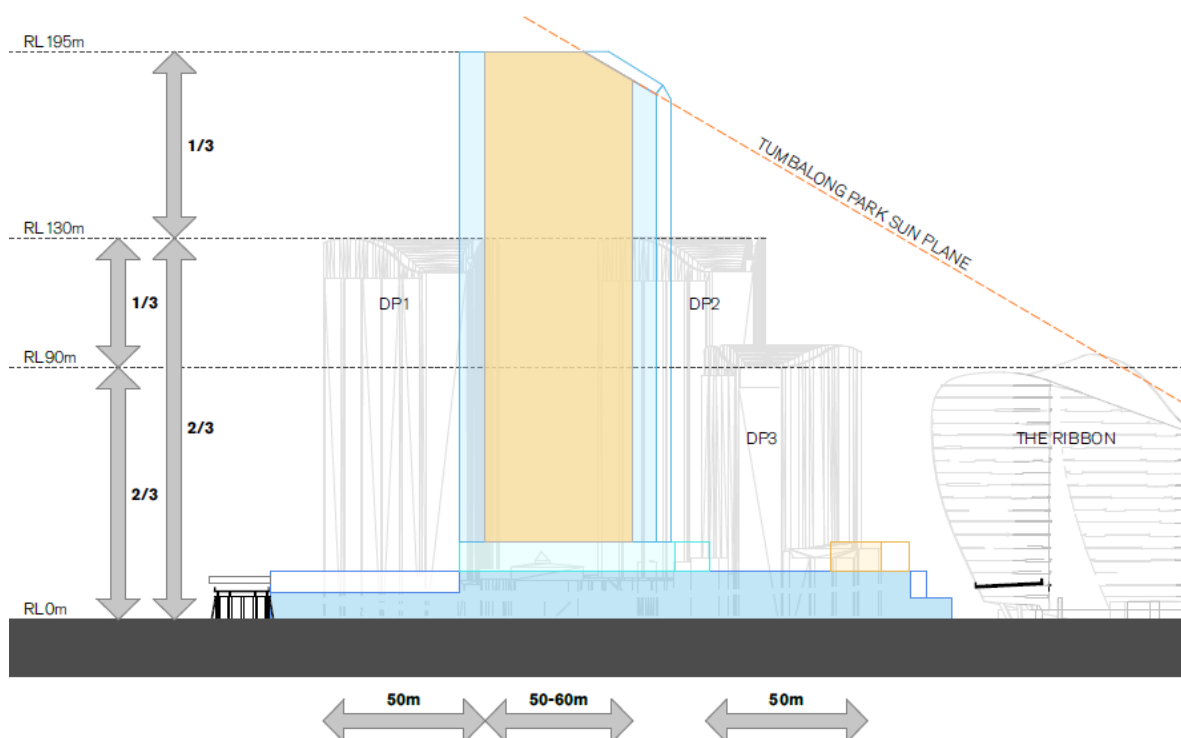


Figure 15 - Height and Scale relationship

Source: FJMT

The proposed built form will contribute to the creation of a revitalised cultural, entertainment and recreational hub, and is appropriate for the following reasons:

- The proposed building height would deliver a landmark building that will revitalise Cockle Bay as a gateway destination to the City and Darling harbour;
- The proposed podium and tower built form, close to the CBD would complement other proposed tall buildings within and adjacent to the Darling Harbour precinct;
- The proposed bulk and scale is proportional to the existing Darling Park precinct;
- The proposed height and location maintains mid-winter solar access to Tumbalong Park, enhances the Market Street vista and minimises impacts on the future Town Hall Square;
- A podium and tower form maximises view sharing opportunities to surrounding buildings including the Ribbon, Darling Park and the Astoria residential building;
- By locating the tower further south it allows for the consolidation new publicly accessible open space opportunities that maximises solar access; and
- Visual analysis of the proposed built form at **Appendix G** and **Section 7.8** demonstrates that the proposed building heights are capable of integration into the built form typology of the locality.

Further justification for, and assessment of, the bulk and scale of the amended Concept Proposal can be found in:

- the original Design Report, prepared by FJMT, located at Appendix C of the original EIS;
- the updated Design Report, prepared by FJMT with input from Aspect Studio, Tony Caro Architecture, FutureCity, Arup, and SpaceSyntax, located at **Appendix C**; and
- the View and Visual Impact Assessment located at **Appendix G**.

7.7 Solar Access and Overshadowing

The FJMT Architectural Design Report, which is provided as **Appendix C** provides an assessment of the impact of the amended Concept Proposal's envelope on solar access. Specifically, the report examines the impact of the proposed development on Tumbalong Park, the foreshore walk and the future Town Hall Square, as well as nearby existing and proposed residential uses.

PNSW has required that the proposal not affect the Cockle Bay waterfront between 12:00pm and 2:00pm on 21 June. In addition, the draft Central Sydney Planning Strategy (published by the City of Sydney in July 2016) defines the period of protection for portions of the eastern waterfront from Darling Harbour to Barangaroo between 11:00am and 3:00pm mid-winter and 9:00am to 5:00pm mid-summer. The amended Concept Proposal does not overshadow the Cockle Bay waterfront during these times. It is noted that the amended Concept Proposal will overshadow the foreshore between 9am- 11am as discussed below.

It should be noted that the assessment of overshadowing and solar access impact has been undertaken as an assessment of the impact of the entire building envelope presented by the Concept Proposal. This results in a conservative (and maximum) assessment of impact, as building controls proposed as part of this application would limit the future development within the proposed building envelope to 60% of the total envelope. A second solar access study will be completed and publicly exhibited during the Stage 2 DA, once the design of the building is known.

A summary of overshadowing impacts on the foreshore promenade, Tumbalong Park, future Town Hall Square and Residential uses is provided at **Table 9** that shows the amended Concept Proposal largely maintains all solar access requirements. Overshadowing to the future Town Hall Square is further discussed below.

Table 9 – Overshadowing summary

Location	Control source	Measure	Proposal
Cockle Bay Foreshore	PNSW requirement	11am-3pm mid-winter	Complies
Tumbalong Park	Proposal Design Guideline	No additional overshadowing	Complies
Town Hall Steps	LEP	No additional overshadowing 10:30am-4pm	Complies
Sydney Square	LEP	No additional overshadowing 11am-4pm	Complies
Future Town Hall Square	Draft Central Sydney Planning Strategy	No additional overshadowing 12pm- sunset	Refer to Section 7.7.1 below
Residential Uses	Apartment Design Guide	Maintain ADG compliance	Complies

A solar access and overshadowing impact assessment of a future and potential building provided within the proposed building envelopes will be undertaken as part of the Stage 2 DA and would inevitably result in a reduction in predicted overshadowing, when compared to the assessment undertaken of the amended Concept Proposal.

7.7.1 Overshadowing of Public Space

Foreshore Promenade

The impact of overshadowing caused by the proposed building envelope on the eastern foreshore promenade of Cockle Bay has been assessed by FJMT. Overshadowing impacts were modelled for the winter solstice (21 June). The assessment demonstrated that there is no overshadowing impact from the proposed envelope to the foreshore promenade or boulevard between 11am-3pm. The amended Concept Proposal therefore does not cause shadowing during the time required by PNSW or the draft Central Sydney Planning Strategy (12pm-3pm).

There would be some shadowing of the eastern foreshore promenade between 9am-11am; however, any overshadowing impacts to the foreshore promenade are balanced by the significant increase in publicly accessible area associated with the Concept Proposal (and the quality of solar access enjoyed within that area), which would be provided by the future development.

The new publicly accessible open space, which will be provided by the future development of the Site, is predicted to enjoy solar access from midmorning until late in the day throughout the year.

The Concept Proposal will therefore result in an increase in the choice of available open spaces locally, and in an increase of solar access across publicly accessible areas in the Darling Harbour precinct more broadly.

Tumbalong Park

The impact of overshadowing caused by the amended Concept Proposal on Tumbalong Park has also been conducted by FJMT. One of the design principles of the Cockle Bay redevelopment is to avoid mid-winter overshadowing of the public domain areas of Tumbalong Park and the Children's Playground. This principle is based on the precedent set by the Ribbon development approval.

Two sun planes define the top of the proposed envelope, one at 12:00pm and one at 11:00am. The planes are generated from the roof line of the Ribbon development and project northward. The sun planes solar study at **Appendix C** demonstrates the proposed development does not generate any additional mid-winter overshadowing of Tumbalong Park and the Children's Playground.

Town Hall Square

FJMT has assessed the overshadowing impact of the proposed envelopes on the existing Sydney Square and Town Hall Steps and also on the future Town Hall Square. The proposed building envelopes have no additional shadow impact on Sydney Square and the Town Hall Steps and hence comply with the controls within the current LEP.

The draft Central Sydney Planning Strategy proposes to introduce additional "no additional overshadowing" control to the future Town Hall Square between 12pm and sunset (year-round). The draft CSPA has not yet been publicly exhibited and is therefore not a matter for consideration under S79C of the EP&A Act.

Solar impacts of the amended Concept Proposal on the future Town Hall Square have been reduced when compared to the exhibited EIS and are now limited to a brief window after 4:00pm for a period in late March to mid-April and mid-August to late-September. Of the maximum available c.1700 hours of sunlight potentially available over the entire year, the amended Concept Proposal would equate to a peak spot reduction of 11 hours (reduced from 21 hours under the exhibited EIS) and 6 hours annual average overshadowing across the square (reduced from 12 hours under the exhibited EIS).

The amended Concept Proposal has also reduced the duration of overshadowing from 70 days to 62 days in which minor overshadowing would occur. During this time the most affected day for the amended concept is 4 April and 5 September. The maximum overshadowing impact on these days is 1.5% (reduced from 2.9%) (increase of overshadowing to the square) reducing to zero on other affected days; and only for a 15-minute period (reduced from 20 minutes) between 4pm-4:30pm. It is noted that the period between 4pm and 4:30pm is not usually part of a solar access control period. The area within the future Town Hall Square that is predicted to receive the greatest impact is limited to the north east of the square, where the square will interface with Park Street (which is not the core useable space of the proposed square). It is noted that as no plan of the future square is available, no quantitative assessment of impact can be at this point.

Figure 16 is a 'heat-map' that expresses the solar reduction of the future town hall square in hours and excludes shadows by existing adjacent structures. **Figure 17** below shows that the northern open space for the Concept Proposal would receive up to 8 hours of sunlight on 21 June and up to 10 hours at equinox. The new space is within 5-10 minutes' walk of the proposed future Town Hall Square, and is located desirably for users next to the water. Any minor reduction of sunlight to Town Hall Square is considered by the proponent on balance acceptable on its own merits, but is also acceptable considering the new publicly accessible open space directly next to the Harbour, which would be created because of the amended Concept Proposal.

Any future building within the proposed envelopes would be subject to additional assessment and would likely have a less-significant impact than that assessed within this application as building controls proposed as part of this application would limit the future development within the proposed building envelope to 60% of the total envelope.



Figure 16 - Overshadowing impact of the proposed envelope on Future Town Hall Square (site area shown in blue)

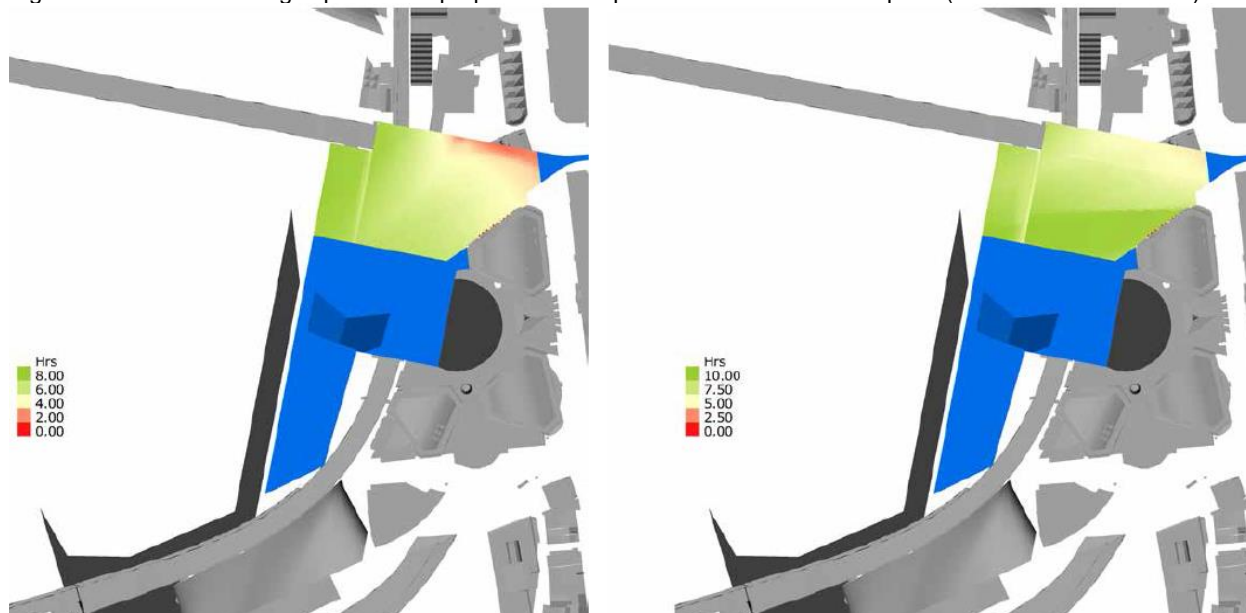


Figure 17 - Overshadowing of the northern area of the Site where publicly accessible open space is proposed (left: 21 June, right: 4 April)

7.7.2 Overshadowing of Residential Uses

FJMT has assessed the impact of the proposed building envelopes on the solar access received by the neighbouring residential development, particularly those located at 222-228 Sussex Street and 230 – 234 Sussex Street, Sydney. The assessment determined that the proposed building envelope would have no impact on the solar access currently received by these building at any time on June 21.

7.8 Visual and View Impact Assessment

An assessment of Visual and View Impact has been prepared by Ethos Urban and is provided at **Appendix G**. In summary, it concluded that:

With respect to the street level public domain:

- Existing views from the CBD along Market Street will be enhanced;

- Existing public domain views to key heritage buildings and places are retained, including Pyrmont Bridge; visual connectivity to other heritage items in the vicinity is not significantly affected by the proposed amended Concept Proposal;
- The amended Concept Proposal continues with the evolution and change to the character of Darling Harbour, providing the opportunity to deliver an iconic building form that marks the Site's location at the confluence of Darling Harbour and the wider CBD by redefining the density and height of development on the eastern side of Darling Harbour;
- Continuous and unobstructed public sightlines to the foreshore are maintained and improved, and views to, through and over the Site are retained such that the public / pedestrians will continue to enjoy the visual qualities of the harbour and its foreshores;
- The key design principles adopted for the future tower will create a strong identifiable form when viewed within the city skyline and at the local pedestrian level;
- The podium and tower form allows an expansive new open space of up 15,000m² which will maximise public view opportunities, with the tower skilfully positioned having regard to a range of constraints and opportunities including:
 - The provision of north facing open space;
 - Structural considerations associated with the western distributor;
 - Opening public views and vistas; and
 - Overshadowing of public spaces.
- The tower positioning supports ample sky views and a retained sense of openness on this western CBD fringe;
- The amended Concept Proposal will contribute to Global Sydney through the provision of a new premium grade office tower; and
- The proposed public open space will establish new sightlines, visual permeability and views and vistas.

The proposal will not detract from the overall visual connectivity for pedestrians in the public domain nor result in any significant adverse impact and will be designed to the highest standards of architectural excellence. Generally, the affected vantage points are not key places for pedestrians to stop and view the CBD or its skyline, and the wide range of different viewing points available within the Darling Harbour precinct, Pyrmont and its approaches will continue to provide for variety and interest in the different views, vistas and sightlines available to pedestrians approaching and moving through the precinct from the north, south, east and west. Low, medium and high-level views of the sky along streets and from public domain places (parks etc.) are also retained in a variety of contexts. With respect to private views:

- The siting and design of the proposal (the tower element) has specifically and skilfully sought to respond to a range of environmental planning considerations including publicly accessible open space with sunlight access, overshadowing, structural considerations for the Western Distributor, proportion and height relative to the surrounding buildings, view corridors along Market Street, heritage considerations and view sharing. The design has skilfully sought to balance many key considerations to include an appropriate outlook from existing and future adjoining private development to the extent practicable in a highly urbanised inner-city environment.
- Notwithstanding, the amended Concept Proposal will impact existing westerly views from the Astoria Tower and the future views from 230-234 Sussex Street. However, the proposed improvements to visual and pedestrian connectivity to the waterfront and the provision of significant new open space allowing the broader community, city workers and tourists to enjoy the benefits of the Site's waterfront location, needs to be balanced against the retention of private views. This is consistent with the aims of the Sydney Harbour REP which articulates that *the public good has precedence over the private good whenever and whatever change is proposed for Sydney Harbour or its foreshores*. This provision supports the principle that, in the context of the proposed development, the improvements to the public domain, including public views, should be given precedence over private view loss. The location of the proposed publicly accessible open space is a key urban design principle for the amended Concept Proposal which has been developed specifically in order to improve the function of the public domain, address concerns raised about the quality of open spaces and to better integrate the Site to Market Street, Pyrmont Bridge and the waterfront. The new open space will provide the broader community with an expansive location to view and enjoy the waterfront.
- It is considered that a more 'skilful design' could not achieve the level of public benefit that results from the proposed location of the new open space, the improved connections between the CBD and the waterfront and the protection of solar access to existing public spaces within the CBD.
- The impacts associated with the proposal (podium and tower elements) are considered to continue to provide for a reasonable 'outlook' from private apartments, that may nonetheless have a change in 'view', consistent with current planning objectives, strategies, principles and development controls for the CBD which recognise that

outlook, as distinct from views, is the appropriate measure of residential amenity within a global CBD context. Outlook is retained from all affected apartments with an appropriate distance separation and with space and daylight provided and in most affected apartments partial water views are retained consistent with the principles of view sharing.

- As the buildings are located in a global city adjacent to a precinct without any building height controls it is not reasonable for affected owners to expect that their outlook would not be impacted.

While we acknowledge that view loss is a key concern for local residents, it is considered that the amended Concept Proposal achieves a reasonable balance between the protection of private views and the protection/enhancement of public domain views in the delivery of a significant and high quality public domain, new world class commercial and retail centre catering for local and tourist markets and a new iconic tower on the foreshore of Darling Harbour. It should be additionally noted that the actual envelope of any building constructed in accordance with the amended Concept Proposal will occupy only 60% of the envelope and will therefore have a reduced view loss impact.

7.9 Open Space

The amended Concept Proposal includes an outline framework for the future upgrades of the publicly accessible open spaces proposed within the Site.

As outlined in the Architectural Design Report by FJMT at **Appendix C**, the amended Concept Proposal includes a series of open space design principles that were developed as part of the design review process; these include:

- creating a new publicly accessible open space;
- provide a city scale Pyrmont Bridge and Markey Street connection;
- make the spaces permeable and diverse;
- creation of open spaces that connect to the Darling Harbour waterfront; and
- enhance the waterfront experience.

A further description of the design principles are provided at **Appendix C**.

As outlined in the Architectural Design Report the proposed open space is similar in scale to open space provision in many other world cities including Federation Square, Melbourne which has utilised space above infrastructure (railway) to provide additional open space in the CBD. Once constructed, the development facilitated by the amended Concept Proposal will vastly improve the pedestrian experience between Pyrmont, Darling Harbour and the City by revitalising unused space above the Western Distributor, effectively creating publicly accessible open space.

The amended Concept Proposal has enabled the consolidation of a large open space that is more useable being located adjacent to the key pedestrian paths between the CBD and harbour, greatly improving the quality of the pedestrian experience.

The detailed design and provision of future open space will form part of the subsequent Stage 2 detailed development application. The design of future open space will be guided by the Design Principles (**Appendix C**), the Vision Statement (**Appendix D**), and by the design excellence processes outlined in **Section 4.7** to ensure that the future open space exhibits design excellence and meets the needs of future users of the open space.

7.10 Environmental Sustainability

An Environmentally Sustainable Design (ESD) Report has been prepared by Arup (**Appendix H**). Although details relating to ESD initiatives provided by the future development will only be available during the detailed design process, the Arup assessment outlines a wide variety of sustainability initiatives, which may be proposed within the Stage 2 detailed design development application.

The development facilitated by the Concept Proposal will be a premium grade commercial tower. As such, premium level sustainability initiatives will be required within any future Stage 2 DA(s). The report notes the following are key sustainability initiatives, which may be considered further:

- Energy –reduce energy use and greenhouse gas emissions.
- Indoor Environmental Quality – design the building to maximize occupant comfort addressing issues of thermal and visual comfort and indoor air quality.
- Water –minimize potable water consumption and optimise the water efficiency.
- Materials – minimize waste; encourage reuse and recycling of materials and use low environmental impact materials.
- Transport – encourage more energy efficient and less polluting forms of transport to and from the Site.
- Benchmarking – The buildings are to be designed to achieve a minimum 5 stars NABERS Energy and 6 Star Green Star Design and As-Built v1.1 rating.

7.11 Traffic and Transport

A Traffic and Parking Assessment Report has been undertaken by CBRK (**Appendix I1**). The report considers the traffic matters raised in the SEARS and those raised during the exhibition of the EIS. These matters are summarised below:

- existing traffic conditions;
- estimated traffic generation of the proposed development;
- impact of the proposed development on the operation of the surrounding road network; and
- provision of appropriate on-site parking.

As the Concept Proposal has potential to impact ongoing maintenance and operation of the Western Distributor, consultation with RMS and TfNSW has been on-going and will be continued throughout the design and construction phases of future development.

7.11.1 Existing Local Traffic

Section 2 of **Appendix I1** examines the existing traffic situation, including traffic flows, the level of service at existing intersections and the capacity of local public transit. This section is summarised below.

Traffic Flows

CBRK conducted traffic counts between 7.00am and 9.30am in the morning and 3.30pm and 6.30pm in the afternoon, these being the weekday morning and afternoon peak periods, over three days in August and September 2016. Observations were made at the following locations:

- Harbour Street/Wheat Road (IMAX access);
- Harbour Street/Wheat Road (Cockle Bay Wharf access);
- Harbour Street/Wheat Road (King Street Wharf access); and
- Harbour Street/Blackwattle Place.

The reported traffic flows are presented below in **Table 10**.

Table 10- Existing traffic flows

Road	Observed vehicles per hour (two-way/peak)
Harbour Street	1,800 – 2,600
Wheat Road	10 – 790
Blackwattle Place	15

During the traffic observation periods, queueing was noted on Harbour Street, it was noted that:

- in the weekday morning survey period, there was no queueing northbound on Harbour Street through the intersection with Blackwattle Place;
- in the weekday afternoon survey period, there were three occasions when queueing northbound on Harbour Street extend to the intersection with Blackwattle Place. This represented 0.2% of the survey period;
- in the weekday morning survey period, there were 40 occasions when queueing southbound on Harbour Street extend to the intersection with Blackwattle Place. This represented 9% of the survey period;
- in the weekday afternoon survey period, there were eight occasions when queueing southbound on Harbour Street extend to the intersection with Blackwattle Place. This represented 1.5% of the survey period; and
- when queueing on Harbour Street did extend to Blackwattle Place it was noted that:
 - on the three occasions, the northbound queue extended to Blackwattle Place the queue lasted less than a minute within a five-minute period; and
 - the majority of the time (65%) the southbound queue extended to Blackwattle Place the queue lasted less than a minute within a five-minute period. The maximum time was some two minutes.

Intersection Operation

CBRK conducted a SIDRA analysis of the operation of intersections surrounding the Site in order to determine their Level of Service (LoS). The SIDRA analysis found that the signalised intersection of Harbour Street and Blackwattle Place currently operates with average delays of less than 15 seconds per vehicle in the peak periods. This represents a LoS of A/B. Observations noted that due to the low traffic flows in Blackwattle Place the traffic signals were only activated occasionally and that the green time allocated to turning to/from Blackwattle Place was a minimum.

Existing Public Transport, Pedestrians and Cycling

The Site is well serviced by pedestrian and cycle connections. Numerous public transportation options are also available, including:

- Wynyard and Town Hall railway stations are within 10 minutes walking distance;
- Proposed Sydney Metro Stations will significantly increase rail capacity from 2024;
- Numerous bus services operate within the vicinity of the Site, bus facilities are located at Wynyard Park and Queen Victoria Building (within 10 minutes' walk); and
- Existing Light Rail currently extends to within 500m of the Site; extensions to the light rail network are currently under construction and will increase the coverage and capacity of the light rail network.

7.11.2 Anticipated Impact of the amended Concept Proposal

The following section summarises Section 3 of **Appendix I1**.

Parking

Future development of the Site will provide car parking significantly below the maximum allowed by the LEP. Although the Site is not included within the LEP the maximum parking rates that apply to surrounding sites within the CBD can be extrapolated to apply to the Site. Through adopting maximum car parking rates, development at the Site will reflect Council's objective of reducing vehicular traffic and encouraging use of alternative transportation.

The Site area is some 24,900m² with approximately 75,000m² commercial and approximately 14,000m² retail floor space proposed. Using the formula provided by the LEP the proposal could provide a maximum of 498 parking spaces (420 commercial and 78 retail spaces). The amended Concept Proposal seeks provision of up to 150 car parking spaces within the podium parking area. The provision of parking is less than the maximum permitted by the LEP.

Short term set down/pick up parking (Kiss and Ride) will be integrated into the project, off Wheat Road at the northern end of the project. Parking provision will be confirmed in a Stage 2 DA, but would not exceed the maximum allowed under the provisions of LEP 2012.

With regards to bicycle parking the rates in the City of Sydney DCP 2012 have been adopted, although it is noted that these do not technically apply to the Site. For the proposed development, the following rates in DCP are relevant:

- commercial – 1/150m² employees plus 1/400m² visitor;
- retail – 1/200m² employees plus 1/300m² visitor; and
- open space – 1/1,000m² employees plus 1/200m² visitor.

Applying these rates, the proposed development would require the following number of bicycle spaces:

- commercial – 642 (467 employee and 175 visitor);
- retail – 142 (85 employee and 57 visitor); and
- open space – 84 (14 employee and 70 visitor).

The specific layout and location of these spaces will be resolved in the Stage 2 DA.

Traffic Generation and Impact

The assessment found the development delivered following the Concept Proposal would have limited impact on the operation of the road network, as follows.

The morning and afternoon peak hour traffic generation of the existing uses is approximately 53 vehicles per hour in the morning peak hour; and approximately 69 vehicles per hour in the afternoon peak hour. The development delivered following the Concept Proposal would generate additional 75 and 95 vehicles per hour (two way) in the morning and afternoon peak hours.

As outlined at **Section 4.9** Wheat Road is proposed to be reconfigured and closed through the Site. RMS has indicated support for the left turn egress onto Harbour Street (with priority control). Two further options for the configuration of the Wheat Road connection to Harbour Street at the southern end of the Site have been assessed by CBRK at **Appendix I1**. These include provision for a right turn out onto Harbour Street (with modifications to the Blackwattle Place traffic signals to facilitate the right turn movement). A summary of the existing and proposed traffic operation is provided at **Table 11** below.

Table 11 - Existing and proposed two way peak hours traffic flows

Road	Weekday Morning		Weekday Afternoon	
	Existing	Proposed	Existing	Proposed
Harbour Street				
• north Shelly Street Access	1790	+15	2350	+50
• north Cockle Bay Wharf access	2520	+155	2575	+255
• north of Imax access	2575	+60	2645	+50
Wheat Road				
• north Shelly Street Access	815	+5	390	-55
• north Cockle Bay Wharf access	90	-75	190	-180
• north of Imax access	35	+0	120	+0
Blackwattle Place				
• east of Harbour Street	15	15	15	15

Note: Existing traffic volumes include IMAX development

The analysis found that the modified intersection of Harbour Street/Blackwattle Place/Wheat Road would operate with average delays of less than 25 seconds per vehicle in the morning and afternoon peak periods with left out only (priority control), operating at a LoS B which means the intersection has spare capacity.

CBRK found that with a left turn exit onto Wheat Road traffic flows on Harbour Street would increase by 15 to 255 vehicles per hour (northbound). The biggest increase is in the section between the central and northern connections of Wheat Road to Harbour Street, as existing traffic (including from the IMAX redevelopment) is required to use this section of Harbour Street following the closure of Wheat Road through the Site. The assessment found there would be minimal change in traffic flows on Wheat Road north and south of the Site.

7.11.3 Interaction with The Ribbon hotel development

Currently The Ribbon hotel development (adjacent) has ingress from Harbour Street (at the southern connection, south of Blackwattle Place) with egress via Wheat Road (through the subject Site) to Shelley Street. The amended Concept Proposal will not change ingress to The Ribbon development. Egress will be modified with traffic exiting onto Harbour Street (left turn only) at the central Wheat Road connection to Harbour Street (opposite Blackwattle Place). This would allow Ribbon traffic to either travel directly north onto the Harbour Bridge or access the CBD via Shelley Street. RMS has indicated support for the left turn egress onto Harbour Street (with priority control). The traffic effects of the change in egress from The Ribbon development has been assessed by CBRK and found to be satisfactory.

7.11.4 Impacts on the Western Distributor

During exhibition of the original EIS a number of questions were raised by RMS and TfNSW about the potential impact to the Western Distributor including fire safety, maintenance, repair, demolition and closure during construction. Consideration of these items is provided below.

Fire Safety

Aurecon was commissioned to prepare a Fire Safety Study (**Appendix J1**) and Landbridge Design Principles (**Appendix K**).

The Fire Safety Study undertaken indicates that the likelihood of untenable conditions being present within the egress pathways on the roadways beneath the proposed landbridge is low. In undertaking the simulations no means of external intervention was used to improve the tenability condition. Tenability was shown to exist by natural means alone.

Further, fire safety design criteria for the landbridge over the Western Distributor have been developed, in consultation with RMS, for the future stage of design development to demonstrate an appropriate level of fire safety below the landbridge and in the surrounding area (refer to **Appendix K**).

Maintenance, Repair and Demolition

The amended Concept Proposal has been designed to ensure ongoing inspection and maintenance of the Western Distributor can continue. Aurecon have identified how maintenance and replacement of bearings and joints may be undertaken (refer to **Appendix K**).

Aurecon have considered the methodology for future demolition and replacement of the Western Distributor if the landbridge were constructed (refer to Appendix G of the Aurecon report at **Appendix K**). Aurecon confirm that construction of the landbridge does not unreasonably interfere with the ability to replace or augment the existing infrastructure in the future.

Closure of the Western Distributor during construction

In consultation with RMS, construction planning has been developed to minimise closures of the Western Distributor. Pier and column locations have been located in order to be constructed with minimal lane closures. The installation of precast girders and concrete decks over the road network would require periodic night time closures.

Detailed programming and coordination of times and durations would be subject to agreement with RMS through preparation and approval of a Works Authorisation Deed. Consultation with RMS and TfNSW will be continued throughout the detailed design and construction phase of the development.

Future development of the Stage 2 detailed design will be undertaken in consultation with the RMS to ensure that impacts on the ongoing operation, maintenance and expansion of the Western Distributor and Harbour Street are appropriately managed.

7.12 Noise and Vibration

A Noise Impact Assessment has been undertaken by Acoustic Logic (**Appendix L**). The study has identified and investigated potential acoustic and vibration impacts generated by future development including:

- traffic noise generation from additional vehicle movements on public roads;
- plant and equipment;
- retail and commercial uses; and
- construction noise and vibration impacts.

7.12.1 Existing Environment

Acoustic Logic undertook a series of attended and unattended noise measurements at the Site to establish the existing ambient noise environment. Acoustic loggers were placed in four locations, these being:

- Loc 1 – NE corner, Level 2 of existing Cockle Bay structure - 18 July to 26 July 2016;
- Loc 2 – SE corner, Level 2 of existing Cockle Bay structure - 18 July to 26 July 2016;
- Loc 3 – 234 Sussex Street - 10 Nov to 18 Nov 2015.
- 311-316 Sussex Street – 6th July to 13th July 2016.

In addition to these locations, existing noise acoustic monitoring from neighbouring projects was interrogated to provide an expanded representative baseline. Additional baseline monitoring was provided from:

- Development at 65 – 67 Sussex Street (carried out in 2015); and
- Novotel southern terrace (carried out in 2013).

Recorded and reported acoustic baseline surrounding the Site is reported below in **Table 12**.

Table 12- Background Noise Level, dB (A) L90

Location	Day	Evening	Night
Location 1	66	64	54
Location 2	71	70	58
Location 3	56	52	49
311 – 316 Sussex Street	62	61	55
Southern terrace of Novotel	58	59	52
65 – 67 Sussex Street	66	61	55

7.12.2 Noise and Vibration Assessment Criteria

Assessment criteria applicable to the development are outlined below:

- Acoustic impacts associated with construction will be assessed against the NSW EPA *Interim Construction Noise Guidelines 2009*;
- General acoustic impacts will be assessed against the NSW EPA Industrial Noise Policy (INP);
- Noise from traffic on public roads will be assessed against the NSW EPA Road Noise Policy (RNP);
- Patron Noise from licenced areas will be assessed by Liquor and Gaming; and
- The Guideline for Development Near Rail Corridors and Busy Roads has been consulted.

7.12.3 Noise and Vibration Impact Assessment

Construction Noise and Vibration

The ICNG provides acoustic criteria that can be applied during the construction process, relevant to the proposed development are the following:

- Commercial and Retail – 70dB(A) L_A (EQ 15 min)
- Residences:
 - RBL + 10dB(A) L_A (EQ 15 min) for 'Noise Affected' properties;
 - 75dB(A) L_A (EQ 15 min) for 'Highly Noise Affected' properties

A detailed program and methodology for the demolition and excavation works has yet to be developed, and so the assessment provides an indicative assessment of noise emissions based on typical construction activities.

Based on noise emissions from standard construction equipment; hydraulic hammers, excavators and concrete saws would be the loudest activities during construction. **Table 13** summarises the likely worst-case scenario for hammering and excavation on key receivers.

Table 13- Worst case scenario construction noise assessment

Construction Plant	Plant Noise Level dB(A)	Receiver Location	Predicted Worst Case Noise Level dB(A) L_{eq}	Construction Noise Objective dB(A) L_{eq}
Hammering	120	Harbourside	63	70
		Sheraton	72	70
		Darling Park Towers	82	70
Excavator	114	Harbourside	57	70
		Sheraton	66	70
		Darling Park Towers	76	70
Angle Grinders	114	Harbourside	57	70
		Sheraton	66	70
		Darling Park Towers	76	70

The assessment indicates that:

- there are no residential receivers within proximity of the Site that may be affected by construction noise that exceeds the ambient noise environment;
- predicted noise levels during construction would exceed the noise criteria at the Darling Park Towers, however, it is noted that Darling Park is managed by the applicant and so would be subject to construction noise management and consultation with tenants in association with the developer;
- predicted hammering noise levels would marginally exceed the noise criteria at the Sheraton, which is also impacted by traffic noise levels of up to 70 dB(A) L_{eq} ; and
- overall, construction noise levels are accepted to be below the noise criteria. Where exceedances do occur, they are expected to be able to be managed through construction conditions and through the construction management plan.

With respect to construction vibration, Acoustic Logic concludes that due to the proximity of surrounding receivers no significant vibration impacts are expected during construction works.

Any future Stage 2 DA would include a further assessment of construction noise and vibration impacts.

Noise from additional Traffic on Public Roads

Access to the Site is generally via Wheat Road with connection from King Street and Shelley Street. There are no sensitive receivers on Wheat Road that would be impacted by traffic accessing the Site. Residential dwellings on Shelley Street are heavily impacted by traffic noise from the Western Distributor and any traffic noise generated by the proposal would have a negligible impact compared to existing traffic noise. Acoustic Logic concludes that the proposal would be compliant with the Road Noise Policy.

Noise from Mechanical Plant

A detailed assessment of mechanical plant noise emissions will be undertaken during the design development phase of the subsequent Stage 2 DA, once specifications and plant selections have been made and can be governed by standard conditions of consent.

Noise from Retail and Licenced Premises

The Concept Proposal would include retail food and beverage uses, not dissimilar to the existing licenced tenancies that occupy Cockle Bay Wharf. Noise from licensed food and beverage tenancies (i.e. restaurants and bars) will be typically associated with:

- patron noise;
- music; and
- mechanical plant.

Acoustic Logic have undertaken a worst-case scenario assessment for predicted noise generated by retail venues that indicates that noise levels at the closest residential receiver would be below the noise emission criteria due to the shielding inherent from the built form on the Site.

7.13 Reflectivity

Arup have prepared a Reflectivity Report in support of the Concept Proposal and it is included at **Appendix M**. To inform the assessment of reflectivity Arup has undertaken an indicative assessment of a simplified massing model for one possible development outcome within the concept envelope. The report investigates the potential for solar reflectivity glare on motorists, pedestrians and surrounding buildings. The reflectivity measures of Sydney DCP 2012 have been adopted as a guide for this assessment.

Arup has tested the potential impact of reflectivity in a range of locations surrounding the Site, testing specular reflectivity for each indicative façade to ensure there are no impacts on motorists. The modelling found that the future development would not cause adverse impact to motorists if the specular reflectivity of glazing and cladding is kept to within 20 percent.

Reflectivity analysis will be undertaken for detailed design and submitted with the subsequent Stage 2 DA. It is anticipated that all facade glazing will have a normal specular reflectivity of visible light of 20% or less (as required) or alternative suitable measures will be provided to avoid adverse glare. Such measures will ensure that the future buildings will not cause adverse solar glare to vehicle drivers or pedestrians in any of the surrounding areas or to the occupants of other residential buildings.

7.14 Wind Impact

A Wind Tunnel Assessment of the Concept Proposal has been carried out by Cermak Peterka Petersen (CPP) and is included as **Appendix N**. The report draws conclusions based on the prevailing wind conditions and the results of quantitative wind tunnel tests undertaken for the proposal.

The general pedestrian wind conditions around the Site have been assessed under the “Lawson comfort” and distress/safety criteria. It was found that the impacts of the addition of the Concept Proposal on the pre-existing wind conditions along the boardwalk, in Crescent Garden, and at the corner of Market and Sussex Streets were marginal, and these areas would be expected to remain suitable for continued public uses without the need for any mitigation.

The report finds that the proposed building envelope may result in downwash from the tower and that windy conditions could be expected close to building corners. The report indicates that while some locations could experience windy conditions, these can be mitigated through design measures to ensure these locations can pass relevant criterion.

The report notes that the strength of the conditions in windy locations will depend on the final architectural form of the proposal and can be confirmed through wind tunnel testing as part of a future Stage 2 DA.

CPP concludes that depending on the use of spaces (to be confirmed at Stage 2) mitigation measures can be implemented to reduce the potential wind impacts including vertical screening and dense planting. Such measures, where required, can be detailed within future Stage 2 DAs.

7.15 Access

7.15.1 Public Access

A Pedestrian Assessment has been undertaken by Arup (in consultation with Space Syntax) that considered the impact of the proposal on pedestrian movements (refer to **Appendix O**). The Assessment has undertaken a pedestrian planning analysis of the existing Site and the proposals impact on site accessibility and movement.

A quality analysis audit was undertaken for the four primary pedestrian routes that connect Cockle Bay Wharf to the surrounding area and would be affected by the proposal, including Pymont Bridge (route 1), north Cockle Bay Wharf (route 2), the central Cockle Bay Wharf bridge crossing (route 3) and Druitt Street Bridge (route 4). The analysis measured journey time and the quality and operation of each route against five key metrics:

- Connected – connectivity, permeability and the ease for pedestrians to travel from one place to another;
- Comfort – the amenity of the pedestrian environment, including shade and shelter, street furniture and space to mingle;
- Sense of Place – an environment that attracts people and encourages social interaction;
- Visibility – visibility of pedestrians and extent which they are seen from nearby land uses; and
- Convenient – the extent which a route may minimises delays.

The analysis found that generally the existing pedestrian paths offered varying degrees of connectivity with many pathways currently underutilised with some requiring switch backs within private land making these options less efficient or convenient. The existing and proposed pedestrian routes are shown at **Figure 18** and **Figure 19**.

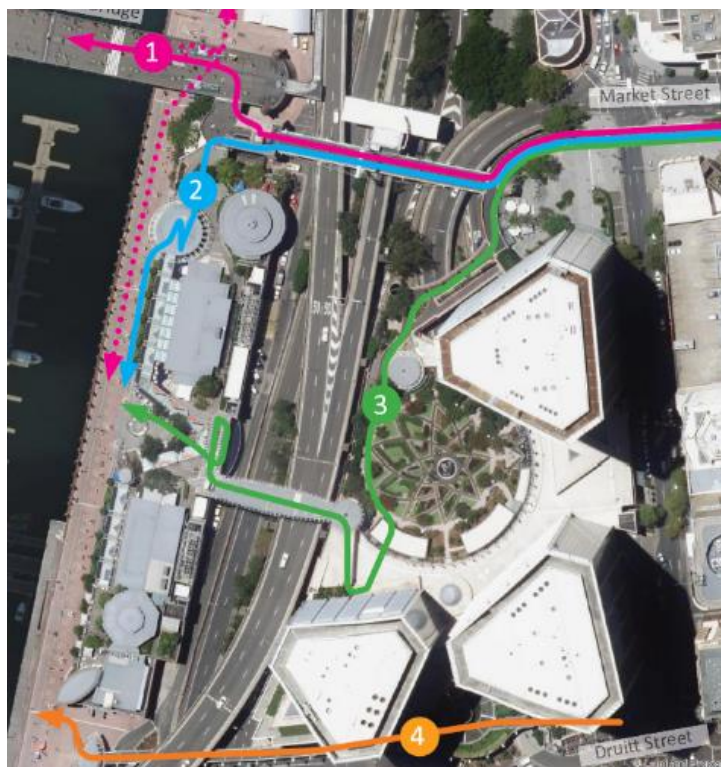


Figure 18 – Existing pedestrian travel routes

Source: FJMT

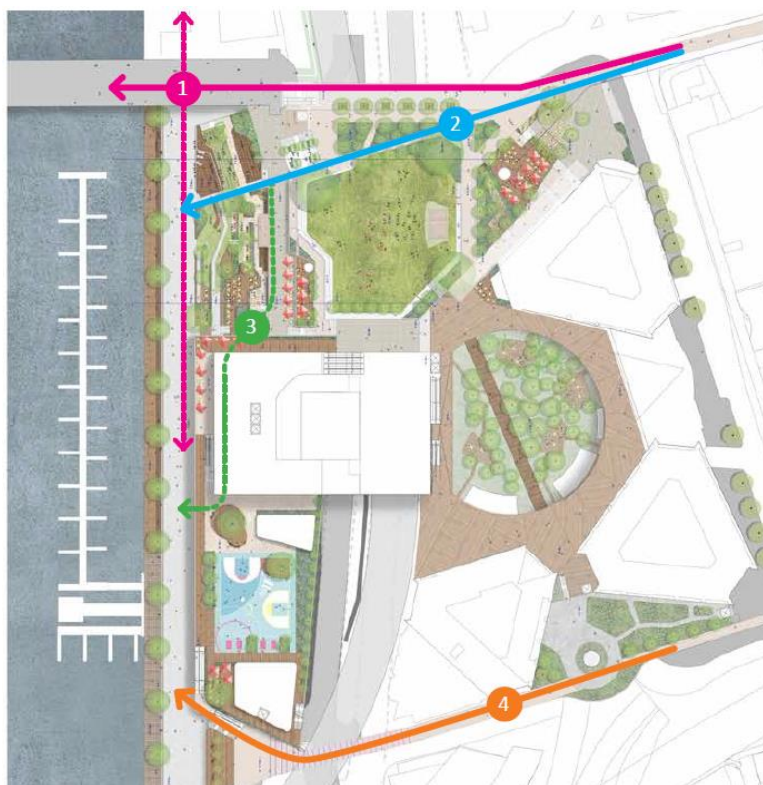


Figure 19 – Proposed new pedestrian travel paths

Source: FJMT

The Concept Proposal greatly improves the connectivity of the Site by providing direct travel paths that reflect desire lines of travel that would make the journey more accessible and direct. The Concept Proposal also provides an opportunity to significantly improve amenity and create a sense of place through the introduction of new open spaces which can accommodate additional shelter and rest areas within a landscaped environment. Overall journey times are improved by the proposal as shown at **Table 14**.

Table 14 - Existing and proposed pedestrian journey times

Route	Pedestrian path	Existing (min)	Proposed (min)	Improved Journey Time (min)
1	CBD to Pyrmont Bridge	5.27	4.40	0.47
2	CBD to Cockle Bay Wharf (north)	8.02	6.28	1.34
3	CBD to Cockle Bay Wharf (Central)	9.53	Not required	-
4	Druitt Street bridge	6.37	6.22	0.15

Accessibility modelling has been undertaken by Arup of the 10-minute walking catchment. The modelling shows that the proposal increases the 10-minute walk time catchment by 50%, represented by the pink shaded areas shown in **Figure 20**. This means that more of the CBD will be within a 10 minute walk of the Site. The increased catchment also significantly improves the connection between the CBD and Harbour for pedestrians. Arup summarise the pedestrian benefits as follows:

Connectivity

- An opportunity for more direct connections between CBD and wharf/ Pyrmont Bridge;
- Potential for improved natural wayfinding through open deck and sightlines to waterfront;
- Opportunity to improve connectivity with Darling Park and the Crescent Garden;
- Increased volumes can be moved/stored comfortably; and
- Reduces demand on water level boardwalk in event mode.

Amenity

- Potential to provide additional shelter and rest areas through landscape design;
- Opportunity to provide high quality consistent finishes throughout development;
- Potential to improve lighting provision for all hour's operation;
- Increased sense of place with the northern open space area, created as a destination; and
- Greater separation of the Western Distributor and the development has the potential to improve both sound and air quality for pedestrians.

Accessibility

- Increase in vertical transport provision between Market Street and the foreshore, including more prominent lift locations; and
- The western end of Pyrmont Bridge is now within 10 minutes perceived time of the development and CBD.

Events

- Increased capacity for public events with views of Harbour; and
- The publicly accessible open space provides an area for a range of public and private event types.
- Increased flexibility of operations with multiple access points and possible configurations of the space.

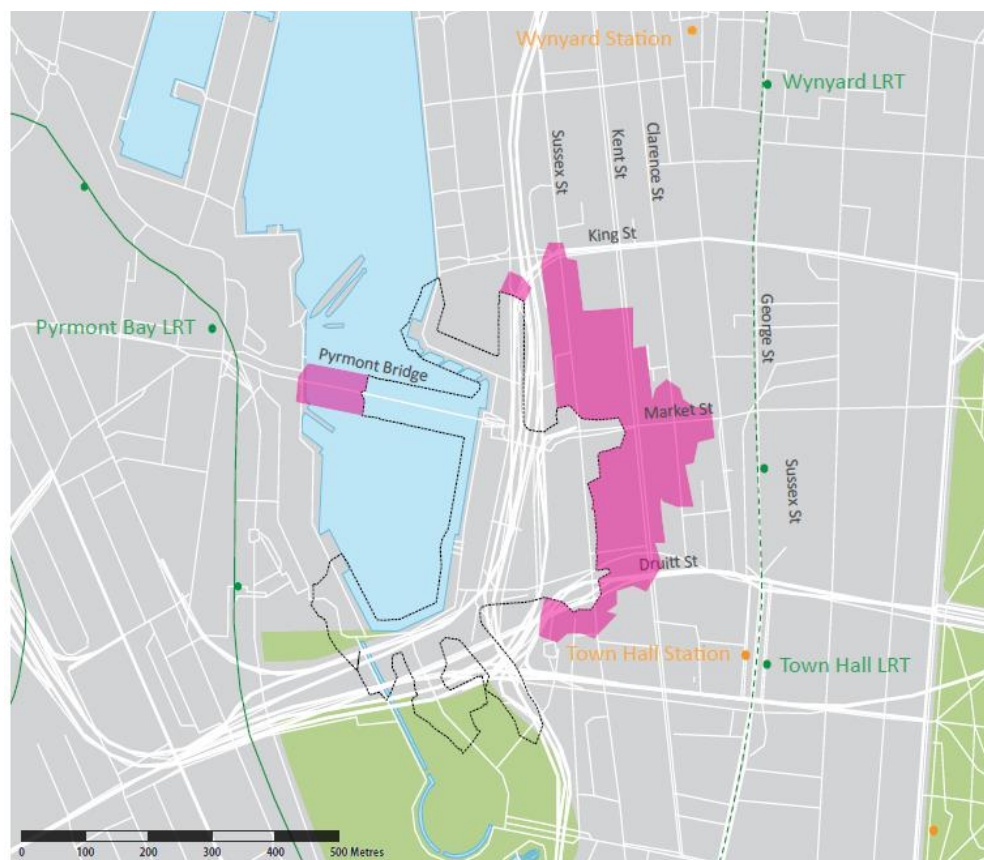


Figure 20 – Ten-minute walking catchment and increased capture area resulting from the proposal (in pink)

7.15.2 Cycleway Extension

There is an opportunity to connect the Site with the existing pedestrian and cycleway infrastructure on the Western Distributor (south of the Druiitt Street Pedestrian Bridge) with the King and Kent Street cycleway. Further investigation will be undertaken in consultation with TfNSW's CBD Coordination Office and pending those results may form part of the Stage 2 (detailed) DA.

7.15.3 Events

The proposed publicly accessible open space offers the opportunity to provide new public space in the Cockle Bay precinct. This provides an opportunity to enhance the movements to and from Cockle Bay Park and Darling Harbour as a place for casual engagement and organized events.

The northern accessible open space will provide a public area of up to 4,000m², with urban furniture, vegetation and activated spaces for retail. Arup indicate it would generate demand up to 8,000 people. The demand and capacity for events will vary according to event type and other requirements to maintain through movements, provide food stalls and other temporary retail which may occupy space.

For large gatherings such as Vivid Festival and New Year's Eve, the publicly accessible open space also provides a significant increase in capacity to move to / from the foreshore to the city via Market Street. This is important as the Pyrmont Bridge vertical capacity is limited and movement from the foreshore to the City is therefore constrained. The diagonal spine therefore provides a substantial increase in capacity and resilience for major events. In this respect, the northern portion of the open space will increase the capacity of the precinct, provide unique views from well above the wharf as well as provide operational flexibility and resilience during large crowd gatherings. The Architectural Design Report includes criteria that will ensure the future design of pedestrian paths and spaces will enhance the amenity and functionality of the urban realm (refer to **Appendix C**).

7.15.4 Accessibility

Morris Goding Accessibility Consulting has undertaken an assessment of the proposal against the relevant provisions of the Commonwealth *Disability Discrimination Act 1992* (DDA) and Building Code of Australia (BCA) regarding accessibility. The Access Report (refer to **Appendix P**) proposes a statement of commitments that considers operational modes and user groups to deliver equality, independence and functionality to people with disabilities, in compliance with the DDA and, as far as possible, eliminate discrimination against persons on the grounds of disability. The drawings indicate that compliance with statutory requirements with respect to Site access and common area access can readily be achieved.

7.16 Heritage

The following heritage documents have been prepared to assess the amended Concept Proposal:

- Historical Archaeological Assessment has been prepared by GML Heritage (**Appendix Q**);
- Maritime Archaeology Assessment has been prepared by Cosmos Archaeology (**Appendix R**);
- Heritage Impact Statement (HIS) has been prepared by Weir Phillips Heritage to assess the impact of the Concept Proposal on items listed on the State Heritage Register, including Pyrmont Bridge (**Appendix S**); and
- Aboriginal Heritage Due Diligence Report has been prepared by GML Heritage and is included at (**Appendix T**).

These reports are summarised in the following section.

7.16.1 Archaeology

A Historical Archaeological Assessment has been prepared by GML Heritage and is included at **Appendix Q**. A summary of the assessment and proposed mitigation measures are provided below.

Assessment

The Historical Archaeological Assessment evaluates the Site's potential to contain historical archaeological objects and the potential impacts the Concept Proposal will have (if any) on the heritage significance of the Site. GML Heritage's report follows the guidelines for Archaeological Assessments set out in the '*NSW Heritage Manual*', '*Assessing Significance for Historical Archaeological Sites and Relics*' and the ICOMOS '*Burra Charter*'.

As there have been no archaeological excavations undertaken at the Site, the Assessment has analysed the archaeological potential of the Site including a comparison of the outcomes of previous archaeological investigations within the general vicinity of the Site.

The Assessment found that there is a moderate to high potential for archaeological remains across approximately 60% of the Site with moderate level of disturbance across the Site and localised areas of high levels of impact from existing development. The potential for archaeological remains is summarised as follows:

- The eastern half of the Cockle Bay Wharf building is the main area with high potential for historical archaeological remains, due to continuous reclamation during the nineteenth and twentieth centuries. The integrity of any remains is fragmentary because of piling and excavation for services associated with previous redevelopments at the Site. The potential significance of remains at this location could be of local or State significance.
- The area beneath the Western Distributor is considered to have moderate potential for archaeological remains. The potential significance of remains would likely be of local significance.
- The northeast and western edges of the Site are assessed as having low potential for archaeological remains due to previous development.

Potential Impacts of the Concept Proposal

In terms of potential impacts arising from the Concept Proposal, the Assessment identifies that the future buildings have some potential to impact archaeological deposits depending on the extent and depth of proposed footings.

Key impacts arising from the Concept Proposal are outlined below:

- Demolition of the Cockle Bay Wharf building, including the removal of below-ground footings and piles may have an impact on archaeological remains.

- Works associated with the proposed tower, particularly in the eastern half of the building footprint, may result in a level of impact on archaeological remains due to the density of piles.
- Construction of the proposed retail building, would potentially impact archaeological remains due to the density of piles, however, due to the predicted depth of deposits in this area there is potential for some deposits to survive.
- The western half of the proposal is located outside the area of historic land reclamation and would not have an impact on archaeological deposits.
- Works, including excavation may have the potential to expose or impact on remains of earlier seawalls, earlier wharf structures or building remains.
- The construction of the foundation piers of the landbridge is expected to impact only within the footprint of each pier.

Summary

The Assessment concludes that there is potential for some disturbance to archaeological remains within the footprint of the Concept Proposal buildings. It is noted that the Cockle Bay Wharf development completed approximately 20 years ago and that subsequently any archaeological remains are likely to have been previously disturbed. The potential remains are likely to be considered of local significance, however, depending on their nature and extent, remains could be of State significance, in particular the remains of early seawalls and buildings.

However, it is noted that the likely impacts are only indicative at the Concept Proposal stage and appropriate mitigation measures can be put in place. These mitigation measures will be further developed during the detailed design of the Stage 2 DA, when the detailed impacts of the proposal including piers and piling will become clearer.

A summary of the key mitigation measures for the Concept Proposal is provided below. For further detail, refer to the Historical Archaeological Assessment at **Appendix Q**.

Mitigation Measures

To minimise impacts to potential archaeological remains, the following mitigation measures are proposed by GML Heritage:

- Undertake archaeological test excavation to determine the nature, condition and extent of potential archaeological remains and to inform the design in order to avoid impacts to any potential Stage Significant archaeological remains. An assessment of marine archaeology is provided at **Section 7.16.2** below.
- Should the program of historical test excavation identify substantial and/or significant historical archaeological remains, further excavation and recording of these features may be required following demolition of existing structures.
- The results of archaeological test excavation and recording should be used to inform future historical heritage management and interpretation measures, if appropriate, as part of future development of the Site.
- In the event of any unexpected significant finds, works should cease and the NSW Heritage Division, OEH be notified in accordance with Section 146 of the Heritage Act.

7.16.2 Maritime Archaeology

A Marine Archaeological Assessment has been undertaken by Cosmos Archaeology to assess the Site's potential for maritime archaeology and possible mitigation requirements (**Appendix R**). A maritime archaeological inspection was carried out on the 21st August 2017 including a dive inspection of the site and survey. The findings of the assessment is summarised below.

The eastern side of Cockle Bay has been used for maritime purposes since the early 19th century until the mid-20th century. During this time a number of wharves had been constructed in the area with episodes of seawall construction and land reclamation.

The diving inspection identified the 1997 seawall that extends along the Site and found evidence of earlier sheet piling in the northern half of the study area. Remains of timber sheet piling and Monier concrete plating were also identified, being remains of a 1903-1908 seawall. The remains of two other piles were also found that may be associated with historic wharves.

Remains of wharves and related material were assessed to be of State significance as they represent the earliest private maritime infrastructure development in Sydney Harbour and a finite archaeological resource. The timber sheet piling with Monier concrete plates and potential remains of other seawalls were also assessed to be of State significance as the archaeological remains may yield information on the adaption of seawalls and/or the location, material and form of seawalls which are not be available in the historic record. The sheet piling was identified as having no heritage significance.

Figure 21 indicates the potential for maritime archaeology across the Site. Zones of high potential indicate areas where previous maritime structures have been constructed, including wharves and seawalls, which possibly remain buried within the seabed or beneath reclamation.

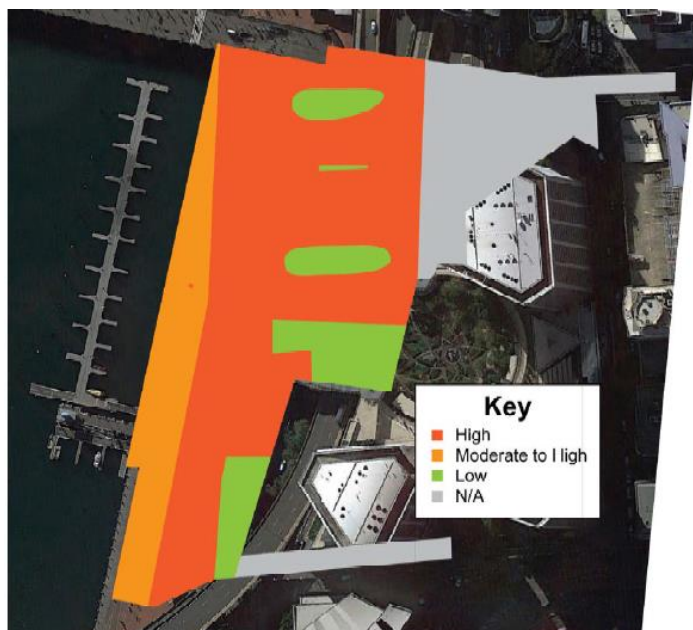


Figure 21 - Marine archaeological potential

Source: Cosmos Archaeology

Potential Impact of the Concept Proposal

In terms of potential impacts arising from the Concept Proposal, the Assessment identifies that the future building footings including piling have some potential to impact archaeological deposits depending on their location, extent and depth. These details would be confirmed at the detailed DA stage (Stage 2) which would allow for a more complete understanding of potential impacts and the mitigation measures that may be required following completion of the design excellence process. The assessment concludes that potential impacts could be satisfactorily mitigated by undertaking selected archaeological excavation in areas of high maritime archaeological potential and monitoring in areas of low archaeological potential.

Mitigation measures

Cosmos Archaeology confirm that there are a number of potential mitigation measures that could be undertaken during design development and as part of the Stage 2 DA that can reduce impacts of future development to an acceptable level. A summary of mitigation measures is provided below.

- Undertake a pre-disturbance survey of the building footprint once the design is finalised to inform planning for salvage excavation (if necessary);
- Provide monitoring and work crew inductions during excavation works to identify and record unexpected sites;
- Undertake maritime archaeological test excavation and/or future salvage works in locations where direct impacts are known; and
- Consider artefact relocation as a way to provide long-term storage and conservation of artefacts.

7.16.3 Impact on Items Listed on the State Heritage Register

A HIS has been prepared by Weir Phillips Heritage to assess the impact of the Concept Proposal on items listed on the State Heritage Register, including Pyrmont Bridge; this is included at **Appendix S**.

The Assessment has been prepared to assess the potential impacts the Concept Proposal will have (if any) on the overall significance of the Site and surrounding area; significant built and heritage items, including Pyrmont Bridge, and opportunities for heritage interpretation within the public domain.

Weir Phillips has been prepared their assessment with reference to the NSW Heritage Office's publication:

- Statements of Heritage Impact (2002);
- *Guideline on Heritage Curtilages* (1996);
- *Guidelines Assessing the Significance of Archaeological Sites and Relics*; and
- *Design in Context – guidelines for infill development in the Historic Environment* (2005).

The HIS identifies the following heritage items as being located in the vicinity of the Site:

- The Corn Exchange Building, 173-185 Sussex Street, Sydney;
- Shelbourne Hotel, 200 Sussex Street, Sydney;
- Cockle Bay Precinct Archaeological remains;
- Former "Foley Bros" warehouse including cartway, courtyard and interiors, 230-232 Sussex Street, Sydney;
- Former "Central Agency" warehouse including interiors, 48-58 Druitt Street, Sydney; and
- Former warehouse "Archway Terrace" including interiors, 26-32 Market Street, Sydney.

The HIS includes an assessment of the proposal which confirms it will have either no impact or an acceptable impact on the above heritage items.

Impact on Pyrmont Bridge

The Heritage Impact Statement notes that the setting of Pyrmont Bridge has evolved over time with the setting of the bridge fundamentally changed after the redevelopment of Darling Harbour after 1988, with development occurring in proximity to the approaches of the bridge, including Cockle Bay Wharf.

The Concept Plan options for re-establishment of the severed connection between Market Street and the bridge is considered to have a positive impact on the significance of the bridge as it will restore its original approach path and role connecting Pyrmont and the City (as shown in **Figure 22**). The Concept Proposal would limit any impact on the interface with the bridge by joining with the bridge at later and intrusive additions.

Existing view corridors from the south would have some visual interruption, however the Concept Proposal would maintain existing views from the north, north-east and from Pyrmont. The HIS found that the Concept Proposal would not visually detract from the bridge or the Harbour setting as the proposal would be limited to the truncated end of the bridge or the first span out from the eastern shoreline of Darling Harbour.

The podium setback is configured to maintain an appropriate visual setting from the bridge and with greater setback for the tower element has an acceptable impact. The HIS found that appreciation of the technical significance of the bridge would not be impacted by the proposal as these values are largely independent of its setting. Weir Philips found the proposed bulk and scale of the podium is considered reasonable in relation to the bridge and the increased tower setback provides good connection for pedestrians while maintaining sufficient separation.

The HIS includes an assessment of the effect of the proposal with respect to the *Pyrmont Bridge Conservation Management Plan (2006)*. The report finds that the proposal would not visually detract from the bridge, would not hasten the deterioration of surviving fabric and would not result in irreversible alteration of surviving fabric.

The Assessment concludes that the proposal would have a positive impact on the setting of the bridge, and any impacts are considered acceptable.



Figure 22 - Original relationship between Pyrmont Bridge and Market Street

Source: Weir Phillips Heritage

7.16.4 Aboriginal Heritage

An Aboriginal Heritage Due Diligence Report has been prepared by GML Heritage and is included at **Appendix T**. The assessment is the first stage in the process of identifying the potential for the Site to possess Aboriginal heritage sites, places or objects, and/or values in accordance with the Office of Environment and Heritage (OEH) guidelines for due diligence. An Aboriginal cultural heritage assessment has not been undertaken, however, further consultation with the Aboriginal community will be undertaken during the Stage 2 DA as a mitigation measure (outlined below).

A search of the Aboriginal Heritage Information Management System (AHIMS) database was undertaken on 19 August 2016. It found that there are no Aboriginal heritage sites within the study area. There are 39 recorded Aboriginal sites in Sydney CBD and immediate surrounds. The most common site type registered in the area is potential archaeological deposit sites, followed by artefact sites and open camp sites. GML identify that due to the land use history and environmental context there could be potential for Aboriginal archaeological potential associated with the original Cockle Bay foreshore.

The Site is located on land that has undergone progressive land reclamation that has extended the original Cockle Bay shoreline westward over time with fill. Past investigations have confirmed that there is potential to identify artefacts within fill.

Figure 23 below shows the potential for Aboriginal archaeological items across the Site. The areas with low potential include those areas that were fully submerged prior to European reclamation and moderate potential to find remains within fill that was used for reclamation in the past. There is high potential where the original foreshore was previously located, at the far west of the Site, which is outside the location of the proposed tower footprint.

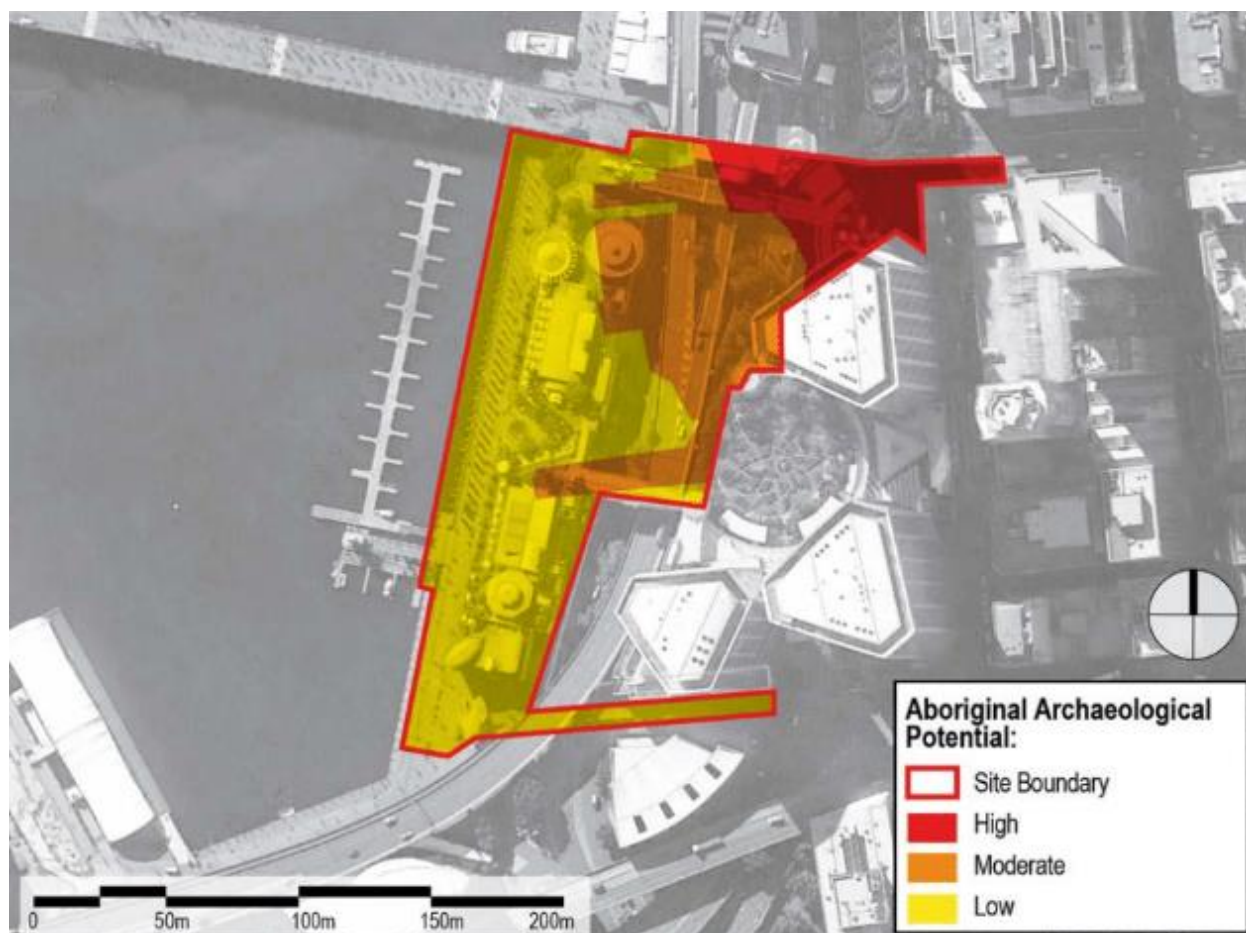


Figure 23 - Aboriginal heritage potential

Source: GML

Mitigation Measures

To mitigate potential impacts arising from the amended Concept Proposal on Aboriginal remains the following mitigation measures are proposed by GML Heritage:

- Aboriginal community consultation should be undertaken in accordance with the OEH Guidelines for Consultation 2010.
- An Aboriginal archaeological research design (ARD) should be prepared, in consultation with the proponent.
- A program of test excavation and/or salvage excavation should be implemented in accordance with the ARD. Test excavation should aim to sample a representative portion of intact soil profiles. Any Aboriginal archaeological deposit identified would require salvage and removal.
- Should archaeological excavation identify an Aboriginal Site /deposit of exceptional value. There may be a need to cease works and discuss options for its conservation and mitigation.

7.17 Geotechnical

An Initial Geotechnical Assessment of the Site has been prepared by Coffey; this is provided as **Appendix U**.

The Geotechnical Assessment determines that the Concept Proposal is feasible from a geotechnical perspective, subject to appropriate design and construction methodology. Further geotechnical investigations can be carried out and submitted with the future Stage 2 DA, to mitigate potential geotechnical risk.

7.18 Contamination

A Preliminary Site Investigation (PSI) has been prepared by Coffey and is included at **Appendix V**. An assessment of historical data found that the Site has been used for various industrial purposes and a working dock from as early as the 1880s to 1980s when the area was subsequently developed as part of the Darling Harbour Entertainment Precinct.

Many former uses had the potential to contaminate the Site, including ship dock operations and historical automobile garage and engineering workshops. The western portion of the Site was reclaimed and is known to contain unknown sources of fill that is likely to be similar to material used in the surrounding areas of Darling Harbour, King Street Wharf and Barangaroo. Based on the Site historical review, Coffey has developed a conceptual site model that indicates the Site may have areas of environmental concern and associated chemicals of potential concern including PAH, TRH, BTEX, PCB, OCP, heavy materials and asbestos. It is noted that this existing contamination is below ground and therefore isolated from existing publicly accessible areas.

The Site is currently fully developed which has prevented testing for soil and ground water. However, Coffey found that the Site is currently covered by a building slab and concrete which precludes the potential for Site contamination by existing and future Site users.

The amended Concept Proposal includes ground uses that remain unchanged from that which currently exists as the proposal does not seek to excavate the Site and would continue to cover the Site by a building slab and concrete.

Coffey conclude that the Site is suitable for the continued commercial use. Coffey make the following recommendations to be implemented as part of any future Stage 2 DA:

- Implementation of a Construction and Environmental Management Plan;
- Additional soil sampling to confirm presence of acid sulfate soils and to develop appropriate management options including preparation of an Acid Sulfate Soils Management Plan;
- Disposal of spoil generated from the Site in accordance with NSW EPA (2014) Waste Classification Guidelines; and
- Implementation of an Unexpected Finds Protocol.

7.19 Visual Privacy

The amended Concept Proposal will facilitate an increase in publicly accessible open space, along with a landmark commercial tower and retail outlets. Impacts of the proposed development on visual privacy will be addressed within the Stage 2 DA when more detail is available in relation to:

- the design of the building and its likely outlook; and
- the design of the publicly accessible open space and the likely impacts on privacy of onlooking to, and outlook from, this area.

Notwithstanding, the amended Concept Proposal is located approximately 100m from the nearest residential dwellings at 222-228 Sussex Street, Sydney and the Meriton Building (under construction) at 230-234 Sussex Street.

7.20 Structural Engineering

A Structural Engineering Report has been prepared in support of the Concept Proposal by Enstruct Group and is included at **Appendix W**. The report has reviewed the Site constraints to develop a viable construction methodology for the proposal. Enstruct propose the following key engineering components:

- Foundations - steel encased large diameter concrete piles, bearing in competent rock.
- Podium - conventional cast in situ concrete frame with post tensioned slabs.
- Commercial Office Tower - jump start composite steel columns, conventional jump formed reinforced concrete core providing lateral capacity for the tower, post tensioned long span floor plates supported by high strength concrete columns.

- Landbridge – pre-fabricated pre-stressed precast concrete beams at close centres supporting pre-cast slab and topping layer. Dimensioned to allow transport and lifting thereby minimizing intrusion in the western distributor zone.

The Enstruct report notes that the amended Concept Proposal will include construction over existing piles and above the existing sea wall. The proposed tower envelope has been so located to enable the majority of required piling to be undertaken behind the existing sea wall.

The existing structure on site has been studied by Enstruct. The existing deck will be retained by the proposed development as part of the boardwalk. It will also play a key role as a construction platform for the superstructure which is built to the east of the existing sea wall over the harbour.

As the design of the development is further developed, the structural feasibility of the Stage 2 development will be assessed within that application.

Landbridge Pier Options

Enstruct and Aurecon have considered two structural options for landbridge pier locations. They are:

- including piers between the on-grade northbound Harbour Street and the elevated Western Distributor and
- an alternate 'no piers' option.

The options are presented at **Appendix K** and **Appendix W**.

Landbridge Structural Design Criteria

Aurecon have developed structural design criteria for the landbridge in consultation with RMS, based on a 'pier option'. Application of the design criteria at the detailed design stage will ensure compliance with the relevant Australian Standards and requirements related to earthquake actions. The landbridge superstructure, substructure and foundations immediately adjacent and over the Western Distributor would have a 100-year design life. Refer to the Aurecon Report at **Appendix K**.

7.21 Utilities

A Preliminary Utility Services Infrastructure Assessment has been prepared by Arup and is included at **Appendix X**. A summary of this report is provided below.

Arup has performed a 'dial before you dig' enquiry to determine the existing utilities and arrangements, forecast demand and any required upgrade works to accommodate the amended Concept Proposal.

Water

The existing 150mm water main is available from Wheat Road and Arup confirm the water main size is expected to be sufficient is size for the amended Concept Proposal. The water main is located within the property boundary and would need to be modified to suit the amended Concept Proposal along the new Wheat Road, subject to Sydney Water approval.

Sewer

The existing sewer mains available at the Site include a 225mm and 300mm sewer main located at north and south Wheat Road respectively. Arup confirm the existing sewer main capacity is sufficient for the amended Concept Proposal. Arup note the northern end of the proposal connection to the 225mm sewer main would be subject to the available invert level as the connection is greater than 30m away.

Stormwater

The existing stormwater mains available at the Site include a 1500mm stormwater main at Wheat Road (mid) and a 600mm and 1800mm stormwater main at Wheat Road (south). Arup confirm the existing water main capacity is sufficient for the amended Concept Proposal. The water main infrastructure is located within the property boundary and may need to be modified to accommodate the proposed development.

Gas

The existing natural gas main available at the Site is a 110mm medium pressure gas main 210kPa. Arup confirm the existing gas main capacity is sufficient for the amended Concept Proposal, subject to Jemena's approval. The gas main infrastructure is located within the Site boundary and would need to be relocated approximately 20m west to suite the proposed development, along new Wheat Road and subject to Jemena's approval.

Electrical

The estimated demand generated by the amended Concept Proposal to be in the order of 8 to 11.5 MVA which will require 3 substations. Arup has undertaken initial discussions with Ausgrid who advise there is likely available spare capacity for the proposal from a new Sydney North Zone Substation on Sussex Street.

The existing in ground conduits would be required to be augmented to provide new HV supplies to the Site.

7.22 Construction Management

A Preliminary Construction Management Plan (PCMP) has been prepared by Multiplex and is included at **Appendix Y**. A summary of the report is provided below.

Assessment

The PCMP details the Site construction and environmental management principles for the proposed development. The CMP details management principles which seek to manage the impact of construction activities in terms of public and employee safety, noise, vibration, air and water quality and construction traffic. Further detailed Construction Management Plans will be prepared prior to the commencement of construction.

Traffic, Parking and Pedestrian Management (Construction)

CBRK have prepared a report entitled *Principles of Construction Traffic Management for the Proposed Redevelopment of Cockle Bay Wharf, Darling Harbour*, and this is provided as **Appendix I2**. This report will form the basis of a detailed Construction Traffic Management Plan that will be prepared (and included as part of the Stage 2 DA) to ensure vehicle movements to and around the Site will not unduly impact the operation of the surrounding pedestrian or vehicle network.

Appendix I2 notes likely construction traffic routes to and from the Site and sets principles to guide the detailed construction management plans that will be required by the future Stage 2 Development Application. The CBRK report covers:

- The diversion of Wheat Road;
- Enabling and substructure works;
- Construction hours;
- Truck routes to and from the Site;
- Required traffic diversions;
- Construction site access points;
- Impacts on pedestrians; and
- Consultation.

The principles of Construction Traffic Management that are noted by the CBRK report include:

- Wheat Road will be closed through the site with connections at the northern and southern ends of the site to/from Harbour Street;
- at the southern end of the site, the existing Cockle Bay connection of Wheat Road to Harbour Street will be modified to provide left out only to Harbour Street. This will facilitate egress from the site, the adjacent Ribbon development and the existing bus/coach set down pick up area (located at the southern end of the site);
- at the northern end of the site, the existing northern exit from Harbour Street to Wheat Road will be retained and a new Wheat Road diversion will be provided starting further south than the existing exit. This section of Wheat Road will be one-way northbound with separate entry and exit connections to the subject site. It will maintain access to existing bus/coach parking on Wheat Road, servicing for Helm Bar and adjacent Aquarium, and maintain access to King Street Wharf via Shelly Street;

- it is expected that construction of the proposed development will commence after the completion of the adjacent Ribbon development;
- the proposal seeks to minimise effects on pedestrian movements and amenity. The Preliminary Construction Management Plan (**Appendix Y**) notes that a temporary pedestrian bridge be constructed during the construction works to ensure that pedestrian connectivity is not severed during the construction process;
- maintain appropriate capacity for pedestrians at all times along the pedestrian promenade and connections to/from Sussex Street;
- maintain convenient access and circulation for buses and coaches;
- provide appropriate safety fencing/hoardings around the site compound and adjacent to the construction activity;
- manage and control construction traffic movements on the adjacent road network and vehicle movements to and from the site;
- maintain traffic capacity at intersections and mid-block in the vicinity of the site;
- construction work zones adjacent to, within and directly above the Western Distributor will be undertaken at night during agreed working hours. This work will require the temporary closure of part of the northbound and/or southbound carriageways of the freeway, adjacent to the construction activity;
- the temporary lane closures of the Western Distributor will be subject to the preparation of an overall Construction Traffic Management Plan, in consultation with the CBD Coordination Office within TfNSW, RMS and the City of Sydney;
- manage and control traffic diversions around the construction activity associated with the temporary partial closure of the Western Distributor;
- maintain access to properties adjacent to the site, including the Ribbon development (currently under construction), Helm Bar and adjacent Aquarium;
- restrict construction vehicle activity to designated truck routes through the area;
- construction access driveways to allow trucks to enter and exit the site in a forward direction;
- maintain safety for workers;
- the construction access driveways and the on-street traffic diversions to be managed and controlled by qualified traffic controllers;
- construction hoardings/fencing and scaffolding to be erected around the construction site, with overhead protection provided where required;
- construction vehicles to be accommodated on-site;
- all trucks removing demolition material from the site to be loaded from the on-site construction compounds;
- pedestrian movements adjacent to the site to be protected with the erection of construction hoardings and containment fencing/barriers
- pedestrian movements across the construction access driveways to be managed and controlled by traffic controllers when the driveway is in use;
- construction activity to be carried out in accordance with approved hours of work; and
- the preparation of the construction traffic management plans, signage detail, control of pedestrians and control and management of construction activity/ vehicles in the vicinity of the site will be the responsibility of the appointed builder.

The principles of construction traffic management presented in the CBRK report will be used as the basis for the preparation of the construction traffic management plans for the various stages of construction and for ongoing negotiations with the authorities. The final Construction Traffic Management Plan will be prepared prior to construction and will be informed by the requirements of the Stage 2 DA.

Noise and Vibration

The PCMP details noise and vibration management principles and measures which will be formalised in a Noise and Vibration Management Plan developed in consultation with relevant stakeholders. An independent noise and vibration consultant will install and monitor noise and vibration logging equipment that will be triggered in the event of exceeding acceptable measures.

Dust Emissions

Dust control will be implemented in all areas of active demolition and construction and as required for the health and safety of employees and the general public. A Construction Air Quality Management Plan will be prepared as part of an Environmental Management Plan which will outline dust control measures to be implemented in accordance with the *Protection of the Environment Operations Act 1997*.

Water Quality

The Site will be managed to ensure that any discharges will be strictly controlled preventing hazardous materials and contaminants are contained and do not pollute Councils stormwater system or Darling Harbour.

A Water Quality Management Plan will be implemented that will outline key management strategies to avoid and manage discharges in compliance with relevant State Planning Policies. Environmental Audits will be undertaken that will review the usage and storage of hazardous materials on site.

Sediment and Erosion Control

Sediment and erosion controls will be provided in accordance with the principles and site actions identified in the PCMP. These controls will ensure that there are no unacceptable impacts on water quality within existing watercourses and stormwater drainage systems, and to the Harbour, as a result of the proposed development.

Ground Water Seepage

The groundwater in Cockle Bay is generally 0m AHD and fluctuating seawater would largely affect ground water beneath the Site footprint. As no basement is currently proposed, the risk of excavation induced movements and groundwater inflow issues impacting on adjacent structures are expected to be negligible.

Soil Pollution

The Preliminary Site Investigation prepared by Coffey (**Appendix V**) confirms that the Site is currently covered by building slab and concrete which reduces the potential for site contamination to affect site users. No excavation (other than piling and footings) is proposed and the future development would remain consistent with the existing development scenario. Measures to ensure the prevention of soil pollution would be included with any future CMP.

Construction Waste

A Construction Waste Management Plan will be developed to ensure best practice waste management initiatives are implemented. The constructor will also implement a Waste Minimisation Plan (WMP), the aim of which is to manage and minimise the amount of waste going to landfill. The WMP will exceed regulatory requirements and comply with Green Star benchmarks for the proposed development.

Community Consultation

The Contractor will be required to minimise disruption and inconvenience to neighbouring buildings and their occupants. A Community Liaison Officer will be employed to consult and work with neighbours as necessary. Prior to commencement of works, the Contractor will undertake a communication meeting with stakeholders and surrounding tenants in accordance with the strategy outlined in the CMP. A Communications Plan will be developed prior to the commencement of construction.

7.23 Air Quality

An Air Quality Assessment (AQA) has been prepared by Pacific Environment; this assessment is provided as **Appendix Z**. The AQA includes an assessment of the impact of the amended Concept Proposal on emissions, and the impact from the Cross-City Tunnel (CCT) Vent Stack and the Western Distributor.

The assessment concludes that the emissions from the CCT stack and Western Distributor are not anticipated to result in any exceedances of the EPA NSW criteria for the air quality metrics assessed near the proposed development.

The modelling completed to date indicates that higher concentrations of the air quality metrics evaluated are predicted to occur at the top of the proposed development compared with those at ground level. Optimisation of any air intakes locations for the proposed development can occur during the detailed design stage for the development.

Further, Aurecon have developed internal air quality design criteria for the landbridge by in consultation with RMS (**Appendix K**). These criteria will be implemented as part of the future detailed design development in conjunction with the relevant Australian Standards.

7.24 Drainage, Flooding, Climate Change and Sea Level Rise

A Stormwater Management Report has been prepared for the Concept Proposal by Enstruct, this is provided as **Appendix AA**. The report is summarised below.

The Concept Proposal does not propose to disturb existing major street drainage pipelines, which currently pass through the Site. New drainage systems will meet authority requirements in terms of capacity and water quality management. Future development of the Site will afford the opportunity to collect roof runoff for irrigation of podium level garden planters, and appropriate rainwater storage will be provided as part of a future Stage 2 Development Application.

A Flood Assessment was undertaken by BMT WBM for Council and is presented in the “Darling Harbour Catchment Flood Study” dated October 2014. Information from this flood study has been extracted for the vicinity of the Concept Proposal.

The flood modelling indicates anticipated flood levels in Harbour Street immediately adjacent to the development Site will be RL2.87 for the 100-year average recurrence interval (ARI) storm event and RL3.34 for the probable maximum flood (PMF) storm event.

An existing Jersey kerb barrier (RMS Type F unit) exists along Harbour Street and this barrier will be reconstructed as part of any future development to provide an overland flood protection barrier for the Site. Additional provisions will be made to improve drainage from Harbour Street during extreme flood events as well as draining the Site itself. There will be no adverse effects on flooding because of the proposed development.

The peak water level expected in Sydney Harbour will be RL2.28 m. The proposed flood level for the development will be at least RL3.25 m (the intended base structural slab level). Therefore, no adverse flood impacts are anticipated to affect the proposed development from flooding in Harbour Street or from sea levels in Cockle Bay.

7.25 Extension of Marine Structures

The amended Concept Proposal includes provision and recommendation to extend the existing marine structures along the foreshore promenade. It is noted that the amended Concept Proposal will not reduce the width of the existing foreshore promenade, and any expansion of the foreshore promenade undertaken as part of a subsequent detailed development application will provide an expansion of the existing pedestrian capacity and an opportunity to enhance and improve the pedestrian experience and engagement with the waterfront.

The maritime infrastructure in Cockle Bay is managed for the NSW Government by RMS and PNSW. Many options may be available to seek consent for an expansion of the foreshore promenade. Options would be discussed with RMS and PNSW before separate consent is sought to undertake these works. Available approval pathways could include:

- A Development Application to City of Sydney Council;
- Modification of the recently approved State Significant Application to renew the marine structures within Cockle Bay (SSD6611, approved 13/11/15); or
- Inclusion of this aspect of the development within a future Stage 2 application on the Site.

Extension of the existing timber board walk will require co-ordination with the existing Darling Harbour marina.

Following further consultation with PNSW and RMS, more information will be available in relation to the assessment of any expansion of marine structures surrounding the Site. Delivery of any future expansion of marine structures will be undertaken in accordance with a future development consent.

7.26 Crime Prevention through Environmental Design

The proposed development is a Stage 1 Development Application, which seeks consent for building envelopes and specific land use only. The Stage 2 Development Application, which will be consistent with this application, will fully consider the principles of Crime Prevention through Environmental Design (CPTED) in the detailed design phase. As assessment against the CPTED principles will be provided in the Stage 2 DA.

8.0 Mitigation Measures

The collective measures required to mitigate the impacts associated with the amended Concept Proposal are detailed in **Table 15** below. These measures replace those outlined in the original EIS.

Table 15 - Mitigation Measures

Mitigation Measures

Built Form Design

- The future building will reflect the Urban Design Principles outlined in the Architectural Design Report and Drawings (including envelope drawings) prepared by FJMT.

Landbridge Design

- The landbridge concept design criteria will be finalised and agreed by RMS.

Wind

- The recommendations of the Wind Report prepared by Cermak Peterka Petersen (CPP) are to be considered during the detailed design and included with the Stage 2 DA.

Traffic

- The recommendations outlined in the Transport and Parking Impact Assessment prepared by CBRK are to be employed including a Construction Traffic Management Plan developed based upon the Principles outlined in this EIS.

Noise

- The construction noise mitigation measures outlined in the Noise Impact Assessment prepared by Acoustic Logic are to be adopted during construction.
- The Stage 2 SSD DA report(s) will seek to identify the specific strategies for noise control and management.

Geotechnical

- The recommendations outlined in the Geotechnical Assessment prepared by Coffey Environments Australasia Pty Ltd are to be implemented including the following:
 - Further geotechnical site investigations should be carried out to assess subsurface conditions to assist in developing a more thorough geotechnical site model in support of detailed design works.

Mitigation Measures

Heritage

The recommendations outlined in the Heritage Reports prepared by GML Heritage, Cosmos Archaeology and Weir Phillips Heritage are to be developed further during the Stage 2 DA and implemented during construction as follows:

- Archaeological test excavation, undertaken to determine the nature, condition and extent of potential archaeological remains and to inform the design in order to avoid impacts to Stage Significant archaeological remains.
- Should the program of historical test excavation identify substantial and/or significant historical archaeological remains, further excavation and recording of these features may be required following demolition of existing structures.
- The results of archaeological test excavation and recording should be used to inform future historical heritage management and interpretation measures, if appropriate, as part of future development of the Site.
- In the event of any unexpected significant finds, works should cease and the NSW Heritage Division, OEH be notified in accordance with Section 146 of the Heritage Act.
- Aboriginal community consultation should be undertaken in accordance with the OEH guidelines for consultation 2010.
- An Aboriginal archaeological research design (ARD) should be prepared, in consultation with the applicant.
- A program of test excavation and/or salvage excavation should be implemented in accordance with the ARD. Test excavation should aim to sample a representative portion of intact soil profiles. Any Aboriginal archaeological deposit identified would require salvage and removal.
- Should archaeological excavation identify an Aboriginal site/deposit of exceptional value. There may be a need to cease works and discuss options for its conservation and mitigation.

Access

- The recommendations of the Accessibility Report prepared by Morris Goding are to be incorporated into the detailed design.
- To ensure equal access is provided throughout the proposed development, the detailed design of the proposal will need to ensure compliance with the relevant accessibility provisions of the BCA.

Ecologically Sustainable Development

- The ESD measures outlined in the Ecologically Sustainable Design Statement prepared by Arup are to be explored in the Stage 2 detailed design of the building design to maximise the environmental performance and energy efficiency of the building.

Construction Management

- A Construction Management Plan (CMP) will be finalised and agreed to with the RMS prior to the release of the Construction Certificate following the Stage 2 DA.

Crime Prevention through Environmental Design

- A CPTED report should be undertaken for the detailed designs and submitted with the Stage 2 DA.

Reflectivity

- Reflectivity analysis should be undertaken for the detailed designs and submitted with the Stage 2 DA.

9.0 Justification and Conclusion

The proponent and its expert project team have considered all submissions made in relation to the public exhibition of the proposed Cockle Bay Park Concept Proposal. A considered and detailed response to all submissions made has been provided within this report and the accompanying documentation.

In responding and addressing the range of matters raised by government agencies and authorities, independent bodies and the public, the proponent has amended the Concept Proposal. The amended Concept Proposal also captures changes made by a design review and those principles will inform the competitive design process. In addition, and to the benefit of the overall project, the refinements to the design are considered to reduce the environmental impacts and to on balance deliver a project that results in an overall improvement to the scheme that was previously exhibited.

In summary, the amended Concept Proposal will facilitate the reconnection of the city centre and Darling Harbour through the creation of significant new publicly accessible open space that will span the Western Distributor. It will re-energise Cockle Bay and Darling Harbour and will become a dynamic and inclusive place for city workers, the wider community and visitors to enjoy with the following benefits:

- the repair of severed access between Darling Harbour and the CBD, through the introduction of a new pedestrian link to Darling Harbour, and through the provision of expanded (up to 15,000m²) landscaped publicly accessible open space in the Darling Harbour precinct;
- the landscaped publicly accessible open spaces will bridge the Western Distributor, providing a seamless connection from the city to the water with improved pedestrian connections and wayfinding;
- the mixture of uses proposed will complement the current and future uses of Darling Harbour, contributing to the revitalisation of the precinct as a dynamic and activated world-class destination;
- high quality retail and entertainment offering catering for local and tourist markets will be delivered on the Site through the Concept Proposal, contributing to the entertainment and retailing experience of Darling Harbour;
- opportunities will be provided for more activated ground level public domain spaces and greater opportunities for event spaces, contributing to the entertainment and tourism values of Darling Harbour;
- a number of benefits will be delivered to Pyrmont Bridge, including greater building separation, the removal of disused monorail infrastructure, make-good works and additional viewing opportunities from publicly accessible areas;
- relieve identified pedestrian flow bottle-necks, such as on New Year's Eve;
- provide for additional surveillance opportunities with the delivery of the future buildings and overall improvements to the Site, in turn increasing the perception of the area as a high quality and safe environment; and
- the provision of a vibrant retail and commercial precinct will further support and strengthen the vitality of Darling Harbour within the Global Sydney context.

The co-owners have considered the concerns raised during the exhibition process and the amended Concept Proposal will facilitate a development that offers extensive public benefit, is suitable in the location, is an appropriate scale with improved local effects. It is considered that the solutions available in the design excellence process will deliver a development that offers strong overall benefit to the precinct and city.

Given the merits described above, and the significant public benefits that will result from the amended Concept Proposal, it is recommended that this application be approved.