

# Powerhouse Ultimo Renewal



Environmental Impact Statement

Submitted to the Department of Planning and Environment



Prepared by Ethos Urban  
Submitted for Department of Enterprise, Investment and  
Trade (Create NSW)

26 May 2022 | 2210545



**'Gura Bulga'**

Liz Belanjee Cameron

'Gura Bulga' – translates to Warm Green Country. Representing New South Wales.

By using the green and blue colours to represent NSW, this painting unites the contrasting landscapes. The use of green symbolises tranquillity and health. The colour cyan, a greenish-blue, sparks feelings of calmness and reminds us of the importance of nature, while various shades of blue hues denote emotions of new beginnings and growth. The use of emerald green in this image speaks of place as a fluid moving topography of rhythmical connection, echoed by densely layered patterning and symbolic shapes which project the hypnotic vibrations of the earth, waterways and skies.

Ethos Urban acknowledges the Traditional Custodians of Country throughout Australia and recognises their continuing connection to land, waters and culture.

We acknowledge the Gadigal people, of the Eora Nation, the Traditional Custodians of the land where this document was prepared, and all peoples and nations from lands affected.

We pay our respects to their Elders past, present and emerging.

**Contact**

Michael Oliver  
Director

moliver@ethosurban.com  
9956 6962

This document has been prepared by:

Ella Coleman

26 May 2022

This document has been reviewed by:

Anna Nowland

26 May 2022

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- Q** Environmental Wind Assessment  
*Arup*
- R** Preliminary Site Investigation  
*Douglas Partners*
- S** Geotechnical Report  
*Douglas Partners*
- T** Air Quality Assessment  
*RWDI*
- U** Site Infrastructure Management Strategy  
*Steensen Varming*
- V** Stage 1 Civil Report  
*TTW*
- W** Clause 4.6 Variation Request  
*Ethos Urban*
- X** Consultation Outcomes Report  
*Ethos Urban*
- Y** Biodiversity Waiver  
*Eco Logical*
- Z** Historical Archaeological Assessment  
*Curio Projects*

Submitted under separate cover:

- Capital Investment Value
- Physical and Digital Models



## Abbreviations and Key Terms

Abbreviation	Meaning
Building envelope	Maximum envelope within which any future building, including any alterations and additions to existing retained buildings, will be contained within.
CMP	Draft Conservation Management Plan 2022
Concept SSDA	Concept proposal for the renewal of Powerhouse Ultimo in the meaning of Section 4.22 of the EP&A Act. It seeks approval for a concept for the entire site including indicative land uses, a maximum building envelope, and a range of strategies to guide the future detailed design and operation of the site. This is also sometimes referred to as a 'Stage 1 DA'.
Council	City of Sydney Council
CPTED	Crime Prevention Through Environmental Design
CWC	Connecting with Country
DA	Development Application
DPE	Department of Planning and Environment
Detailed SSDA	Separate application for the detailed design, construction and operation of built form or open space on the site, which is made pursuant to the framework and vision that has been set under the Concept SSDA. This is also referred to as the 'Stage 2 DA'.
EIS	Environmental Impact Statement
EP&A Act	Environmental Planning and Assessment Act 1979
EP&A Regulation	Environmental Planning and Assessment Regulation 2021
HIS	Heritage Impact Statement
Job Years	The number of full-time equivalent (FTE) jobs supported over the construction period. i.e. if construction is over 10 years, 100 job-years is equivalent to 10 FTE jobs per year. This only applies to construction employment.
JWA	John Wardle Architects
Reference scheme	Indicative design, representing one possible solution for how a new built form and public domain could be delivered on the site in compliance with the framework for this site. No approval is sought for the reference scheme.
SEARs	Secretary's Environmental Assessment Requirements
SSDA	State Significant Development Application
Sydney LEP	Sydney Local Environmental Plan 2012
Stage 1 SSDA	See Concept SSDA above, these terms have the same meaning and are interchangeable
Stage 2 SSDA	See Detailed SSDA above, these terms have the same meaning and are interchangeable
Tech Central	Refers to the Central State Significant Precinct, located at Central Station and is bounded by Pitt Street and Regent Street to the west, Cleveland Street to the south, Eddy Avenue, Hay Street and Goulburn Street to the north, and Elizabeth Street and Chalmers Street to the east.
The Plan	NSW Government's <i>Cultural Infrastructure Plan 2025+</i>
UTS	University of Technology Sydney
VIA	Visual Impact Assessment

# EIS Declaration

<b>Project Details</b>	
Project name	Powerhouse Ultimo Renewal
Application Number	SSD-32927319
Address of the land to which the development application is made	500 Harris Street, Ultimo
<b>Development Application Details</b>	
Applicant name	NSW Department of Enterprise, Investment and Trade (Create NSW)
	(Note: Create NSW was formerly an agency of the Department of Premier and Cabinet)
Applicant address	52 Martin Place, Sydney NSW 2001 GPO Box 5341, Sydney NSW 2001
<b>Prepared by</b>	
Name	Anna Nowland & Ella Coleman
Address	173 Sussex Street, Sydney NSW 2000
Qualifications	Bachelor of Planning (Hons 1) UNSW & Bachelor of Planning MQU
In respect of	Concept Proposal State Significant Development - Development Application
<b>Declaration</b>	
Name	Michael Oliver BPlan(Hons1) MEL MPIA
	<p>The undersigned declares that this EIS:</p> <ul style="list-style-type: none"> <li>• has been prepared in accordance with Schedule 2 of the <i>Environmental Planning and Assessment Regulation 2000</i>;</li> <li>• contains all available information relevant to the environmental assessment of the development, activity or infrastructure to which the EIS relates;</li> <li>• does not contain information that is false or misleading;</li> <li>• addresses the Planning Secretary's environmental assessment requirements (SEARs) for the project;</li> <li>• identifies and addresses the relevant statutory requirements for the project, including any relevant matters for consideration in environmental planning instruments;</li> <li>• has been prepared having regard to the Department's State Significant Development Guidelines - Preparing an Environmental Impact Statement;</li> <li>• contains a simple and easy to understand summary of the project as a whole, having regard to the economic, environmental and social impacts of the project and the principles of ecologically sustainable development;</li> <li>• contains a consolidated description of the project in a single chapter of the EIS;</li> <li>• contains an accurate summary of the findings of any community engagement; and</li> <li>• contains an accurate summary of the detailed technical assessment of the impacts of the project as a whole.</li> </ul>
Signature	
Date	26/05/2022



# Executive Summary

## Purpose of this Report

This Environmental Impact Statement (EIS) has been prepared on behalf of NSW Department of Enterprise, Investment and Trade<sup>1</sup> (Create NSW) in support of a concept proposal State Significant Development, Development Application made to the Department of Planning and Environment (DPE) for the renewal of Powerhouse Ultimo.

Development for the purposes of a museum (information and education facility) that has a capital investment value of more than \$30 million is classified as State Significant Development (SSD) in accordance with Schedule 1 of the State Environmental Planning Policy (Planning Systems) 2021. As the proposed development has a capital investment value greater than \$30 million, it is SSD for the purposes of the *Environmental Planning and Assessment Act 1979* (EP&A Act) and will be assessed by DPE and determined by the Minister for Planning.

A request for the Secretary's Environmental Assessment Requirements (SEARs) was made on 3 December 2021 and SEARs were issued on 18 January 2022. This EIS addresses those issues raised in the SEARs and has been prepared in accordance with the Department's guidelines for SSD applications lodged under Part 4 of the EP&A Act, being the State Significant Development Guidelines (November 2021) and the State Significant Development Guidelines – Preparing an Environmental Impact Statement – Appendix B (December 2021).

## Project Background

The Powerhouse Ultimo Renewal is a transformative \$480-\$500 million investment by the NSW Government to establish a world-class museum that will significantly contribute to an important and developing part of Sydney. The renewal will see Powerhouse Ultimo deliver a programming focus on design and fashion, presenting exhibitions that showcase the Powerhouse Collection, international exclusive exhibitions and programs that support the creative industries.

The Powerhouse Ultimo Renewal investment will catalyse a wider Ultimo creative industries precinct that unites existing creative industries workspaces and institutions, including the Tech Central, University of Technology and the ABC. This investment directly supports and aligns with the broader strategic opportunity to transform the Pyrmont Peninsula as identified in the *Pyrmont Peninsula Place Strategy* and supports a coordinated series of investments in cultural infrastructure throughout NSW as envisaged in the *Cultural Infrastructure Plan 2025+*.

The objectives for this development are to:

- Deliver an international standard museum that is complimentary to Powerhouse Parramatta, Powerhouse Castle Hill and Sydney Observatory.
- Provide new and refurbished international standard spaces for museum operations, exhibitions, programs and associated industry and creative uses that will activate and engage audiences.
- Facilitate a national design excellence process that encourages a wide range of creative and innovative architectural responses to the site and functional brief.
- Integrate a vibrant creative industries precinct, that connects with its surrounds, responds to the changed and changing urban environment and provides concurrent original and distinctive contemporary cultural experiences.
- Enable and support the development of the NSW creative industries and improve productivity through sustainable, flexible and affordable infrastructure that supports co-location and collaboration.
- Deliver a highly operational precinct that contributes to the NSW visitor and night-time economies.
- Ensure effective and efficient coordination with other government initiatives and represent value for money.
- Provide a connected and integrated interface with surrounding precinct developments, including the Ultimo Goods Line, Harwood Building, Darling Square, Darling Harbour and Tech Central.

<sup>1</sup> Note: Create NSW formerly formed part of the Department of Premier and Cabinet but was subsequently relocated to the Department of Enterprise, Investment and Trade pursuant to government changes.



**Figure 1** *Artist's Impression Powerhouse Ultimo*

Source: Mogamma

## Project Overview

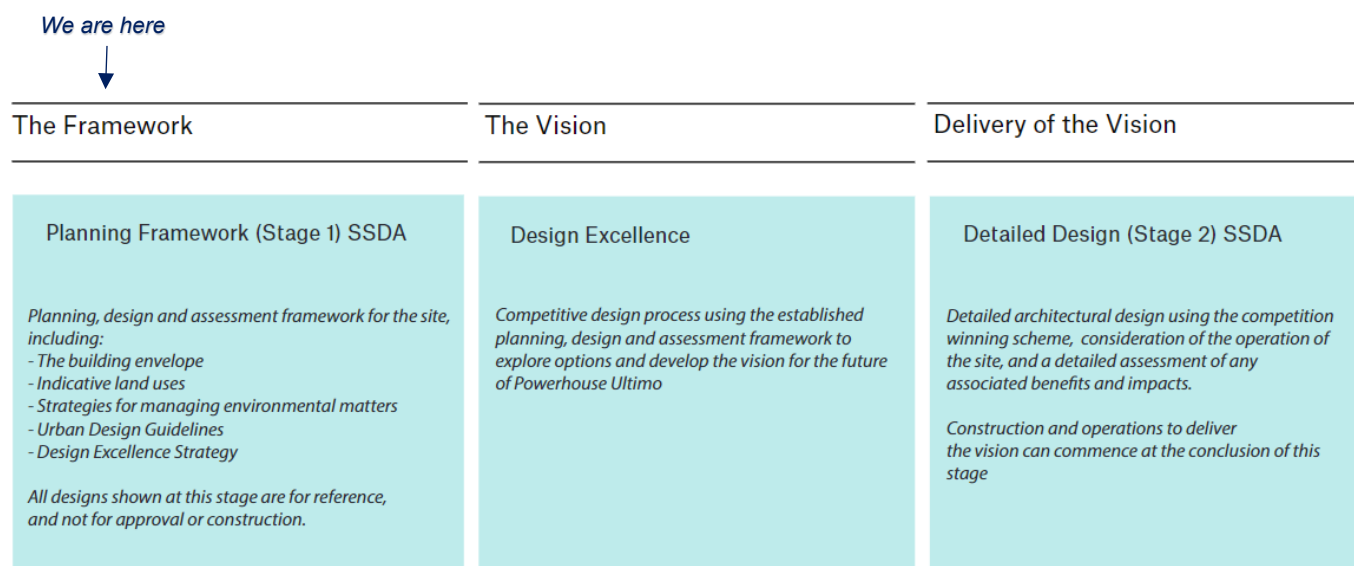
This Development Application sets out the concept proposal ('Concept SSDA') for the renewal of Powerhouse Ultimo. It establishes the overarching vision, principals and development controls for the future detailed design, construction and operation of buildings and public domain spaces that will be separately detailed and assessed at the next stage of the project (Stage 2).

Specifically, consent is sought for the following in this Concept SSDA:

- A maximum building envelope for any new buildings and alterations or additions to existing buildings retained on the site.
- Use of the site as an 'information and education facility' including museum exhibition and learning spaces that are supported by a range of ancillary and related uses contributing to the operation of Powerhouse Ultimo.
- A Design Excellence Strategy and Urban Design Guidelines to guide the next stages of the project.
- An updated Draft Conservation Management Plan (herein referred to as 'CMP') to ensure that future development occurs in a manner that is compatible with, and facilitates the conservation of, the heritage values of the site.
- General functional parameters for the future design and operation of the site including principles and strategies for the management of heritage, transport and access, noise and vibration, utilities and services, and the like.

It is emphasised that no physical works are proposed as part of this Concept SSDA, which will be detailed in a separate and future Stage 2 SSDA and informed by a competitive design process.

The Powerhouse Ultimo Renewal project will occur in stages, as summarised in **Figure 2** below.



**Figure 2** Planning process summary

### Strategic Context

The Cultural Infrastructure Plan 2025+ (the Plan) is the NSW Government's guide for the planning and delivery of cultural infrastructure that will support a thriving and dynamic cultural sector. The Plan will deliver contemporary, relevant world-class infrastructure to strengthen the depth and quality of NSW's cultural sector and provide digital infrastructure and technology that enables all forms of culture to reach wider audiences and create across new mediums.

The Cultural Infrastructure Investment Framework within the Plan ensures a strategic, coordinated approach to cultural infrastructure investment in NSW. The Powerhouse Ultimo Renewal is identified by the Plan as forming one part of a coordinated series of investments in cultural infrastructure throughout NSW. By making sustainable and fit-for-purpose cultural infrastructure available to all residents, visitors and workers across the state, the NSW Government will contribute to the social, economic, civic and individual wellbeing of the state and the people in its communities. The delivery of cultural infrastructure is a key part of creating places that bring people together to live, work, visit and do business.

The Plan recognises that well-designed cultural infrastructure can have a catalytic effect on places, and when supported by other uses and transport links, it anchors urban renewal and regeneration processes, attracting business and investment. It can transform the functionality and relevance of a place and foster a new and historic identity and character that attracts people and activates the city. The Powerhouse Ultimo Renewal is a transformative investment that will develop a wider Ultimo creative industries precinct that unites existing creative industries workspaces and institutions, including Tech Central, University of Technology and the ABC. This investment directly supports and aligns with the broader strategic vision to transform the Pyrmont Peninsula as identified in the Pyrmont Peninsula Place Strategy.

The proposal is also generally consistent with the following strategic planning policies:

- NSW State and Premier's Priorities
- Greater Sydney Region Plan
- Eastern City District Plan
- Draft Ultimo Sub-Precinct Master Plan
- Local Strategic Planning Statement – City Plan 2036 (City of Sydney)
- NSW Government Architect's Office policies including Better Placed, Draft Guide for Heritage, Greener Places, the Designing with Country discussion paper, and the Connecting with Country draft framework.

**Section 2.0** of the EIS further identifies the key issues that are relevant to the Project's locational and strategic context and provides a justification for the Project in light of this context.

## Statutory Context

This EIS has been prepared in accordance with the requirements of the EP&A Act and Regulation, and **Section 4.0** of the EIS considers all applicable legislation in detail.

The Sydney Local Environmental Plan 2012 applies to the site, which is zoned B4 Mixed Use. The proposal is for an 'information and education facility' which is permissible with consent and meets the objectives of this zone.

This Concept SSDA is prepared in satisfaction of Clause 7.20 of the LEP, which requires the preparation of a site-specific development control plan (fulfilled by a Concept DA in accordance with section 4.23 of the EP&A Act) for development with a site area of more than 5,000m<sup>2</sup> or with a building height of more than 25 metres. A Design Excellence Strategy accompanies this EIS which sets out how the detailed design will be the subject of a competitive design process.

Pursuant to Clause 4.5 of the EP&A Act and Clause 2.7 of State Environmental Planning Policy (Planning Systems) 2021, the Minister for Planning is the consent authority for a SSDA made by or on behalf of a public authority. This application is made by the Department of Enterprise, Investment and Trade<sup>2</sup> (Create NSW), who are a public authority.

## Community Engagement

Create NSW and the Powerhouse have consulted with the community, staff, guilds and associations, precinct partners, First Nations community and key government agencies through preparing the Business Case for Powerhouse Ultimo and during the process to develop a new Draft Conservation Management Plan for the site. These consultation activities shaped engagement as part of the SSDA, with a view to build on relevant conversations with stakeholder groups.

As detailed in the Consultation Outcomes Report at **Appendix X**, further pre-lodgement consultation as part of the SSDA process included community information sessions, and briefings to the Tech Central OneGov group, Project Control Group, and engagement with City of Sydney, stakeholders relevant agencies.

## Environmental Impacts and Mitigation Measures

This EIS provides an assessment of the environmental impacts of the project in accordance with the SEARs and sets out the undertakings made by Create NSW to manage and minimise potential impacts arising from the development. The key environmental matters identified include (indicative below):

- potential impacts on heritage and archaeology;
- amenity impacts including overshadowing and visual and view impacts;
- urban design, built form, and design excellence;
- public domain and landscaping;
- the overarching social and economic impacts and benefits; and
- sustainability.

The proposed development has been assessed in each of these instances by technical experts across a range of disciplines as informed by the SEARs and industry best-practice. In this respect, it is also noted that while no physical works are proposed as part of this first stage, the assessments demonstrate that there are no conditions precluding the future renewal of the site in accordance with the recommendations of the technical assessments and the framework established under this Concept SSDA.

Accordingly, the EIS provides a detailed assessment of the environmental, social and economic impacts of the proposed development drawing upon information provided by a team of experienced technical experts across a range of disciplines. The EIS concludes that the proposed development will not result in any significant social, economic or environmental impacts which cannot be appropriately managed through the identified mitigation measures, standard conditions of consent, and a separate future planning process for the Stage 2 SSDA.

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<sup>2</sup> Note: Create NSW formerly formed part of the Department of Premier and Cabinet but was subsequently relocated to the Department of Enterprise, Investment and Trade pursuant to government changes.

## Conclusion and Justification

The EIS addresses the SEARs and provides an assessment of the relevant environmental planning considerations for the Concept SSDA for the renewal of the Powerhouse Museum, Ultimo. The potential impacts of the development are acceptable and are able to be managed. Having regard to biophysical, economic, and social considerations, including the principles of ecologically sustainable development, the carrying out of the project is justified for the following reasons:

- The proposal will facilitate the renewal of Powerhouse Ultimo and provide world class museum and exhibition space, which will deliver important community wellbeing and economic benefits to a district, regional and national scale, as well as a local scale.
- The proposal represents a significant investment in the cultural, arts and creative industries, and the renewal of this significant national scale public cultural facility, the associated public programming and community infrastructure will be widespread, significant and long term.
- The maximum building envelope will support a design competition process that encourages creative expression and elicits a wide range of innovative design responses to the site to deliver an internationally important public museum development of the highest architectural design quality.
- The proposal allows for the significant improvement of the public domain on and around the site, allowing for improved connection to The Goods Line and surrounding precincts, including Darling Square and Darling Harbour. This will redefine the entrance to the museum, improving the experience for visitors.
- The proposal will support up to 1,710 job-years and a total direct value-add to the economy of \$225.2 million during the construction phase, and 340 jobs supported and a total direct value-add to the economy of \$34.4 million per annum, based on total direct and indirect employment during the operational phase of the project.
- The proposed Concept SSDA allows for the provision of renewed cultural facilities that respond to the heritage significance of the site, whilst not resulting in impacts on surrounding uses that cannot be managed.
- The proposed works are directly consistent with the Pyrmont Peninsula Place Strategy, the Draft Ultimo Sub-Precinct Plan, the NSW Government's Cultural Infrastructure Plan 2025+ and the City of Sydney's Local Strategic Planning Statement, as it delivers design excellent, cultural and community facilities.
- The assessment of the proposal has demonstrated that the development will not result in any environmental impacts that cannot be appropriately managed and consistent with the relevant planning controls for the site.
- The proposal is consistent with the principles of ecologically sustainable development as defined by section 193 of the *Environmental Planning and Assessment Regulation 2021*.

Given the planning merits of the proposal, the proposed development warrants approval by the Minister for Planning.



# 1.0 Introduction

This Environmental Impact Statement (EIS) is submitted to the Department of Planning and Environment (DPE) pursuant to Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) in support of an application for State Significant Development (SSD). This application comprises a concept proposal for the Powerhouse Ultimo Renewal and is made pursuant to Section 4.22 of the EP&A Act and to fulfil the requirement of Clause 7.20 of the Sydney Local Environmental Plan 2012.

Development for the purposes of a museum (information and education facility) that has a capital investment value in excess of \$30 million, is identified as development that is SSD in Schedule 1 of the State Environmental Planning Policy (Planning Systems) 2021. As the proposed development has a capital investment value of greater than \$30 million, it is SSD for the purposes of EP&A Act.

The report has been prepared by Ethos Urban on behalf of the NSW Department of Enterprise, Investment and Trade (Create NSW), and is based on the Architectural Plans provided by John Wardle Architects (JWA) (see **Appendix C**) and other supporting technical information appended to the report (see Table of Contents).

This EIS has been prepared in accordance with the requirements of Part 4 of the EP&A Act, Schedule 2 of the *Environmental Planning and Assessment Regulation 2021* (EP&A Regulation), and the SEARs for the preparation of the EIS, which are included at **Appendix A**. The EIS has also been prepared in accordance with the Department's guidelines for SSD applications lodged under Part 4 of the EP&A Act, being the State Significant Development Guidelines (November 2021) and the State Significant Development Guidelines – Preparing an Environmental Impact Statement – Appendix B (December 2021). This EIS should be read in conjunction with the supporting information and plans appended to and accompanying this report.

## 1.1 The Applicant

The Applicant's details are presented in **Table 1** below.

**Table 1**      **Applicant Details**

Applicant:	Department of Enterprise, Investment and Trade (Create NSW)
Address:	Level 7, 52 Martin Pl, Sydney NSW 2000
ABN:	34 945 244 274

## 1.2 Overview of Proposed Development

This application sets out the concept proposal for the renewal of Powerhouse Ultimo. It seeks to establish the overarching guidelines, principles and development controls for the detailed design, construction and operation of buildings and public domain spaces for Powerhouse Ultimo that will be detailed and assessed at the next stage of the project (Stage 2).

The retention and renewal of Powerhouse Ultimo will deliver an international standard museum with new and refurbished spaces for museum operations, exhibitions, programs and associated industry and creative uses that will activate and engage audiences. It will deliver a programming focus on design and fashion, presenting exhibitions that showcase the Powerhouse Collection, international exclusive exhibitions and programs that support the creative industries.

Specifically, consent is sought for the following:

- A maximum building envelope for any new buildings and alterations or additions to existing buildings retained on site.
- Use of the site as an 'information and education facility' including museum exhibition and learning spaces that are supported by a range of ancillary and related uses contributing to the operation of Powerhouse Ultimo.
- Design Excellence Strategy and Urban Design Guidelines to guide the next stages of the project.
- Draft 2022 Conservation Management Plan (CMP) to ensure that future development occurs in a manner that is compatible with, and facilitates the conservation of, the heritage values of the site.
- General functional parameters for the future design and operation of the site including principles and strategies for the management of heritage, transport and access, noise and vibration, utilities and services, and the like.

It is emphasised that no physical works are proposed as part of this Concept SSDA, which will be detailed in a separate and future Stage 2 SSDA and informed by a competitive design process.



### 1.3 Objectives of the Development

The objectives of the proposed development are to:

- Deliver an international standard museum that is complementary to Powerhouse Parramatta, Powerhouse Castle Hill and Sydney Observatory.
- Provide new and refurbished international standard spaces for museum operations, exhibitions, programs and associated industry and creative uses that will activate and engage audiences.
- Facilitate a design excellence process that encourages a wide range of creative and innovative architectural responses to the site and functional brief.
- Integrate a vibrant creative industries precinct, that connects with its surrounds, responds to the changed urban environment and provides concurrent original and distinctive contemporary cultural experiences.
- Enable and support the development of the NSW creative industries and improve productivity through sustainable, flexible and affordable infrastructure that supports colocation and collaboration.
- Deliver a highly operational precinct that contributes to the NSW visitor and night-time economies.
- Ensure effective and efficient coordination with other government initiatives and represent value for money.
- Provide a connected and integrated interface with surrounding precinct buildings and precincts, including the Harwood Building, The Goods Line, Darling Square, Darling Harbour and Tech Central.

### 1.4 Background to the Development

On 4 July 2020, the NSW Government announced that Powerhouse Ultimo would be retained and renewed. The renewal of Powerhouse Ultimo will complement the museum flagship Powerhouse Parramatta, expanded collection storage facilities at Castle Hill (**Figure 3**), and Sydney Observatory. The Powerhouse Ultimo Renewal is a transformative \$480-\$500 million investment by the NSW Government to establish a world-class museum that will significantly contribute to an important and developing part of Sydney. The renewal will see Powerhouse Ultimo deliver a programming focus on design and fashion, presenting exhibitions that showcase the Powerhouse Collection, international exclusive exhibitions and programs that support the creative industries.



**Figure 3** Powerhouse Parramatta (left) and Powerhouse Castle Hill Building Development (right)

Source: Moreau Kusunoki and Genton; Lahznimmo Architects

## 1.5 Project Staging

This SSDA is a concept proposal (also sometimes referred to as a 'Stage 1 DA') made under Section 4.22 of the EP&A Act. It seeks approval for a concept for the entire site including indicative land uses, a maximum building envelope, and a range of strategies to guide the future detailed design and operation of the site.

Following this Concept Proposal, a competitive design alternatives process will be undertaken in accordance with the proposed Design Excellence Strategy (**Appendix E**) to achieve the most innovative and exceptional outcome for the site having regard to the requirements of Clause 6.21D of the Sydney LEP.

Once the competitive process is complete and a winning design has been selected, a detailed development application (Stage 2 SSDA) will be prepared seeking approval for the detailed design and construction of all or specific aspects of the proposal in accordance with the vision set by this Concept SSDA.

As no physical works are proposed as part of this SSDA, the staged construction and operation of the site (and the need for staged certificates) will be addressed as part of the separate and future Stage 2 SSDA.

**Figure 2** in the Executive Summary above further summarises this process.

## 2.0 Strategic Context

This chapter identifies the key issues that are relevant to the project's locational and strategic context and provides a justification for the project in light of this context. The chapter also provides an analysis of alternatives that were considered as part of the scoping process.

### 2.1 Site Overview

Powerhouse Ultimo is situated upon the lands of the Gadigal people of the Eora Nation. The site is located at the interface between the suburbs of Ultimo, Pyrmont, Haymarket and Darling Harbour, and this is reflected in its strategic positioning in relationship to the local pedestrian, active transport, public transport and road network. The site is located at the northern terminus of The Goods Line from Central Station and close to the southern end of Tumbalong Boulevard. Macarthur Street serves as a pedestrian-friendly east-west connection between Ultimo and the southern CBD. Paddy's Markets and Exhibition Centre Light Rail Stations are both located near the site, and bus stops at Harris Street provide access to Central as well as centres including Ryde and Parramatta via Victoria Road.

The site's locational context is shown at **Figure 4** below.

#### 2.1.1 Site Description

The site comprises a number of allotments all of which are owned by the Trustee of the Museum of Applied Arts and Sciences. These encompass the following:

**Table 2**      *Site description*

Lot/DP	Description	Owner
Lot 1 DP 631345	Ultimo Power House, Harris Street civic space and museum entrance, café and southern carpark	The Trustees of the Museum of Applied Arts and Sciences
Lot 1 DP 781732	Wran Building	The Trustees of the Museum of Applied Arts and Sciences
Lot 3 DP 631345	Harris Street civic space and museum entrance	The Trustees of the Museum of Applied Arts and Sciences
Lot 37 DP 822345	Harris Street civic space and museum entrance	The Trustees of the Museum of Applied Arts and Sciences
Lot 1 DP 770031	Former Ultimo Post Office	The Trustees of the Museum of Applied Arts and Sciences





**Figure 4** Site plan and key features



### 2.1.2 Restrictions and Covenants

The site is subject to a number of existing easements as detailed in the site survey at **Appendix F**. There are no restrictive covenants registered to the site.

It is noted that no physical works are proposed as part of this DA, and as such the easements and covenants that relate to the use of the existing site will not be extinguished at this time. These will be addressed as part of the detailed Stage 2 SSDA when the built form, public domain areas, and site operational strategies for Powerhouse Ultimo are known.

The following easements are likely to be extinguished and/or reshaped at the next stage of the project:

- BK1277 – right of way easement that both benefits and burdens the Trustees of the Museum of Applied Arts and Sciences, which is a historical easement from 1922 when the site was under previous ownership. Given this is now redundant, it is likely that it will be removed.
- T738285 – right of way easement to pass over the site benefitting the former State Rail Authority of NSW and its successes, which related to the former monorail line that connected with the site. Given the monorail no longer passes through the site, it is likely that this easement will also be removed or reshaped as necessary to align with any new built form and public domain areas on the site.
- DP870306 – an easement enabling the maintenance of the Harwood Building from a neighbouring lot. This easement is likely to be unaffected by the project.

## 2.2 Key Features of Site and Surrounds

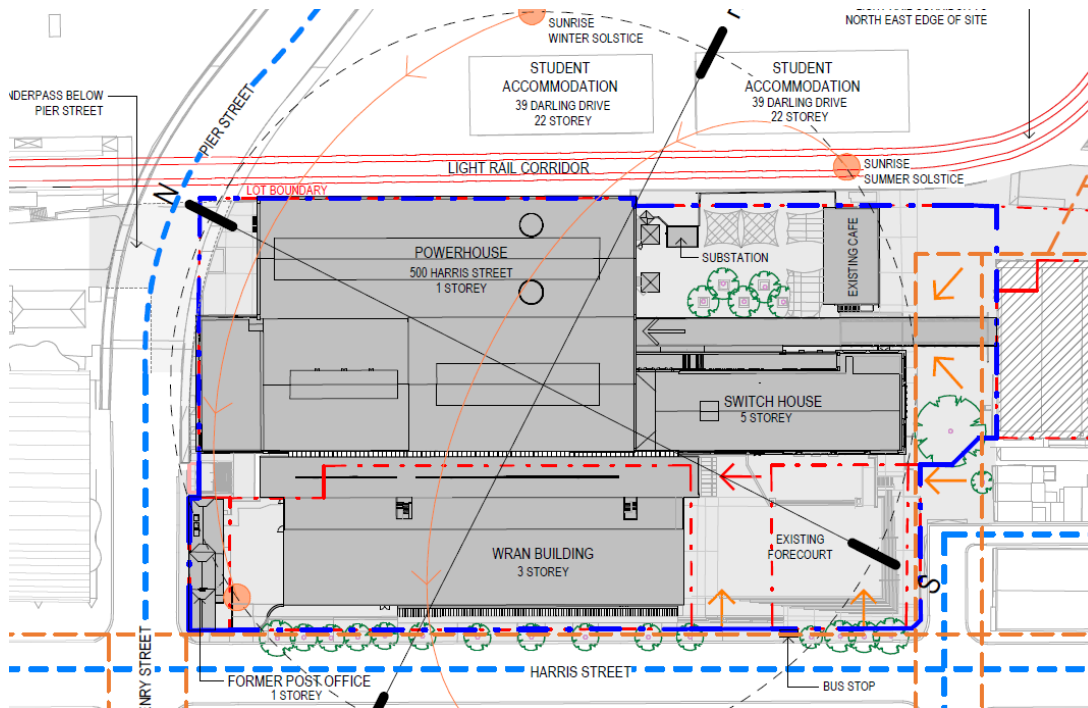
### 2.2.1 Existing Development

The project site contains several existing buildings that range in architectural style, scale, and significance including:

- The 1988 museum building (Wran Building) fronting Harris Street,
- The 'Ultimo Power House' heritage buildings at Pier Street adjacent to the light rail line,
- The café building immediately to the south of the Power House at the northern end of The Goods Line, and
- The 'Former Ultimo Post Office' heritage building at the corner of Harris Street and Pier Street.

There is also the former tram shed (Harwood Building) located to the south of the project site. This building will remain on the site, noting that whilst the Harwood Building is not included in the scope of this project, some minor works may be necessary to upgrade and separate shared building services, decouple operational functions, increase activation of public spaces, and support the NSW Government's commitment to establish a creative industries precinct. No physical works are proposed as part of this Concept SSDA and any such works will be confirmed at Stage 2 if needed.

A plan of the existing site layout is provided at **Figure 5** below.



**Figure 5** Current project site layout, with the Harwood Building out of frame

Source: John Wardle Architects



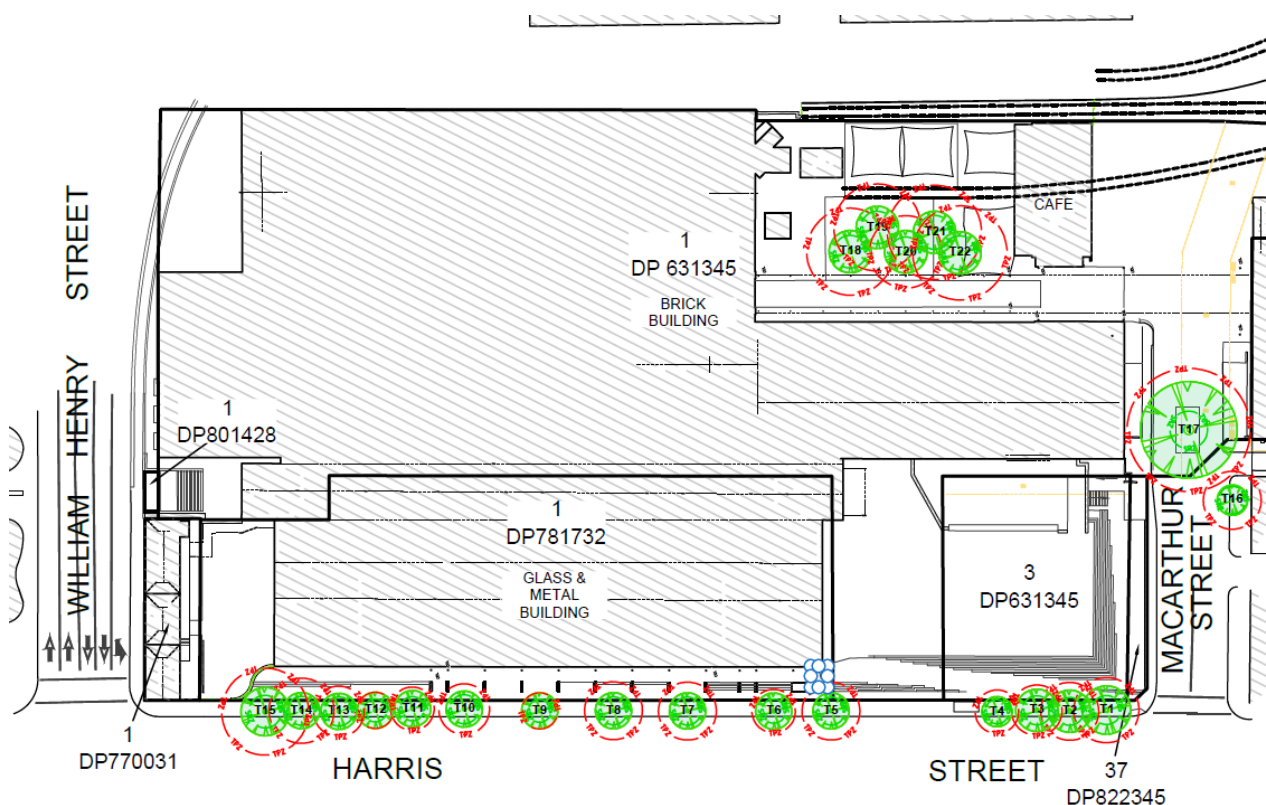
**Figure 6** Wran Building and Powerhouse building viewed from Harris Street

Source: Powerhouse Ultimo



## 2.2.2 Vegetation

As the site is in a highly urbanised environment ensuring there is not extensive existing vegetation within the project boundary. The Arboricultural Report prepared for this application (**Appendix L**) has identified trees located within the project area, which includes 22 trees in total located along Harris Street frontage of the site, within the café courtyard to the south of the Power House building, and on the southern Macarthur Street road reserve. Other trees exist within the broader Powerhouse Ultimo site; however, these trees are outside of the project site boundary area and as such do not require further consideration.



**Figure 7** Existing trees on the project site

Source: Tree IQ

## 2.2.3 Topography

The Powerhouse site is characterised by a complex ground plane in terms of topographic level changes. The topography of the site varies by up to 9m between Harris Street and The Goods Line meaning that the existing buildings step across the site in response to this slope to form several different floor levels and platforms throughout the site. There is a sharp drop from the eastern edge of the site towards Darling Park, which is managed through retaining walls and stairs/ramps within The Goods Line.

A site survey detailing the topography of the site is provided at **Appendix F**.

## 2.2.4 Heritage

The site contains two heritage-listed buildings, being the 'Ultimo Power House' (c.1899-1905) and the 'former Ultimo Post Office including interior' (c.1901), both of which are listed on the State Heritage Register under the *Heritage Act 1997*.

The site is also located in the vicinity of several locally listed heritage items identified under the Sydney LEP including the Glasgow Arms Hotel, groups of terrace-houses along Harris Street and Macarthur Street, the former Millinery House building, former National Cash Register building, and the former Technological Museum/Sydney Technical College building in Harris Street.

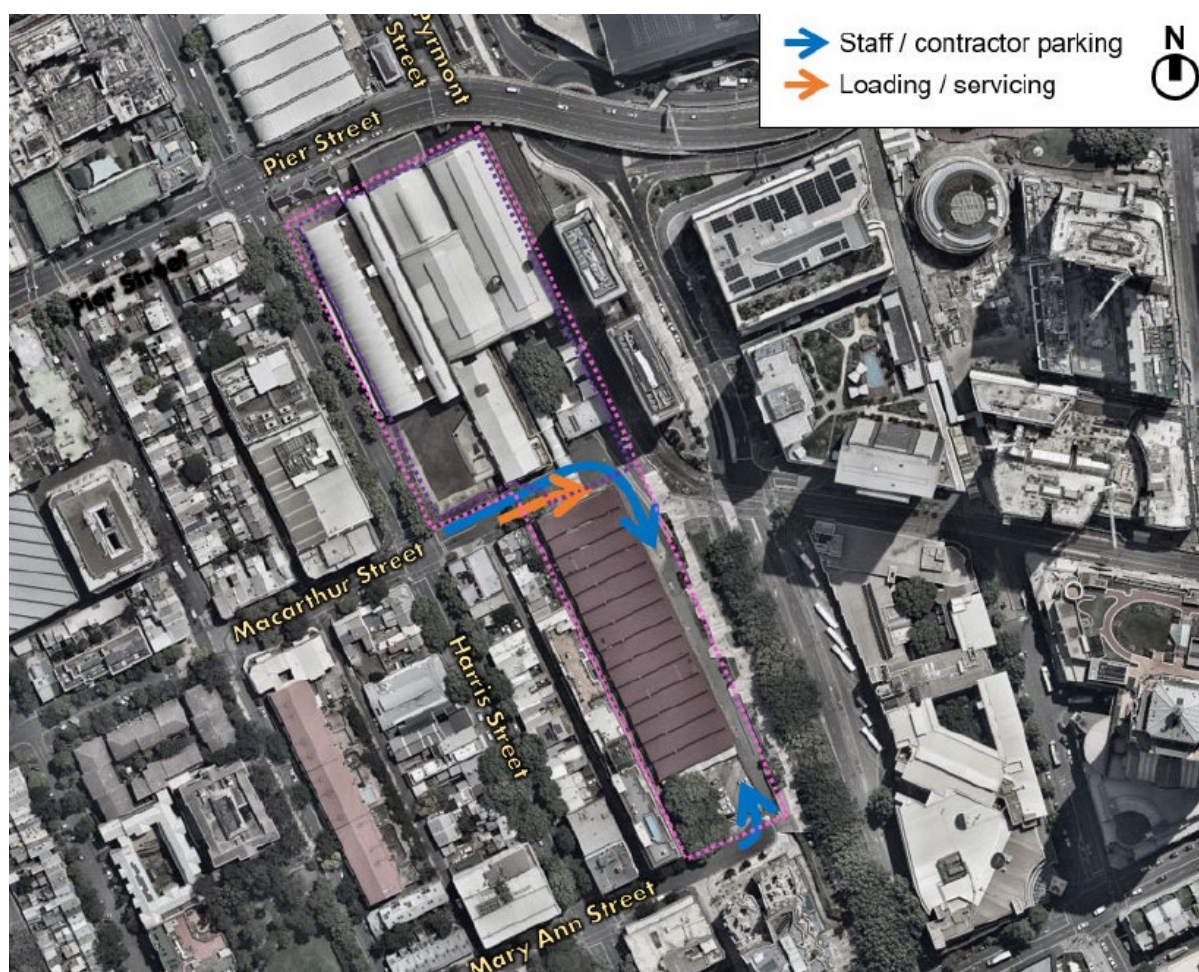
The site is not identified as being located within a Heritage Conservation Area, however, it is adjacent to and in the vicinity of the Harris Street Ultimo Conservation Area.

## 2.2.5 Transport and Accessibility

### Vehicle Access

Vehicular access to the site varies for staff and contractors, and for loading and servicing. Staff and contractor parking is accessed via Pyrmont Street (underneath the Pier Street overpass), Mary Ann Street and Macarthur Street. Staff parking is provided to the east of the Harwood Building. It is noted that no public parking is provided on the site.

Loading and servicing access is provided via Macarthur Street, with the main loading dock located within the Harwood Building. For large museum deliveries, trucks manoeuvre within the main civic space and museum entrance area at the eastern end of Macarthur Street and reverse into the loading zone of the eastern building. The vehicle and access arrangements are shown in **Figure 8** below.



**Figure 8** Existing vehicle access arrangements

Source: JMT Consulting

### Walking and Cycling Network

The site is well serviced by several key walking and cycling routes, providing connections to key destinations such as Darling Harbour, Darling Square, Central Sydney and Central Station. The Goods Line facilitates a continuous connection between the site and Central Station/Railway Square, while a shared path on Darling Drive provides connectivity to Darling Harbour and into Pyrmont. Public bicycle parking is available within the streets surrounding the site.

### Public Transport

The site is well connected by a range of public transport services, including:

- Light rail, with stops on both the Inner West, CBD and South East Light Rail line within 800m of the site.



- Heavy rail, with Central Station and Town Hall approximately 10 minutes' walk from the site.
- Bus, with bus stops located on Harris Street immediately adjacent to the site. Railway Square bus terminus is also within walking distance via The Goods Line.

There are also further public transport improvements planned in the surrounding area including the delivery of a new Metro Station at Pyrmont as part of Sydney Metro West line.



**Figure 9** Transport connections

Source: John Wardle Architects

## 2.2.6 Contamination and Geotechnical Conditions

The site has been historically used as for industrial and commercial purposes from the early 1900s, prior to which the use of the site in relation to potentially contaminating activities is not known. Outside of the existing buildings, the majority of the site is surfaced with either concrete or asphalt. As per the Geotechnical Report (**Appendix S**), the western portion of the site is underlain by Hawkesbury Sandstone of Triassic age, whereas the eastern part of the site is underlain by Quaternary Alluvium.

A Preliminary Site Investigation (**Appendix R**) has been undertaken for the site, which found that across the site, eight metal contaminants were identified in soil and ground water samples above criteria. This is assessed further in **Section 5.0** of the EIS.

## 2.2.7 Surrounding Development

The urban context of the site is characterised by a wide array of land uses, development typologies and architectural styles. There is no consistent street wall height along Harris Street or intersecting local streets, with 2-storey historic terraces sitting in close proximity to more modern 6-8 storey commercial and mixed-use buildings. The recent urban renewal of Darling Square provides a rapid transformation in density and building heights immediately to the east of the site, with a range of 20+ storey buildings with a modern setting.

The context surrounding the site is discussed in more detail below.

## North

The site is bordered by William Henry Street / Pier Street to the north, which is a four-lane arterial road connecting Harris Street and Ultimo to southern Central Sydney and Haymarket. The publicly accessible Ian Thorpe Aquatic Centre is located on the northern side of Pier Street. Beyond this is Tumbalong Park and Darling Harbour, which represents the western edge of Central Sydney.



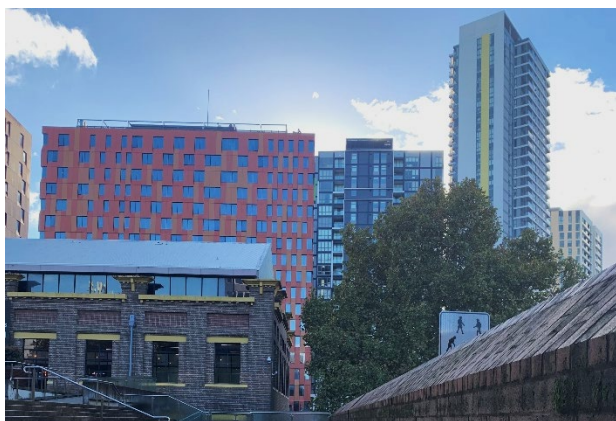
**Figure 10** Harris Street to the north



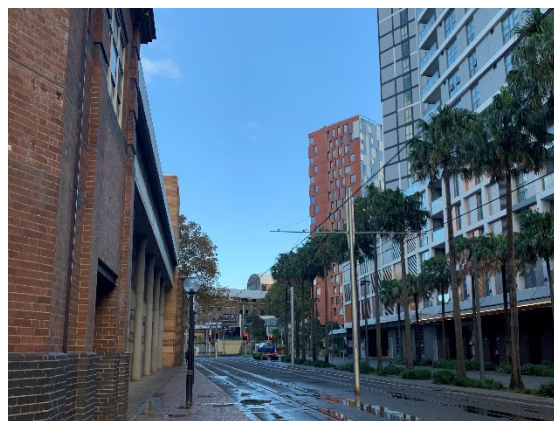
**Figure 11** Ian Thorpe Aquatic Centre

## East

Directly to the east of the site is Urbanest student accommodation, which is an approximately 22 storey building. Further east is Darling Square, which contains high density student and residential accommodation. Beyond this precinct is Haymarket and Chinatown, characterised by commercial, retail and residential development.



**Figure 12** Urbanest and Darling Square behind the Powerhouse building



**Figure 13** Hay Street, Darling Park to the east of the site

## South

The Goods Line is located directly to the south of the site, connecting the Powerhouse, northern Ultimo and Pyrmont with Central Station and the University of Technology Sydney (UTS). The Goods Line is a pedestrianised park and walking track along an old train track and is not accessible by vehicle. Several UTS education buildings are located along The Goods Line, including the Dr Chau Chak Wing Building designed by Frank Gehry. Harris Street is parallel to the Goods Line and runs to the south-east of the site, connecting Pyrmont to Central Station. Further south of the site is Central Station, the Central Park precinct and Chippendale.



## West

Directly to the west of the site is the suburb of Ultimo, which is characterised by a mix of medium density residential, educational uses and commercial uses. Beyond this is Wentworth Park, the suburb of Glebe and Broadway. This area is characterised by a mix of residential, education and commercial uses, and contains Broadway Shopping Centre and University of Sydney.



**Figure 14** Western side of Harris Street



**Figure 15** Residential street to the west of the site

## 2.3 Strategic Planning Context

The relevant strategies, environmental planning instruments, policies and guidelines as set out in the SEARs are addressed in **Table 3**.

**Table 3** Strategic planning context

Instrument/Strategy	Comments
NSW State and Premier's Priorities	<p>The proposal will deliver on key state priorities, including 'building infrastructure'.</p> <p>The proposal will also support providing 'jobs closer to home' through creating jobs on a site that is well connected to transport and is accessible within the Sydney CBD. The proposal will create job opportunities in construction during the project's construction phase of works, and job opportunities project related land uses at the project's completion following Stage 2.</p>
Greater Sydney Region Plan Eastern City District Plan	<p>The Powerhouse Ultimo Renewal is strongly aligned with the key strategic principles and vision outlined for the Eastern City in the Region and District Plans. Powerhouse Ultimo sits at the heart of a planned 'Innovation Corridor' spanning from the Bays Precinct through Pyrmont-Central and up to Circular Quay, with creative, cultural and digital industries identified as being critical to supporting the innovation ecosystem. The site also sits at the edge of the Camperdown-Ultimo Collaboration Area, which highlights the need to create a walkable precinct with a vibrant cultural and night-time economy.</p> <p>More generally, the project will closely align with the key priorities identified for the Eastern City by:</p> <ul style="list-style-type: none"> <li>Contributing towards a more liveable city with high-quality cultural infrastructure to meet the needs of the community, support culturally rich and socially connected communities and support urban renewal to create a place that respects local heritage.</li> <li>Supports a stronger and more competitive Harbour CBD by contributing towards the development of a strong Innovation Corridor that can support innovation and economic growth and supporting the growth of the cultural and tourism sectors.</li> <li>Supports key sustainability principles including the reduction of energy/resource consumption, delivering high quality and resilient public buildings and protecting the health and water quality of Sydney Harbour</li> </ul>
Pyrmont Peninsula Place Strategy	<p>The Powerhouse Ultimo Renewal is a key government investment that will support the strategic directions and 'big moves' identified in the Pyrmont Peninsula Place Strategy (PPPS). The site is identified under the PPPS as being capable of change, and the Powerhouse is identified as a significant contributor to the growth of knowledge-based jobs, innovation and creative, cultural and community uses within the Peninsula.</p> <p>The reuse of heritage buildings, enhancement of pedestrian connections and rejuvenation of Harris Street will all be directly supported through the delivery of the project. Subject to further</p>

Instrument/Strategy	Comments
	transport, heritage and design advice, the project has the potential to contribute towards the enhancement of The Goods Line as an active transport loop with potential new pedestrian connections.
Draft Ultimo Sub-Precinct Master Plan	The Draft Pyrmont Peninsula Sub-Precinct Master Plans were publicly exhibited between November 2021 and February 2022. The Draft Ultimo Sub Precinct Master Plan supports the urban renewal of the Ultimo precinct and identifies the important contribution the Powerhouse renewal will make to creating an innovative, entrepreneurial, and knowledge-based 24-hour precinct.
Cultural Infrastructure Plan 2025+ (NSW Government)	<p>The <i>Cultural Infrastructure Plan 2025+</i> (the Plan) is the NSW Government's guide for the planning and delivery of cultural infrastructure that will support a thriving and dynamic cultural sector. The Plan will deliver contemporary, relevant world-class infrastructure to strengthen the depth and quality of NSW's cultural sector and provide digital infrastructure and technology that enables all forms of culture to reach wider audiences and create across new mediums.</p> <p>The Cultural Infrastructure Investment Framework within the Plan ensures a strategic, coordinated approach to cultural infrastructure investment in NSW. By making sustainable and fit-for-purpose cultural infrastructure available to all residents, visitors and workers across the state, the NSW Government will contribute to the social, economic, civic, and individual wellbeing of the state and the people in its communities. The delivery of cultural infrastructure is a key part of creating places that bring people together to live, work, visit and do business.</p> <p>The Plan recognises that well-designed cultural infrastructure can have a catalytic effect on places, and when supported by other uses and transport links, it anchors urban renewal and regeneration processes, attracting business and investment. It can transform the functionality and relevance of a place and foster a new and historic identity and character that attracts people and activates the city. The Powerhouse renewal transformative investment will develop a wider Ultimo creative industries precinct that unites existing creative industries workspaces and institutions, including the Tech Central, University of Technology and the ABC. This investment directly supports and aligns with the broader strategic opportunity to transform the Pyrmont Peninsula as identified in the <i>Pyrmont Peninsula Place Strategy</i>.</p>
Local Strategic Planning Statement – City Plan 2036 (City of Sydney) LSPS	<p>The Powerhouse Ultimo Renewal will directly support the vision and key planning priorities outlined in the City of Sydney's LSPS by supporting excellence in design, contributing to Sydney's profile as Australia's most significant global city with world-renowned cultural infrastructure, and a well-connected city with a facility that supports the desired future character of the Pyrmont/Ultimo village as a highly walkable place.</p> <p>The LSPS identified the Harris Street corridor as making the largest contribution to employment growth outside of the CBD, with 22,000 new jobs over the next 15 years. The LSPS highlights the role that the Innovation Corridor (including Ultimo) will play in delivering the knowledge intensive jobs that will be vital to Sydney's ongoing economic success and global competitiveness. The Powerhouse Ultimo Renewal will support this by prioritising space for knowledge-based creative industries and developing relationships with surrounding creative sector stakeholders.</p> <p>The project will make significant positive contributions by improving walkability within and around the site, better activating Harris Street and supporting the creation of great places that are vibrant and support activity throughout the day and evening. Ongoing adaptive reuse and conservation of heritage fabric and better articulation of First Nations culture will play an important role in creating a more connected and culturally aware community.</p>
Better Placed	Better Placed - An Integrated Design Policy for the Built Environment of New South Wales (2017) is a policy produced by the Government Architect NSW (GANSW), which seeks to promote good design and capture our collective aspiration and expectations for the places where we work, live and play. Better Placed includes 7 objectives for good design, which have been considered in the preparation of the Urban Design Guidelines and will be further addressed through the following detailed design stages.



## 2.4 Cumulative Impacts

**Table 4** identifies nearby relevant future projects. An assessment of the cumulative impacts associated with these projects are considered under the relevant issue in **Section 6.0**

**Table 4** *Surrounding future projects*

Development	Description	Location	Timing / Approval Stage
SSD-7874	Staged Development Application (Concept Proposal) for a residential apartment tower, non-residential podium envelope and public domain improvements.	2-10 Darling Drive, Darling Harbour	Stage 1 approved in June 2021.
Harbourside Shopping Centre Redevelopment		Approx. 700 metres from the site	Stage 2 SEARs have not yet been requested. Due to the preliminary concept nature of this application, the cumulative impacts from both these developments are anticipated to be minimal.
SSD-9978934	Construction and use of a 43-storey mixed-use development and land bridge across part of the Western Distributor between Darling Harbour and Darling Park	Cockle Bay, 241-249 Wheat Road, Sydney	Stage 1 approved in May 2019.
Cockle Bay Wharf Mixed Use Development		Approx. 700 metres from the site.	Stage 2 Detailed DA was lodged in October 2021 and is currently being assessed. Given that this project is significantly more progressed, it is anticipated that the construction of Cockle Bay will occur prior to any works occurring at Powerhouse Ultimo.
D/2021/251	Demolition of existing office buildings and staged construction of two commercial towers (35 and 37 storeys) containing office and retail uses, basement parking (121 car spaces, end of trip facilities) and loading facilities (48 servicing spaces) with proposed basement connections to the adjoining Atlassian and future "over station development". Works are proposed to part of Henry Deane Plaza and above the existing Devonshire Street tunnel for an above ground connection to the future 'over station development'. Future detail is to be provided on the low-rise Attractor building that connects to the podium fronting Henry Deane Plaza.	14-18 Lee Street, Haymarket	A DA was lodged with the City of Sydney in March 2021 and is currently under assessment.
Dexus-Frasers Central Place Sydney		Approx. 750 metres from the site	Given that this project is significantly more progressed than the Powerhouse Ultimo Renewal, it is anticipated that the construction of Central Place will occur prior to any works occurring at Powerhouse Ultimo.
SSD 33258337	Development of a mixed-use hotel, retail, and commercial development within the Western Gateway Sub-precinct	2 & 8A Lee Street, Haymarket	The request for SEARs for this project was lodged in December 2021, and it is anticipated an EIS is currently being prepared.
TOGA Central		Approx. 750 metres from the site	It is unclear as to when construction timing for this development is likely. Any future detailed DA for the Powerhouse Ultimo will need to consider any cumulative impacts that this development may have in conjunction with the TOGA Central Development.
SSD 10405	Development of a new mixed-use development comprising 'tourist and visitor accommodation' (in the form of a 'backpackers' YHA (Youth Hostel Association) and commercial office space within the tower form. Retail, lobby and food and drink premises at the Lower Ground level and Upper Ground level.	8-10 Lee Street	The detailed DA was approved by the Department on the 15 October 2021.
Atlassian – Office and Hotel Development		Approx. 750 metres from the site	Given that this project is significantly more progressed than the Powerhouse Ultimo Renewal, it is anticipated that the construction of the Atlassian development will occur prior to any works occurring at Powerhouse Ultimo.
Blackwattle Bay State Significant Precinct	A State Significant Precinct (SSP) is currently being planned to facilitate	Blackwattle Bay, Glebe	This represents the statutory planning process for Blackwattle Bay, and does not include any proposal for specific construction works. Once

Development	Description	Location	Timing / Approval Stage
	the future redevelopment of Blackwattle Bay.	Approx. 650 metres from the site	<p>the statutory requirements for the SSP are finalised, the redevelopment of Blackwattle Bay will likely begin, in line with the SSP.</p> <p>However, as there are no specific development applications lodged for the precinct, it is unclear as to whether there would be any specific cumulative impacts between the renewal of the Powerhouse Ultimo and this development. This will be considered again at the detailed DA phase of the development.</p>
SSD 8925  The New Sydney Fish Market – Stage 2	Construction and operation of a new fish market including land and water-based structures for the use of the site for the fish market including waterfront commercial and tourist facilities and ancillary uses.	1A, 1B and 1C Bridge Road, Glebe 2037  Approx. 650 metres from the site	<p>This SSDA was approved in June 2020 and is currently under construction.</p> <p>Given that this project is significantly more progressed than the Powerhouse Ultimo Renewal, it is anticipated that the construction of the Sydney Fish Market development will occur prior to any works occurring at Powerhouse Ultimo.</p>
SSI 19238057  Sydney Metro West – The Bays to Sydney CBD	<p>Application for tunnelling and major civil construction work between The Bays and the Sydney CBD.</p> <p>This proposal is largely located underground and includes all major civil construction work including station excavation at Pyrmont Station and Hunter Street Station.</p>	Areas within the Inner West and City of Sydney local government areas.	<p>This SSI was lodged in November 2021 and is currently being assessed by the Department.</p> <p>Given that this project is significantly more progressed than the Concept Powerhouse Ultimo Renewal, it is anticipated that the civil works associated with the Sydney Metro West development will occur prior to any works occurring at Powerhouse Ultimo.</p> <p>Whilst no application has been lodged for the Pyrmont Station itself, a station is proposed to be located between Pyrmont Bridge Road and Union Street, Pyrmont, which is approximately one kilometre from the site. It is unclear as to when timing for the development of the Pyrmont Metro Station is expected, and therefore any future detailed DA for the redevelopment of the Powerhouse Ultimo will need to consider any cumulative impacts arising from this development.</p>
UTS Sites 13-15 Indigenous Residential College	Proposal to amend planning controls for UTS Sites 13-15 to facilitate the future development of a c. 18 storey building for indigenous residential accommodation associated with the university.	South-east on block bounded by UTS Gehry Building, Mary Ann Street, Harris Street and Ultimo Rd	The draft master plan and Design Guidelines to facilitate the proposed development were publicly exhibited alongside the Pyrmont Peninsula sub-precinct master plans. To date the Design Guidelines have not been adopted nor have the existing statutory planning controls been amended. Should this occur, any project consistent with this proposal would continue to require development consent, including the assessment of potential environmental, social and economic impacts, prior to the carrying out of any works.

## 2.5 Project Justification

As detailed in **Section 7.0** of this EIS, the project is justified in the context of biophysical, social, and economic environments, as well as the proposal's alignment with the objects of the EP&A Act and other statutory instruments applicable to the site.

## 2.6 Analysis of Alternatives

Three primary options have been considered by Create NSW in responding to the strategic need and objectives for the renewal of the Powerhouse Ultimo. This includes not undertaking any works on the site, proceeding with a different use of the site, and proceeding with the proposed renewal project as detailed in this EIS.

### Option 1 – Do Nothing

The 'Do Nothing' scenario comprises the existing Powerhouse Ultimo remaining in-situ. For the reasons outlined in Section 1.3 above, the renewal of the Powerhouse Ultimo precinct represents an important investment in cultural infrastructure and the creative industries in NSW and allows for Powerhouse Ultimo to act as a complementary facility to Powerhouse Parramatta, Powerhouse Castle Hill (Museums Discovery Centre), and Sydney Observatory.

Without renewal, Powerhouse Ultimo will fall behind comparative museum facilities, locally, nationally and internationally, with Sydney and NSW missing out on major exhibitions, programs and events due to the lack of contemporary spaces available. This would include locally produced exhibitions and programs and missed opportunities associated with potential major regional and international exhibitions, program and events. This would result in the loss of potential social, cultural, and economic opportunities.

Therefore, the 'Do Nothing' approach is not considered to be an acceptable approach for a major public facility such as Powerhouse Ultimo.

### Option 2 – Different Use

The second option available to Create NSW is to close Powerhouse Ultimo and pursue an alternate use for the site. For the reasons discussed in Option 1 above, the renewal of Powerhouse Ultimo represents an important investment in cultural infrastructure and the creative industries of NSW, and to lose this space to an alternate use would be detrimental to the cultural and creative industries and the attractiveness of Sydney as a destination.

While the use of the site for an alternate land uses would be economically beneficial to NSW in the short term, it would not provide the long-term positive cultural or social outcomes that can be realised through the retention and renewal of Powerhouse Ultimo and would fundamentally result in the loss of a recognisable cultural landmark and destination within Sydney.

Therefore, the 'Different Use' approach is not considered an acceptable alternative for the retention of a major public facility such as Powerhouse Ultimo.

### Option 3 – This Proposal

The retention and renewal of Powerhouse Ultimo will deliver an international standard museum with new and refurbished spaces for museum operations, exhibitions, programs and associated industry and creative uses that will activate and engage audiences. It will deliver a programming focus on design and fashion, presenting exhibitions that showcase the Powerhouse Collection, international exclusive exhibitions and programs that support the creative industries.

The proposal represents the first stage in facilitating the renewal of Powerhouse Ultimo while responding to the site-specific needs of the site and surrounds. The proposal responds to and seeks to celebrate the important State heritage listed buildings on the site, while providing an adaptable envelope to accommodate innovation at the competitive design process phase. It has been developed through testing and analysis, which included consideration of varying levels of renewal, and consultation completed through this process to lodgement to inform the outcomes and performance requirements of the future museum.

Importantly, the proposal will support the renewal of the museum spaces for contemporary and flexible use in line with contemporary museum practice and the cultural needs of NSW.

Therefore, 'Option 3 – This Proposal' approach represents is considered to be the best possible, and preferred option for this site.

### Further Analysis of Design Alternatives

As outlined in **Section 3.6**, the final project will be the subject of a competitive design process carried out in accordance with the proposed Design Excellence Strategy (**Appendix E**), which will allow for the independent development of multiple possible design alternatives for the project in order to elicit the architectural design that best achieves design excellence. Detail of the competitive design process outcomes and selected architectural design will be provided as part of the future Stage 2 State Significant Development Application.



### 3.0 Project Description

This chapter describes the proposed development, including the Project's disturbance area, conceptual layout and design, main uses and activities and staging.

This application seeks approval for a concept proposal that will facilitate the future redevelopment of the site, and guide future design through a competitive design process and Stage 2 detailed DA. Specifically, consent is sought under 'Division 4.7 - Stage Significant Development' of the EP&A Act for the renewal of Powerhouse Ultimo. The proposal's key elements comprise:

- A maximum building envelope for any new buildings and alterations or additions to existing buildings retained on site.
- Use of the site as an 'information and education facility' including museum exhibition and learning spaces that are supported by a range of ancillary and related uses contributing to the operation of Powerhouse Ultimo.
- Design Excellence Strategy and Urban Design Guidelines to guide the next stages of the project.
- Updated CMP to ensure that future development occurs in a manner that is compatible with, and facilitates the conservation of, the heritage values of the site.
- General functional parameters for the future design and operation of the site including principles and strategies for the management of heritage, transport and access, noise and vibration, utilities and services, and the like.

It is emphasised that no physical works are proposed as part of this Concept SSDA, which will be detailed in a separate and future Stage 2 SSDA and informed by a competitive design process.

The proposed development is described in greater detail in the following sections. An Urban Design Report and accompanying plans have also been prepared by JWA and Aspect (**Appendix B**) which provide greater detail on the project and how the proposed development has responded to the site and the unique opportunities and requirements associated with the Powerhouse Ultimo Renewal project.



**Figure 16** Artist's impression Powerhouse Ultimo

Source: Mogamma

### For information only – not part of this DA

This Concept SSDA has been developed with consideration of the broader context of the site, and specifically how separate and future development might fit within and improve this context. As a result, information has also been provided as part of this EIS and within other appended environmental assessments of how the future detailed design of building and public domain areas, which is not sought as part of this DA, might be developed at Stage 2 of the project. This, for example, might include consideration of the Harwood Building in the context of the project site which will remain on the site and is not included in the scope of this project. While some minor works may be necessary to upgrade and separate shared building services, decouple operational functions, increase activation of public spaces, and support the NSW Government's commitment to establish a creative industries precinct in the future, no physical works are proposed as part of this Concept SSDA and any such works will be confirmed at Stage 2 if needed at that stage.

Namely, a 'reference scheme' has been prepared for the site which shows one possible solution for how a new building and public domain could be delivered on the site in compliance with the proposed building envelope discussed in **Section 3.2** below. It is not intended that this reference scheme confine or limit further exploration of all possible design alternatives and solutions for the site through the competitive design process and Stage 2 SSDA that follows this Concept SSDA (discussed further in **Section 3.5** below).

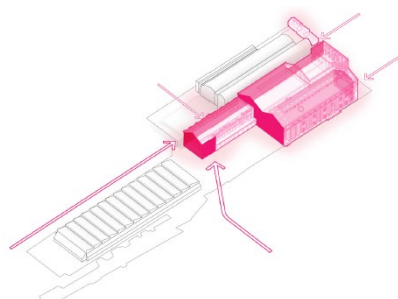
The purpose of the reference scheme is to demonstrate a design that is compliant with the building envelope and design guidelines proposed in this DA, and that can achieve the functional requirements of the project with acceptable environmental impacts, and to assist key stakeholders to understand the type of intended outcomes for the project during this initial conceptual stage.

This reference scheme does not form part of the documentation sought for approval under this Concept SSDA, rather, it is provided to assist in the assessment and determination of this first stage of the project.

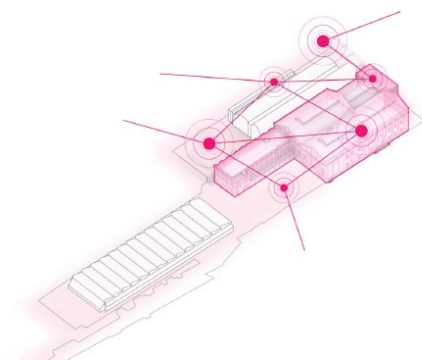
### 3.1.1 Design Principles

The proposed development seeks to provide a world-class contemporary museum delivering a program that is focused on design and fashion and presents exhibitions that showcase the Powerhouse Collection as well as international exhibitions and programs.

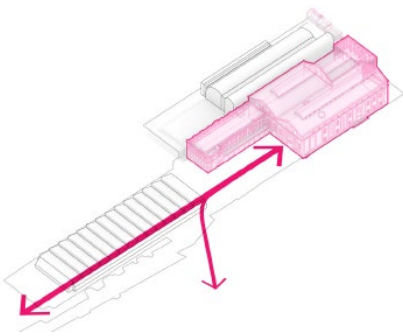
Through a detailed analysis of the site and its opportunities and constraints, the following design principles have been developed as the objectives and guidelines for this project:



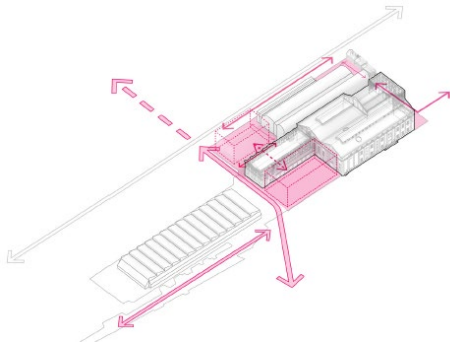
**Reveal and celebrate heritage fabric and spaces:** reveal important heritage fabric and spaces to the wider public domain network allowing improved access to, and appreciation for, these buildings and spaces than is currently the case.



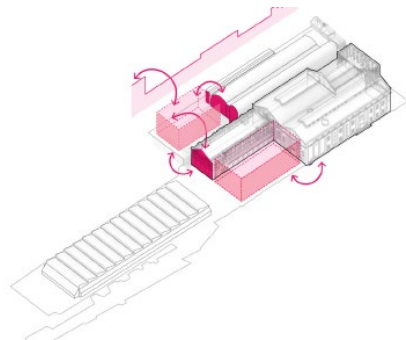
**Adaptive reuse for contemporary museum practice:** the museum needs to reflect the changing needs of the community it serves it must be contemporary in its outlook and the way it presents its stories and its collections. The continued adaptive re-use of the heritage fabric of the museum will reflect these contemporary methods, it requires ongoing flexibility and agility of the built form.



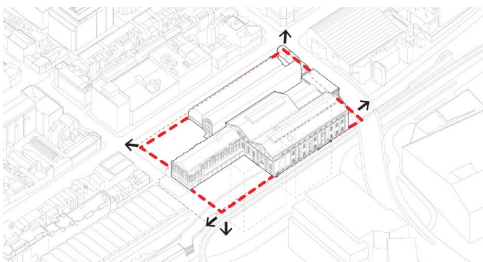
**Continue the cultural spine:** the continuation of The Goods Line increases connectivity to expansive public domain space, increase the visibility of the Harwood Building and provides an opportunity to reorientate the museum's public address and entrance back to the CBD.



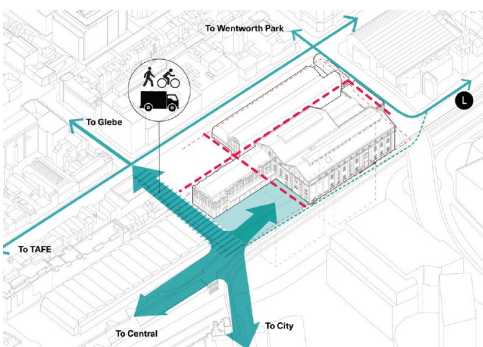
**Create a connected and engaging public domain:** introduce a network of lanes, streets and public spaces within the site to seamlessly connect with the wider public domain network.



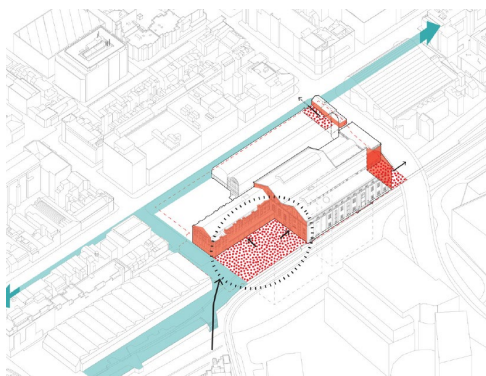
**Arrange new built form to be responsive to the site and its context:** The new floor space will improve the relationships between heritage fabric, the public domain network and surrounding streetscapes.



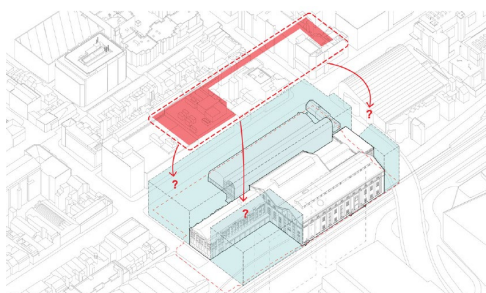
**Unlock the site:** remove fences and obstructive structures to open the site and connect to the adjacent public domain.



**Connect:** strengthen connections to the surrounding precinct and public transport, including opportunities to integrate accessible connections into the project.



**Unique character:** celebrate the unique architecture, character, and role of each space. Enable museum programming as well as the open spaces in the wider context.



**Public space:** maintain or increase the quality and quantity of public domain on the site.

## 3.2 Land use

This application seeks consent for the redevelopment of the site primarily for the purposes of an ‘information and education facility’, which includes museum exhibition and learning spaces. This primary function may be supported by a range of ancillary and related uses that contribute to the operation of Powerhouse Ultimo as a renewed day-to-night cultural and arts destination, including:

- Office and co-working spaces for use by staff, as well as other stakeholders associated with programs at Powerhouse Ultimo, and partners and stakeholders for external meetings.
- Internal and external facing retail spaces, to be used for services related to the purpose and functions of the Powerhouse Ultimo, including food and beverage tenancies. Any external retail spaces at the ground floor could potentially also accommodate outdoor dining to support further activation of the site.
- Temporary accommodation to be used for visitors to Powerhouse Ultimo as part of the Museum’s learning outreach programs, including students from regional NSW, interstate and overseas.

The provision and mix of the above and any other museum exhibition and learning spaces will be subject to the detailed design of buildings and public domain areas on the site as an outcome of the competitive design process (discussed further in **Section 3.5** below). Accordingly, the Stage 2 SSDA will include further details regarding the anticipated use of the site, as well as the nature of these uses and their operation as part of the broader Powerhouse program.

## 3.3 Maximum Building Envelope

This application seeks consent for a maximum building envelope which is defined via horizontal and vertical planes. The building envelope sets the maximum extent within which any future building, including any alterations and additions to existing retained buildings, will be contained within.

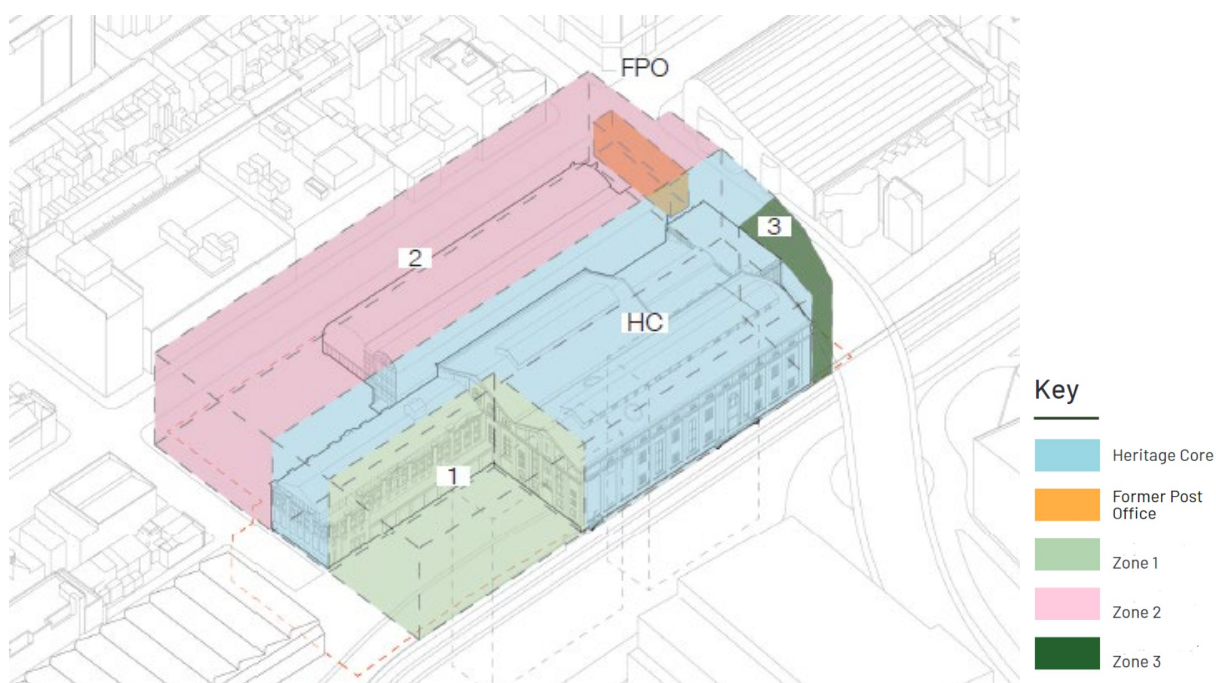
The building envelope has been designed as a ‘maximum space’ that responds to the relevant planning controls and provides appropriate flexibility to allow architectural and landscape design responses to consider a range of options to be explored through the competitive design excellence and detailed design processes (described more in **Section 3.5** below). This approach establishes a maximum building envelope for which approval is sought at the Concept SSDA stage and which forms the ‘worst-case’ basis for the environmental assessment in this EIS and supporting documentation. The final detailed design of buildings, including compliance with the proposed maximum building envelope, will be detailed further in the Stage 2 Development Application.



Within the proposed maximum building envelope are a series of indicative 'zones'. These zones provide principles and guidelines for how development in that section of the site might respond to its context, recognising that there are varied existing conditions and adjacencies created by the different buildings and spatial elements across the Powerhouse Ultimo site. These zones make up the proposed maximum building envelope as shown in **Figure 17** below and discussed in further detail in the following sections.

Building heights generally follow the maximum permitted under the Sydney LEP being 28 metres above ground level (except for the Former Ultimo Post Office site which has a height limit of 6 metres) or up to 30.8 metres where design excellence is achieved. Small exceptions occur to this within parts of the site due to the location of existing basements that alter the existing ground level within the site (refer **Section 4.0**). By virtue of the retention of significant existing building fabric (both heritage listed and non-heritage), and other considerations such as achievement of the Design Guidelines discussed in **Section 3.4**, it is not expected that future development will utilise more than a fraction of the total building envelope indicated.

Future development within the Heritage Core zone particularly, and across the whole site more generally, must also be generally in accordance with the principles and guidelines contained within the CMP prepared by Curio Projects (**Appendix G**). In many instances this will mean that development up to the maximum building envelope is not possible.



**Figure 17** Five key zones of the proposed maximum building envelope

Source: John Wardle Architects & Aspect Studios

### Heritage Core zone

The Heritage Core refers to the existing Power House building (North Annex, Boiler House and Turbine Hall) and the Switch House on the eastern side of the site. This section of the site includes the State heritage listed built form elements that make up the existing Powerhouse Ultimo, and as such any future development in this portion of the site will be required to respond to this context.

As this envelope zone is located at the heart of the site, any adaptive reuse or alterations and additions to the retained buildings within this zone should seek to promote greater physical and visual engagement to potential adjacent public open space and possible built form components. Overshadowing to Zones 1 and 2 (discussed further below) should be considered and minimised as a result of any works within this building envelope.

### Former Post Office zone

The Former Post Office zone of the building envelope is proposed around the state heritage item situated in the north-western corner of the site. Works within this zone will be required to consider promoting visual engagement with any adjacent open space, such as the Harris Street frontage of the site or the within the adjoining Zone 2 (discussed further below). The Former Post Office zone is subject to the lower building height limit of 6 metres that applies under the Sydney LEP only across this portion of the site.

### Zone 1

Zone 1 refers to the current courtyard space that is located at the end of The Goods Line, in the south-eastern corner of the site, and contains the existing café building adjacent to the Harwood Building. This zone is identified as one of the opportunity sites to provide either new built form or renewed publicly accessible open space area.

Any development within this zone will need to respond to The Goods Line and create a new legible address for the Powerhouse from this frontage, as well as responding to adjacent buildings within the Heritage Core and the Harwood Building located outside of the project boundary.

### Zone 2

Zone 2 refers to the existing Wran Building and civic space and museum entrance located on Harris Street. This is one of the largest portions of the building envelope, extending from Pier Street in the north, to Macarthur Street in the south. This zone is also identified as one of the opportunity sites to provide either a new building and/or renewed publicly accessible open space area.

Any future development within this zone will need to consider greater visual engagement to the adjacent buildings within the Heritage Core/Former Post Office zones and allow for articulation and alignment of any built form within the existing Harris Street civic space and museum entrance to respect adjacent heritage and other existing significant building fabric.

### Zone 3

Zone 3 refers to a small portion of the envelope to the north-west of the Power House building where it interfaces with the street and land beneath the vehicle overpass. Any future development within this zone should consider opportunities for public connection to the Exhibition Centre light rail stop.

## 3.4 Urban Design Principles

Urban Design Guidelines have been prepared by JWA and Aspect Studios (**Appendix B**) which set out the guidelines for the future detailed design of the renewed museum and public spaces, including their interfaces with surrounding areas. The Guidelines will shape the detailed design phase of the project, and will be a benchmark against which to review proposed outcomes for the site as part of the competitive design process and at Stage 2.

Parts 5 and 6 of the Urban Design Report at **Appendix B** sets out principles and more detailed guidelines for the following aspects of the design:

- First Nations and heritage
- Architectural expression and material selection
- Sustainability
- Building envelope, form, massing, scale and setbacks
- Public domain and activation
- Access and movement
- Safety, security and wayfinding

The proposed Urban Design Guidelines nominate the overarching objectives for the project and are supplemented by a series of strategies and principles which provide further context to the design intent for future museum facilities. The following sections summarise some of the key aspects of these guidelines.

Preparation of the guidelines has been informed by an appreciation of the site and surrounds, an understanding of the functional requirements of the future museum based on the reference scheme, and benchmarking of aspects of the museum experience against best-practice examples of museums and information and education facilities in Australia and internationally. This approach has facilitated the development of principles for the future built form and public domain which will ensure that the spaces provide for a world class facility which is grounded in an understanding of the constraints and opportunities of this site.

The following sections set out the indicative design outcomes of the guidelines.

### First Nations

Based on the NSW Government Architect's Draft Designing with Country, Connecting with Country and Better Placed frameworks, and with guidance and input from the Powerhouse's First Nations Directorate, JWA and Aspect have identified several principles to guide any future development on the site in relation to First Nations. A number of key outcomes are identified for the site in these spaces.

- Recognition of Traditional Custodians as well as diasporic First Nations communities that now call Sydney home.
- Recognition that Aboriginal history on the site is continuous.
- Reflect and respect cultural narratives of the site.
- Reinstate the relationship between the Harbour and Pirrama peninsula.
- Create opportunities for First Nations employment, engagement and participation.

All related project briefs will be authored with leadership and participation of the Powerhouse First Nations Directorate to ensure self determination of Indigenous representation.

### Heritage

Acknowledge the heritage significance of the State Heritage Listed buildings within the Powerhouse Ultimo site.

- Reveal and celebrate heritage fabric and spaces to the wider public domain network allowing improved access to, and appreciation for, these buildings and spaces.
- Enable better connections to and appreciation of significant built fabric.
- Allow for adaptive reuse, demonstrating and acknowledging the ongoing development of contemporary museum practice.

### Architectural expression

In order to encourage a contemporary response to the site and its context, JWA and Aspect have drafted and guidelines to support adaptive heritage reuse, as well as contemporary, new additions. Any future design should include quality, long lasting and low maintenance materials which maintain a high-quality appearance. The details of these principles are provided at **Appendix B**. These guidelines include:

- Integrate with the existing Powerhouse Ultimo buildings and surrounding Ultimo context.
- Allow for an environmentally responsive design approach.
- Create transparent and active street frontages at ground level.
- Provide diversity in the elevations through articulation of the façade.

### Sustainability

All aspects of the design, construction and ongoing operation of the precinct will seek opportunities to minimise negative environmental impacts. This includes a triple bottom line approach to sustainability, which addresses environmental economic and social sustainability impacts. The museum, once operational, should have net zero operations and be climate positive. The sustainability guidelines include:

- Prioritise climate positive, low-carbon, high-performance outcomes.
- 5 Star Green Star minimum with opportunities for 6 Star Rating to be explored during detailed design.
- Integrate renewable energy generation.
- Minimise waste and reduce the precinct's water consumption.

### Form, massing, scale and setbacks

To support innovative design within the building envelope provided, as well as ensure any future development responds appropriately to its context, JWA and Aspect have prepared a number of guidelines. The site should accommodate the functional requirements of a world-class museum that is also responsive to the site and integrated into its context. These guidelines include:

- Height and massing of any new built forms should be sensitive and responsive to the significance of existing buildings and in alignment with the draft CMP (**Appendix G**).
- Form and massing of new built forms should consider and provide functional requirements of the Powerhouse.
- New buildings are to respond to the surrounding scale and built environment, and should respect and consider impacts to privacy, views, public open space and minimise negative impacts to local residential amenity.
- Minimise overshadowing to public spaces.
- Improve connections to and around the built form.
- All building alignments should respect and respond to the adjacent building alignments and maximise opportunities for pedestrian connectivity and accessibility with space created by increased setbacks.

### Public domain and activation

The project shall achieve a significant public realm across the site. JWA and Aspect have prepared a number of principles and guidelines to ensure good public domain outcomes whilst encouraging innovative design outcomes. These include:

- Provide at least one significant public space, connected at grade to the adjacent public domain, to allow for gathering, events, socialising and programming.
- Consider the relationship between the heritage buildings on the site and the public open space.
- Provide a safe and accessible pedestrian experience that responds to principles of Crime Prevention through Environmental Design (CPTED).
- Demonstrate good solar access is achieved to public open spaces.
- Create clear and legible wayfinding, including lighting and signage.
- Provide a variety of events and gathering spaces complimentary to the museum use, including uses that encourage day and night-time uses.

### Access and Movement

All aspects of the design are to enhance existing pedestrian connections, acknowledging the significance of The Goods Line and east-west connection between Darling Harbour and Pyrmont. Further, design is to improve access and legibility with the heritage core and promote and support active transport through connection to the broader network. Vehicular access and servicing are also a consideration for future design. The following guidelines have been prepared by JWA and Aspect:

- Consider civic space and museum entrance design to promote this as the primary entrance to the site, a natural termination of The Goods Line and as an urban anchor to the east-west connection.
- Improve the character of the Harris Street public domain with consideration to the existing bus stop location.
- Explore future connectivity opportunities with the Exhibition Centre light rail stop.
- Include provision for bicycle parking spaces.
- Ensure visibility and legibility of cycling and pedestrian routes.
- Investigate potential future opportunities for the possible future extension of pedestrian access to the north within the Light Rail corridor.
- Integrate efficient and adequate loading and services requirement for new built form.
- Emphasise pedestrian priority and minimise conflicts on surrounding streets.



## Safety, security and wayfinding

Any future development will need to provide safe, well designed public domain and pedestrian thoroughfares in line with the principles of CPTED. This will include providing adequate public amenities, such as street furniture and lighting, as well as providing clarity for visitors around the site through wayfinding signage and well-designed public spaces.

A CPTED Report has been provided at **Appendix O**, and a further detailed CPTED Report will accompany the Stage 2 SSDA assessing the detailed design of the project.

## 3.5 Heritage Conservation

A new draft CMP has been prepared by Curio Projects (**Appendix G**) in order to establish appropriate principles and guidelines for future development of the site. This CMP will supersede the CMP from 2003 prepared by Architectural Projects and will ensure that conservation principles and guidelines reflect the heritage listing of the site and align with the current requirements of the Heritage Act 1977 and associated heritage conservation guidelines.

This draft CMP assesses the overall heritage values of the Powerhouse site including its curtilage, buildings, fabric, archaeological potential, and intangible values, and will be used to guide the conservation, maintenance and restoration of the site, as well as to appropriately guide any future development, inclusive of the Powerhouse Ultimo Renewal. The aim of the draft CMP is to review the significant heritage values of the Powerhouse site today, discussed in the context of any issues that are relevant in 2022 to the ongoing management of the site, and to revise and further develop policies to build-upon the 2003 CMP to retain and conserve these heritage values.

The draft CMP has been developed to provide a functional framework and categorises areas of significance in order of exceptional, high, moderate, little and intrusive, and also identifies the timing for implementing the CMP in order of immediate, short-term, medium-term, long-term, ongoing, and as required.

## 3.6 Design Excellence Process

This Concept SSDA seeks endorsement of a Design Excellence Strategy which details how the design excellence provisions of Clause 6.21C of Sydney LEP 2012 are to be satisfied by this project.

The Design Excellence Strategy has been prepared by Ethos Urban and City Lab in consultation with the NSW Government Architect's Office and City of Sydney Council (**Appendix E**) to ensure that the Powerhouse Ultimo Renewal project achieves design excellence by following a competitive design process in accordance with both the Government Architect NSW (GANSW) Design Excellence Guidelines (Draft, May 2018) and the City of Sydney Competitive Design Policy 2020.

The Design Excellence Strategy proposes undertaking a design alternatives process, on a competitive basis, in accordance with Sections 1.2 and 2.1(1)(c) of the City of Sydney Competitive Design Policy 2020. The invited competitive alternative design process will be undertaken to select the design that will be the subject of the future Stage 2 SSDA for the detailed design, construction, and operation of the Powerhouse Ultimo Renewal project. The actual competitive design process will be undertaken prior to the lodgement of any detailed Stage 2 SSDA, although the approval of the Design Excellence Strategy – which will generally inform the carrying out of the competition in connection with the detailed Stage 2 SSDA – is sought as part of this Concept SSDA. Such an approach accords with the sequencing contemplated by the City of Sydney Competitive Design Policy 2020 as well as the SEARs for the current Concept SSDA. The carrying out of the actual design competition as part of the Concept SSDA is unnecessary having regard to the customary nature, sequencing and process that is followed for design competitions for development of this nature in City of Sydney.

This process will comprise of the following:

- Engaging up to minimum of five (5) invited architectural firms to prepare concepts for the Powerhouse Ultimo Renewal project on a competitive basis.
- Selecting a Jury of suitably qualified and experienced experts appointed by the proponent in consultation with DPE (including GANSW) who will be responsible for the assessment of proposals and selecting a winning design. Some members of the Jury will be retained in an ongoing role as the Design Integrity Panel to ensure that the design integrity of the winning scheme from the competitive process is maintained throughout the design development process to ensure that design excellence is maintained. This process will involve a series of presentations to, and issuing of advice by, the Design Integrity Panel which is a subset of the Jury at key design development milestones.

- Appointing the successful competitor (or consortia) as the lead architect for the project, responsible for preparing the detailed design for the Stage 2 SSDA.

A future detailed and endorsed Design Competition Brief will be developed prior to the competition commencing in accordance with the Design Excellence Strategy, detailing the specific terms, objectives, and process to be followed for the design alternatives process, on a competitive basis. A Design Competition Report will further be prepared at the conclusion of the competition outlining the process that was followed, evaluating the submissions received, and detailing the reasons for the final decision of the Jury. This Design Competition Report will be prepared and endorsed by the Jury for submission to DPE as the consent authority for the Stage 2 SSDA.

As part of the process for preparing this EIS and Design Excellence Strategy, an early form of the project and description of the strategy for design excellence was presented to the State Design Review Panel (SDRP) on 16 February 2022. Comments and recommendations were provided by the SDRP that have been addressed in this DA and will be further addressed through engagement with the SDRP. Refer to **Section 5.2** of the EIS.

## 4.0 Statutory Context

Concept development approval is sought for the project under the State Significant Development provision of Part 4 of the *Environmental Planning & Assessment Act 1979*. **Table 5** below outlines the project's key statutory requirements. This section is complemented by a statutory compliance table at **Attachment 2** that identifies all statutory requirements and where those requirements have been addressed in the EIS.

**Table 5 Key Statutory Requirements**

Matter	Comment														
Land Use Definition	The project is defined as an 'information and education facility' under the Sydney Local Environment Plan 2012, consistent with the Standard Instrument.														
Permissibility	The site is zoned B4 Mixed Use under the Sydney Local Environmental Plan 2012. Information and education facilities are permissible with consent within the B4 zone.														
Power to grant consent	<p>Declaration of State Significant Development</p> <p>Development consent will be sought under 'Division 4.7 - Stage Significant Development' of the EP&amp;A Act.</p> <p>Section 4.36(2) of the EP&amp;A Act states that "A State environmental planning policy may declare any development, or any class or description of development, to be State significant development."</p> <p>Schedule 1 of <i>State Environmental Planning Policy (Planning Systems) 2021</i> lists development that is declared State significant development. Section 13 states (emphasis added):</p> <p>(1) <i>Development that has a capital investment value of more than \$30 million for any of the following purposes—</i></p> <p>(a) <i>film production, the television industry or digital or recorded media,</i></p> <p>(b) <i>convention centres and exhibition centres,</i></p> <p>(c) <i>entertainment facilities,</i></p> <p>(d) <i>information and education facilities, including museums and art galleries,</i></p> <p>(e) <i>recreation facilities (major),</i></p> <p>(f) <i>zoos, including animal enclosures, administration and maintenance buildings, and associated facilities.</i></p> <p>As the project is for an information and education facility, with a CIV of over \$30 million, it is declared State Significant Development. Before a State Significant Development can be determined, it is subject to a comprehensive assessment under the EP&amp;A Act.</p> <p>Consent Authority</p> <p>Section 4.5 of the EP&amp;A Act and Section 2.7 of the <i>State Environmental Planning Policy (Planning Systems) 2021</i> stipulates that the consent authority is the Minister for Planning if an SSDA is made by or on behalf of a public authority. This application is made by the Department of Enterprise, Investment and Trade (Create NSW), who is a public authority.</p>														
Other Approvals	<p>The following section outlines other legislative approvals required for the project in addition to a development consent under Division 4.7 of the EP&amp;A Act.</p> <p>Consistent Approvals</p> <p>Section 4.42 of the EP&amp;A Act stipulates that certain authorisations cannot be refused if they are necessary for carrying out State significant development. The following table lists legislative approvals that are required for the project and cannot be refused if the project is approved.</p> <table> <tr> <th>Act</th><th>Approval Required</th></tr> <tr> <td colspan="2">Legislation that must be applied consistently</td></tr> <tr> <td>Fisheries Management Act 1994</td><td>No</td></tr> <tr> <td>Mine Subsidence Compensation Act 1961</td><td>No</td></tr> <tr> <td>Mining Act 1992</td><td>No</td></tr> <tr> <td>Petroleum (Onshore) Act 1991</td><td>No</td></tr> <tr> <td>Protection of the Environment Operations Act 1997</td><td>No</td></tr> </table>	Act	Approval Required	Legislation that must be applied consistently		Fisheries Management Act 1994	No	Mine Subsidence Compensation Act 1961	No	Mining Act 1992	No	Petroleum (Onshore) Act 1991	No	Protection of the Environment Operations Act 1997	No
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Protection of the Environment Operations Act 1997	No														

Matter	Comment														
	<p>Roads Act 1993</p> <p>Possible at Stage 2 SSDA phase</p> <p>Pipelines Act 1967</p> <p>No</p>														
	<p>EPBC Approval</p> <p>The <i>Environmental Protection and Biodiversity Act 1999 Act</i> (EPBC Act) provides a legal framework to protect and manage matters of national environmental significance (MNES), which include nationally and internationally important flora, fauna, ecological communities, and heritage places. These are known as MNES. If the proposed development will, or is likely, to impact a MNES, then it is required to be referred to the Federal Department of the Environment for assessment to determine if it constitutes a 'controlled action' requiring EPBC approval. Presently, a bilateral agreement allows the Commonwealth Minister for the Environment to rely on the NSW environmental assessment process when assessing a controlled action under the EPBC Act.</p> <p>The project is not likely to impact any MNES. Therefore, the project is not required to be referred to the Federal Department of the Environment to determine if it constitutes a controlled action and the bilateral agreement applies.</p> <p>Approvals not required for State Significant Development</p> <p>Section 4.41 of the EP&amp;A Act stipulates that certain authorisations are not required for SSD. The following legislative approvals would otherwise be required if the project was not State significant.</p>														
	<table> <tr> <th>Legislation</th><th>Approval Otherwise Required</th></tr> <tr> <td colspan="2">Legislation that does not apply to State Significant Development</td></tr> <tr> <td><i>Fisheries Management Act 1994</i></td><td>No</td></tr> <tr> <td><i>Heritage Act 1977</i></td><td>Yes</td></tr> <tr> <td><i>National Parks and Wildlife Act 1974</i></td><td>No</td></tr> <tr> <td><i>Rural Fires Act 1997</i></td><td>No</td></tr> <tr> <td><i>Water Management Act 2000</i></td><td>No</td></tr> </table>	Legislation	Approval Otherwise Required	Legislation that does not apply to State Significant Development		<i>Fisheries Management Act 1994</i>	No	<i>Heritage Act 1977</i>	Yes	<i>National Parks and Wildlife Act 1974</i>	No	<i>Rural Fires Act 1997</i>	No	<i>Water Management Act 2000</i>	No
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Matter	Comment	
Conservation) 2021	<p>The proposed building envelope has been designed to have minimal impact on biodiversity, ecology and the environment. Future detailed DAs on the site will be required to consider stormwater and water quality, vegetation on the site and biodiversity and ecology.</p> <p>The site is not located within a close distance of the foreshore, and therefore, it is not anticipated that the development will have any impact on access to the waterfront or foreshore access. The proposal intends to improve pedestrian access and permeability across the site, contributing to pedestrian access to Darling Square, Darling Harbour and the Darling Harbour Foreshore. Further, the project can be comfortably integrated into the site ensuring it will not impact prevailing views of Sydney Harbour or iconic features of the harbour as discussed further in the Visual Impact Assessment accompanying this EIS.</p>	
Sydney Local Environmental Plan 2012	Clause 2.3 Zone Objectives and Land Use Table	<p>The site is zoned B4 Mixed Use. Development for the purposes of an 'information and education facility' is permissible with consent.</p> <p>The proposal is consistent with the B4 zone objectives as:</p> <ul style="list-style-type: none"><li>• The renewal and enhancement of Powerhouse Ultimo provides a range of spaces and functions including museum, education and presentation facilities. These will complement surrounding uses, such as existing university and education uses at the University of Technology Sydney, and tourist facilities within Darling Harbour.</li><li>• The site is closely aligned with a variety of public transport options and is highly accessible within walking distance of Central Station, the light rail and numerous bus routes. The adjacent Goods Line also provides highly amenable pedestrian walkways through to Broadway and Central Station. Sustainable and active transport options will continued to be prioritised for Powerhouse Ultimo.</li><li>• The proposed renewed Powerhouse Ultimo in this location supports the viability of the Ultimo, Pyrmont and Darling Square centres, by providing a mix of uses in close proximity to residential, retail, commercial and education uses.</li></ul>
	<p>Clause 4.3 – Height of Buildings</p> <p>Clause 4.6 – Exceptions to development standards</p> <p>Clause 6.21D – Competitive design process</p>	<p>The maximum height of buildings on the site is 28 metres across the majority of the site, and 6 metres for the Former Post Office at the corner of William Henry Street and Harris Street. The Powerhouse Ultimo Renewal project will also be the subject of a design alternatives competitive process and as such will be seeking up to 10% additional building height from that shown on the height of buildings map in accordance with Clause 6.21D of the Sydney LEP.</p> <p>As detailed in the Clause 4.6 Variation Request provided at <b>Appendix W</b>, the proposed maximum building envelope has been designed to respond to the existing ground levels and the natural fall of the site. This complies with the practice taken by City of Sydney Council and other consent authorities, including the NSW Land and Environment Court in <i>Stamford Property Services Pty Ltd v City of Sydney &amp; Anor</i> [2015] NSWLEC 1189.</p> <p>However, for an abundance of caution, a variation request has also been prepared to respond to <i>Merman Investments Pty Ltd v Woollahra Municipal Council</i> [2021] NSWLEC 1582, which holds that the existing ground level of a site could include existing basement levels. In this respect, the building envelope would exceed the mapped height limits by between 12.11m to 0.05m depending on the location and depth of the existing basement levels, but noting that all exceedances occur internal to the site and not at the streetscape boundaries.</p> <p>Measuring the height of buildings from the complex existing basement levels (in the context of a State Heritage-listed site) would result in a complex and unnatural height plane which does not relate to the existing natural ground levels at the site, existing buildings on the site, or the intended height of buildings in the streetscape in accordance with the height standard.</p>

Matter	Comment
	<p>As is demonstrated in request at <b>Appendix W</b>, the Concept SSDA may be approved in accordance with the flexibility allowed under Clause 4.6 of the Sydney LEP.</p>
Clause 4.4 – Floor Space Ratio	<p>The maximum floor space ratio on the site is 4:1. The reference scheme provided by JWA inclusive of existing buildings on the site does not exceed this FSR. Any future design proposed within the envelope will need to comply with the maximum FSR on the site and detail compliance at Stage 2.</p>
Clause 5.10 – Heritage Conservation	<p>There are two items of heritage significance on the site, including the locally listed 'Ultimo Power House' buildings and the 'Former Ultimo Post Office including interior'.</p> <p>External to the Powerhouse site, there are also a number of locally-listed heritage items mapped in the Sydney LEP in proximity including the Glasgow Arms Hotel, terrace-house groups along Harris St and Macarthur St, the former Millinery House building, former National Cash Register building and the former Technological Museum/Sydney Technical College building in Harris Street. The site is also adjacent to, and in the vicinity of, the Harris Street Ultimo Conservation Area</p> <p>Both heritage items will be retained and protected on the site in alignment with the CMP (<b>Appendix G</b>). Heritage is discussed further at <b>Section 6.5</b> including a preliminary assessment of the response to surrounding heritage items.</p>
Clause 5.21 – Flood Planning	<p>The existing Darling Harbour flood model has been obtained from Council to confirm existing flood behaviour and flood levels at the site location. The flood study identifies that the site is generally flood free with only a localised areas at the low end of Macarthur Street experiencing shallow flooding-typically less than 200mm deep in the 1% AEP and approximately 250mm deep in the PMF. More significant flooding is experienced downstream of the site within the railway corridor, however this is significantly lower (approximately 3m) than the development site.</p> <p>Flood Hazard is generally low across the development site in the 1% AEP, with localised steeper road areas experiencing High Flood Hazard in the PMF at the junction of Macarthur Street and Harris Street.</p> <p>Flooding implications of the proposed works are discussed further at <b>Section 6.14.3</b> and <b>Appendix V</b>.</p>
Clause 6.21C – Design Excellence	<p>This Concept SSDA seeks endorsement of a Design Excellence Strategy which details the objectives for achieving design excellence in accordance with Clause 6.21C(2) of the LEP.</p> <p>While this will be a mandatory consideration for the competitive design alternatives process and the Stage 2 SSDA, as the detailed design phases of the project, this EIS provides consideration of the Clause 6.21C(2) of the LEP in the following sections. It is emphasised that this is a Concept SSDA, which sets the vision and objectives for the site, and as such the responses to 6.21C(2) of the LEP will be refined as part of the separate and future stages of the Powerhouse Ultimo Renewal project.</p> <p><i>(a) whether a high standard of architectural design, materials and detailing appropriate to the building type and location will be achieved, - The Design Excellence Strategy and Urban Design Guidelines detail how the detailed design of the project will progress, including the objectives and strategies for achieving a high standard of architectural and landscape design. No detailed design response is proposed at this stage in terms of materials and finishes, architectural design, or the specific location and types of new buildings and alterations/additions to existing buildings, which will all be the subject of a competitive design alternatives process and Stage 2 SSDA.</i></p>

Matter	Comment
	<p>(b) <i>whether the form and external appearance of the proposed development will improve the quality and amenity of the public domain</i>, - The Urban Design Guidelines detail objectives for improving the public domain through the detailed design phase of the project</p> <p>(c) <i>whether the proposed development detrimentally impacts on view corridors</i>, - The Visual Impact Assessment provides an assessment of public and private views and confirms that on the balance of relevant visual impact considerations, the proposal has an acceptable visual impact and can be supported on the visual impact grounds. The following detailed design phase will generate a more refined built form than the proposed maximum building envelope.</p> <p>(d) <i>how the proposed development addresses the following matters—</i>  (i) <i>the suitability of the land for development</i>, - This is addressed in <b>Section 7.3.4</b> of the EIS.</p> <p>(ii) <i>the existing and proposed uses and use mix</i>, - This is addressed in <b>Section 3.2</b> of the EIS.</p> <p>(iii) <i>any heritage issues and streetscape constraints</i>, - The Urban Design Guidelines and draft CMP provide objectives and strategies in responding to the site's heritage context and the streetscape, which will be address further in the following detailed design phase and will be the subject of a competitive design alternatives process and Stage 2 SSDA.</p> <p>(iv) <i>the location of any tower proposed, having regard to the need to achieve an acceptable relationship with other towers, existing or proposed, on the same site or on neighbouring sites in terms of separation, setbacks, amenity and urban form</i>, - It is proposed to deliver an integrated built form outcome on the site having regard to the opportunities and constraints of the site and retained heritage buildings. The detailed design of any new buildings will consider the Urban Design Guidelines and draft CMP, and the objectives and strategies for integrating into the site's context.</p> <p>(v) <i>the bulk, massing and modulation of buildings</i>, - This Concept SSDA seeks consent for a building envelope designed as a 'maximum space' that responds to the relevant planning controls and provides appropriate flexibility to allow architectural and landscape design responses to consider a range of options to be explored through the competitive design excellence and detailed design processes. The bulk, massing and modulation of built form will be addressed at the next stages of the project with consideration the opportunities and constraints of the site, the Urban Design Guidelines, and the draft CMP.</p> <p>(vi) <i>street frontage heights</i>, - the building envelope provides a flexible maximum space for the detailed design of buildings to occur within. The Urban Design Guidelines and draft CMP establish considerations for how the future detailed design might respond to the sites context.</p> <p>(vii) <i>environmental impacts, such as sustainable design, overshadowing and solar access, visual and acoustic privacy, noise, wind and reflectivity</i>, - An assessment of the building envelope, and the reference scheme, with respect to these matters is provided under the relevant headings in <b>Section 6.0</b>. Further assessment will be completed as part of the Stage 2 SSDA, when the detailed design of built form and public domain areas are known.</p> <p>(viii) <i>the achievement of the principles of ecologically sustainable development</i>, - The ESD Strategy accompanying the EIS, as well as the DES, establishes sustainability targets for this project that will be addressed through the following detailed design stages of the project.</p>



Matter	Comment
	<p>(ix) <i>pedestrian, cycle, vehicular and service access and circulation requirements, including the permeability of any pedestrian network</i>, - The Transport Assessment accompanying this EIS provides a preliminary assessment of these matters, which will be detailed further as part of the Stage 2 SSDA. The Urban Design Guidelines provide objectives and strategies for access and transport.</p> <p>(x) <i>the impact on, and any proposed improvements to, the public domain</i>, - The Urban Design Guidelines detail objectives for improving the public domain through the detailed design phase of the project.</p> <p>(xi) <i>the impact on any special character area</i>, - The Heritage Impact Statement accompanying this EIS considers the nearby heritage conservation area.</p> <p>(xii) <i>achieving appropriate interfaces at ground level between the building and the public domain</i>, - The Urban Design Guidelines provide objectives and strategies for activating spaces which will be explored further through the detailed design phase of the project.</p> <p>(xiii) <i>excellence and integration of landscape design</i>. - The Urban Design Guidelines detail objectives for improving the public domain through the detailed design phase of the project.</p>
	<p>Clause 7.9 – Car parking – Other land uses</p> <p>Under this clause, information and education facilities are permitted a maximum number of car parking spaces of 1 space for every 200 square metres of the gross floor area of the building used for those purposes.</p> <p>This application does not seek to provide any parking for visitors to the site. There remains limited existing staff parking on the site which will not be altered or increased as part of this application. Any future detailed DAs will not exceed the rate specified in the LEP.</p>
	<p>Clause 7.14 – Acid Sulfate Soils</p> <p>The site is identified as being affected by Class 5 acid sulfate soils. Further, the Geotechnical Report at <b>Appendix S</b> notes that the site contains natural material deposited in the early Holocene era, currently located at, or under the water table that represents a moderate risk of actual acid sulfate soils (AASS) or potential acid sulfate soils (PASS). Additionally, historic fill material may have undergone oxidation in the past, if it was sourced from harbour locations and hence represents a low / moderate risk of AASS.</p>
Sydney Development Control Plan 2012	<p>Clause 11 of SEPP SRD states that 'Development Control plans... do not apply to... State significant development'. Further, it is noted that Sydney DCP 2012 does not provide specific controls for information and education facilities. Reference to the DCP has been made if relevant in the technical studies, and discussed in the environmental assessment sections.</p>

## 5.0 Community Engagement

This chapter describes consultation undertaken prior to the lodgement of the EIS for the Project Ultimo Renewal project, including the preparation of technical assessments such as the Aboriginal Heritage Cultural Assessment Report and the Draft Conservation Management Plan. Further information is provided in the appended technical studies.

### 5.1 Engagement Carried Out

As detailed in the Consultation Outcomes Report at **Appendix X** of the EIS, the following activities were undertaken:

- Two community information sessions
- Briefing to the Tech Central OneGov meeting
- Update to the Tech Central OneGov Quarterly Update meeting
- Project Control Group (PCG) meetings
- Engagement with Council and relevant agencies
- Relevant inputs from activities undertaken during the CMP engagement and consultation period

The outcomes of consultation and the relevant responses are detailed in the Consultation Outcomes Report at **Appendix X**.

#### 5.1.1 Consultation Methods

A range of consultation methods were used to engage stakeholders. This included activities completed prior to lodgement, through the preparation of the ACHAR and Draft CMP, and the through the preparation of the EIS and associated technical studies. The following methods were utilised:

**Table 6** Consultation Methods

Activity	Purpose
Letterbox drops	Letterbox drop undertaken to notify nearby residents and businesses about upcoming community consultation opportunities
eDM	eDM to database of people to notify community members about upcoming community consultation opportunities
Advertising	Advertisement in the Sydney Morning Herald to notify community members about upcoming community consultation opportunities
1800 phone line	A direct phone number established to receive any community enquiries and to be answered during business hours (8 – 5pm). Community members have the option to leave messages to receive a return phone call when phoning out of hours.
Consultation email address	The consultation email address (consultation@ethosurban.com) is used to provide a method of communication that is available to community and stakeholders 24/7.
Online information session	To provide an opportunity to meet with the project team, learn about the development application, ask questions, and learn about what to expect in the coming stages.
Face to face meetings	To establish a working relationship and open channel of communication between the project team, and key stakeholders.

### 5.1.2 Aboriginal Community Consultation

Consultation was undertaken with Aboriginal groups during the preparation of the Aboriginal Cultural Heritage Assessment in accordance with the 'Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010' and the requirements of Clause 60 of the National Parks and Wildlife Regulation 2019.

The aim of the consultation process was to integrate cultural and archaeological knowledge and ensure registered Aboriginal stakeholders have information to make decisions on Aboriginal cultural heritage. The Aboriginal consultation process involved the following stages:

- Stage 1 – Notification & Registration of Interest
- Stage 2 – Presentation of Project Information
- Stage 3 – Gathering Information about Cultural Significance
- Stage 4 – Review of Draft Cultural Heritage Assessment

In February 2022, Curio on behalf of Create NSW, initiated a process of Aboriginal Community Consultation for the project in accordance with statutory consultation guidelines. In March 2022, the Registered Aboriginal Parties were provided with written details of the proposed project and the draft proposed Aboriginal cultural heritage assessment methodology. All feedback was recorded and is summarised in the draft Aboriginal Cultural Heritage Assessment Report provided at **Appendix H**. It is noted that consultation with the Registered Aboriginal Parties is ongoing, and the draft Aboriginal Cultural Heritage Assessment Report will be finalised following the completion of the consultation with the Registered Aboriginal Parties, prior to the determination of the Concept SSDA.

## 5.2 State Design Review Panel

The project team met NSW Government Architect's State Design Review Panel (SDRP) prior to the lodgement of this SSDA on 16 February 2022. Through this meeting the proponent presented the proposed project and the strategy for the achievement of design excellence. Feedback from the SDRP has been addressed through the preparation of this EIS, and will be detailed further in the next meeting with the SDRP.

Matter	Response
<b>Connecting with Country</b>	Principles and guidelines for Connecting with Country through the project development phases have been developed in collaboration with the Powerhouse's First Nations Directorate. Further information is set out in Sections 2.0 and 5.0 of the Urban Design Report. Through its First Nation's Directorate, the Powerhouse will continuously engage with First Nations communities to produce a design that supports Aboriginal and Torres Strait Islander connections to the site and continuing practices. All related project briefs will be authored with leadership and participation of the Powerhouse First Nation's Directorate to ensure self-determination of indigenous representation. The Powerhouse Ultimo Renewal will be undertaken in accordance with the Draft Designing with Country Discussion Paper, which will include opportunities for direct collaboration with First Nations designers. Specific details of requirements for First Nations participation in the competitive process will be further defined through the preparation of the Competitive Design Brief.
<b>Reference Scheme</b>	A Reference Scheme has been prepared by John Wardle Architects (JWA) and Aspect Studios to demonstrate one possible design response to the Building Envelope, Design Guidelines and Draft Conservation Management Plan and other project considerations. This Reference Scheme and the Urban Design Guidelines have been further developed following consultation with the State Design Review Panel. Further information regarding the Reference Scheme is set out in Sections 6.0 and 8.0 of the Urban Design Report which accompanies the SSD Application. The Reference Scheme sets out possible responses to the project objectives, opportunities and constraints to assist in preliminary assessment and project understanding. The Reference Scheme is not intended to constrain the broad range of potential architectural design responses which will be elicited through the competitive design process, and in this respect the Concept SSD Application does not seek consent for the Reference Scheme nor is it intended for the Reference Scheme to have any weight or standing following determination of the Concept Proposal. The Design Guidelines, Building Envelope and Draft Conservation Management Plan, alongside the Design Excellence Strategy, will ensure a high-quality and appropriate design response.

Matter	Response
<b>Design Excellence</b>	The Design Excellence Strategy that accompanies the Concept SSD Application has been prepared in consultation with the NSW Government Architect's Office (GANSW) and the City of Sydney in order to inform the competitive design process. The Strategy sets out the processes to be followed in preparation of the competitive brief and processes to be followed in order to attain design excellence, having regard to the wide array of factors that will be required to be considered in the competitor briefing and design evaluation processes.

It is noted that as detailed in the DES and **Section 3.6** of this EIS, the next phase of the project will be subject to a competitive design alternatives process including the established of a Jury and Design Integrity Panel. The Jury/Design Integrity Panel will be responsible for review, comment, and feedback of the detailed design at the following stages of the project and as such will take the place of the SDRP at these stages.

### 5.3 Engagement to be Carried Out

The Applicant is committed to ongoing community consultation following the submission of the EIS. This includes during the exhibition and assessment of the project, and if approved, following a determination.

Following its submission, DPE will exhibit the EIS on the Major Projects NSW Website and invite submissions from government agencies and the public. Once the exhibition period is complete, DPE may require the Proponent to prepare a Submissions Report in response to issues raised. The Proponent will continue to liaise with DPE and stakeholders during the Project's assessment to address queries that may arise.



## 6.0 Assessment of Impacts

This section of the report assesses and responds to the environmental impacts of the proposed DA. It addresses the matters for consideration set out in the SEARs (see **Appendix A**). The Mitigation Measures at **Attachment 3** complement the findings of this section. A table summarising compliance against the SEARs is also provided at **Attachment 1**.

### 6.1 Built Form and Urban Design

#### 6.1.1 Urban Design, Bulk and Scale

Preparation of the Urban Design Guidelines (**Appendix B**) by JWA and Aspect Studios has been informed by an appreciation of the site and surrounds, community and stakeholder feedback received during the pre-lodgement consultation and in the development of the new CMP and understanding of the functional requirements of the future museum. This approach has facilitated the development of principles for the future built form and public realm which will ensure that the Powerhouse Ultimo Renewal provides for an international-standard facility which is grounded in an understanding of the constraints and opportunities of the local place.

The Guidelines address and outline principles across the spectrum of design considerations, including access and movement, building height and massing, public realm and open space, security and safety, activation, wayfinding, architectural expression, sustainability and cultural and heritage significance. These considerations will form the basis for the briefing and assessment of the design excellence process, outlined in **Section 3.6**.

The proposed built form and massing of the building envelope is a result of extensive preliminary design analysis undertaken by JWA and Aspect Studios, aimed at achieving an optimal urban design outcome for flexible, adaptable and contemporary future museum space whilst also protecting and conserving the significant heritage value on the site. Specifically, the envelope has been designed to consider the following factors:

- Consider and celebrate heritage fabric and spaces.
- Respond to the need for adaptable spaces to support contemporary museum practice.
- Continue and protect the cultural and pedestrian spine of The Goods Line to the south of the site.
- Create a built form that is responsive to the existing built form, heritage, and public domain opportunities.
- Respond to and protect the needs of surrounding residents and other sensitive receivers.

The proposed envelope has therefore considered the above factors in its design, designed to establish appropriate built form constraints as a guide for development while providing flexibility for future detailed design on the site.

The building envelope is largely consistent across the site, with the exception of a maximum building height of 6 metres over the State listed Former Post Office building in the north-west corner of the site. The building envelope has a maximum height of 28 metres, with the capacity to be increased by 10% in line with the design excellence provisions under clause 6.21(D) of the Sydney LEP. This maximum height does not exceed the LEP mapped height maximum on the site, which is considered the appropriate height of buildings for the location. Building height is discussed further at **Section 6.1.2**.

To control the bulk and massing of future development within the envelope, the building envelope has been considered in five key building envelope zones, as previously discussed in **Section 3.3**. Each of these envelope zones will be guided by key Urban Design Guidelines, as well as controls set by the CMP to ensure that the bulk and scale of each of the building elements within the envelope is responsive to the specific constraints of each zone.

It is not anticipated that the entire volume of the envelope will be required for the final detailed design, but rather the 'loose-fit' approach provides for a 'worst case' assessment of the built form having regard to key issues such as overshadowing (**Section 6.4.1**) and visual impact (**Section 6.4.2**). Whilst the building envelopes generally reflect a scale of development that is consistent with the building heights which are permitted under the Sydney LEP, the competitive design alternatives process and detailed design that is the subject of a future Stage 2 SSDA will also be influenced by the requirements of the updated CMP prepared by Curio Projects (**Appendix G**). Accordingly, it would be unlikely develop to the maximum proposed building envelope in many areas of the site.

## 6.1.2 Building Height

As discussed above, the maximum height of the proposed building envelope is 6-28 metres, consistent with the maximum heights set out in the Sydney LEP. As outlined in **Section 3.6**, a design excellence strategy for the renewal of Powerhouse Ultimo precinct is proposed as part of this Concept SSDA, which would allow for up to an additional 10% height across the site in line with clause 6.21D of the Sydney LEP. When adopting the long-held approach of measuring height from the existing ground level and following the natural fall of the site, the proposed building envelope is entirely compliant with the mapped height limit on the site.

The heights of the maximum building envelope proposed is considered to be appropriate and acceptable in the context of this site as follows:

- The proposed heights expressed in the maximum building envelopes would be required to be read in conjunction with the Urban Design Guidelines and CMP under the terms of the Concept SSDA as set out in this EIS, and as a result the locations in which the maximum building height could be achieved are appropriately confined and would be subject to further assessment as part of the future Stage 2 SSDA.
- The proposed building envelope heights are consistent with the site-specific building height development standards set out in the Sydney LEP.
- The proposed building envelope heights are compatible with the scale of existing development in the immediate vicinity of the site, and are consistent with the position of the site in a highly urbanised CBD-fringe location.
- The *Pymont Peninsula Place Strategy* and draft sub-precinct plans prepared by the Department of Planning and Environment following detailed analysis and community and stakeholder engagement indicate that there is capacity (having regard to urban design and environmental planning considerations) for an increase in building heights above the existing provisions of the Sydney LEP both in respect of this site and surrounding sites within the Ultimo sub-precinct, such that the future context of the site is likely to be characterised by taller buildings than those that are currently present.

It is noted that the height of any proposed additions or new buildings within the proposed building envelope will be the subject of further assessment as part of the future Stage 2 SSDA.

### Building Height Variation Request

Whilst the proposed maximum building envelope reflects the building height limits established under the Sydney LEP, a recent NSW Land and Environment Court case in *Merman Investments Pty Ltd v Woollahra Municipal Council* [2021] NSW LEC 1582 (*Merman*) took an approach to measuring building height that is different to previous approaches to measuring building height on developed sites within the City of Sydney. In *Merman* it was said that the definition of 'existing ground level' (from which the maximum building height is to be measured) on that particular site should include any previously excavated areas, and that accordingly the 'existing ground level' should be measured from the excavated height of existing basement levels. This differs from the previously accepted approach of adopting levels from the unexcavated portions of the site to remove any 'unnatural' variations to the ground level caused by previous basement excavations.

There are between one (1) and two (2) basement levels that exist beneath parts of the Power House, Switch House, Wran Building, and public domain areas on the site including the existing civic space/museum entrance fronting Harris Street. It is not yet known whether these basements would be retained at the future detailed design stage. If the approach in *Merman* is followed, the maximum building envelope permitted at the site edges would not change, but large areas within the interior of the site would be required to be lower than the height permitted at the perimeter of the site by distances of up to 12 metres. This would result in a highly complex and varied height plane that is not consistent with the intention of the development standard, would have significant impacts on the ability to design future buildings within the envelope, and would achieve no planning purpose.

For an abundance of caution in response to the approach taken in *Merman* (which is not binding on the consent authority's determination of this Concept SSDA), a Clause 4.6 Variation Request has been prepared and is provided at **Appendix W**. This variation request is administrative in nature, and addresses the technical departure to the height of buildings standard that has occurred in response to the interpretation of 'existing ground level' in *Merman*.

The breach of height of building development standards as a result of the existing basement levels is highly variable and ranges from between 0.05m and 12.11m (excluding the design excellence bonus), following both the position and relative depth of these existing basement levels.

As detailed in the Clause 4.6 Variation Request, strict compliance with the height of buildings development standard in this context is unreasonable and unnecessary in the circumstances of the case and there are sufficient environmental planning grounds to justify a contravention of the standard. The proposed development will continue to achieve the objectives for the height of buildings and the B4 Mixed Use zone contained in the Sydney LEP.

### 6.1.3 Setbacks

The proposed building envelope is located across almost the entirety of the site, responding to the existing built form, surrounding residential context and future public domain requirements. There are no prescribed setback controls that apply to the site, therefore, the setbacks have been provided having consideration to the existing constraints and opportunities, including:

- The opportunity to redefine the entrance to the museum from The Goods Line, and utilise the existing constrained space available on Harris Street for museum purposes.
- Create responsive public domain areas that have high amenity, are useable and connected to other existing public domain areas and cultural spines, such as The Goods Line and Darling Square thoroughfare.
- Respond to existing heritage items on, and adjacent to, the site.

Based on the above considerations, the proposed building envelope extends to the site boundary on Harris Street, Macarthur Street and William Henry Street/Pier Street. The envelope is then setback approximately 21 metres from the Harwood Building.

As discussed in the previous section in respect of building height, the requirement to consider the Urban Design Guidelines and CMP in the competitive design alternatives process and assessment of the Stage 2 SSDA will mean that the building envelope will not be able to be built to its maximum, and instead has been designed in its current form to accommodate maximum flexibility in future design. The Guidelines prescribe that future development should respond to the adjacent building alignments and maximise opportunities for pedestrian accessibility and connectivity.

## 6.2 Public Domain

In conjunction with the proposed building envelope, the Concept SSDA supports the delivery of a significant quantum of new high-quality public realm within the site. The Urban Design Guidelines require the provision of at least one significant publicly space, which would likely be within either Zone 1 and Zone 2, or a combination of both. This is to be in addition to areas of public domain provided within the civic link and Zone 3 potential connection beneath Pier Street.

The Urban Design Guidelines make clear that the project intends to maintain or increase the quantity of public domain, and that there should be an overriding presumption in favour of the bulk of this new public domain area being located within Zone 1 at the northern terminus of the Ultimo Goods Line. Whilst innovative design solutions might be identified through the competitive design alternatives process to deliver all or part of this space in Zone 2, fronting Harris Street, it is considered that the opportunity to integrate new areas of public domain with the highly-utilised Goods Line and move these areas away from street noise pollution along Harris Street is a preferable place outcome.

The Urban Design Guidelines set out principles and guidelines to inform the design of new public domain within the site, including opportunities to celebrate heritage, create an inviting and legible Museum entrance, provide areas of weather protection, maximise connectivity and improve pedestrian experiences within a safe, accessible place. In this way, the renewal of the site will provide enhanced and accessible public space commensurate with the civic nature of the site.



**Figure 18** Opportunities for enhanced publicly accessible space coloured green

Source: John Wardle Architects & Aspect Studios

### 6.3 Connecting with Country

The competitive design alternatives process will require designers to recognise and highlight the importance of First Nations historic and ongoing care of Country and participation in the industrialised histories of the Power House. The response of this design would also be subject to further detailed assessment as part of the Stage 2 SSDA.

To ensure that all future development incorporates elements of Connecting with Country throughout the design and development of the precinct, the Urban Design Guidelines nominate a number of principles for future development on the site relating to First Nations. A number of key initiatives are also identified that will be realised through the next stages of the project, as follows:

- All related project briefs will be authored with leadership and participation of the Powerhouse First Nations Directorate to ensure self-determination of Indigenous representation.
- Continuously engage with First Nations communities to produce a design that supports Aboriginal and Torres Strait Islander connections to the site and continuing practices.
- The subsequent Competition Brief/s (in addition to the Design Excellence Strategy at **Appendix E**) is to be informed by the NSW Government Architect's Connecting with Country Draft Framework and Torres Strait Islander connections to the site and continuing practices.
- The project is to be undertaken in accordance with recommendations from the Connecting with Country discussion paper (GANSW).

The competitive design alternatives process and subsequent Stage 2 SSDA will be required to demonstrate consideration of the above, in addition to be accompanied by other assessments including an updated Aboriginal Cultural Heritage Assessment Report and evidence of further consultation and collaboration.

## 6.4 Environmental Amenity

### 6.4.1 Solar Access and Overshadowing

This EIS is accompanied by shadow diagrams prepared by JWA (**Appendix C**). These plans and further analysis provided as part of the Urban Design Report at **Appendix B** detail overshadowing associated with the proposed maximum building envelope at one-hour intervals between 9am and 3pm for both solstices and equinoxes in accordance with the SEARs. The shadow diagrams show a 'worst-case' resulting from the maximum building envelope, which as noted in previous sections is not realistic nor possible to construct the maximum building envelope once the Urban Design Guidelines and CMP are complied with. However, the below discussion demonstrates that an appropriate outcome can still be achieved.

The shadow diagrams also detail the reference scheme, to demonstrate how a more refined and minimal built form may be achieved within the proposed maximum building envelope, resulting in lesser environmental impacts.

The shadow diagrams show that the proposed maximum building envelope would result in additional overshadowing to buildings on Harris and Macarthur Street to the west and south of the site. The impacted buildings include some two-storey Victorian terraces, as well as a series of commercial buildings, food and drink premises, and an 8-storey commercial building at the corner of Macarthur and Harris Street. Further, the proposed maximum building envelope creates additional overshadowing during the winter solstice and autumn equinox to the buildings across from the Powerhouse Ultimo site, west of Harris Street. Outside of these winter months, the additional overshadowing on these adjacent buildings is limited.

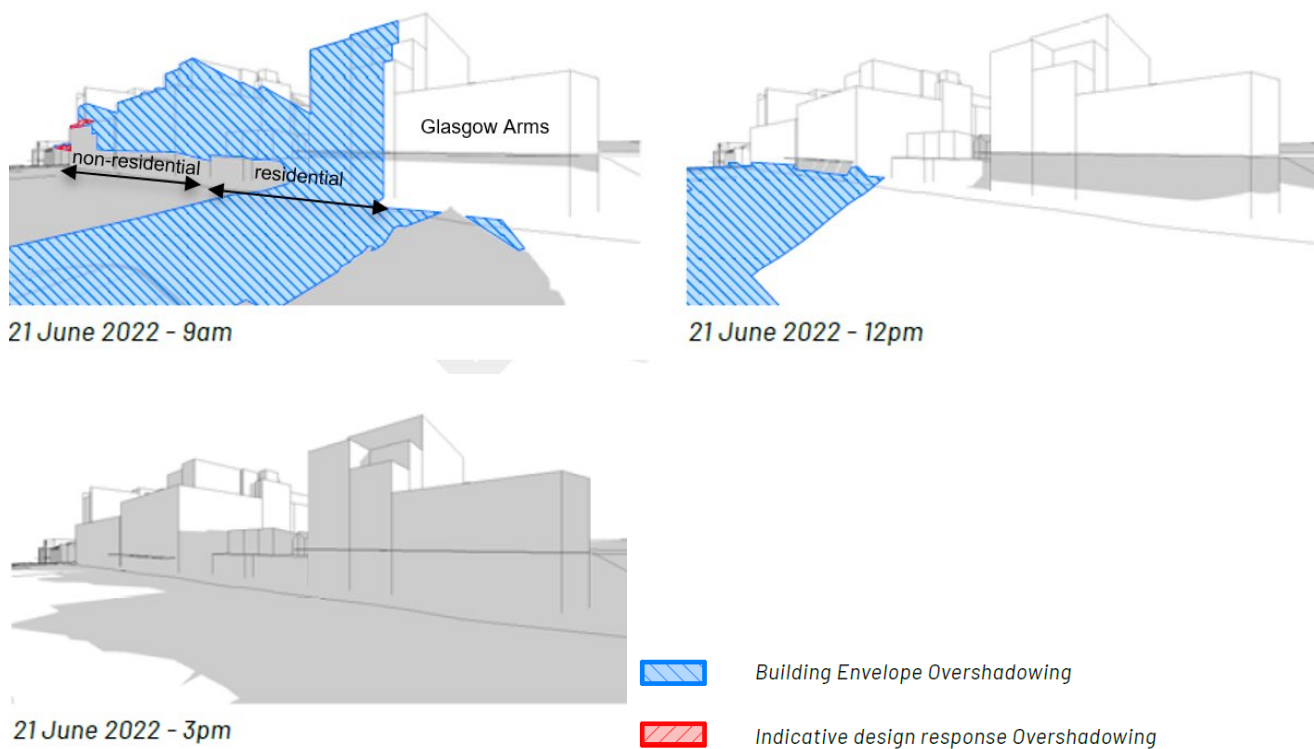
Given that the building envelope is entirely within the mapped maximum height permissible on the site, the overshadowing impact of the proposed envelope is considered to be reasonable and acceptable. Further, it is noted that the Urban Design Guidelines accompanying this application are intended to guide any future development on the site and require consideration of overshadowing in the design and assessment of all future built elements.

As acknowledged, the implementation of the Urban Design Guidelines and CMP will mean that the building envelope will not be able to be built to its maximum, and instead has been designed in its current form to accommodate maximum flexibility in future design. This will further reduce the overshadowing impacts, as demonstrated by the reference scheme prepared by JWA, the overshadowing impacts of which are shown in red in **Figure 19** and **Figure 20** below as compared to the total envelope overshadowing shown in blue. This demonstrates that during the winter solstice, the proposed envelope does not create additional overshadowing to any residence surrounding the site for more than 3 hours.

Having regard to the above, the proposed maximum envelope is not considered to give rise to any unacceptable overshadowing impacts on existing or future public domain areas or adjoining properties, noting that further assessment of the actual shadows caused by any proposed buildings will be subject to further detailed assessment as part of the Stage 2 SSDA.

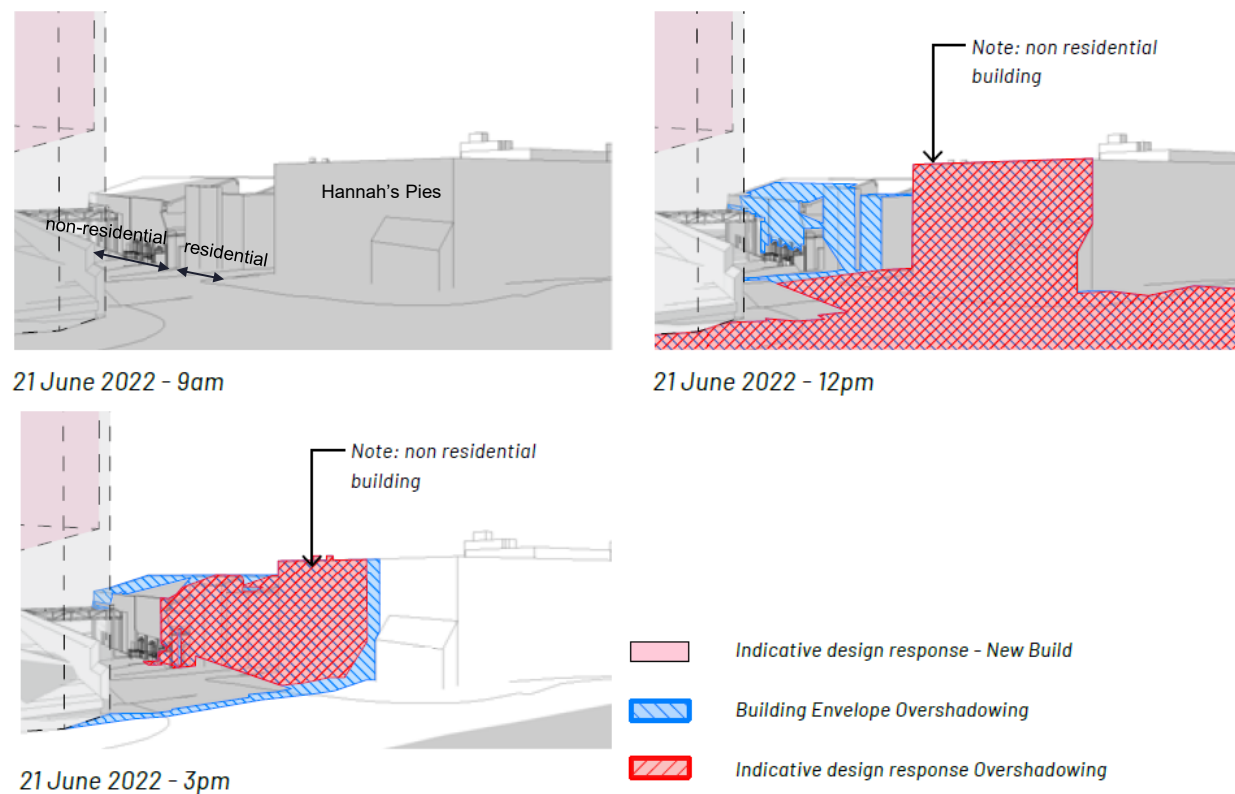
- For the western side of Harris Street, shadows are cast on the residences located between 531 and 547 Harris Street of varying degrees between 9am and 11am (noting that all shadows are gone by 12pm), residences at 11-21 Hackett Street at 9am only, and on the eastern façade of a residential terrace at 79 Macarthur Street for an hour at 9am (which occurs for a short duration and on a primarily a blank wall). All remaining sections of this area are non-residential or are already overshadowed by the existing urban environment. The reference scheme represents a refined, potential outcome, for built form within the building envelope and demonstrates that there is the potential for built form to not overshadow the residences at the northern end of Harris Street or on Hackett Street. The proposed development does not create additional overshadowing to any residence surrounding the site for more than 3 hours.
- For the southern side of Macarthur Street, shadows are largely cast on the road network, on non-residential buildings, or are contained within the footprint of existing overshadowing from Urbanest and other buildings. The overshadowing plans demonstrate that there is a row of three terraces at 81-85 Macarthur Street which will be subject to varying additional overshadowing in the afternoon by the building envelope, but will not be overshadowed by the reference scheme. Accordingly, the reference scheme demonstrates that the project is capable of not creating additional overshadowing to surrounding residential buildings for more than 3 hours.
- The overshadowing plans also demonstrate that there will be no additional shadow cast to The Goods Line between 12pm and 2pm, consistent with the Open Space Sun Access Control Zone in the Peninsula Height Strategy proposed in the Draft Pyrmont Peninsula Sub-precinct Master Plans (recognising that this Master Plan has not been finalised).





**Figure 19** Overshadowing to the west, at the northern end of Harris Street

Source: John Wardle Architects



**Figure 20** Overshadowing to the south, at the western end of Macarthur Street

Source: John Wardle Architects

## 6.4.2 Visual and View Impact

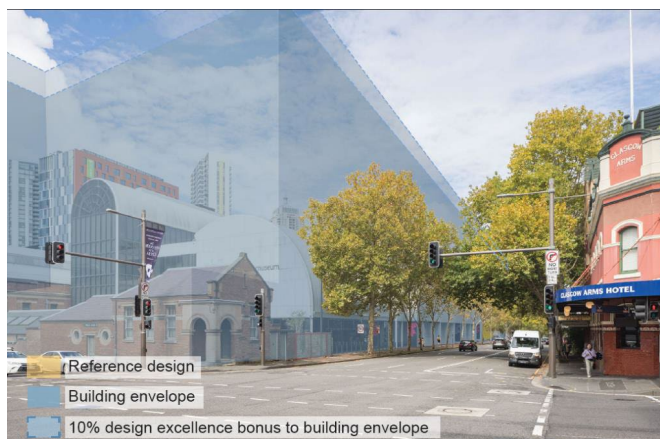
A Visual Impact Assessment (VIA) has been prepared by Ethos Urban (**Appendix N**), to identify, describe and assess the significance and appropriateness of the potential visual impacts of the maximum building envelope, as well as the reference scheme. To gain an understanding of the existing visual experience and potential visual impacts, the six (6) viewpoints in the public domain were selected to represent the pattern or viewing by the public and seven (7) viewpoints in the private domain were selected to represent the pattern of viewing available from residential properties. The methodology used by this VIA is derived from the international standard 'Guidelines for Landscape and Visual Impact Assessment' version 3 (GLVIA3), the NSW Land and Environment Court (LEC) planning principle for 'impact on public domain views' established in *Rose Bay Marina Pty Limited v Woollahra Municipal Council & Anor* [2013] NSWLEC 1046 (Rose Bay) and for 'Views - general principles' established in *Tenacity Consulting v Warringah Council* [2004] NSWLEC 140.

### Public views

The assessment of the public viewpoints confirms the following:

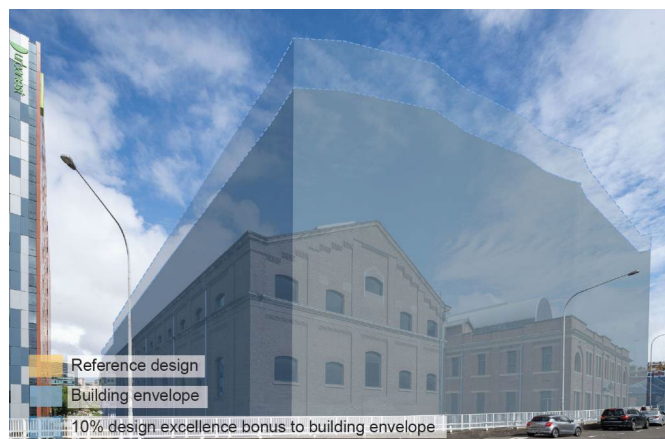
- The existing site is complex and layered. While dominated by large scale, Federation Warehouse buildings, the site also comprises the finer grain former Ultimo Post Office at the north-west corner of the site, and the newer (1988) Wran Building that dominates the site's Harris Street frontage and publicly accessible civic space and entrance at the site's south-west corner. Like its surrounding inner Sydney visual context, this creates a complex and layered visual quality. While detail such as architectural styles, materiality and colours are diverse, there is a general compatibility of scale and form.
- Because Powerhouse Ultimo operates as an 'island site', with its boundaries defined by streets and transport infrastructure, the proposal and extent of change will be visible from the localised area and in particular adjoining streets. The area in which the proposal may be most visible is small and is generally contained to an area delineated by William Henry Street to the north, the Goods Line, L1 Dulwich Hill Line and Urbanest to the east, Macarthur Street to the south and Harris Street to the west. Beyond this, due to its alignment the proposal may be visible from parts of Hay Street. However, it will appear in the longer range, and will be occluded by the Urbanest south building.
- The magnitude of visual impact across the assessed viewpoints ranges from negligible to considerable. The greatest magnitude of change resulting from the maximum building envelope will be to the Harris Street and William Henry Street intersection and The Goods Line and Macarthur Street intersection, where the envelope will appear as a major change occurring over a wide area.
- Regarding the Harris Street and William Henry Street intersection, it is noted the State heritage listed buildings that dominate this frontage will be retained and that works to this part of the site will be to sensitively adaptive reuse these buildings in accordance with the draft CMP. In this respect, the extent of change is expected to be less than the flexibility enabled under the maximum building envelope. Accordingly, the VIA finds that the overall visual impact is considered to be moderate for the building envelope and low for the reference scheme.
- Regarding The Goods Line and Macarthur Street intersection, views from The Goods Line are highly sensitive to change due to it being a highly valued, well used major public domain element used for walking and cycling, and having a strong visual and historic connection to Powerhouse Ultimo. However, from most parts of The Goods Line with the exception of its intersection with Macarthur Street, the Harwood Building dominates views and will be retained on site. At the intersection with Macarthur Street, no works are proposed to the Harwood Building available in this view and the State heritage listed buildings will also be retained in this view. While there remains the opportunity to provide a new built form or public open space area within the available view of the Switch House, Turbine Hall and Boiler House, this will be shaped in accordance with the Urban Design Guidelines and draft CMP to ensure an appropriate and sensitive response. In this way, the project also has the option of creating a new address for the site to The Goods Line. Accordingly, the VIA finds that the overall visual impact is considered to be moderate for both the building envelope and the reference scheme.

The VIA concludes that, on the balance of relevant visual impact considerations, the proposal has an acceptable visual impact and can be supported on the visual impact grounds. A further assessment will be completed of the refined, detailed design as part of the Stage 2 SSDA noting that the siting and design of any new built form will be subject of a subsequent competitive design alternatives process.



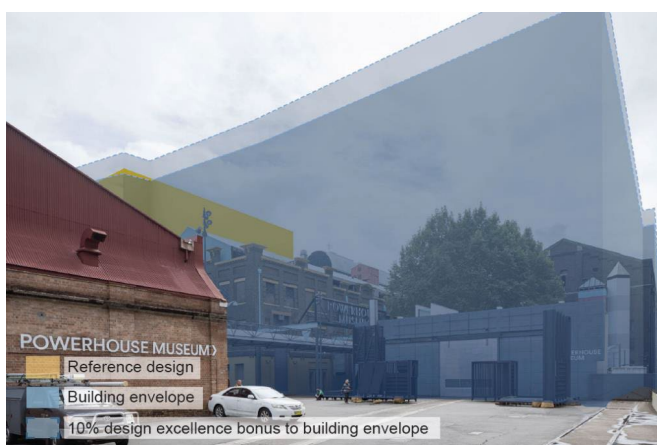
**Figure 21** *Modelled view from Harris Street and William Henry Street*

Source: Virtual Ideas



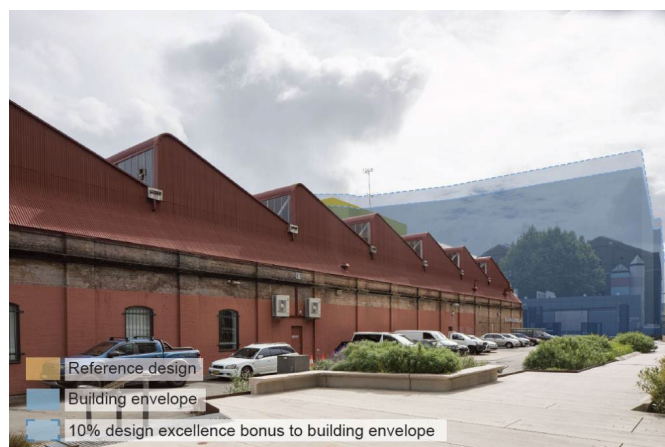
**Figure 22** *Modelled view from Pier Street*

Source: Virtual Ideas



**Figure 23** *Modelled view from The Goods Line and Macarthur Street*

Source: Virtual Ideas



**Figure 24** *Modelled view from The Goods Line*

Source: Virtual Ideas



**Figure 25** *Modelled view from Harris Street and Macarthur Street*

Source: Virtual Ideas

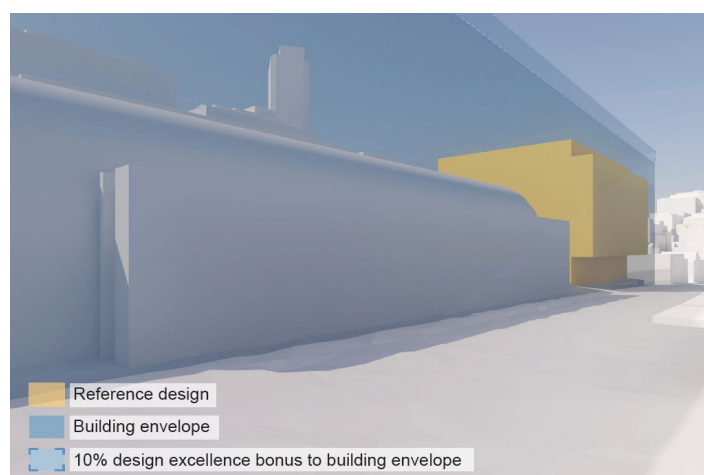


## Private views

The VIA has considered the established principles for view sharing in accordance with *Tenacity Consulting v Warringah Council* [2004] NSWLEC 140 and confirms the following:

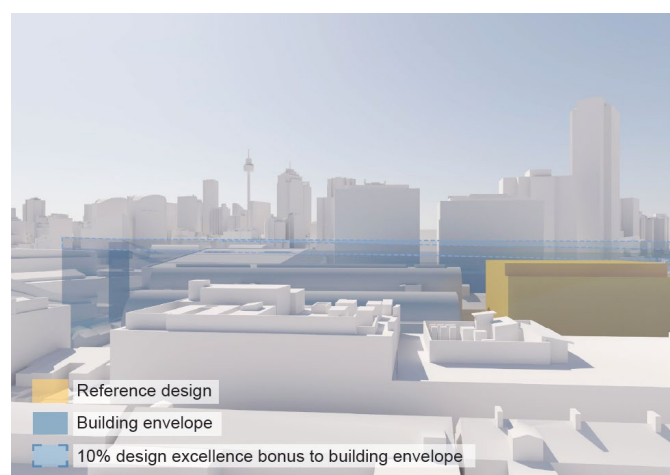
- Views are available from the Urbanest building over and through the existing Powerhouse Ultimo site. However, the Urbanest development is for the purposes of short term accommodation and is classified as 'tourist and visitor accommodation' and not residential accommodation. Further, the scale and nature of the proposal will be similar in scale to the existing development on the site and, unlike properties to the west of the Powerhouse, views obtained from the western elevation of Urbanest are district level and do not include valued landscape features such as the Sydney CBD skyline or include iconic landscape features such as the Opera House or Harbour Bridge.
- There are rows of residential terraces located at the northern end of the site on Harris Street that are impacted by established mature street trees and a modest scale (generally limited to 2 storeys in height) ensuring that, what views are available from these locations, are unlikely to significantly change in scope or depth. These views also do not contain any water, land and water interface or iconic elements or features in the meaning of Tenacity that would be impacted by the proposed development. The proposed development will not fundamentally alter the components or composition of views (see **Figure 26** below).
- There is an apartment block located approximately 100m to the south-west of the central part of the site at 349-355 Bulwara Road, which owing to its scale, benefits from views of and over the Powerhouse Ultimo site towards the CBD. The existing Powerhouse Ultimo buildings partially obscure areas of sky and/or lower parts of buildings within the Sydney CBD skyline in views from this location. The proposed building envelope, and reference scheme, will therefore build upon this existing context and obscure parts of the sky and lower parts of buildings in the background of views. As detailed in the VIA, the apartments in this location will retain the ability to see and perceive the skyline and there will be no loss of visibility to highly valuable or iconic features (such as Centre Point Tower). The VIA concludes that the proposed development will not fundamentally alter the components or composition of views (refer to **Figure 29** and **Figure 30** below).
- There is an apartment block behind Harris Street at 333 Bulwara Road which, owing to its scale, also benefits from views of and over the Powerhouse Ultimo site towards the CBD. The VIA concludes the same findings as the above, determining that the proposed development will not fundamentally alter the components or composition of views (see **Figure 27** and **Figure 28** below).

Fundamentally, the proposed development does not introduce a new element that is uncharacteristic or discordant in the existing views. The Powerhouse Ultimo Renewal project will contribute to the existing layered built form on this site which, like its context, comprises buildings of different periods, styles, and scales of development. Any future building and public domain areas on this site will be the subject of a competitive design alternatives process ensuring the achievement of design excellence. In this respect the detailed design (Stage 2) proposal will be more refined from the proposed maximum building envelope and will result in a high quality and visually interesting proposal than the maximum building envelope and the reference scheme that is shown at this Concept SSDA stage.



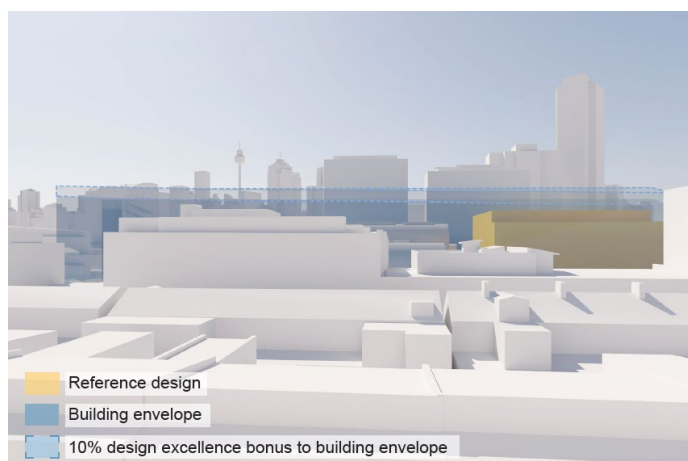
**Figure 26** Modelled view from terraces at the northern end of Harris Street

Source: Virtual Ideas



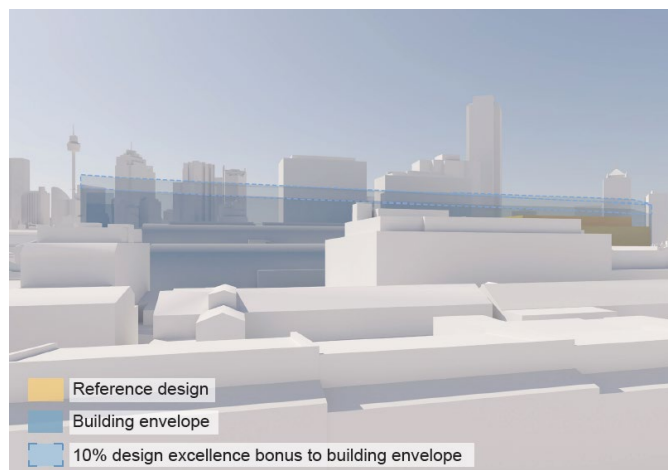
**Figure 27** Modelled high level view (lvl 5) from 355 Bulwara Road

Source: Virtual Ideas



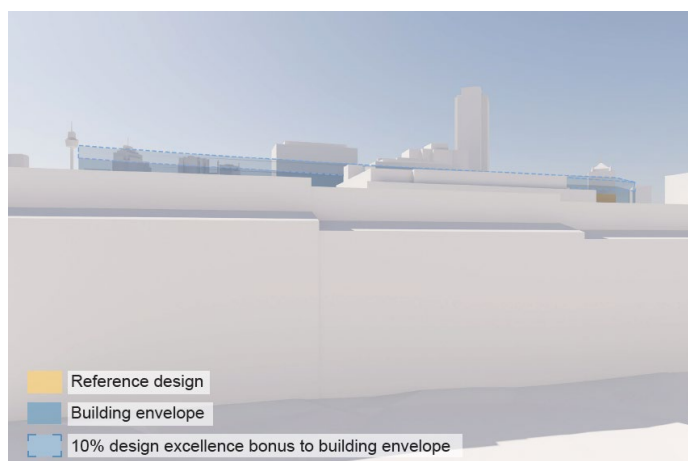
**Figure 28** *Modelled low level view (lvl 3) from 355 Bulwara Road*

Source: Virtual Ideas



**Figure 29** *Modelled high level view (lvl 4) from 333 Bulwara Road*

Source: Virtual Ideas



**Figure 30** *Modelled low level view (lvl 2) from 333 Bulwara Road*

Source: Virtual Ideas

### 6.4.3 Wind Impacts

An Environmental Wind Assessment has been prepared by Arup and is included at **Appendix Q**. The purpose of this assessment was to determine the impact of the proposal on pedestrian level wind conditions for comfort and safety in and around the site. The assessment considered a redevelopment to the entirety of the maximum building envelope, as well as the indicative reference scheme prepared by JWA.

It is considered that the envelope scheme would have a slight impact on the wind conditions around the southern corners, whilst the reference scheme was considered to have minimal impact on wind conditions around the site. Qualitatively, it is considered that wind conditions at the majority of locations around the site would be classified as suitable for pedestrian standing, with windier conditions around the building corners being classified as suitable for pedestrian walking, which is similar to the existing wind conditions around the site. All locations around both the envelope and reference scheme would be expected to pass the safety criterion.

It is noted that any future detailed development on the site within this envelope will need to undergo further wind testing to ensure ongoing compliance with the safety criterion, however, the proposed envelope does not preclude the achievement of safe and amenable environmental wind conditions.



## 6.5 Heritage

### 6.5.1 Aboriginal Cultural Heritage

An Aboriginal Cultural Heritage Assessment Report has been prepared by Curio Projects and is included at **Appendix H**. The ACHAR documents the process of investigation, Aboriginal community consultation and assessment with regards to Aboriginal cultural heritage and Aboriginal archaeology.

The assessment has been prepared in accordance with the *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW* (OEH [now DPE] 2011), the *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (the Code of Practice) (DECCW [now DPE] 2010) and the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (the Consultation Guidelines) (DECCW [now DPE] 2010).

#### Aboriginal archaeology

A search of the Aboriginal Heritage Information Management System (AHIMS) was undertaken on 16 March 2022. The AHIMS search identified 47 Aboriginal heritage sits within the search area, however no AHIMS registered sites were located directly within the current boundaries of the study area. A total of nine Aboriginal sites are located within 500m of the study area, four of which are situated within less than 200m of the study area. This includes the following sites:

- Ultimo PAD 1 (AHIMS ID# 45-6-2652)
- UTS PAD 1, 14-28 Ultimo Rd Syd (AHIMS ID# 45-6-2979)
- Poultry Market 1 (AHIMS ID# 45-6-2987)
- Darling Central Midden (AHIMS ID# 45-6-3217)

The ACHAR concludes that the study area is located within an archaeologically sensitive landscape of the Ultimo portion of the Pyrmont peninsula, situated along what would have originally been the shoreline of Cockle Bay (now Darling Harbour) and to the east of the original course of Black Wattle Swamp Creek. Potential Archaeological Deposits (PADS) and artefact sites (including isolated artefacts and artefact scatters) are the most likely types of sites to be identified within the current study area.

The ACHAR notes that the site is located within the GyMEA soil landscape unit, meaning that Aboriginal sites within this soil landscape are likely to be disturbed low-density artefact scatters that are highly prone to displacement due to erosion and landscape disturbance. Despite the disturbance from previous land use practices within the study area, natural soil profiles below the disturbed layers retain a moderate to high potential for preserving Aboriginal objects. These objects are expected to relate to use of the area during the last 7,000-1,000 years when sea levels had reached their current position, the coastal environment had stabilised, and the climate had become similar to present conditions.

The nature, extent, and significance of the potential Aboriginal archaeological resource within the study area, however, remains unknown. Therefore, the ACHAR recommends several mitigation measures to ensure that Aboriginal archaeology is suitably assessed and protected prior to any physical works commencing on the site. It is noted that no physical works are proposed as part of this Concept SSDA, and any future detailed DA on the site will require further ACHAR considerations.

#### Aboriginal cultural heritage

It is acknowledged that consultation is ongoing with Aboriginal stakeholders and interested parties at the site. Accordingly, a more detailed understanding is required to determine the exact social and cultural value of the site to Aboriginal people, which can only be identified through detailed consultation with Aboriginal people. As part of the consultation process, the present ACHAR will be reviewed by the relevant parties and finalised following their input. Create NSW will continue to consult with Aboriginal stakeholders and interested parties, including the following Registered Aboriginal Parties (RAPs), as reflected in the Mitigation Measures at **Attachment 3**.

### 6.5.2 European Heritage

A Heritage Impact Statement (HIS) has been prepared by Curio Projects and is included at **Appendix I**. The HIS has been prepared to assess the potential heritage impacts of the proposed development on heritage items located on site and within the vicinity of the site. Notably, both the former Ultimo Power House (I2031, 14 Dec 12) and the Ultimo Post Office (I2030, 14 Dec 12) are identified as local heritage items in Schedule 5 of the Sydney LEP 2012. The Ultimo Post Office is also identified in the State Heritage Register.

The site is also located adjacent to, and within close vicinity of the Harris Street Conservation Area (C67), which also includes a number of individually listed items. **Figure 31** below identifies the items surrounding the site that are of local heritage significance or are contributory buildings to a heritage conservation area.



**Figure 31** Surrounding heritage context

Source: Curio Projects

The HIS confirms the following:

- The Concept SSDA proposes no physical impacts to significant heritage fabric and includes retention and adaptive re-use of all heritage items. Provisions for the removal of modern insertions of little or intrusive heritage significance could occur at the next stage of the project, with Curio confirming that this could have a positive outcome for interior heritage spaces. It is noted that all future works with respect to the existing heritage buildings on the site will be guided by the draft CMP.
- The reference scheme would be consistent in height, scale and bulk of the Wran Building and other wider buildings across the site. Whilst the new built form would obstruct existing views from Harris Street east to the heritage core buildings, namely the Switch House, historically, the former Ultimo Power House did not have a frontage to Harris Street. This direct view from Harris Street to the heritage items was only established as part of the 1980s museum redevelopment of the site. Therefore, the reference scheme has the ability to have a neutral visual impact on the heritage values of the site.
- The adaptive reuse of the Post Office and creation of a new public domain zone surrounding this State heritage item has the potential to have a major positive impact for this heritage asset.
- From a heritage perspective, the potential re-orientation of the museum entry from Harris Street to The Goods Line would have a neutral impact to the heritage significance and values of the place. However, relocating the key visitor arrival space to be directly into the heritage core of the site would be an overall positive heritage outcome for the site's activation and future use, encouraging visitors to connect immediately with the heritage core, fabric, and history of the place immediately upon arrival to the museum.

Overall, the Concept SSDA and indicative design response shows that the proposal can appropriately minimise impacts to heritage significance and values of the site by avoiding physical impacts to State heritage items or significant fabric. The key elements of the reference scheme that are able to be accommodated within the proposed building envelope will allow for the sympathetic renewal of Powerhouse Ultimo, with an overall neutral to positive impact to the heritage values and significance of the site.

Mitigation Measures are identified by Curio Projects to inform the competitive design alternatives process and Stage 2 detailed design phases of the project, which are to be guided by best practice heritage principles to avoid adverse impact to heritage items and the significant heritage character and context of the site. These Mitigation Measures have been incorporated into **Attachment 3**.

### 6.5.3 Historic Archaeology

A Historical Archaeological Assessment (HAA) has been prepared by Curio Projects and is provided at **Appendix Z**. This report assesses the potential of historical archaeological resources to be located within the study area. The HAA concludes that overall, there is a moderate to high potential for an archaeological resource of locally and potentially State significance to be present within the Powerhouse Ultimo site, particularly in areas that have not been previously impacted via the construction of basements for the former Ultimo Powerhouse construction in the early 20<sup>th</sup> century.

In this respect, Curio Projects identify that the reference scheme located including a basement on Harris Street is located within an area of historical archaeological potential that will require historical archaeological investigation. Accordingly, while the placement of the building envelope has the potential to impact historical archaeological items, the impact to potential archaeology is considered to be a necessary and unavoidable outcome of the proposal. In this respect, Curio Projects has identified recommended mitigation measures and strategies to offset impacts to historical archaeology, including undertaking a further historical archaeological investigation of the study area prior to commencing works, and preparing an Archaeological Research Design and Excavation Methodology. These Mitigation Measures have been incorporated into **Attachment 3**.

### 6.5.4 Heritage Interpretation

While the existing museum has played an important role in the history of the Ultimo site, there is also a significant opportunity to interpret the original structures and function of the site in an innovative and sustainable way. In Curio's Heritage Impact Statement, it is recommended that a Heritage Interpretation Strategy be prepared to accompany any future detailed DA on the site.

As identified in the CMP at **Appendix G**, heritage interpretation is a way of communicating the significance of a site to those that visit, allowing them to gain a better understanding of, and appreciation for, the site. There is, therefore, an opportunity to embrace this history and explore the history of the Post Office, Powerhouse, and Tram Sheds, as well as the relationships between these structures and Darling Harbour through The Goods Line and the Darling Harbour Rail Corridor.

Incorporation of interpretation initiatives and elements within Powerhouse Ultimo site, particularly opportunities both within the existing heritage items, as well as within areas of public domain and landscaping, have great potential to enhance the heritage setting and aesthetic of the site, presenting significant positive benefit to the entire Powerhouse Ultimo site and its heritage significance. Potential heritage interpretation initiatives for the site could include walking tours, participation in wider events, interpretative lighting of heritage facades, interactive panels and signage, ground inlays, and the like.

The site has a long and varied history which has little representation on the site and within the Museum. Potential stories for interpretation at the Powerhouse Ultimo site could include:

- Aboriginal history of the site.
- Harris Estate and subdivision.
- Role of the Goods Line and the connection to Darling Harbour via the rail corridor.
- Development of the Ultimo Power House and its importance in the early 20th Century/Industrial history of the wider Pyrmont Peninsula.
- Ultimo's role in the Electrification of Sydney.
- Omnibus Stables and the history of the Omnibus in the late 19th Century.
- Ultimo Tram Shed and Sydney's Tram history.
- Water Cooling System and Manifold and how water cooling systems were developed from the late 19th Century and how they were then adapted for modern use.
- Conversion of the site to a museum and how revolutionary this was for the 1980s.

It is recommended in the mitigation measures at **Attachment 3** that a detailed Heritage Interpretation Strategy is undertaken to accompany any future detailed SSDA on the site.

## 6.6 Access and Transport

A Transport Assessment and Green Travel Plan have been prepared by JMT Consulting and are provided at **Appendix J**. This report includes an assessment of traffic movements, car parking, public transport, and active transport arrangements.

### Parking

At present, no visitor carparking is provided on the site. Approximately 40 staff/contractor parking spaces are available at the southern end of the site accessed off Mary Ann Street, as well as to the east of the Harwood Building accessed off Macarthur Street. No change is proposed to these existing spaces that are available for staff and services only.

This Concept SSDA does not propose or contemplate any increase to parking on the site, including with respect to visitors, noting that Powerhouse Ultimo has a policy of not providing any on-site visitor parking. The existing staff parking will remain as part of this application, as it is outside the project boundary.

As identified in the Transport Assessment, there are a number of publicly accessible parking areas that can continue to be utilised by the public for those electing to drive to the site. However, the provision of no visitor parking on the site aligns with the strategic policies of City of Sydney Council who seek to reduce dependency on private vehicles and improve the uptake of sustainable and active transport options.

### Travel Demand

JMT Consulting has prepared a visitation profile for Powerhouse Ultimo, based on current and expected visitation behaviours, which indicates that visitors will be arriving and departing the site constantly throughout the day, rather than all arriving and departing at the same time. This spread throughout the day reduces the pressure on the transport network by limiting the number of people movements during peak hours of the day.

At present, a large majority of visitors to Powerhouse Ultimo utilise public or active transport, with only approximately a third of visitors accessing the site via private vehicle.

Based on the typical weekday and weekend visitation rates, it is forecast that the proposal will generate approximately 5,000 visitors per day over a typical weekday and approximately 6,000 visitors per day over a typical weekend. However, most recent data prior to the COVID-19 pandemic indicated an annual visitation to the site of 757,000 people. Therefore, the net increase in visitation as a result of the proposal would be 3,100 visitors per day over a typical weekday and 3,720 visitors per day over a typical weekend.

The additional demand on the train/metro network will be in the order of 100-200 passengers per hour, which can be comfortably accommodated on the range of rail and metro services to be in place.

### Vehicle Access Arrangements

Currently, loading and servicing is provided via Macarthur Street, with the main loading dock located within the Harwood Building. For large museum deliveries, trucks manoeuvre within the main forecourt area at the eastern end of Macarthur Street and reverse into the loading zone of the eastern building.

The reference scheme prepared by JWA demonstrates that a suitable loading design is capable of being accommodated, which has been designed to:

- Take advantage of the ground levels and minimise the extent of ramping required within the site boundary.
- Allow for vehicles to enter and exit the site in a forward direction, consistent with City of Sydney's policy for new development.
- Allow for the creation of a pedestrianised, vehicle free zone immediately to the east which will connect through to the northern end of the site.

It is noted that these vehicle access arrangements demonstrated in the reference scheme are subject to change dependent on the outcome of the competitive design alternatives process and subsequent detailed DA. Nevertheless, the loading arrangements contemplated under the reference scheme are considered suitable to meet the needs of Powerhouse Ultimo without impacting the safety or efficiency of the adjacent transport network. The reference scheme does not propose direct vehicle access from Harris Street (being a classified State Road), with all access proposed via the adjoining local road network.



## Green Travel Plan

A Green Travel Plan (GTP) has been prepared by JMT Consulting and is included at **Appendix J**. The GTP provides a series of measures aimed at promoting sustainable travel and reducing reliance on the private car. The following potential measures and initiatives could be implemented to encourage more sustainable travel modes:

- Staff cycling advice and safety training.
- Provision of walking and cycling maps.
- Transport access guides for all modes of sustainable transport for dissemination to visitors and staff.
- Provision of end of trip facilities.
- Provide on site bicycle parking, and ensure it is clearly visible and well signposted.
- Encourage public transport for business transport.

## Construction Traffic Management

A Preliminary Construction Pedestrian Traffic Management Plan (CPTMP) has been prepared by JMT Consulting and is also included at **Appendix J**. This CPTMP outlines the key principles for how construction may be carried out on the site, subject to further planning to be undertaken during subsequent stages of the project. As the project is at the concept phase, details around construction timeframes, methodology and processes are not yet clear. Further, no physical work are proposed as part of this SSDA.

Accordingly, prior to the commencement of construction for Powerhouse Ultimo, a detailed CPTMP will be prepared which will assess the proposed access and operation of construction traffic associated with proposed development with respect to safety and capacity. Further consideration of the construction management processes for the detailed design of the Powerhouse Ultimo Renewal project will also be completed at Stage 2 of this project. This recommendation has been incorporated into **Attachment 3**.

## 6.7 Contamination

A Preliminary Site Investigation has been prepared by Douglas Partners and is included at **Appendix R**. The aim of this investigation was to assess the contamination status of the site with respect to the proposed land uses. This investigation included soil sampling from 11 designated sampling points and two boreholes designated for groundwater sampling. Fill was observed to be up to five metres in depth, comprising various soil types and containing anthropogenic materials.

These samples were tested for contaminants, and most contaminants were either not detected or found at low concentrations in the soil and groundwater samples. However, elevated concentrations of polycyclic aromatic hydrocarbons (PAH), total recoverable hydrocarbons (TRH), metals and organochlorine pesticides (OCP) were identified in fill samples above adopted assessment criteria. In addition, an elevated concentration of ammonia in groundwater was encountered at one sample location.

Therefore, the results indicate that remediation or management of contamination will be required for site development, although the extent of remediation and management will likely depend on the layout of future uses as well as the results of additional investigations. With the adoption of the below recommendations, Douglas Partners consider that the site can be made suitable for the proposed Powerhouse Ultimo Renewal.

Prior to establishing plans for remediation and management of contamination, it is recommended that a detailed site investigation (including soil and groundwater sampling) be undertaken to obtain data at untested parts of the site. Given the current physical and operational constraints, completion of a detailed site investigation may need to be undertaken post-demolition works. This recommendation has been incorporated into **Attachment 3**.

## 6.8 Geotechnical

A Geotechnical Report has been prepared by Douglas Partners and is included at **Appendix S**. This report considers the suitability of the site for the proposed building envelope and range of potential uses in relation to geotechnical implications.

This investigation identifies that the ground conditions on the site vary, however boreholes on the northern and southern parts of the site indicate that sandstone is encountered at depths of 1.5m – 11.8m below the ground surface. In the northern part of the site, sandy fill and clayey natural soil overlies the sandstone bedrock. In the southern half of the site, fill, alluvial and residual soils

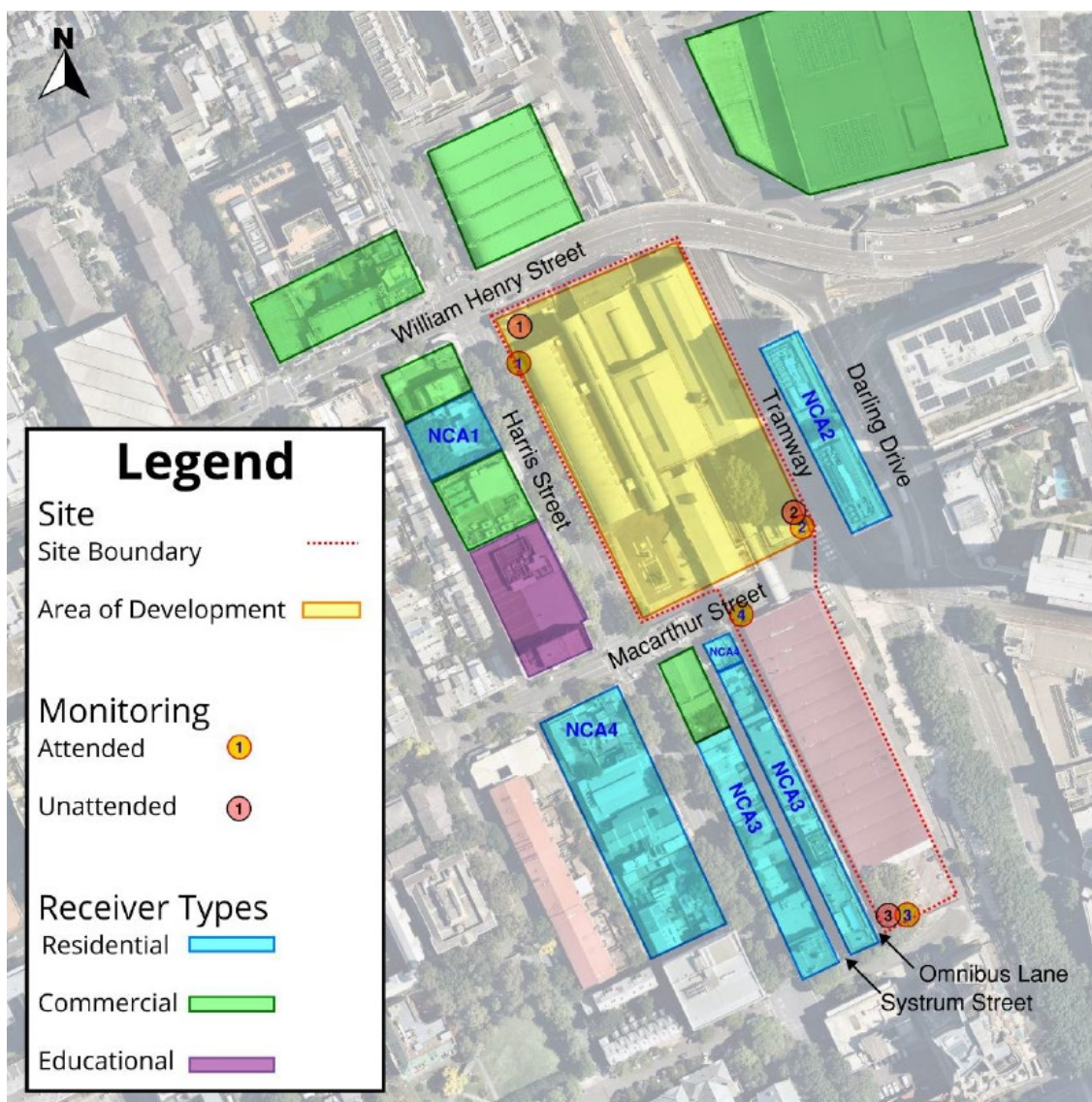


overlay the sandstone bedrock. Up to 4.5 metres of fill was encountered in the boreholes. Soft to firm clayey and loose sandy alluvial soil was also encountered.

Based on the results of this investigation, the report provides advice on the proposed civil and structural design. These recommendations relate to earthworks, excavation, foundations, acid sulfate soils, soil salinity and other specific geotechnical impacts. These recommendations will inform the future detailed design, and subsequent, construction phases of the project and do not preclude the redevelopment of the site as part of these separate and future stages.

## 6.9 Noise and Vibration

A Noise and Vibration Assessment has been prepared by RWDI and is included at **Appendix P**. The assessment considers the potential noise and vibration impacts that may result from the construction and operation of the Concept SSDA. The surrounding sensitive land uses include residential developments to the west and south of the site, and student accommodation to the north east. It is noted that the site is located adjacent to Harris Street and the light rail corridor, both of which are noise generating. RWDI undertook attended and unattended noise monitoring in various locations around the site, which are shown in **Figure 32** below.



**Figure 32** Noise monitoring locations and surrounding sensitive receivers

Source: RWDI

### 6.9.1 Construction Noise and Vibration

The Concept SSDA does not propose any construction works. However, RWDI has provided a preliminary assessment of the potential construction noise and vibration impacts that may be associated with the development, however it is noted that no detailed construction plan has been prepared. During standard construction hours, noise during all stages of work (demolition, earthworks, construction) has the potential to exceed the highly noise affected levels at all sensitive receiver locations around the site. However, this excludes any future mitigation measures which will be incorporated to reduce noise and vibration impacts on the site and surrounding receivers.

A number of administrative and engineering mitigation measures are recommended by RWDI, noting that they should be refined following the preparation of a detailed Construction Noise and Vibration Management Plan by the nominated contractor. Some of these mitigation measures include:

- Introduce engineering controls, such as temporary screening or enclosure of equipment, orientating equipment away from sensitive receivers etc.
- Undertake appropriate training of onsite staff.
- Preparation complaints handling process.
- Operate during approved construction hours.

In addition to the above, RWDI have identified that several pieces of vibration causing equipment may be utilised at a distance less than the minimum working distances recommended for avoiding potential cosmetic building damage and impacts to human comfort. RWDI recommend that a preliminary vibration survey be undertaken of each vibration generating piece of plant once the details of the construction are finalised.

A more detailed assessment of construction noise and vibration assessment will be undertaken to accompany any future detailed development application on the site.

### 6.9.2 Operational Noise and Vibration

This Concept SSDA does not identify or seek approval for any operational details, and any future detailed DA proposed within the building envelope outlined in this Concept SSDA will need to be undergo further noise and vibration testing.

RWDI have considered the reference design and have identified that the proposed introduction of additional rooftop plant, located on the southern corner of the site is of primary acoustic significance. Any future detailed design should undergo an acoustic review of mechanical plant selections and locations to ensure noise levels comply with the relevant levels.

Mitigation measures that are commonly employed to control noise emissions from mechanical equipment include using in-duct treatments such as internally lined ductwork or silencers, building barriers around equipment or using acoustic louvres.

As the proposal does not include any changes to the current parking arrangements of the site, and it is not anticipated to change the traffic generation to and from the site, it is not anticipated that there will be any change to the current traffic noise levels.

Any future detailed DA on the site will be required to undergo further operational noise assessments.

## 6.10 Safety, Security and Management

A Crime Prevention Through Environmental Design (CPTED) Report has been prepared by Ethos Urban and is included at **Appendix O**. The review identifies the potential security concerns in and around the site and provides recommendations to guide crime prevention, safety and security arrangements as part of detailed design of the development.

This strategy includes a detailed assessment, which includes:

- A review of Safety By Design Manual by the NSW Police Force.
- Collection and analysis of local and NSW State crime statistics from the Bureau of Crime Statistics and Research (BOSCAR).
- A crime risk assessment, in accordance with the current NSW policy and practice, of matters of surveillance, lighting and technical supervision, territorial reinforcement, environmental maintenance, activity and space management, access control, and design, definition and designation.

A number of recommendations were identified a part of the CPTED Report which will be further considered and assessed as part of the detailed design of the project at Stage 2. These include the following:

- Maintaining sightlines to and from the future development and the surrounds by ensuring signage, landscaping and other fixed equipment do not create a significant visual obstruction from internal areas towards the public domain.
- Ensuring circulation spaces (including presentation spaces, entrances, exhibition foyers, retail entrances and other points of ingress and egress) are unobstructed by structures, to remove opportunities for concealment and ensure that pedestrians can move freely with clear sightlines of their surrounds. Medium height vegetation with top to bottom foliage should be avoided.
- Ensuring the future design of any active street level uses along Macarthur Street or Harris Street maximises natural surveillance, effective guardianship, and activation. Seating should be located in areas of active use.
- Considering the installation of a CCTV network in publicly accessible areas and within the curtilage of the development. Further, considering an appropriate bollard/barrier system at the Macarthur Street terminus to prevent vehicles driving into the site.
- Having due consideration of site maintenance and the performance of selected building materials.

## 6.11 Air Quality

An Air Quality Report has been prepared by RWDI and is included at **Appendix T**. This report has been prepared to assess onsite and offsite air quality impacts on sensitive receivers during the operation and construction of the development. RWDI has identified that air emissions are likely during both the construction and operation of the proposed Powerhouse Ultimo development.

### Construction Impacts

RWDI has provided a preliminary assessment of the potential air quality impacts that may be associated with the development, noting that no detailed construction plan has been prepared, and all detailed construction works will be assessed under a future detailed DA at Stage 2 of the project.

It confirms that air pollutants associated with the project comprise dust particulate matter, but that it is considered unlikely that the proposed works would result in unacceptable air quality impacts, subject to the implementation of mitigation measures at the construction phase of the project. These measures include protocols around stakeholder communication and complaints, site management and maintenance, dust monitoring, construction vehicles, operating equipment on the site, and measures specific to construction works, haulage, and earthworks. It is recommended that these measures be incorporated into a Dust Management Sub-Plan to a Construction Environmental Management Plan at the appropriate future phase of the project.

### Operational Impacts

During operation, the site is not expected to generate any air quality impacts, noting that it will continue to operate as a museum and ancillary land uses. The site can be easily accessed by public transportation and given no on-site car parking is provided as a part of the project, the air quality impacts arising from the proposed development due to vehicular movement is confirmed to be negligible. Although southern-winds would be able to carry emissions downwind of the site towards the residential areas located to the south-west of the site, it is not anticipated that these will have a large significant impact.

## 6.12 Tree Removal and Retention

A Preliminary Arboricultural Report has been prepared by Tree IQ and is included at **Appendix L**. This report identifies the trees currently located on and around the site, and provides an overview of the quality and value of the trees.

As no construction works are proposed as part of this Concept SSDA, this report does not identify any trees specifically for removal. A detailed assessment will accompany the Stage 2 SSDA relating to the envelope proposed in this Concept SSDA. Therefore, this report does not consider any proposed development works and does not provide a schedule for tree retention or removal.

The Preliminary Arboricultural Report identifies that of the 22 trees surveyed, 1 tree was identified as a priority for retention, 20 were identified as considering retention, and 1 was identified as considering removal.

The assessment also identified that there is very limited diversity of the trees at and surrounding the site. When selecting new trees, it is recommended to ensure a diversity of plant family, genus and species to provide greater resilience against pests,

diseases and climatic conditions. In addition, the potential mature size of new trees should be considered to ensure sufficient space for the development of good tree form. Overplanting or planting trees in close proximity to one another will promote suppression, impact tree form, reduce amenity value and likely increase management costs over the lifetime of the tree. New trees should be grown and supplied in accordance with *Australian Standard 2303 Tree Stock for Landscape Use (2015)*.

A further Arboricultural Impact Assessment will accompany the Stage 2 SSDA, and a Tree Protection Plan will be prepared prior to commencing physical works to examine the potential impact of any proposed works on the trees and provide recommendations for tree sensitive methods and tree protection measures prior to commencing any works on the site.

## 6.13 Sustainability

An Ecologically Sustainable Development (ESD) report has been prepared by Steensen Varming and is included at **Appendix K**. This report outlines the relevant sustainability principles and targets applicable to the site, as well as how the Powerhouse Ultimo Renewal will meet the relevant industry recognised building sustainability and environmental performance standards.

The following environmental targets are aspired by this project:

- Minimum 5-star Green Star Rating, targeting 6-Star Green Star.
- Exceed the requirements of Section-J of the National Construction Code for energy-efficiency in building fabric and building services / systems.
- Align with the Government Resource Efficiency Policy.
- Demonstrate good design through early stage analysis and guidance, in general accordance with the best practice standards, such as Green Star.
- Implementation of a Net Zero Operational Plan.
- Implementation of climate positive, low-carbon and high-performance precinct.
- Align with Greater Sydney Commission and City of Sydney strategies and targets.
- Transition plan to achieve net zero carbon performance.

The above environmental targets will be met through the implementation of various sustainability and design strategies, such as:

- The promotion of quality natural daylight.
- Provision of excellent indoor air quality.
- Provision of excellent thermal, visual and acoustic comfort.
- Resource conservation of energy, water and waste.
- The creation of an integrated community resource.

The details of the sustainability strategy relating to Powerhouse Ultimo Renewal is further detailed at **Appendix K** and will require a more detailed assessment of any future detailed DAs lodged on the site. This has been addressed in the Mitigation Measures at **Attachment 3**.

## 6.14 Water Cycle Management

A Civil Engineering Report has been prepared by TTW and is included at **Appendix V**. A summary of the assessment and proposed mitigation measures are provided below.

### 6.14.1 Stormwater

The site is split into three separate catchments based on existing site levels and potential existing gravity drainage. Further investigation and survey are required to fully understand the existing stormwater system within the development site, existing catchments, stormwater controls and existing discharge points off site, however these further details will be determined during any future detailed DA on the site.

Sydney Water have confirmed that there is no on-site detention required or any restriction on stormwater discharge required for the site. There is no net change in peak flows expected following development as both the pre-development and post development areas are assumed not to change the percentages of impermeable areas.



The proposed stormwater concept allows for reuse of the existing stormwater infrastructure across the development site, with a new stormwater connection for the new building to an existing Council stormwater pit on Macarthur Street. Water sensitive urban design (WSUD) measures will be required for this new building and will be located within the development site area upstream, of the Council connection pit.

The proposed stormwater minor system will be designed to convey the 5% annual exceedance probability (AEP) flows and the major system will be designed to convey the 1% AEP flows in accordance with City of Sydney stormwater design requirements.

### 6.14.2 Water Sensitive Urban Design

In accordance with the City of Sydney's water quality requirements, any future development is required to meet the nominated pollutant reduction targets and will nominate measures to be integrated with the landscaping, irrigation, water use, reuse and reticulation components of the site and project. Any future detailed SSDA on the site will need to detail the WSUD performance and commitment.

Notwithstanding this, preliminary MUSIC modelling completed by TTW demonstrates that development on the site is capable of meeting these targets as summarised in **Table 7** below.

**Table 7** Stormwater treatment targets and results

Pollutant	Required reduction	Modelled reduction (full site)	Modelled reduction (reference scheme)	Compliance
Gross pollutant	90%	100%	100%	✓
Total suspended solids	85%	87.4%	85.7%	✓
Total phosphorus	60%	68.6%	69.2%	✓
Total nitrogen	45%	50.7%	49.1%	✓

Source: Arup

### 6.14.3 Flooding

An assessment for the flood risk of the development has been undertaken by TTW to understand the site-specific flood risks and requirements specific to the site. The Darling Harbour flood model, which includes the site, identifies that the site is generally flood free with only localised areas at the low end of Macarthur Street experiencing shallow flooding, typically less than 20cm deep in the 1% AEP and approximately 250mm deep in the probable maximum flood (PMF). More significant flooding is experienced downstream of the site within the light rail corridor, however, this is significantly lower than the development site.

Any future development on the site must comply with the City of Sydney's flood planning levels. For commercial floor levels, the flood planning level is 1% AEP and the higher of the PMF or the 1% + 500mm for basements. This Concept SSDA does not propose to change the existing floor levels of the heritage buildings on site. However, the 1% AEP flood level at the bottom of Macarthur Street is currently higher than the floor level of the adjacent Switch Room Building and does not meet the flood planning requirements. Any future detailed SSDAs on the site will need to address the flooding risk in this area.

Overall, however, there is not expected to be any change to the existing flood behaviour, flood levels, depths or hazards as a result of the proposed envelope on the site. Any future detailed SSDA will need to consider and address the flood implications of any detailed design on the site.

### 6.14.4 Sediment and Erosion Control

A detailed erosion and sediment control plan will be implemented during the construction, subject to the separate Stage 2 SSDA, and will need to be in accordance with the City of Sydney's requirements and Landcom NSW's Management Urban Stormwater, Soils and Construction (Blue Book).

Typical measures to be implemented would include:

- Provision of sediment and erosion controls at locations downstream of construction areas.
- Provision of stormwater diversions around the construction site for run-off from upstream undisturbed areas.



- Identification of stockpile locations, and sediment control barriers.
- Protection of existing stormwater using geotextile filters, sandbags, etc.
- Identification of suitable locations for construction vehicle access and wheel wash facilities.

## 6.15 Infrastructure and Utilities

An Infrastructure Management Strategy for the Powerhouse Ultimo site has been prepared by Steensen Varming and is included at **Appendix U**. This report addresses the potential impact of the renewal of the site on the relevant services on the site, including any impacts on existing utility infrastructure and service provider assets, the Inner West Light Rail and any infrastructure upgrades required to facilitate the renewal. A summary of the assessment and proposed mitigation measures are provided below.

### Electrical Utility Services

Steensen Varming have identified that the electricity supply is currently provided on the site by Ausgrid, with the following services serving or traversing the site:

- 132kV high voltage cabling
- Distribution substation
- 11kV high voltage cabling
- Various low voltage supplies

The existing substation servicing the site is an older basement substation with limited access.

Based on the size of the development, the initial detailed assessment has confirmed that a substation of similar size to the existing is required for the works. The final connection requirements will be based on the detailed maximum demand which will be completed as part of the future detailed SSDA on the site.

### Communications Infrastructure

The site is currently serviced by various fibre, broadband and mobile services from Optus, Telstra, Pipe Networks and other private connections. Most carriers have significant telecommunications infrastructure below the roads surrounding the Powerhouse Ultimo, with the largest being from Optus. There is also a dedicated fibre link between the Powerhouse Museum and the Powerhouse facility at Castle Hill.

To support any future development, a new building distributor room will need to be established in the development with new lead-in cable services. New cable connection from the relevant telecommunication service providers will be required to reticulate underground to the building. Modifications to existing cabling infrastructure will also be required. Further detail will be determined as part of any future detailed SSDA on the site.

### Inner West Light Rail

The site is immediately adjacent to the Inner West Light Rail Corridor. No changes or impacts on the Inner West Light Rail is expected or warranted as a result of this Concept SSDA. Future development on the site may require cathodic protection and earthing studies, however this will be undertaken as part of any future detailed SSDA on the site. All works and access where required will be in accordance with the requirements from Transport for NSW.

### Sea Water Heat Rejection System

The Powerhouse Ultimo precinct intakes seawater from Darling Harbour to assist in cooling the existing buildings. This system was completed in about 1928 and was integral component of the operating system of the former Ultimo Power House.

No changes to the existing pipeline route are envisaged. The existing infrastructure will be retained.

### Sewerage

The site has access to two Sydney Water sewer main, one from Macarthur Street and one from Omnibus Lane south west of the Harwood Building.

Details of the authority and utility consultation will be provided as part of any future detailed SSDA on the site. Utilisation of the existing sewer connections will also be determined in the detailed SSDA stage.

### Water Supply

Three water mains are provided to the site, including from Harris Street, Macarthur Street and William Henry Street. Utilisation of the existing water mains will be determined by the application to Sydney Water as part of any future detailed SSDA on the site.

For consideration in future designs, potable water usage will be reduced using low flow taps and sanitary fixtures should be used where possible, typically using the following flow rates:

- Shower = 9.0L/m
- Basin = 7.7L/m
- Sink = 7.7L/m

### Natural Gas

The site is currently serviced by one Jemena natural gas main which is located in Harris Street and Macarthur Street. Any future connections and natural gas requirements will be determined during the future detailed SSDA process on the site.

### Recommendations

Steensen Varming recommend that an infrastructure delivery and staging plan, including more detail on how infrastructure requirements are to be co-ordinated, funded and delivered to facilitate the future detailed SSDA process on the site.

## 6.16 Access and Compliance

Because of the conceptual nature of this SSDA, no assessment of the detailed requirements of the Building Code of Australia or Disability Discrimination Act Premises Standards has been completed. The maximum building envelope is capable of delivering a range of potential design options and, therefore, would be capable of complying with the aforementioned codes and standards at the appropriate competitive design process and detailed SSDA phases. This has been addressed in the Mitigation Measures at **Attachment 3**.

## 6.17 Waste Management

As detailed in **Section 3.0** of this report, the proposed development does not include any physical works on the site and does not seek consent for the detailed design or operation of buildings, which will be the subject of a competitive design process and subsequent Stage 2 SSDA. Accordingly, the measures through which to manage and minimise waste during the construction phase of the project including the quantity and likely waste streams will be detailed as part of a subsequent Preliminary Construction Management Plan to accompany the Stage 2 SSDA. The detailed methodology and strategies for managing operational waste including reusing and recycling will be addressed through a Waste Management Plan to accompany the Stage 2 SSDA. Loading and servicing for this site has been addressed as part of the Transport Assessment prepared by JMT Consulting and discussed in **Section 6.6** above.

This has been addressed in the Mitigation Measures at **Attachment 3**.

## 6.18 Social and Economic Impacts

Ethos Urban has prepared a Social Impact Assessment (**Appendix M**) in accordance with the Social Impact Assessment Guideline for State Significant Projects 2021, which includes an estimate of the economic benefits associated with the construction and operation of the proposed development. The purpose of Social Impact Assessment is to assess the impacts of the development, both positive and negative, for all stages of the project lifecycle for key stakeholders and the broader affected community.

Overall, the Social Impact Assessment has identified that the proposed Powerhouse Ultimo Renewal project will deliver important community wellbeing and economic benefits to a district, regional and national scale, as well as a local scale. The negative impacts are primarily short term and occur during the construction period, and can be mitigated through appropriate construction management plans prepared at an appropriate future stage. It is considered that any negative amenity and way of life impacts arising from the operation of the facility in the immediate locality can be well managed and mitigated through consideration of robust operational management of the site, in accordance with any existing museum operations, and ongoing planned

consultation with the local community and relevant stakeholders. The refurbishment and expansion of the site, if impacts associated with construction are well mitigated, will ensure positive social outcomes for the broader community. Broader benefits of the investment in the renewal of this significant national scape public cultural facility, the associated public programming and community infrastructure will be widespread, significant and long term.

The Assessment further confirms that the construction phase is expected to directly support employment of approximately 440 job-years and deliver a direct value-add to the economy of an estimated \$61.3 million. When multipliers are taken into account, the total state economy-wide effects over the construction program are forecast to comprise employment of approximately 1,710 job-years (direct and indirect) and an estimated total direct value-add to the economy of \$225.2 million. Further, during the operational phase of the project, the proposal will support around 200 jobs upon completion and full occupancy, with 400 workers to be potentially working across many of the Powerhouse sites. For the approximately 200 jobs located at Powerhouse Ultimo, this represents a total direct value-add to the economy of approximately \$34.4 million per annum, based on total direct and indirect employment.

The methodology for confirming operational and construction jobs is confirmed in the Social Impact Assessment at **Appendix M** in accordance with the SEARs.

## 6.19 Development Contributions

The site is located within the West Precinct of the land to which the City of Sydney Section 7.11 Development Contributions Plan 2015 applies. The plan does not apply to the current application as the Concept SSDA does not give rise to any additional infrastructure demand. Any requirement for the payment of development contributions will be determined as part of the Stage 2 Development Application.

## 7.0 Project Justification

The EP&A Act specifies that a justification must be made having regard to biophysical, economic, and social considerations and the principles of ecologically sustainable development, including both positive and negative impacts.

The proposed development comprises a concept proposal for the renewal of Powerhouse Ultimo. It sets the guidelines and framework for alterations and additions and new built form and public domain spaces to deliver programming focused on design and fashion, presenting exhibitions that showcase the Powerhouse Collection, international exclusive exhibitions, and programs that support the creative industries. No physical works are proposed as part of this DA, noting that the detailed design and construction of any buildings and public domain spaces on the site will be the subject of a competitive design process and a separate and future Stage 2 SSDA.

The assessment, therefore, focuses on the identification and appraisal of the effects of the proposed change over the site's existing condition, while noting that a further detailed assessment will be provided as part of the Stage 2 SSDA when the detailed extent of works is confirmed. Accordingly, assessment at this stage is conceptual and is founded in the maximum building envelope as well as the reference scheme which represents one possible outcome for the site.

Various components of the biophysical, social, and economic environments, as well as the proposal's alignment with the objects of the EP&A Act and other statutory instruments applicable to the site, have been examined in this EIS and are summarised below.

### 7.1 Ecologically Sustainable Development

The EP&A Regulation lists 4 principles of ecologically sustainable development to be considered in assessing a project. They are:

- The precautionary principle;
- Intergenerational equity;
- Conservation of biological diversity and ecological integrity; and
- Improved valuation and pricing of environmental resources.

An analysis of these principles follows.

#### Precautionary Principle

The precautionary principle is utilised when uncertainty exists about potential environmental impacts. It provides that if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation. The precautionary principle requires careful evaluation of potential environmental impacts in order to avoid, wherever practicable, serious or irreversible damage to the environment.

This EIS has not identified any serious threat of irreversible damage to the environment and, therefore, the precautionary principle is not relevant to the proposal. The proposed technical studies accompanying this EIS appropriately establish strategies and a framework for the future detailed design and delivery of the Powerhouse Ultimo Renewal project, emphasising that there is no potential threat of serious or irreversible damage at this stage.

## Intergenerational Equity

Inter-generational equity is concerned with ensuring that the health, diversity, and productivity of the environment is maintained or enhanced for the benefit of future generations. The proposal has been designed to benefit both the existing and future generations by:

- Delivering a highly operational precinct that contributes to delivery of strategic State and Local Government directives for activation of visitor and night-time economies, while creating publicly accessible and open spaces to encourage the local community to engage with the precinct.
- Providing for new local employment opportunities close to public transport including approximately 200 jobs, and 400 people employed flexibly across the suite of four Powerhouse sites in its future state.
- Enhancing opportunities for recreation and social interaction for residents, workers, and visitors in the local area through renewed, programmed internal exhibition/display space, and enhanced open space and pedestrian infrastructure within the site. This will positively improve daily living routines due to increased amenity and walkability.
- Delivering new/renewed creative and learning spaces for creative, research and learning programs, providing enhanced opportunities to collaborate with schools, universities, and industry. This has the potential to improve life-long education outcomes for students and thereby supporting long term social and economic wellbeing.
- Supporting sustainability and the transformation of Ultimo alongside Tech Central and Darling Harbour as an internationally renowned innovation precinct and cultural destination. The proposal has the potential to enhance the cultural significance and characteristics of the south-eastern CBD.
- Recognising and appropriately considering the sites rich heritage and architectural fabric which can be appropriately adapted and complemented at Stage 2 and contribute to Powerhouse Ultimo as a vital component of the ongoing cultural life of Sydney.

The proposal has integrated short and long-term social, financial, and environmental considerations so that any foreseeable impacts are not left to be addressed by future generations. Issues with potential long-term implications such as waste disposal would be avoided and/or minimised through construction planning and the application of safeguards and management measures described in this EIS and the appended technical reports. The adaptive reuse of any heritage significant spaces within the site would be conducted in accordance with the CMP. A further, detailed, assessment will also be completed at Stage 2 when the detailed extent of works is known.

## Conservation of biological diversity and ecological integrity

The principle of biological diversity upholds that the conservation of biological diversity and ecological integrity should be a fundamental consideration. As has been demonstrated in **Section 6.0** and throughout this EIS, the proposed development will not result in any significant effect on the biological and ecological integrity of the study area, subject to the implementation of the Mitigation Measures set out in **Attachment 3** below.

No physical works are proposed as part of this DA, and a separate detailed assessment will also be completed at Stage 2 when the detailed extent of physical works is known.

## Improved valuation, pricing and incentive mechanisms

The principles of improved valuation and pricing of environmental resources requires consideration of all environmental resources which may be affected by a proposal, including air, water, land and living things. Mitigation measures for avoiding, reusing, recycling and managing waste during construction and operation would be implemented to ensure resources are used responsibly in the first instance.

Additional measures will be implemented to ensure no environmental resources in the locality are adversely impacted during the construction or operational phases.



## 7.2 Environmental Planning and Assessment Act 1979 – Objects of the Act

This EIS has examined and considered all possible matters affecting or that are likely to affect the environment by reason of the proposed development. The project is consistent with the relevant Objects of the EP&A Act, as outlined in **Section 4.0**, and will not result in any unjust or significant environmental impact.

## 7.3 Environmental Planning and Assessment Act 1979 – Clause 4.15 Evaluation

The following section assesses the proposal against the relevant heads of consideration listed in Section 4.15 of the EP&A Act.

### 7.3.1 Environmental Planning Instruments

As described in **Section 4.0**, the proposal is consistent with all relevant EPIs relating to the site, including:

- Environmental Planning and Assessment Act 1979
- Environmental Planning and Assessment Regulation 2021
- Biodiversity Conservation Act 2016
- State Environmental Planning Policy (Transport and Infrastructure) 2021
- State Environmental Planning Policy (Industry and Employment) 2021
- State Environmental Planning Policy (Resilience and Hazards) 2021
- State Environmental Planning (Resilience and Hazards) 2021
- State Environmental Planning Policy (Biodiversity and Conservation) 2021
- Sydney Local Environment Plan 2012

It is further noted that State Environmental Planning Policy (Housing) 2021 and State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004 will not apply to this project.

The Statutory Compliance Table at **Attachment 2** further outlines the relevant statutory requirements of each EPI and the location in the EIS where those requirements have been assessed. Those statutory requirements that are yet to be assessed in the EIS are addressed below.

### 7.3.2 EP&A Regulation

The EIS has addressed the specification criteria within Section 190 and clause 192 of the EP&A Regulation. Similarly, the EIS has addressed the principles of ecologically sustainable development through the precautionary principle (and other considerations), which assesses the threats of any serious or irreversible environmental damage (see above). As required by Section 4.42 of the EP&A Act, no additional approvals will be required at this stage to enable the project. An approval under the Roads Act 1993 may be required at Stage 2 subject to confirmation of the detailed extent of works.

### 7.3.3 Likely Impacts of Development

#### Social and Economic

An assessment of the likely social and economic impacts of the project has been undertaken in the Social Impact Assessment at **Appendix M** of the EIS, prepared in accordance with the Social Impact Assessment Guideline 2021. The assessment confirms that the proposal has the potential to result in both positive and negative impacts. The identified negative impacts are primarily short-term related to completing construction activities on the site, and have informed mitigation measures discussed in **Attachment 3**. The identified positive impacts range from short-term to long-term and will impact both the local area and the wider vitality and vibrancy of Sydney and NSW.

Further, the proposal will support approximately 1,710 (direct and indirect) job-years and an estimated total direct value-add to the economy of \$225.2 million during the construction phase, and approximately 340 jobs supported and an estimated total direct value-add to the economy of \$34.4 million per annum, based on total direct and indirect employment during the operational phase of the project.

Overall, the renewal and expansion of Powerhouse Ultimo, if impacts associated with construction are well mitigated, will ensure positive social outcomes for the broader community. Investment in the renewal of this significant national scale public cultural facility, will generate broader benefits for the associated public programming and community infrastructure, which will be widespread, significant and long term.

A further detailed assessment will be completed at Stage 2 when the detailed extent of works is known.

## Biophysical

This Concept SSDA establishes the vision and framework for the future detailed design and delivery of the Powerhouse Ultimo Renewal. In this way, the environmental impact assessment of the proposed development has demonstrated that the concept proposal adopts appropriate management strategies to guide future stages, and as such the potential impacts of the development are acceptable and are able to be managed through compliance with the identified mitigation measures.

### 7.3.4 Suitability of the Site

Having regard to the characteristics of the site and its location, the proposed development is suitable for the site as it:

- Will not radically change the use or function of the site, as the project seeks to renew and enhance the existing museum (information and education facility) that has occupied this site for several decades.
- Directly supports and aligns with the broader strategic opportunity to transform the Pyrmont Peninsula as identified in the *Pyrmont Peninsula Place Strategy* and supports a coordinated series of investments in cultural infrastructure throughout NSW as envisaged in the *Cultural Infrastructure Plan 2025+*.
- Will recognise and celebrate the heritage significance of the site, including future opportunities for Connecting with Country through the competitive design process and Stage 2 SSDA.
- Has been designed to be developed in a manner that minimises impacts on its surrounds, and has been designed to in some respects improve the natural, historical, and environmental qualities of the site.
- Will result in only minor environmental impacts that can be appropriately managed and mitigated.

The subject site is also considered to be highly suitable for the proposal in that:

- It is zoned B4 Mixed Use under the Sydney LEP 2012, which permits the development of 'information and education facilities', and the project will meet the objectives for this land use zone.
- It is well serviced by existing and future transport arrangements comprising walking and cycling routes including The Goods Line, light rail, heavy rail, and buses, and a new Metro Station at Pyrmont as part of Sydney Metro West line.
- It is of sufficient size to accommodate new built form and public domain areas.
- It has existing utility infrastructure connections which have capacity, or which can be readily augmented to provide capacity for, the servicing requirements of the Powerhouse Ultimo Renewal project.
- The site is located on the CBD-fringe and therefore is ideally positioned to host a 'destination' development that contributes to the visitor economy and day-to-night character of the Sydney CBD.

### 7.3.5 Public Interest

The application provides additional direct benefits that the previous site did not accommodate and realises the project objective to renew Powerhouse Ultimo and provide a world-class contemporary museum and is considered to be in the public interest as it:

- Has the potential to deliver significant social, cultural and economic benefits to the local and greater Sydney and NSW community by providing new and enhanced cultural infrastructure that will support creative, research and learning programs, providing enhanced opportunities to collaborate with schools, universities, and industry. This has the potential to improve life-long education outcomes for students and thereby supporting long term social and economic wellbeing.
- Represents the economic and orderly development of land that will retain the existing core function of the site and renew and enhance the existing facilities, providing an additional approximate 200 jobs and 400 people employed flexibly across the suite of four Powerhouse sites in its future state.
- Contributes to the visitor and night-time economies and activates the site and surrounds, providing new cultural and entertainment opportunities during both day and night and diversifying the local night-time economy.

- Will be the subject of a competitive design process that will ensure a high-quality built form and landscape design that achieves design excellence and contributes to the architecture of Sydney.
- Provides opportunities to better integrate with its surrounds including enhanced connections to The Goods Line and surrounding light rail stops, to support the activation and uses of these spaces and destinations.
- Identifies the desire to achieve a high level of environmental performance including achieving a minimum 5 Star Green Star Rating with opportunities for 6 Star Green Star Rating elements, as well as measures that promote and support the uptake of sustainable transport options, and design considerations for addressing environmental risks and climate change.
- Continues to prioritise increased visitation by public transport, cycling and walking through providing bicycle parking, improved coordination infrastructure outside of the site, and the development of a Green Travel Plan as part of the future operation of the site.
- Will not result in any significant environmental impacts that cannot be appropriately mitigated or managed through adherence to the Mitigation Measures outlined in **Section 8**, standards conditions of development consent, and any further mitigation measures and conditions identified during the preparation of the Stage 2 SSDA.

## 8.0 Conclusion

The Environmental Impact Statement (EIS) has been prepared to consider the environmental, social and economic impacts of the proposed Powerhouse Ultimo Renewal. The EIS has addressed the issues outlined in the SEARs (**Attachment 1**) and accords with Part 8 of the EP&A Regulation with regards to consideration of the relevant environmental planning instruments, built form, and social and environmental impacts resulting from the proposed development. Appropriate mitigation measures have been identified to manage the impacts of the development through the construction and operational phases of the project.

This SSD DA represents the first phase in the ongoing redevelopment of Powerhouse Ultimo. It is envisaged that following this application, a Competitive Design Process will be undertaken on the site, followed by a detailed SSDA of the winning scheme.

The project is identified as having strategic merit, by delivering renewed, world class cultural, museum and exhibition spaces. The project is consistent with the objectives of the strategic planning documents applying to the land, including the Eastern City District Plan and the Pyrmont Peninsula Strategy.

Having regard to biophysical, economic and social considerations, including the principles of ecologically sustainable development, the carrying out of the project is justified for the following reasons:

- The proposal will facilitate the renewal of Powerhouse Ultimo and provide world class museum and exhibition space, which will deliver important community wellbeing and economic benefits to a district, regional and national scale, as well as a local scale.
- The proposal represents a significant investment in the cultural, arts and creative industries, and the renewal of this significant national scale public cultural facility, the associated public programming and community infrastructure will be widespread, significant and long term.
- The maximum building envelope will support a competitive design excellence process that encourages creative expression and elicits a wide range of innovative design responses to the site in order to deliver an internationally important public museum development of the highest architectural design quality.
- The proposal allows for the significant improvement of the public domain on and around the site, allowing for improved connection to The Goods Line and surrounding precincts including Darling Square and Darling Harbour. This will redefine the entrance to the museum, improving the experience for visitors.
- The proposal will support approximately 1,710 (direct and indirect) job-years and an estimated total direct value-add to the economy of \$225.2 million during the construction phase, and approximately 340 jobs supported and an estimated total direct value-add to the economy of \$34.4 million per annum, based on total direct and indirect employment during the operational phase of the project.
- The proposed Concept SSDA allows for the provision of renewed cultural facilities that respond to the heritage significance of the site, whilst not resulting in impacts on surrounding uses that cannot be managed.
- The proposed works are directly consistent with the Pyrmont Peninsula Place Strategy, the Draft Ultimo Sub-Precinct Plan, the NSW Government's Cultural Infrastructure Plan 2025+ and the City of Sydney's Local Strategic Planning Statement, as it delivers design excellent, cultural and community facilities.
- The assessment of the proposal has demonstrated that the development will not result in any environmental impacts that cannot be appropriately managed and consistent with the relevant planning controls for the site.
- The proposal is consistent with the principles of ecological sustainable development as defined by section 193 of the *Environmental Planning and Assessment Regulation 2021*.

Given the merits described above, and the significant benefits associated with the proposed development, it is requested that the application be approved.

## Attachment 1 – SEARs Compliance Table

Requirement	EIS Section and/or Technical Study	
Statutory Context		
Address all relevant legislation, environmental planning instruments (EPIs) (including proposed EPIs), plans, policies and guidelines.	Section 2.3, 4.0	
Identify compliance with applicable development standards and provide a detailed justification for any non-compliances	Section 4.0	
If the development is only partly State significant development (SSD) declared under clause 8(1) of the State and Regional Development SEPP, provide an explanation of how the remainder of the development is sufficiently related to the component that is SSD	N/A	
Address the requirements of any approvals applying to the site, including any concept approval or recommendation from any Gateway determination.	N/A	
Capital Investment Value	EIS Section	Technical Study
Provide a detailed calculation of the capital investment value (CIV) of the development, prepared by a qualified quantity surveyor.	-	Provided under separate cover
Provide an estimate of the retained and new jobs that would be created during the construction and operational phases of the development, including details of the methodology to determine the figures provided.	-	Provided under separate cover
Design Quality		
Present the concept proposal and draft design excellence strategy to the State Design Review Panel (SDRP) for review prior to lodgement.	Section 5.2	
Demonstrate how the future detailed design will achieve: <ul style="list-style-type: none"><li>design excellence in accordance with any applicable EPI provisions</li></ul>	Section 3.6	Appendix B Appendix E
<ul style="list-style-type: none"><li>good design in accordance with the seven objectives for good design in Better Placed</li></ul>	Section 3.6	Appendix B
Where required by an EPI, or where proposed, demonstrate how the future detailed design will be subject to a competitive design process, carried out in accordance with the City of Sydney Competitive Design Policy, Sydney DCP 2012 and the SDRP recommendations	Section 3.6	-
In all other instances, demonstrate that the future detailed design will be subject to further review by the SDRP	Section 5.2	-
Built Form and Urban Design		
Demonstrate how the proposal responds to Aboriginal cultural connections to Country, in accordance with the Draft Connecting with Country framework.	Section 3.4	Appendix B
Explain and illustrate the proposed built form, including a detailed site and context analysis to justify the proposed site planning and design approach.	Section 2.2, Section 3.3, Section 6.1	Appendix B
Demonstrate how the proposed built form (layout, height, bulk, scale, separation, setbacks, interface and articulation) addresses and responds to the context, site characteristics, streetscape and existing and future character of the locality.	Section 2.2, Section 3.3, Section 6.1	Appendix B
Identify any change to the use and or layout of the existing building(s) and associated impacts on circulation movements, access and linkages.	Section 3.3, Section 3.4, Section 6.1	Appendix B
Provide a breakdown of proposed land uses (including ancillary uses).	Section 3.2	Appendix B
Assess how the development complies with the relevant accessibility requirements.	Section 6.16	-



Requirement	EIS Section and/or Technical Study	
Environmental Amenity		
Address how good internal and external environmental amenity is achieved, including access to natural daylight and ventilation, pedestrian movement throughout the site, access to landscape and outdoor spaces.	Section 3.3, Section 3.4, Section 6.1, Section 6.2, Section 6.4	Appendix B, Appendix C, Appendix D
Assess amenity impacts on the surrounding locality, including lighting impacts, reflectivity, solar access, visual privacy, visual amenity, view loss and view sharing, overshadowing and wind impacts. A high level of environmental amenity for any surrounding residential or other sensitive land uses must be demonstrated.	Section 6.0	Appendix B, Appendix N, Appendix Q,
Provide a solar access analysis of the overshadowing impacts of the development within the site, on surrounding properties and public spaces (during summer and winter solstice and spring and autumn equinox) at hourly intervals between 9am and 3pm, when compared to the existing situation and a compliant development (if relevant).	Section 6.4.1	Appendix B
For applicable developments, provide an assessment of the development against SEPP 65 and the Apartment Design Guideline	-	-
Visual Impact		
Provide a visual analysis of the development from key viewpoints, including photomontages or perspectives showing the proposed and likely future development.	Section 6.4.2	Appendix N
Where the visual analysis has identified potential for significant visual impact, provide a visual impact assessment that assesses and justifies the impacts of the development on the existing catchment.	Section 6.4.2	Appendix N
Public Space		
Demonstrate how the development maximises the amount, access to and quality of public spaces (including open space, public facilities and streets/plazas within and surrounding the site), reflecting relevant design guidelines and advice from council and the Department	Section 3.3, Section 6.2	Appendix B, Appendix D
Demonstrate how the development: <ul style="list-style-type: none"><li>ensures that public space is welcoming, attractive and accessible for all</li></ul>	Section 3.3, Section 6.2	Appendix B, Appendix D
<ul style="list-style-type: none"><li>maximises permeability and connectivity.</li></ul>	Section 3.3, Section 6.2	Appendix B, Appendix D
<ul style="list-style-type: none"><li>maximises the amenity of public spaces in line with their intended use, such as through adequate facilities, solar access, shade and wind protection.</li></ul>	Section 3.3, Section 6.2	Appendix B, Appendix D
<ul style="list-style-type: none"><li>maximises street activation.</li></ul>	Section 3.3, Section 6.2	Appendix B, Appendix D
<ul style="list-style-type: none"><li>minimises potential vehicle, bicycle and pedestrian conflicts</li></ul>	Section 3.3, Section 6.2	Appendix B, Appendix D
Address how Crime Prevention through Environmental Design (CPTED) principles are to be integrated into the development, in accordance with Crime Prevention and the Assessment of Development Applications Guidelines.	Section 6.10	Appendix O
Trees and Landscaping		
Assess the number, location, condition and significance of trees to be removed and retained and provide details of existing canopy coverage to be retained, removed or replaced on-site	Section 6.12	Appendix B, Appendix D, Appendix L
Provide a conceptual landscape plan, that details the proposed site planting, including location, number and species of plantings, heights and canopy spread of trees at maturity and proposed canopy coverage	Section 3.3, Section 6.2	Appendix B, Appendix D
provides evidence that opportunities to retain medium and high retention valued trees have been explored and/or informs the plan.	Section 6.12	Appendix L

Requirement	EIS Section and/or Technical Study	
<ul style="list-style-type: none"> <li>demonstrates how the proposed development would:               <ul style="list-style-type: none"> <li>contribute to long term landscape setting in respect of the site and streetscape and local character.</li> </ul> </li> </ul>	Section 6.2	Appendix B, Appendix D
<ul style="list-style-type: none"> <li>mitigate the urban heat island effect and ensure appropriate comfort levels on-site.</li> </ul>	-	Appendix B, Appendix D
<ul style="list-style-type: none"> <li>contribute to the objective of increased urban tree canopy cover in accordance with the City's Greening Sydney Strategy 2021.</li> </ul>	-	Appendix D
<ul style="list-style-type: none"> <li>maximise opportunities for green infrastructure, consistent with Greener Places.</li> </ul>	-	Appendix B, Appendix D
<b>Ecologically Sustainable Development</b>		
Identify how ESD principles (as defined in section 7(4) of Schedule 2 of the EP&A Regulation) are incorporated in the design and ongoing operation of the development	Section 6.13	Appendix K
Demonstrate how the development will meet or exceed the relevant industry recognised building sustainability and environmental performance standards.	Section 6.13	Appendix K
Demonstrate how the development minimises greenhouse gas emissions (reflecting the Government's goal of net zero emissions by 2050) and consumption of energy, water (including water sensitive urban design) and material resources.	Section 6.13	Appendix K
<b>Traffic, Transport and Accessibility</b>		
Provide a transport and accessibility impact assessment, which includes: <ul style="list-style-type: none"> <li>an analysis of the existing transport network, including the road hierarchy and any pedestrian, bicycle or public transport infrastructure, current daily and peak hour vehicle movements, and existing performance levels of nearby intersections.</li> </ul>	Section 6.6	Appendix J
<ul style="list-style-type: none"> <li>details of the proposed development, including pedestrian and vehicular access arrangements (including swept path analysis of the largest vehicle and height clearances), parking arrangements and rates (including bicycle and end-of-trip facilities), drop-off/pick-up-zone(s) and bus bays (if applicable), and provisions for servicing and loading/unloading.</li> </ul>	Section 6.6	Appendix J
<ul style="list-style-type: none"> <li>analysis of the impacts of the proposed development (including justification for the methodology used), including predicted modal split, a forecast of additional daily and peak hour multimodal network flows as a result of the development (using industry standard modelling), identification of potential traffic impacts on road capacity, intersection performance and road safety (including pedestrian and cyclist conflict) and any cumulative impact from surrounding approved developments</li> </ul>	Section 6.6	Appendix J
<ul style="list-style-type: none"> <li>measures to mitigate any traffic impacts, including details of any new or upgraded infrastructure to achieve acceptable performance and safety, and the timing, viability and mechanisms of delivery (including proposed arrangements with local councils or government agencies) of any infrastructure improvements in accordance with relevant standards</li> </ul>	Section 6.6	Appendix J
<ul style="list-style-type: none"> <li>proposals to promote sustainable travel choices for employees, residents, guests and visitors, such as connections into existing walking and cycling networks, minimising car parking provision, encouraging car share and public transport, providing adequate bicycle parking and high quality end-of-trip facilities, and implementing a Green Travel Plan.</li> </ul>	Section 6.6	Appendix J
<b>Biodiversity</b>		
Assess any biodiversity impacts associated with the development in accordance with the Biodiversity Conservation Act 2016 and the Biodiversity Assessment Method 2020, including the preparation of a Biodiversity Development Assessment Report (BDAR), unless a waiver is granted, or the site is on biodiversity certified land.	Section 4.0	Appendix X
If the development is on biodiversity certified land, provide information to identify the site (using associated mapping) and demonstrate the proposed development is consistent with the relevant biodiversity measure conferred by the biodiversity certification.	-	-

Requirement	EIS Section and/or Technical Study	
Noise and Vibration		
Where applicable, provide a noise and vibration assessment prepared in accordance with the relevant NSW Environment Protection Authority (EPA) guidelines. The assessment must detail construction and operational noise and vibration impacts on nearby sensitive receivers and structures and outline the proposed management and mitigation measures that would be implemented.	Section 6.9	Appendix P
Air Quality		
Where applicable, provide an assessment of onsite and offsite air quality impacts on sensitive receives during the operation and construction, including odours, dust and particles, in accordance with the relevant EPA guidelines.	Section 6.11	Appendix T
Where applicable, outline the proposed management and mitigation measures that would be implemented to reduce any air quality impacts.	Section 6.11, Attachment 3	Appendix T
Ground and Water Conditions		
Where applicable, provide an assessment of the potential operational and construction impacts on soil resources, including related infrastructure and riparian lands on and near the site.	Section 6.8	Appendix S
Where applicable, provide an assessment of the potential operational and construction impacts on surface and groundwater resources (quality and quantity), including related infrastructure, hydrology, aquatic and groundwater dependent ecosystems, drainage lines, downstream assets and watercourses	Section 6.8	Appendix S
Where applicable, provide an assessment of salinity and acid sulfate soil impacts.	Section 6.8	Appendix S
Stormwater and Wastewater		
Where applicable, provide an Integrated Water Management Plan for the development that: <ul style="list-style-type: none"><li>is prepared in consultation with council and any other relevant drainage or water authority.</li></ul>	Section 6.14	Appendix V
<ul style="list-style-type: none"><li>details the proposed drainage design for the site including any on-site treatment, reuse and detention facilities, water quality management measures, and the nominated discharge points.</li></ul>	Section 6.14	Appendix V
<ul style="list-style-type: none"><li>demonstrates compliance with council or other drainage or water authority requirements and avoids adverse impacts on any downstream properties, including during construction.</li></ul>	Section 6.14	Appendix V
Provide a stormwater concept plan prepared in consultation with, and compliant with the relevant standards of, the local council or other drainage or water authority	Section 6.14	Appendix V
Flooding Risk		
Identify any flood risk on-site having regard to adopted flood studies, the potential effects of climate change, and any relevant provisions of the NSW Floodplain Development Manual and City of Sydney Interim Floodplain Management Policy	Section 6.14.3	Appendix V
Where applicable, assess the impacts of the development, including any changes to flood risk on-site or off-site, and detail design solutions and operational procedures to mitigate flood risk where required.	Section 6.14.3	Appendix V
Hazards and Risks		
Where there are dangerous goods and hazardous materials associated with the development provide a preliminary risk screening in accordance with SEPP 33.	Section 4.0	-
Where required by SEPP 33, provide a Preliminary Hazard Analysis prepared in accordance with Hazardous Industry Planning Advisory Paper No.6 – Guidelines for Hazard Analysis	-	-

Requirement	EIS Section and/or Technical Study	
If the development is adjacent to or on land in a pipeline corridor, report on consultation outcomes with the operator of the pipeline and prepare a hazard analysis.	-	-
<b>Contamination and Remediation</b>		
In accordance with SEPP 55, assess and quantify any soil and groundwater contamination and demonstrate that the site is suitable (or will be suitable, after remediation) for the development.	Section 6.7	Appendix R
<b>Waste, Management and Servicing</b>		
Where applicable, identify, quantify and classify the likely waste streams to be generated during construction and operation.	Section 6.17	-
Where applicable, provide the measures to be implemented to manage, reuse, recycle and safely dispose of this waste	-	-
Where applicable, identify appropriate servicing arrangements for the site	-	-
If buildings are proposed to be demolished or altered, provide a hazardous materials survey.	-	-
<b>Aboriginal Cultural Heritage</b>		
Provide an Aboriginal Cultural Heritage Assessment Report prepared in accordance with relevant guidelines, identifying, describing and assessing any impacts for any Aboriginal cultural heritage values on the site	Section 6.5.1	Appendix H
<b>Environmental Heritage</b>		
Where there is potential for direct or indirect impacts on the heritage significance of items of environmental heritage, provide a Statement of Heritage Impact and Archaeological Assessment (if potential impacts to archaeological resources are identified), prepared in accordance with the relevant guidelines, which assesses any impacts and outlines measures to ensure they are minimised and mitigated.	Section 6.5	Appendix I
<b>Social Impact</b>		
Provide a Social Impact Assessment prepared in accordance with the Social Impact Assessment Guidelines for State Significant Projects	Section 6.17	Appendix M
<b>Infrastructure Requirements and Utilities</b>		
In consultation with relevant service providers:	Section 6.15	Appendix U
<ul style="list-style-type: none"> <li>assess the impacts of the development on existing utility infrastructure and service provider assets surrounding the site, including the Inner West Light Rail.</li> </ul>		
<ul style="list-style-type: none"> <li>assess the impact on and detail any measures to protect Sydney Water stormwater assess which traverse the site.</li> </ul>	Section 6.15	Appendix U
<ul style="list-style-type: none"> <li>identify any infrastructure upgrades, including for the Inner West Light Rail, required on-site and off-site to facilitate the development and any arrangements to ensure that the upgrades will be implemented on time and be maintained.</li> </ul>	Section 6.15	Appendix U
<ul style="list-style-type: none"> <li>provide an infrastructure delivery and staging plan, including a description of how infrastructure requirements would be co-ordinated, funded and delivered to facilitate the development.</li> </ul>	Section 6.15	Appendix U
<b>Construction and Operation Staging</b>		
If staging is proposed, provide details of how construction and operation would be managed and any impacts mitigated.	Section 1.5	-
<b>Contributions and Public Benefit</b>		
Address the requirements of any relevant contribution plan(s), existing planning agreement or EPI requiring a monetary contribution, dedication of land and/or works-in-kind and include details of any proposal for further material public benefit.	Section 6.18	-

Requirement	EIS Section and/or Technical Study	
Any draft planning agreement must be prepared in accordance with the Planning Agreements Practice Note, February 2021.	-	-
Where the development proposes alternative public benefits or a departure from an existing contributions framework, the local council, the Department and relevant State agencies are to be consulted prior to lodgement and details, including how comments have been addressed, are to be provided.	-	-
Engagement		
Detail engagement undertaken and demonstrate how it was consistent with the Undertaking Engagement Guidelines for State Significant Projects	Section 5.0	Appendix X
<p>Detail how issues raised and feedback provided have been considered and responded to in the project. In particular, applicants must consult with:</p> <ul style="list-style-type: none"> <li>the relevant Department assessment team</li> <li>any relevant local councils</li> <li>any relevant agencies</li> <li>local Aboriginal groups of the community</li> <li>if the development would have required an approval or authorisation under another Act but for the application of s 4.41 of the EP&amp;A Act or requires an approval or authorisation under another Act to be applied consistently by s 4.42 of the EP&amp;A Act, the agency relevant to that approval or authorisation.</li> </ul>	Section 5.0	Appendix X



## Attachment 2 – Statutory compliance table

Statutory Requirement	Report / EIS	Technical Study
<b>Commonwealth Acts of Parliament</b>		
<b>Environmental Protection and Biodiversity Conservation Act 1999</b>		
<b>Section 136 General Considerations</b>		
1) In deciding whether or not to approve the taking of an action, and what conditions to attach to an approval, the Minister must consider the following, so far as they are not inconsistent with any other requirement of this Subdivision: (a.) matters relevant to any matter protected by a provision of Part 3 that the Minister has decided is a controlling provision for the action (b.) economic and social matters.	N/A	-
2) In considering those matters, the Minister must take into account: (a.) the principles of ecologically sustainable development; and	N/A	-
(b.) the assessment report (if any) relating to the action	N/A	-
<b>Section 139 Requirements for decisions about threatened species and endangered communities</b>		
1) In deciding whether or not to approve for the purposes of a subsection of section 18 or section 18A the taking of an action, and what conditions to attach to such an approval, the Minister must not act inconsistently with: (a.) Australia's obligations under: (i.) the Biodiversity Convention; or (ii.) the Apia Convention; or (iii.) CITES; or (b.) a recovery plan or threat abatement plan.	Section 4.0	Appendix Y
2) If: (a.) the Minister is considering whether to approve, for the purposes of a subsection of section 18 or section 18A, the taking of an action; and (b.) the action has or will have, or is likely to have, a significant impact on a particular listed threatened species or a particular listed threatened ecological community; the Minister must, in deciding whether to so approve the taking of the action, have regard to any approved conservation advice for the species or community	Section 4.0	Appendix Y
<b>NSW Acts of Parliament</b>		
<b>Environmental Planning and Assessment Act 1979</b>		
<b>Section 1.3 Objects of the Act</b>		
(a.) to promote the social and economic welfare of the community and a better environment by the proper management, development and conservation of the State's natural and other resources, (b.) to facilitate ecologically sustainable development by integrating relevant economic, environmental and social considerations in decision-making about environmental planning and assessment, (c.) to promote the orderly and economic use and development of land, (d.) to promote the delivery and maintenance of affordable housing, (e.) to protect the environment, including the conservation of threatened and other species of native animals and plants, ecological communities and their habitats, (f.) to promote the sustainable management of built and cultural heritage (including Aboriginal cultural heritage), (g.) to promote good design and amenity of the built environment, (h.) to promote the proper construction and maintenance of buildings, including the protection of the health and safety of their occupants,	Section 7.1	

Statutory Requirement	Report / EIS	Technical Study
(i.) to promote the sharing of the responsibility for environmental planning and assessment between the different levels of government in the State, (j.) to provide increased opportunity for community participation in environmental planning and assessment.		
<b>Section 4.15 Evaluation</b>		
1) Matters for consideration—general In determining a development application, a consent authority is to take into consideration such of the following matters as are of relevance to the development the subject of the development application— (a.) the provisions of— (i.) any environmental planning instrument, and	Section 7.2.1 & refer to the Environmental Planning Instruments presented further below.	
(ii.) any proposed instrument that is or has been the subject of public consultation under this Act and that has been notified to the consent authority (unless the Planning Secretary has notified the consent authority that the making of the proposed instrument has been deferred indefinitely or has not been approved), and	Section 7.2.2	
(iii.) any development control plan, and	Section 7.2.3	
(iii.a.) any planning agreement that has been entered into under section 7.4, or any draft planning agreement that a developer has offered to enter into under section 7.4, and	Section 7.2.4	
(iv.) the regulations (to the extent that they prescribe matters for the purposes of this paragraph), that apply to the land to which the development application relates,	Section 7.2.5	
(b.) the likely impacts of that development, including environmental impacts on both the natural and built environments, and social and economic impacts in the locality	Section 7.2.6	
(c.) the suitability of the site for the development,	Section 7.2.7	
(d.) any submissions made in accordance with this Act or the regulations	Public consultation is expected to be carried out by DPE on the submitted development application. Any submissions received as a result are for DPE's consideration in its assessment of the application against applicable plans and policies.	
(e.) the public interest	Section 7.2.8	
<b>Biodiversity Conservation Act</b>		
2) The Minister for Planning, when determining in accordance with the <i>Environmental Planning and Assessment Act 1979</i> any such application, is to take into consideration under that Act the likely impact of the proposed development on biodiversity values as assessed in the biodiversity development assessment report. The Minister for Planning may (but is not required to) further consider under that Act the likely impact of the proposed development on biodiversity values	Section 4.0	Appendix Y
3) If the Minister for Planning is of the opinion that proposed State significant development or State significant infrastructure that is the subject of an application to which this Division applies is likely to have serious and irreversible impacts on biodiversity values, the Minister— (a.) is required to take those impacts into consideration, and (b.) is required to determine whether there are any additional and appropriate measures that will minimise those impacts if consent or approval is to be granted	Section 4.0	Appendix Y

Statutory Requirement	Report / EIS	Technical Study
<b>NSW EPIs</b>		
<b>State Environmental Planning Policy (Biodiversity and Conservation) 2021</b>		
10.10 The planning principles for land within the Sydney Harbour Catchment are as follows— (a) development is to protect and, where practicable, improve the hydrological, ecological and geomorphological processes on which the health of the catchment depends, (b) the natural assets of the catchment are to be maintained and, where feasible, restored for their scenic and cultural values and their biodiversity and geodiversity, (c) decisions with respect to the development of land are to take account of the cumulative environmental impact of development within the catchment, (d) action is to be taken to achieve the targets set out in Water Quality and River Flow Interim Environmental Objectives: Guidelines for Water Management: Sydney Harbour and Parramatta River Catchment (published in October 1999 by the Environment Protection Authority), such action to be consistent with the guidelines set out in Australian Water Quality Guidelines for Fresh and Marine Waters (published in November 2000 by the Australian and New Zealand Environment and Conservation Council), (e) development in the Sydney Harbour Catchment is to protect the functioning of natural drainage systems on floodplains and comply with the guidelines set out in the document titled Floodplain Development Manual 2005 (published in April 2005 by the Department), (f) development that is visible from the waterways or foreshores is to maintain, protect and enhance the unique visual qualities of Sydney Harbour, (g) the number of publicly accessible vantage points for viewing Sydney Harbour should be increased, (h) development is to improve the water quality of urban run-off, reduce the quantity and frequency of urban run-off, prevent the risk of increased flooding and conserve water, (i) action is to be taken to achieve the objectives and targets set out in the Sydney Harbour Catchment Blueprint, as published in February 2003 by the then Department of Land and Water Conservation, (j) development is to protect and, if practicable, rehabilitate watercourses, wetlands, riparian corridors, remnant native vegetation and ecological connectivity within the catchment, (k) development is to protect and, if practicable, rehabilitate land from current and future urban salinity processes, and prevent or restore land degradation and reduced water quality resulting from urban salinity, (l) development is to avoid or minimise disturbance of acid sulfate soils in accordance with the Acid Sulfate Soil Manual, as published in 1988 by the Acid Sulfate Soils Management Advisory Committee.	Section 4.0	-
<b>State Environmental Planning Policy (Planning Systems) 2021</b>		
13 Cultural, recreation and tourist facilities (1) Development that has a capital investment value of more than \$30 million for any of the following purposes— (a) film production, the television industry or digital or recorded media, (b) convention centres and exhibition centres, (c) entertainment facilities, (d) information and education facilities, including museums and art galleries, (e) recreation facilities (major), (f) zoos, including animal enclosures, administration and maintenance buildings, and associated facilities.	Section 4.0	A CIV Report has been provided under a separate cover
<b>State Environmental Planning Policy (Resilience and Hazards) 2021</b>		
<b>Section 6.1 – Contamination and remediation to be considered in determining development applications</b>		
(1) A consent authority must not consent to the carrying out of any development on land unless—	Section 4.0, Section 6.7	Appendix R

Statutory Requirement	Report / EIS	Technical Study
<p>(a) it has considered whether the land is contaminated, and</p> <p>(b) if the land is contaminated, it is satisfied that the land is suitable in its contaminated state (or will be suitable, after remediation) for the purpose for which the development is proposed to be carried out, and</p> <p>(c) if the land requires remediation to be made suitable for the purpose for which the development is proposed to be carried out, it is satisfied that the land will be remediated before the land is used for that purpose.</p>		
<b>Sydney Local Environmental Plan 2012</b>		
<b>Clause 2.3 Zone Objectives and Land Use Table</b>		
(2) The consent authority must have regard to the objectives for development in a zone when determining a development application in respect of land within the zone.	Section 4.0	
<b>Section 4.3 Height of buildings</b>		
(2) The height of a building on any land is not to exceed the maximum height shown for the land on the Height of Buildings Map.	Section 4.0 Section 6.1	Appendix W
<b>Section 4.4 Floor space ratio</b>		
(2) The maximum floor space ratio for a building on any land is not to exceed the floor space ratio shown for the land on the Floor Space Ratio Map.	Section 4.0	Appendix B, C
<b>Section 5.10 Heritage Conservation</b>		
(4) Effect of proposed development on heritage significance. The consent authority must, before granting consent under this clause in respect of a heritage item or heritage conservation area, consider the effect of the proposed development on the heritage significance of the item or area concerned. This subclause applies regardless of whether a heritage management document is prepared under subclause (5) or a heritage conservation management plan is submitted under subclause (6).	Section 4.0, Section 6.5	Appendix G, H, I
<b>Section 5.21 Flood Planning</b>		
<p>(2) Development consent must not be granted to development on land the consent authority considers to be within the flood planning area unless the consent authority is satisfied the development—</p> <p>(a) is compatible with the flood function and behaviour on the land, and</p> <p>(b) will not adversely affect flood behaviour in a way that results in detrimental increases in the potential flood affectation of other development or properties, and</p> <p>(c) will not adversely affect the safe occupation and efficient evacuation of people or exceed the capacity of existing evacuation routes for the surrounding area in the event of a flood, and</p> <p>(d) incorporates appropriate measures to manage risk to life in the event of a flood, and</p> <p>(e) will not adversely affect the environment or cause avoidable erosion, siltation, destruction of riparian vegetation or a reduction in the stability of river banks or watercourses.</p>	Section 4.0, Section 6.14.3	Appendix V
<b>Section 6.21C Design Excellence</b>		
(1) Development consent must not be granted to development to which this Division applies unless, in the opinion of the consent authority, the proposed development exhibits design excellence.	Section 3.6, Section 4.0	Appendix E
<b>Section 7.2 Car parking spaces not to exceed maximum set out in this division</b>		
(1) Development consent must not be granted to development that includes car parking spaces in connection with a proposed use of land if the total number of car parking spaces (including existing car parking spaces) provided on the site would be greater than the maximum set out in this Division.	Section 4.0, Section 6.6	Appendix J

Statutory Requirement	Report / EIS	Technical Study
<b>Section 7.14 Acid Sulfate Soils</b>		
(3) Development consent must not be granted under this clause for the carrying out of works unless an acid sulfate soils management plan has been prepared for the proposed works in accordance with the Acid Sulfate Soils Manual and has been provided to the consent authority.	Section 4.0, Section 6.8	Appendix S



## Attachment 3 – Mitigation Measures

The collective measures required to mitigate the impacts associated with the proposed works are detailed in below table. These measures have been derived from the previous assessment in **Section 6.0** and those detailed in appended consultants' reports. It is noted that no physical works are proposed as part of this Concept SSDA, and as such the proposed Mitigation Measures are categorised into processes and considerations for design refinement, and recommendations for future environmental assessment requirements.

Ref No.	Mitigation Measure
<b>Design Refinement</b>	
<i>DR-1</i>	The Urban Design Guidelines in Sections 5 and 6 of Urban Design Report prepared by JWA and Aspect Studios shall be adopted in shaping and assessing any competitive design process and subsequent detailed Development Application.
<i>DR-2</i>	The detailed design of the development shall be the subject of a competitive design process and carried out in accordance with the endorsed Design Excellence Strategy.
<i>DR-3</i>	The detailed design of the development shall demonstrate a pathway to achieve a minimum 5 Star Green Star rating, and how the aspirational 6 Star Green Star rating might be achieved or elements of this might be achieved.
<i>DR-4</i>	The detailed design of any built form and public domain shall be conducted with consideration of the CMP, and have regard to the recommendations in Section 8.1 of the Heritage Impact Statement prepared by Curio Projects.
<i>DR-5</i>	The detailed design of any built form and public domain shall have consideration of the principles of Crime Prevention Through Environmental Design and the recommendations contained in the CPTED Report prepared by Ethos Urban.
<i>DR-6</i>	In addition to the principles and objectives in the Urban Design Guidelines, the detailed design of public spaces are to ensure a diversity of plant family, genus and species to provide greater resilience against pests, diseases and climatic conditions. The potential mature size of new trees should be considered to ensure sufficient space for the development of good tree form. New trees should be grown and supplied in accordance with <i>Australian Standard 2303 Tree Stock for Landscape Use (2015)</i> .
<b>Future Assessment</b>	
<i>FA-1</i>	A Visual Impact Assessment will be prepared to reflect the detailed design and submitted with the Stage 2 Development Application assessing public and private view impacts.
<i>FA-2</i>	The future Development Application shall include an overshadowing impact assessment including shadow studies and diagrams showing the likely overshadowing impact of the development on surrounding spaces and properties.
<i>FA-3</i>	Further wind modelling will be prepared to reflect the detailed design and submitted with the Stage 2 Development Application identifying how the design has addressed the relevant comfort and safety criterions.
<i>FA-4</i>	<p>A future Development Application shall address:</p> <ul style="list-style-type: none"> <li>• Archaeological Research Design and Methodology and/or including an Aboriginal Research Design and Methodology to guide potential future works</li> <li>• Protocols for an Aboriginal cultural heritage induction as part of construction management processes</li> <li>• An Aboriginal unexpected finds protocol as part of construction management processes</li> <li>• Protocols for the unexpected discovery of any potential skeletal remains as part of construction management processes</li> <li>• Ongoing consultation with the identified Aboriginal stakeholders (RAPs)</li> <li>• A Heritage Interpretation Strategy or initiatives</li> </ul>
<i>FA-5</i>	The Transport Assessment is to be revised and resubmitted with the Stage 2 Development Application, outlining any changes to traffic and transport management approach including an updated Green Travel Plan and consideration of demolition and construction processes.
<i>FA-6</i>	A Noise and Vibration Impact Assessment shall accompany the Stage 2 SSDA discussed how the detailed design and operation of the site can achieve the adopted criteria, and be reasonably minimised and mitigated.
<i>FA-7</i>	An updated Arboricultural Impact Assessment is to be submitted with the Stage 2 Development Application confirming tree retention and removal for the project.
<i>FA-8</i>	A future Development Application shall provide a detailed site investigation (including soil and groundwater sampling) for accessible parts of the site, and outline commitments for a detailed site investigation post-demolition for other affected areas of the site that are affected by physical and operational constraints.

Ref No.	Mitigation Measure
<i>FA-9</i>	A future Development Application shall provide an updated Geotechnical Report addressing earthworks, excavation, foundations, acid sulfate soils, soil salinity and other specific geotechnical impacts as needed.
<i>FA-10</i>	A future Development Application shall provide an updated Infrastructure Management Strategy, including any necessary preliminary consultation with service providers, detailing the augmentation, removal or protection of services and utilities.
<i>FA-11</i>	A future Development Application shall detail compliance with nominated pollutant reduction targets and flood planning levels.
<i>FA-12</i>	Prior to the commencement of any physical works that are the subject of a separate and future DA, the application will demonstrate how appropriate sediment and erosion control measures have been implemented.
<i>FA-13</i>	A future Development Application shall provide an assessment of the relevant provisions of the Building Code of Australia and the Disability Discrimination Act to demonstrate that the project is capable of compliance, or alternative performance measures.
<i>FA-14</i>	A future Development Application shall provide an assessment of the quantity and likely streams of waste during the construction and operational phases of the project, and measures to be implemented to manage, reuse, recycle and safely dispose of this waste.
<i>FA-15</i>	The complete Aboriginal Cultural Heritage Assessment Report is to be provided to Registered Aboriginal Parties for review in accordance with the 'Guide to investigating, assessing and reporting on Aboriginal Cultural Heritage in NSW'. The final ACHAR will be submitted to DPE prior to determination.