

Heritage Impact Statement

Powerhouse Ultimo Renewal Project

September 2022

Document Information

Citation

Curio Projects 2022, *Heritage Impact Statement—Powerhouse Ultimo Renewal Project*, prepared for Create NSW.

Local Government Area

City of Sydney

Cover Image

"Ultimo Powerhouse" (no date). Source: City of Sydney Archives, CoS SRC14562

Issue	Issue date	Version	Notes/Comments	Author	Review
1	28 April 2022	Draft Report	Client Review	Sam Cooling Mikhaila Chaplin	Natalie Vinton
2	18 May 2022	Final Draft for Approval	Client Review	Mikhaila Chaplin Alex Thorn	Adele Zubrzycka Natalie Vinton
3	24 May 2022	Final	For Submission	Mikhaila Chaplin	Alex Thorn
4	10 Sept 2022	Post-Exhibition Draft	Client Review	Natalie Vinton	
5	19 Sept 2022	Final Post Exhibition	For Submission	Natalie Vinton	

This report has been prepared based on research by Curio Projects specialists. Historical sources and reference material used in the preparation of this report are acknowledged and referenced at the end of each section and in figure captions.

Unless otherwise specified or agreed, copyright in the intellectual property of this report vests jointly in Curio Projects Pty Ltd.

Curio Projects Pty Ltd
5 Blackfriars Street
Chippendale NSW 2008

Contents

Document Information	2
Executive Summary	6
1. Introduction	11
1.1. Process	15
1.2. Site Description	15
1.3. Overview of the Development	17
1.4. Assessment Requirements	17
1.5. Mitigation Measures	19
1.6. Limitations and Constraints	19
1.7. Authorship	20
2. Statutory Context	21
2.1. Environmental Planning and Assessment Act 1979	22
2.1.1. Sydney Local Environment Plan (LEP) 2012	22
2.1.2. Property NSW Section 170 Register	23
2.2. NSW Heritage Act 1977	24
2.2.1. NSW State Heritage Register (SHR)	24
2.2.2. Ultimo Powerhouse	24
2.2.3. Ultimo Post Office	27
2.3. Non-Statutory Listings	27
2.4. Conservation Management Plan (CMP)	27
2.5. Heritage Items in the Vicinity	29
3. Historical Context	32
4. Site Description	47
5. Heritage Significance	53
5.1. Previous Statements of Significance	55

5.2. Potential Aboriginal Cultural Heritage Significance	57
5.3. Potential Historical Archaeological Significance	58
5.3.1. Statement of Historical Archaeological Significance	59
5.4. Ultimo Power House—Updated Statement of Heritage Significance	60
5.4.1. Criterion (a)—Historical Significance	60
5.4.2. Criterion (b)—Associative Significance	61
5.4.3. Criterion (c)—Aesthetic Significance	61
5.4.4. Criterion (d)—Social Significance	62
5.4.5. Criterion (e)—Scientific Significance	62
5.4.6. Criterion (f) – Rarity	63
5.4.7. Criterion (g)—Representativeness	63
5.5.1. Ultimo Post Office (SHR 00502/LEP I2030)	65
5.5.2. Water Cooling System and Manifold	65
5.5.3. Goods Line (Darling Harbour Rail Corridor)	66
5.6. Significant Views	66
5.6.1. Views from Darling Harbour	66
5.6.2. View from William Henry Street Bridge	67
5.6.3. Views from The Goods Line	67
5.6.4. Views and Access from Darling Drive, Exhibition Light Rail Station and Hay Street	67
6. Description of Concept Plan	74
6.1. Concept Plan	75
7. Assessment of Heritage Impact	82
7.1. Discussion	83
7.1.1. Heritage Buildings	83
7.1.2. Former Ultimo Post Office	84
7.1.3. Wran Building	84
7.1.4. Former Pump House	85
7.1.5. Building Envelope—Harris St Forecourt	86
7.1.6. Building Envelope—Goods Line Forecourt	87

7.1.7. Public Domain Renewal	87
7.1.8. Views and Vistas	89
7.2. Summary of Physical Impacts	94
7.3. Summary of Visual Impacts	95
7.4. Archaeological Impacts	96
7.4.1. Historical Archaeology	96
7.4.2. Aboriginal Archaeology	98
7.5. Statement of Heritage Impact	98
8. Conclusions and Recommendations	99
8.1. Stage 2 Detailed Design	100
8.2. Archaeology	102
8.2.1. Historical Archaeology	102
8.2.2. Aboriginal Archaeology	103
8.3. Heritage Interpretation	104
9. References	106

Executive Summary

Curio Projects Pty Ltd (Curio) was commissioned by the Department of Enterprise, Investment and Trade (Create NSW) to support a State Significant Development (SSD) Development Application (DA) for alterations and additions to Powerhouse Ultimo at 500 Harris Street, Ultimo (the study area).

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 Concept SSDA is Stage 1 of a two-stage development process for the Powerhouse Ultimo Renewal.

The objectives for this development (the Concept SSDA) are to:

- Deliver an international standard museum that is complimentary to Powerhouse Parramatta, Powerhouse Castle Hill and Sydney Observatory on the existing site of Powerhouse Ultimo.
- 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.¹

The Powerhouse Ultimo site contains two heritage-listed buildings, being the Ultimo Power House (Turbine Hall, Engine House, Boiler House, North Annex and Switch House) (SHR 02045²) and the Ultimo Post Office (SHR 00502³), both of which are listed on the State Heritage Register and on the local City of Sydney LEP under the *NSW Heritage Act 1977* (Heritage Act).

The purpose of this report is to review and assess the Concept Proposal including overarching principles and controls, as they relate to heritage (both Aboriginal and non-Aboriginal), in order to

¹ Ethos Urban, Environmental Impact Statement, May 2022. P9

² State Heritage Inventory, *Ultimo Power House*, State Heritage Register Item

³ State Heritage Inventory, *Ultimo Post Office*, State Heritage Register Item

guide the management of heritage values as part of the Stage 2 SSDA detailed design, construction and operation of buildings and public domain spaces. It is important to note that as part of this Concept Proposal no physical works are proposed. Specifically, this report

- Assesses any potential built heritage impacts that the Concept Proposal may have on any built heritage items of significance within, and/or in the vicinity of, the study area;
- Identifies whether or not Aboriginal objects are, or are likely to be, present within the study area and if the proposed future development would be likely to harm Aboriginal objects (if present); and
- Identifies whether or not the study area has the potential to contain historical archaeological 'relics', as defined under the NSW Heritage Act and whether, or not.

While summarised in this report, for further detail regarding the built heritage values, constraints and opportunities; historical archaeological assessment and mitigation strategies; and Aboriginal archaeology and cultural heritage values; reference should be made to each of these specialised reports as follows:

- Curio Projects 2022, *Historical Archaeological Assessment, Powerhouse Ultimo Renewal Project*, prepared for Create NSW.
- Curio Projects 2022 *Conservation Management Plan, Powerhouse Ultimo*, prepared for Powerhouse and Create NSW.
- Curio Projects, 2022, *Aboriginal Cultural Heritage Assessment Report, Powerhouse Ultimo Renewal Project*, prepared for Create NSW.

Statement of Heritage Impact:

The updated Concept Proposal minimises impacts to the heritage significance and values of the site by avoiding any major physical impacts to local and SHR-listed heritage items, including significant fabric, instead locating new floor space and facilities into features with a higher tolerance for change and intervention and sensitive placement of a new built form external to the listed buildings.

The updated Concept Proposal has significantly reduced the size and extent of the proposed building envelopes surrounding the State and local listed heritage items. There is no envelope over the buildings comprising the 'heritage core' other than an envelope above the listed Switch House limited in height to RL 27.88 to provide for a re-imagining of the existing modern intervention. The envelope in Zone 3 on the northern elevation of the heritage items has been reduced in extent and facilitates an opportunity for the detailed design stage to incorporate the Pump House remains as an important feature of that design. The envelope has been removed over the Post Office building and there exists opportunity to integrate this important State and local listed item within the Powerhouse Ultimo site.

The envelopes within Zones 1 and 2, with a maximum height of 28m have the potential for significant negative impacts on heritage items within the site. However, those envelopes are a component of the Concept Proposal that also requires a limit on GFA to a maximum of 40,000sqm and a minimum 2,200sqm of public open space. The envelopes identify the parts of the site where such future development could occur and provide a degree of latitude for the design excellence competition.

The Concept Proposal seeks approval for the proposed envelopes in tandem with the updated Conservation Management Plan and Urban Design Guidelines. The impact of these documents on the potential built form of the envelopes is to confine the built form (in quantitative and qualitative ways) to ensure an appropriate design response. Through implementation of the Urban Design

Guidelines and Conservation Management Plan, the impact of the envelopes on the heritage items would be neutral or positive.

Conclusions and Recommendations:

The Concept Proposal comprising of the combination of the proposed envelopes, maximum GFA, minimum public domain and the Urban Design Guidelines address the heritage issues identified above and provides for neutral or positive heritage impacts. The Design Excellence Competition and Stage 2 SSDA detailed design will be guided by best practice heritage principles, as outlined in this document and the Powerhouse Ultimo Conservation Management Plan, to avoid adverse impact to individual heritage-listed items, as well as the significant heritage character and context of the site within its broader setting.

Recommendations for detailed design include:

1. The Design Excellence Competition and subsequent Stage 2 SSDA detailed design must consider Aboriginal and Torres Strait Islander connections to the site and continuing practice. The NSW Government Architect's Better Placed: Draft Connecting with Country framework⁴ and Draft Designing with Country Discussion Paper⁵ should guide this process supported by the Powerhouse Caring for Country Principles which have been developed through community consultation with First Nations and Aboriginal communities with connections to the site.
2. New works to; within; or within close vicinity to heritage items identified in the CMP, including alterations and/or additions to heritage-listed items should retain, protect and enable visibility of significant heritage fabric, key architectural features and insitu heritage elements such as the gantry beams and cranes, roof trusses, columns, and overhead tracks.
3. Any new elements proposed to be built adjacent to and within heritage spaces should be designed as stand-alone lightweight, contemporary elements that respect the significance of original fabric and spaces; can be easily read as new work and can be readily reversed in the future, with minimal to no impact to significant fabric where possible.
4. Introduced new elements, either internal or external should not dominate, distort, obscure or negatively detract from the significance of heritage-listed items. In particular, all new work must respect scale, materiality and key architectural features associated with the heritage-listed items and their broader setting.
5. Where possible, all proposed, new work should aim to improve upon the existing visibility to the fabric of the heritage-listed items and aim to improve the visibility and readability of the external facades of the Ultimo Powerhouse, the Post Office Building, including where possible, their relationship with one another and the broader precinct, including The Goods Line.
6. The spatial volumes and remnant industrial elements of the Engine Room, and Turbine Hall are significant heritage features of these spaces and should be retained and interpreted, in

⁴ GANSW, 2020. Better Placed: Draft Connecting with Country

⁵ GANSW 2020. Designing with Country.

accordance with the policies and guidelines outlined in the Powerhouse Ultimo Conservation Management Plan ('the CMP')⁶.

7. Detailed design should avoid application of any activities or elements proposed for the Engine and Turbine Halls and Boiler House that would require closing in the open roof plan or conversion of the spaces into a 'black box' or similar (i.e. such as a false ceiling). Covering of, and/or impacts to the significant industrial architecture of these items including roof trusses, and insitu industrial equipment such as the gantry crane, columns etc should be avoided as it would have a detrimental visual and physical impact on the significance of the building.
8. Any proposal to convert the heritage core spaces (particularly the Engine Room, Turbine Hall and Boiler House) will need to consider how to manage elements such as light spill and acoustics so that there are no detrimental impacts to the original physical fabric of the building, including spatial volume and overall visual aesthetic.
9. New work should be readily identifiable as such. It must respect and have minimal impact on the heritage significance of the place.
10. An overarching Heritage Interpretation Strategy for the Powerhouse Ultimo site should be developed in conjunction with the Stage 2 SSD development works, with particular focus on integration of meaningful interpretation within the renewed museum site, including the public domain and landscaping design. The Heritage Interpretation Strategy should be submitted for approval as part of the Stage 2 SSD application.

The following recommendations are made with respect to mitigation measures and strategies for historical archaeology for the Powerhouse Ultimo Renewal project:

1. Once further impacts of the design resulting from the Design Competition are identified then assessment of these impacts will need to occur as part of the Stage 2 SSDA.
2. Historical archaeological investigation of the study area will be required prior to commencement of development works.
3. An Archaeological Research Design and Excavation Methodology (ARD + EM) should be developed to guide the approach and methodology for archaeological investigation.

The following recommendations are made with respect to mitigation measures and strategies for Aboriginal Archaeology for the Powerhouse Ultimo Renewal project:

1. A secondary, Stage 2 ACHAR to be completed following finalisation of concept designs for the Project and when ground disturbing impacts are known. The Stage 2 ACHAR to be completed with Aboriginal community consultation and in accordance with the relevant guidelines. The Stage 2 ACHAR will inform any future assessment requirements and/or Aboriginal archaeological test excavation (Recommendation 2).
2. Archaeological test excavations are required to determine the nature, extent and significance of any sub-surface Aboriginal objects and archaeological resources within the

⁶ Curio Projects, 2022. Powerhouse Ultimo Conservation Management Plan

study area. This Stage 1 ACHAR has determined that future assessment in the form of a Stage 2 ACHAR will be required as part of Stage 2 works (Recommendation 1) and that an Aboriginal archaeological test excavation will likely be required prior once the intended potential impacts to the site have been determined (and subject to access being available prior to the commencement of works).

3. The results of the test excavations must be incorporated into the Stage 2 ACHAR or documented in an addendum document and supplied to the project RAPs for comment in accordance with Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 (DECCW, 2010).
4. Final decision of long-term management of any artefacts located during the test excavation process will require management under a Care and Control Agreement under s.85A(1)(c) of the NPW Act. The details of the Care and Control Agreement are to be decided upon in consultation/discussion with Project RAPs, Create NSW, Powerhouse Museum, and Curio Projects, prior to the conclusion of archaeological investigations within the study area.
5. The Applicant should continue to consult with the identified Aboriginal stakeholders (RAPs) throughout the lifetime of the Project. The consultation outlined as part of this ACHAR is valid for six months and must be maintained by the Proponent for it to remain continuous.
6. Should Aboriginal community consultation be restarted as part of Stage 2 ACHAR assessment, the RAPs identified for this Stage 1 ACHAR be included in any future registration of Aboriginal stakeholders.
7. Prior to commencement of future site works, site contractors should undergo an Aboriginal cultural heritage induction, to be lead/delivered by Project RAPs, to communicate the significance of site, deposits, and need to protect and conserve.
8. The induction material should include an overview of the types of sites to be aware of (i.e. artefact scatters or concentrations of shells that could be middens), obligations under the NPW Act, and the requirements of an archaeological finds' procedure (refer to Recommendation 2).
9. Potential options and opportunities for appropriate and feasible Aboriginal cultural heritage interpretation for the Powerhouse Ultimo Renewal Project will be developed in consultation between Create NSW the First Nations Directorate of the Powerhouse Ultimo, the Project RAPs and the Project archaeologists throughout the Project process, including throughout the Stage 1 Concept Proposal and Stage 2 SSD detailed design. Through the direct discussion between Project RAPs and the proponent, the consultation process and the review of the ACHAR, the identification of the most meaningful outcome for the Project can be established, with some examples already put forth including the possibility for a Keeping Place on site, as well as the reinstatement of natural vegetation and any other management and mitigative initiatives that may be discussed in future.

1. Introduction

1. Introduction

This Heritage Impact Statement (HIS) report has been prepared by Curio Projects Pty Ltd (Curio) on behalf of the Department of Enterprise, Investment and Trade (Create NSW) to support a State Significant Development (SSD) Development Application (DA) for alterations and additions to Powerhouse Ultimo at 500 Harris Street, Ultimo (the study area).

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 Concept SSDA is Stage 1 of a two-stage development process for the Powerhouse Ultimo Renewal.

The objectives for this development (the Concept SSDA) are to:

- Deliver an international standard museum that is complimentary to Powerhouse Parramatta, Powerhouse Castle Hill and Sydney Observatory on the existing site of Powerhouse Ultimo.
- 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.⁷

The Powerhouse Ultimo site contains two heritage-listed buildings, being the Ultimo Power House (Turbine Hall, Engine House, Boiler House, North Annex and Switch House) (SHR 02045⁸) and the Ultimo Post Office (SHR 00502⁹), both of which are listed on the State Heritage Register under the *NSW Heritage Act 1977* (Heritage Act).

The former Ultimo Power House¹⁰ (I2031, 14 Dec 12), and the Ultimo Post Office¹¹ (I2030, 14 Dec 12) are also identified as local heritage items in Schedule 5 of the Sydney LEP 2012.

⁷ Ethos Urban, Environmental Impact Statement, May 2022. P9

⁸ State Heritage Inventory, *Ultimo Power House*, State Heritage Register Item

⁹ State Heritage Inventory, *Ultimo Post Office*, State Heritage Register Item

¹⁰ State Heritage Inventory, *Powerhouse Museum Former Warehouse Buildings, including interiors*, Local Environmental Plan Item.

¹¹ State Heritage Inventory, *Former Ultimo Post Office Including Interior*, Local Environmental Plan Item.

The purpose of this report is to review and assess the Concept SSDA as they relate to heritage (both Aboriginal and non-Aboriginal), in order to guide the management of heritage values as part of the future design process (the subject of a design competition). It is important to note that as part of this Concept SSDA no physical works are proposed. Specifically, this report assesses the effect of the Concept Proposal on the heritage significance of the above heritage items and any potential built heritage impacts that the Concept SSDA may have on environmental heritage within, and/or in the vicinity of, the study area.

While summarised in this report, for further detail regarding the built heritage values, constraints and opportunities; historical archaeological assessment and mitigation strategies; and Aboriginal archaeology and cultural heritage values; reference should be made to each of these specialised reports as follows:

- Curio Projects 2022, *Historical Archaeological Assessment, Powerhouse Ultimo Renewal Project*, prepared for Create NSW.
- Curio Projects 2022 *Conservation Management Plan, Powerhouse Ultimo*, prepared for Powerhouse and Create NSW.
- Curio Projects, 2022, *Aboriginal Cultural Heritage Assessment Report, Powerhouse Ultimo Renewal Project*, prepared for Create NSW.
- Coast History & Heritage, 2022, *Aboriginal History Overview – Powerhouse Ultimo*, Final Draft, April 2022.

This HIS has been prepared in accordance with relevant statutory guidelines including:

Heritage NSW Guidelines

- NSW Heritage Office, 2001. *Assessing Heritage Significance*;
- NSW Heritage Council, 2002. *Statement of Heritage Impact*;
- NSW Heritage Office, 2005. *Design in Context: Guidelines for Infill Development in the Historic Environment*;
- NSW Heritage Council, 2006. *Historical Archaeology Code of Practice* (second edition);
- *Heritage Interpretation Policy* (NSW Heritage Office & NSW Heritage Council 2005)
- *Historical Archaeology Code of Practice* (NSW Heritage Branch, second edition, 2006)

(Former) OEH & DECCW Guidelines

- DECCW 2010. *Code of Practice for the Archaeological Investigation of Aboriginal Objects in New South Wales*. (Code of Practice),
- DECCW 2010. *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010*. (Consultation Guidelines).
- *Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW* (DECCW 2010).
- *Aboriginal Heritage Impact Permits, a Guide for Applicants*. (OEH 2011)

Government Architect NSW

- *Design Guide for Heritage* (Heritage Council NSW & Government Architect NSW 2019)
- *Draft Connecting With Country* (Government Architect NSW 2020);
- *Designing With Country* (Government Architect NSW 2020)

ICOMOS Guidelines

- Australia ICOMOS, 2013. *Australia ICOMOS Charter for Places of Cultural Significance, The Burra Charter*
 - *Interpretation Practice Note* (ICOMOS 2013)
 - *Understanding & Assessing Cultural Heritage Significance Practice Note* (ICOMOS 2013)
 - *Intangible Cultural Heritage & Place Practice Note* (ICOMOS 2017)

This HIS has also been prepared with reference to the following documents relevant to the Project:

- Curio Projects, 2022a *Historical Archaeological Assessment, Powerhouse Ultimo Renewal Project*, prepared for Create NSW.
- Curio Projects, 2022b *Conservation Management Plan, Powerhouse Ultimo*, prepared for The Powerhouse and Create NSW.
- Curio Projects, 2022c *Aboriginal Cultural Heritage Assessment Report, Powerhouse Ultimo Renewal Project*, prepared for Create NSW.
- JWA & Aspect, 2022a. *Powerhouse Ultimo Renewal Urban Design Report, Rev. 4*, dated 14 April 2022.
- JWA & Aspect, 2022b. *Powerhouse Ultimo Renewal Revised Urban Design Report and Analysis, Rev 4*, dated 19 September 2022.
- JWA 2022, *Powerhouse Ultimo Renewal Architectural Drawing Set, Rev. 4*, dated 19 September 2022
- Architectural Projects, 2003, *Conservation Management Plan: The Powerhouse Museum*, prepared for the Powerhouse Museum.
- Artefact, 2017, *The Bays Market Precinct Rezoning: Aboriginal Cultural Heritage Assessment Report (ACHAR)*, prepared for Infrastructure NSW.
- Coast History & Heritage, 2022, *Aboriginal History Overview – Powerhouse Ultimo*, Final Draft, April 2022.
- Design 5, *Powerhouse Museum Design Principles (DRAFT)*, with Lionel Glendenning and Richard Johnson, 2021.
- Ethos Urban 2022, *Visual Impact Assessment, 500 Harris Street Ultimo, Powerhouse Ultimo Renewal, on behalf of Create NSW*, 6 May 2022.
- Cracknell & Lonergan Architects, *Assessment of Heritage Significance, Ultimo Tramways, Power House Museum*, Independent Review prepared for Heritage NSW (Rev B. 30 Jan 2020), 2020
- Godden D, E Higginbotham, E Pinder, J Whittaker, R Young, 1984, *The History and Technology of the Ultimo Power House Sydney*. A report for the Government Architects Branch, Public Works Department of New South Wales.
- Property NSW, *Water Cooling System and Manifold*, Section 170 Register, accessed April 2022, <http://www.shfa.nsw.gov.au/sydney-About_us-Heritage_role-Heritage_and_Conservation_Register.htm&objectid=177>
- SHI Listing *Darling Harbour Rail Corridor* ; Transport Heritage NSW, 'Sydney's Metropolitan Goods Line', *Transport Heritage NSW* (website), accessed January 2021, <<https://www.thnsw.com.au/post/sydney-s-metropolitan-goods-lines>>
- State Heritage Inventory, *Powerhouse Museum Former Warehouse Buildings, including interiors*, Local Environmental Plan Item, accessed April 2022, <<https://www.hms.heritage.nsw.gov.au/App/Item/ViewItem?itemId=2424493>>
- State Heritage Inventory, *Ultimo Power House*, State Heritage Register Item, accessed April 2022, <<https://www.hms.heritage.nsw.gov.au/App/Item/ViewItem?itemId=5055576>>
- State Heritage Inventory, *Ultimo Post Office*, State Heritage Register Item, accessed April 2022, <<https://www.hms.heritage.nsw.gov.au/App/Item/ViewItem?itemId=5045092>>
- State Heritage Inventory, *Former Ultimo Post Office Including Interior*, Local Environmental Plan Item, accessed April 2022, <<https://www.hms.heritage.nsw.gov.au/App/Item/ViewItem?itemId=2424431>>
- Tanner Kibble Denton Architects Pty Ltd, Letter to Urbanest re 2013 Statement of Heritage Impact, 10 September 2015.

1.1. Process

The Powerhouse Ultimo Renewal project is for the purposes of an ‘information and education facility’ with a capital investment value of more than \$30 million, and such is classified as SSD pursuant to Section 13(1) of Schedule 1 of State Environmental Planning Policy (Planning Systems) 2021.

The delivery of the Powerhouse Ultimo Renewal will occur in stages, comprising the following:

- **Stage 1** – Concept DA establishing the planning, design, and assessment framework for the Powerhouse Ultimo Renewal Project including the indicative land uses, maximum building envelopes, general parameters for the future layout of the site, and strategies to guide the subsequent detailed design phases of the project including Urban Design Guidelines and Design Excellence Strategy.
- **Architectural Design Competition** – A competitive design process to critically analyse and provide design alternatives for the Powerhouse Ultimo Renewal project in accordance with the planning and development framework established for the site under the Concept DA. A winning design will be selected by a jury of experts and will inform the subsequent detailed design and assessment phase (Stage 2) of the project.
- **Stage 2** – A Detailed DA confirming the ultimate architectural design and operation of Powerhouse Ultimo and assessing any associated planning and environmental impacts. This Detailed DA will seek consent for the detailed design, construction and operation of the proposed development and follows the same planning assessment and determination process as the Concept DA (Stage 1).

1.2. Site Description

Powerhouse Ultimo is situated upon the lands of the Gadigal people of the Eora Nation. It is located within the City of Sydney Local Government Area (LGA) and its primary address is 500 Harris Street, Ultimo.

The Powerhouse Ultimo Site consists of the following lots:

- Lot 1, DP631345- Former Ultimo Power House Buildings
- Lot 1, DP781732- Wran Building
- Lot 3, DP631345- Forecourt (Harris St)
- Lot 37, DP 822345 Forecourt (Harris St)
- Lot 1, DP77031- Former Ultimo Post Office

The site contains two heritage-listed buildings, being the Ultimo Power House (Turbine Hall, Engine House, Boiler House, North Annex, Water Cooling System and Manifold and Switch House) (SHR 02045¹²) and the Ultimo Post Office (SHR 00502¹³), both of which are listed on the State Heritage Register under the *NSW Heritage Act 1977* (Heritage Act). Both the former Ultimo Power House¹⁴ (I2031, 14 Dec 12), and the Ultimo Post Office¹⁵ (I2030, 14 Dec 12) are identified as local heritage items in Schedule 5 of the Sydney LEP 2012.

¹² State Heritage Inventory, *Ultimo Power House*, State Heritage Register Item

¹³ State Heritage Inventory, *Ultimo Post Office*, State Heritage Register Item

¹⁴ State Heritage Inventory, *Powerhouse Museum Former Warehouse Buildings, including interiors*, Local Environmental Plan Item.

¹⁵ State Heritage Inventory, *Former Ultimo Post Office Including Interior*, Local Environmental Plan Item.

The Water Cooling System and Manifold is also listed on the Property NSW s170 register¹⁶, and extends beneath the Powerhouse Ultimo site towards Murray Street and into Darling Harbour.

Other buildings within the site include the 1988 museum building fronting Harris Street (Wran Building). A café building has been constructed immediately to the south of the Boiler House at the northern end of The Goods Line. Located at the corner of Harris Street and Macarthur Street is a forecourt that acts as the main public entrance to the site. It provides limited activation and is disconnected from higher-quality urban spaces including The Goods Line.



¹⁶ Property NSW, *Water Cooling System and Manifold*, Section 170 Register

Figure 1-1: Aerial view showing key built elements of the study area and its immediate surrounds. Note that the Harwood Building sits outside of the Project Site Boundary for this Concept SSDA (Source: Ethos Urban, 2022)

1.3. Overview of the Development

This Concept SSDA sets the parameters for the renewal of Powerhouse Ultimo with the detailed design, construction, and operation of the project to be sought at a separate and future SSDA stage (Stage 2).

Concept approval is sought for the following:

- A maximum building envelope across part of the site for any new buildings and alterations or additions to existing buildings retained on site.
- A maximum gross floor area of 40,000 square metres across the site.
- A minimum public domain area of 2,200 square metres within the site.
- Use of the site as an ‘information and education facility’ including:
 - museum exhibition spaces
 - education and learning spaces
 - creative industries studio spaces
 - back of house functional spaces to support museum operations
 - retail food and beverage offerings
 - administration offices
 - provision for ancillary and related uses contributing to the operation of Powerhouse Ultimo.
- Design Excellence Strategy and Urban Design Guidelines to guide the detailed design of the project.
- General functional parameters for the future design of the site including principles and strategies for the management of heritage, transport and access, noise and vibration, utilities and services.

1.4. Assessment Requirements

The Department of Planning and Environment (DPE) has issued Secretary's Environmental Assessment Requirements (SEARs) to the applicant for the preparation of an Environmental Impact Statement (EIS) for the proposed development. This report has been prepared having regard to the SEARs as follows:

SEARs Condition 21—Environmental Heritage

Environmental Assessment Requirement	Where addressed in this report
<i>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.</i>	Statement of Heritage Impact—This Report; Section 7 Aboriginal and Non-Aboriginal Archaeological Assessments—Summarised in Section 7.4 and 8.2, with a full separate Historical Archaeological Assessment and a full Aboriginal Cultural Heritage Assessment Report also provided with the EIS

1.5. Mitigation Measures

Based on the findings and recommendations of this report, the following measures are suggested to mitigate the identified impacts of the proposed works.

Mitigation Measure	Indicative Timing
<p>The Design Excellence Competition and Stage 2 SSDA detailed design must be guided by best practice heritage principles to avoid adverse impact to heritage items and the significant heritage character and context of the site.</p> <p>This includes compliance with the recommendations in the following documentation:</p> <ul style="list-style-type: none"> • Revised Urban Design Guidelines • Endorsed Design Excellence Strategy • Powerhouse Ultimo Conservation Management Plan • Aboriginal Cultural Heritage Assessment Report • Historical Archaeological Assessment <p>The work must be informed by an appropriately experienced Heritage Professional, as defined by the NSW Heritage requirements.</p>	<p><i>Throughout the Design Excellence Competition Process and throughout the detailed Stage 2 SSDA stage, prior to submission of the Stage 2 SSD Application.</i></p>
<p>Potential impacts to Historical and Aboriginal archaeology should be minimised and/or avoided where possible.</p> <p>If practical, discrete archaeological testing should be undertaken prior to the finalisation of the proposed impacts associated with the Stage 2 SSDA detailed design.</p> <p>This work should be undertaken by appropriately qualified archaeological specialists in accordance with approved test excavation methodologies.</p>	<p><i>Prior to issue of the Stage 2 SSD construction certificate.</i></p>
<p>An overarching Heritage Interpretation Plan that outlines how the significance layering of the history and cultural significance of the site will be interpreted within the future proposed design for the site should be prepared by an appropriately experienced professional, as part of the Stage 2 SSD submission.</p>	<p><i>Throughout the detailed Stage 2 SSDA stage, prior to submission of the Stage 2 SSD Application.</i></p>

1.6. Limitations and Constraints

The report has been prepared using the extensive historical data and documentation related to the study area and surrounds, including recently completed archaeological reports, Aboriginal Cultural Heritage Assessments, and the updated Powerhouse Ultimo Conservation Management Plan. This report has been prepared in accordance with the legislative requirements, best practice heritage management guidelines issued by Heritage NSW and the Australian Burra Charter Guidelines. The

report relates to heritage risks only, and no other planning risks associated with the proposed redeveloped of the study area.

1.7. Authorship

This report has been prepared by Mikhaila Chaplin, Archaeologist and Heritage Specialist, Sam Cooling, Cultural Heritage Manager, Alex Thorn, Senior Heritage Specialist and Natalie Vinton, CEO of Curio Projects Pty Ltd. Senior review of the report, was undertaken by Natalie Vinton, Curio CEO, with additional quality control review undertaken by Tom Kennedy on behalf of Infrastructure, NSW.

2. Statutory Context

2. Statutory Context

In NSW, heritage items and known or potential archaeological resources are afforded statutory protection under the:

- *Environmental Planning and Assessment Act 1979 (NSW)* (EP&A Act);
- *Heritage Act 1977 (NSW)* (Heritage Act); and
- *National Parks and Wildlife Act 1974 (NSW)* (NPW Act).

There are further planning policies and controls that provide a non-statutory role in the protection of environmental heritage. These include Development Control Plans for each local Council area. This section of the report discusses the local and State planning context for the study area with respect to the heritage values and significance connected with heritage items associated with the study area.

2.1. Environmental Planning and Assessment Act 1979

The NSW Department of Planning, Industry and Environment (DPIE) administers the *Environmental Planning and Assessment Act 1979* (EP&A Act), which provides the legislative context for environmental planning instruments to be made to legislate and guide the process of development and land use. Local heritage items, including known archaeological items, identified Aboriginal Places and heritage conservation areas are protected through listings on Local Environmental Plans (LEPs) or Regional Environmental Plans (REPs). The EP&A Act also requires that potential Aboriginal and historical archaeological resources are adequately assessed and considered as part of the development process, in accordance with the requirements of the NPW Act and the Heritage Act.

Part 4, Division 4.7 of the EP&A Act identifies and defines SSD projects as those declared under Section 4.36 of the EP&A Act. Powerhouse Ultimo is a SSD project as it has a capital investment value exceeding \$30 million for the purpose of an 'information and education facility.'

As part of the SSD approvals process, applicants are not required to obtain separate heritage statutory approvals, including built heritage and historical archaeology approvals under Section 60 of the Heritage Act or AHIPs under Section 90 of the NPW Act.

2.1.1. Sydney Local Environment Plan (LEP) 2012

The Powerhouse Ultimo Site is located within the City of Sydney LGA and is subject to the statutory controls of the Sydney LEP 2012. Both the former Ultimo Power House¹⁷ (I2031, 14 Dec 12), and the Ultimo Post Office¹⁸ (I2030, 14 Dec 12) are identified as local heritage items in Schedule 5 of the Sydney LEP 2012.

The site is also located adjacent to, and within close vicinity to the Harris Street Heritage Conservation Area (HCA) (LEP 2012 item no. C67), which also includes a number of individually listed items. The local and State heritage listings in proximity to the site are set out in section 2.5.

¹⁷ State Heritage Inventory, *Powerhouse Museum Former Warehouse Buildings, including interiors*, Local Environmental Plan Item.

¹⁸ State Heritage Inventory, *Former Ultimo Post Office Including Interior*, Local Environmental Plan Item.

2.1.2. Property NSW Section 170 Register

Under Section 170 of the Heritage Act, government instrumentalities must keep a s170 Register which contains items under the control or ownership of the agency and which are or could be listed as heritage items (of State or Local significance).

The Water Cooling System and Manifold is listed on the Property NSW s170 register¹⁹, and extends beneath the Powerhouse Ultimo site towards Murray Street and into Darling Harbour.

As the item has structural integrity (i.e. underground tunnel structure) it is not technically defined as an archaeological 'relic' in accordance with the Heritage Act, but as a work. Nevertheless, given that the Water Cooling System and Manifold and associated conduits are sub-surface features within the bounds of the study area, it must be managed as part of any archaeological methodology for the site.

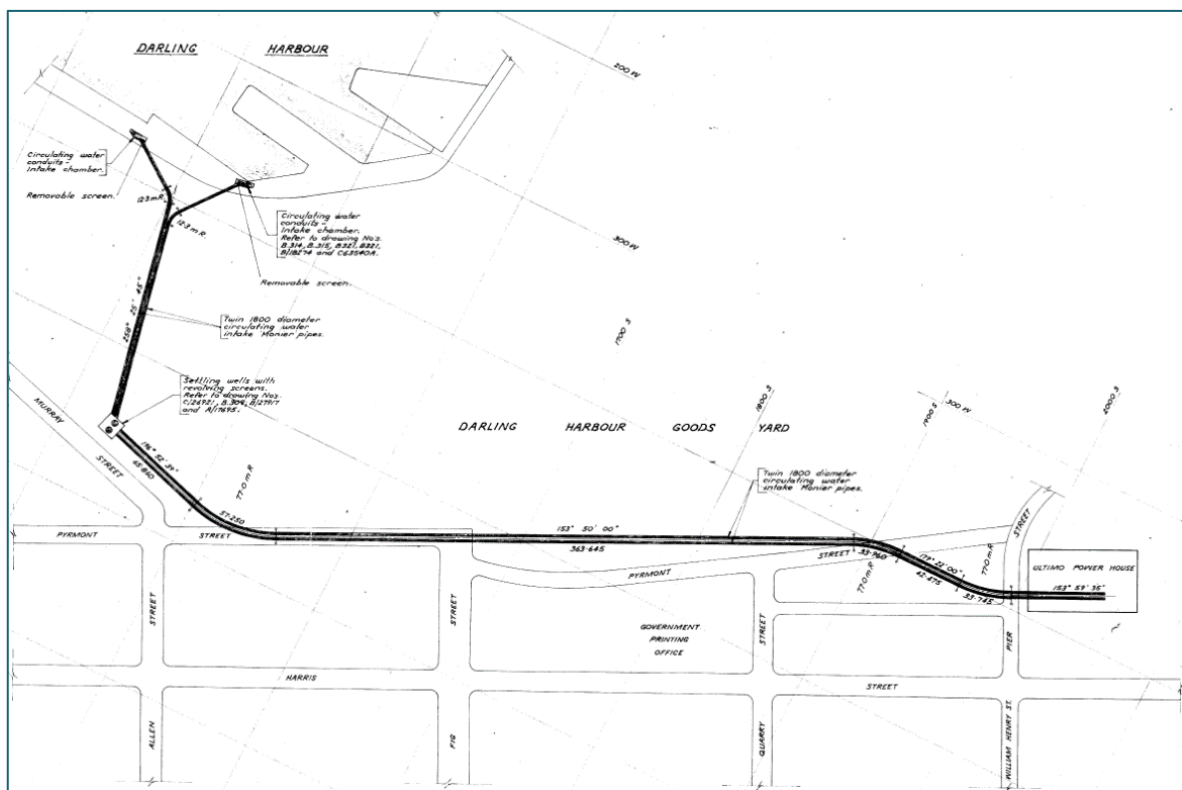


Figure 2-1: Plan of Powerhouse Seawater Conduits (Source: GAO Plan C82-079G/SC-001, Nov 1982)

¹⁹ Property NSW, *Water Cooling System and Manifold*, Section 170 Register

2.2. NSW Heritage Act 1977

Heritage places and items of particular importance to the people of NSW are listed on the NSW State Heritage Register. The Heritage Act defines a heritage item as a ‘place, building, work, relic, moveable object or precinct’. The Heritage Act is responsible for the conservation and regulation of impacts to items of State heritage significance, with ‘State Heritage Significance’ defined as being of ‘significance to the state in relation to the historical, scientific, cultural, social, archaeological, architectural, natural or aesthetic value of the item’.

The Heritage Act also includes provisions for the protection and management of historical archaeological ‘relics’ defined as an archaeological deposit, resource or feature that has heritage significance at a local or State level.²⁰

In order to best implement and administer the protection afforded to historical archaeological ‘relics’ and heritage places as through the Heritage Act, and EP&A Act, the NSW State Government have prepared a series of best practice statutory guidelines with regards to heritage management and historical archaeology. These guidelines are designed to assist developers, landowners and archaeologists to better understand their statutory obligations with regards to built heritage assets and historical archaeology in NSW, and to implement best practice policies into their investigation of built heritage and historical archaeological heritage values in relation to their development.

2.2.1. NSW State Heritage Register (SHR)

Heritage listing on the SHR is a way that communities can preserve and protect their most special places. The listing provides recognition of, and protection for, identified heritage items. Any proposed change to a listed place can be assessed for approval. Minor works, repairs and maintenance rarely need approval as they usually qualify as exempt development. A listing may also allow a broader range of uses than the current zoning would otherwise permit.

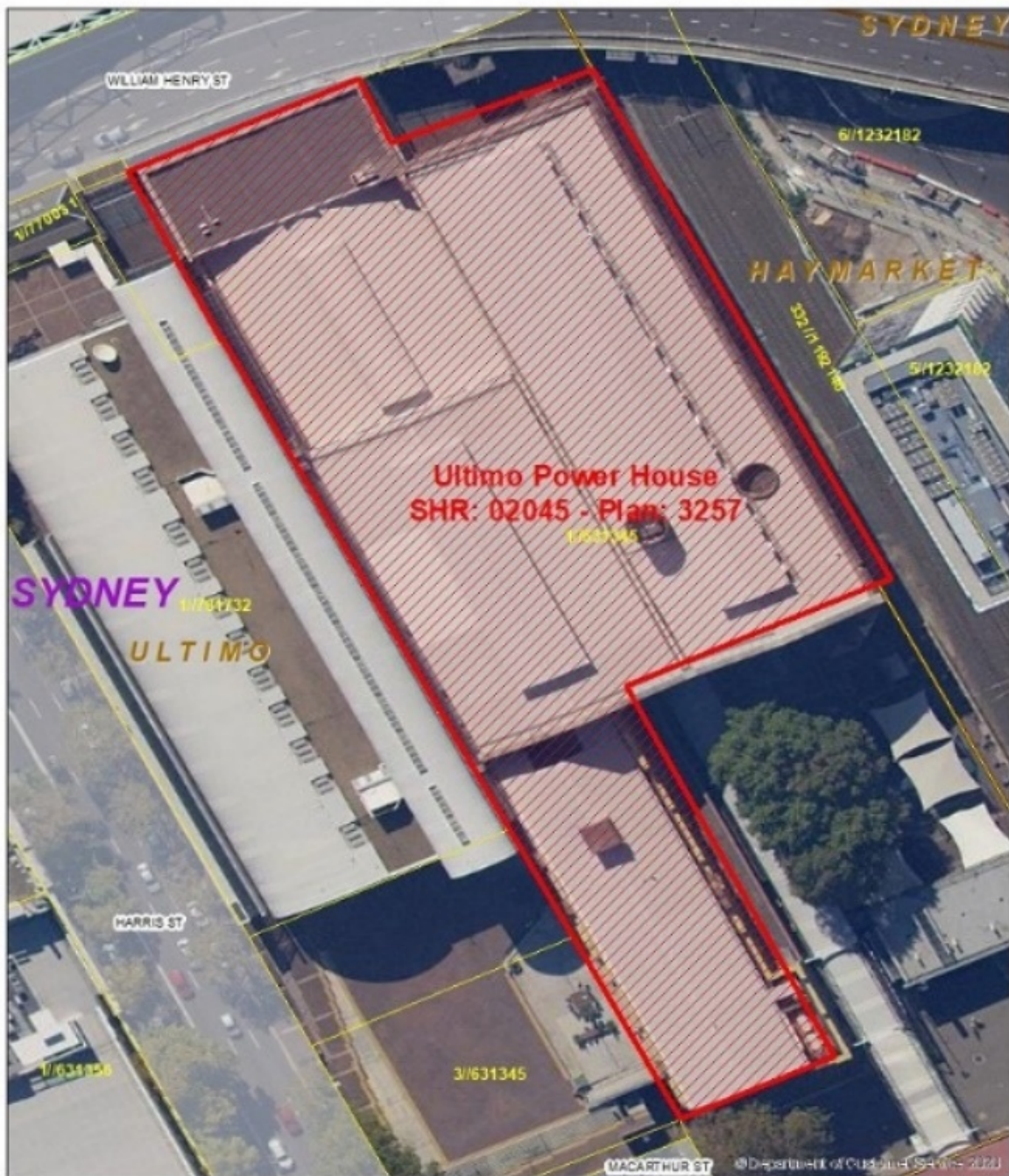
2.2.2. Ultimo Powerhouse

The Ultimo Powerhouse SHR nomination was on public exhibition from 25 February to 24 March 2020, and was gazetted on the SHR on 4 September 2020 as “Ultimo Power House” (SHR #02045²¹). The SHR curtilage only includes the five main interconnected Ultimo Power House heritage buildings (i.e. the Engine House, Turbine Hall, Boiler House, Office Building, and Switch House) (see Figure 2.2). This figure excludes the 1988 additions to the site (the Wran Building) and does not include the remains of the Pump House to the north east of the Boiler House.

²⁰ NSW Heritage Branch Department of Planning. 2009. Assessing Significance for Sites and ‘Relics’

²¹ State Heritage Inventory, *Ultimo Power House*, State Heritage Register Item

Heritage Council of New South Wales



State Heritage Register
Ultimo Power House
500 Harris Street, Ultimo
SHR 02045. Plan 3257

Gazettal Date: 04 September 2020

0 10 20 30 40 Metres

Scale: 1:800

Datum/Projection: GCS GDA 1994



Legend

- SHR Curtilage
- Land Parcels
- Railways
- Roads
- LGAs
- Suburbs

Figure 2-2: Ultimo Powerhouse, 500 Harris Street, Ultimo, SHR Curtilage (Source: SHR Listing)

HERITAGE COUNCIL OF NEW SOUTH WALES			
PLAN			
UNDER THE HERITAGE ACT, 1977			
Description	Land in Lands Department Plan No. Ms. 1751 Sy. "Ultimo Post Office"		
Municipality City	Sydney	Locality	Ultimo
Parish of	St. Andrew	County of	Cumberland

Scale 1:400

SUBJECT LAND SHOWN THUS:

THIS IS THE PLAN REFERRED TO IN INTERIM/PERMANENT CONSERVATION ORDER No. 502		
N.S.W. GOVERNMENT GAZETTE No. 89 OF 29.5.87	PLAN APPROVED 	PLAN NUMBER H.C. 1286
LE HC 32963	DRAWN BY E. M. 18.9.86	for SECRETARY HERITAGE COUNCIL

Figure 2-3: Ultimo Post Office SHR Listing

2.2.3. Ultimo Post Office

The Ultimo Post Office, which forms part of the Powerhouse Ultimo site, is also listed on the SHR (SHR Item #00502.²²) (Figure 2.3). This listing applies to the Former Post Office Building as well as the lot on which the building is located.

2.2.4. Nearby SHR Listings

The SHR-listed Sewerage Pumping Station No. 1 (SHR Item #01336), and Ultimo Road Railway Underbridge (SHR Item #01062) are also in relatively close proximity to the site, although are unlikely to be impacted upon any future redevelopment of the site.

2.3. Non-Statutory Listings

While the Harwood Building (former Ultimo Tram Depot) located to the south of the site is not currently listed on any statutory heritage register (LEP or SHR), it is listed by the National Trust of Australia (NSW), and was recently the subject of a nomination for listing on the SHR which was determined on 30 September 2020 by the NSW Heritage Council to not meet the criteria for listing on the SHR.

2.4. Conservation Management Plan (CMP)

Create NSW and the Powerhouse commissioned Curio Projects to prepare a revised CMP for the site. The Draft CMP²³ was submitted to support the concept SSD.

In 2003, Architectural Projects prepared a detailed Conservation Management Plan (CMP) for the site, titled *Conservation Management Plan: The Powerhouse Museum*, prepared for the Powerhouse Museum.²⁴ NSW Heritage Council generally require CMPs to be updated and/or reviewed at least every 5-10 years.

Therefore, the CMP, being more than 17 years old required updating in many key areas to reflect the major changes to NSW heritage and planning legislation since 2003, as well as the current principles and practices, both internationally and locally, for the management of heritage places. As a result, the significance assessment, policy development and guidelines, which were best practice at the time, required updating to ensure that they remain commensurate with current best practice heritage management in NSW.

Specifically, the CMP was updated in accordance with the latest guidelines issued by Heritage NSW:

- *Heritage Council of NSW, 2021 Guidance on developing a Conservation Management Plan.*
- *Heritage Council of NSW 2021. Conservation Management Plan Checklist*
- *Heritage Council of NSW 2021. Statement of Best Practice for Conservation Management Plans*

The latest guidelines issued by Heritage NSW, and therefore, the updated CMP are also underpinned by :

- *Australia ICOMOS, 2013. Australia ICOMOS Charter for Places of Cultural Significance, The Burra Charter*

²² State Heritage Inventory, *Ultimo Post Office*, State Heritage Register Item

²³ Curio Projects 2022b , *Conservation Management Plan, Powerhouse Ultimo*, prepared for The Powerhouse and Create NSW.

²⁴ Architectural Projects, *Conservation Management Plan: The Powerhouse Museum*, prepared for the Powerhouse Museum, 2003.

- Kerr, J. S., *The Conservation Plan*, (7th ed), Australia ICOMOS, 2013.

In particular, this CMP was required to be updated to include:

- Additional primary research, including historical and ethnographical research related to the site's complex and multilayered history;
- Updated review of existing fabric and its significance (i.e. Ground-truthing any changes to description, spatial configuration and/or loss or additions of fabric since the 2003 assessment)
- Updated Assessment of Significance to reflect all known or potential cultural heritage values related to sites, including but not limited to, the site's built heritage, Aboriginal Cultural Heritage Significance, the significance of the historic Water Cooling Manifold, potential Aboriginal and non-Aboriginal archaeological values, along with any other intangible values, not previously considered.
- Updated assessment of significance, policies and guidelines, reflective of the recent (2020) State-Heritage Register listing of the "Ultimo Power House" (SHR #02045²⁵). The SHR curtilage includes the five main interconnected Ultimo Power House heritage buildings (i.e. the Engine House, Turbine Hall, Boiler House, Office Building, and Switch House) (see Figure 2.2). The SHR listing excludes the 1988 additions to the site (the Wran Building) and does not include the Harwood Building.
- Updated constraints and opportunities related to current and future user requirements.

In addition, there are redundant policies related to external site conditions, such as views and sightlines to Darling Harbour that no longer exist due to new development within the precinct since the completion of the CMP.

²⁵ State Heritage Inventory, *Ultimo Power House*, State Heritage Register Item

2.5. Heritage Items in the Vicinity

There are a large number of individually listed heritage items of local significance within close proximity and within view lines to and from the study area. Any major redevelopment of the study area will potentially impact on views and vistas to and from a number of locally-listed heritage items.

Table 2.1 lists the heritage items in the vicinity of the Powerhouse Ultimo site which is further outlined in Figure 2.4 and Figure 2.5.

Table 2.1: Heritage Items in the vicinity of the Powerhouse Ultimo site

Item	Register	Name	Address
01062	State	Ultimo Road Railway Underbridge	Ultimo Road, Ultimo
01336	State	Sewerage Pumping Station No. 1	William Henry Street, Utimo
I2032	Local	Glasgow Arms Hotel including interior	527–529 Harris Street
I2028	Local	Terrace group including interiors	11–63 Hackett Street
I2024	Local	Terrace group including interiors	342 Bulwara Road and 68–80 Macarthur Street
I2023	Local	Terrace group including interiors	286–340 Bulwara Road
I2067	Local	Terrace group including interiors	91–97 William Henry Street
I2068	Local	House including interior and fence	103–103a William Henry Street
I2044	Local	Terrace group including interiors (C67)	77–79 Macarthur Street
I2033	Local	Terrace group including interiors (C67)	578–606 Harris Street
I2034	Local	Terrace group including interiors (C67)	597–607 Harris Street
I2035	Local	Former “Millinery House” including interior (C67)	608–614 Harris Street
I2037	Local	Terrace group including interiors (C67)	629–637 Harris Street
I2025	Local	Terrace group including interiors (C67)	348 Bulwara Road and 68–80 Mary Ann Street



Figure 2-4: SHR listings in and surrounding the study area (Source: Curio 2021 from HNSW Shapefile, over Nearmaps aerial 2021)



Figure 2-5: Sydney LEP 2012 listed items in and surrounding the study area (Source: Curio 2021 from HNSW Shapefile, over Nearmaps aerial 2021)

3. Historical Context

3. Historical Context

3.1. Pre-European Environment and Early Aboriginal Occupation

The Powerhouse Ultimo site is located at the southern end of the Ultimo-Pyrmont Peninsula, in the subregion of Pittwater within the Sydney Basin. It is underlain by Hawkesbury sandstone geology, and characterised by plateaux and ridges consisting of quartz sandstone, with thin layers of shale caps throughout....²⁶ This natural landscape composition encouraged development of a diverse range of natural environments in this area of Sydney including maritime/coastal, saltmarshes/estuaries and swamps, freshwater creeks, and woodland, that in turn supported a large range of natural faunal and floral resources that supported Aboriginal people for thousands of years.

The shale capped regions were able to support rich grounds for large forested areas of Sydney blue gum and blackbutt or turpentine and grey ironbark, while the sandstone ridges and plateaux enabled the growth of Sydney peppermint, smooth-barked apple, scribbly gum, red and yellow bloodwoods, as well as shrubs and heath covering the ground....²⁷ The maritime and coastal regions provided access to a wide variety of shellfish and fish in the tidal mudflats, as well as allowing transport access to other locations via canoe along the Parramatta River. The saltmarshes, swamps and estuaries all provided rich grounds for both plant life and animals such as reptiles, amphibians, small mammals and birds. Bangalay, swamp mahogany, cabbage tree palm, swamp oak, common reed and cumbungi were common plants present in fresher swamp waters, providing resources for fishing nets and string bag making. While these swampy areas were rich in resources for the Aboriginal communities, they were ill-suited for frequent and repeated use over a long span of time due to regular flooding. Woodland areas located on ridge areas further in from the coast provided a diverse range of large, sturdy vegetation for both food, pigments, poisons, and tool construction (spears digging sticks, boomerangs, canoes, shelters, rope etc.) as well as animals such as possums, gliders, bats, kangaroo and wallabies. The geological properties of the Hawkesbury Sandstone also provided plentiful raw materials ideal for the manufacture of stone tools, such as quartz and chert....²⁸ Freshwater creeks were an important water source, with many originally flowing across and in the surrounds of the Pyrmont Peninsula. One of the more predominate natural creeks of this area of Sydney was Blackwattle Creek, which ran between the current Wattle and Mountain Streets in Ultimo....²⁹

The Powerhouse Ultimo site, and its surrounding inner-city suburbs, have an important and strong legacy of Aboriginal connections to the region. More than a thousand generations of Aboriginal people have lived in the Sydney region through numerous climatic changes that have shaped Australia and its landscape to what it is today.³⁰ The Pyrmont Peninsula appears to form part of the boundary between the Wangal and Gadigal clans of the Darug people. The Wangal boundary extended from Tumbalong (Darling Harbour), westward to Rose Hill to the area later named Parramatta, while the Gadigal occupied the land from the entrance of the harbour, extending along the southern shoreline towards Tumbalong. Despite these 'boundaries', Aboriginal people camped on both sides of Tumbalong and smaller, more diverse groups (sometimes referred to as 'bands')

²⁶ NSW Department of Planning and Environment, *NPWS Bioregional Assessment*, 2003, <<https://www.environment.nsw.gov.au/bioregions/bioregions.htm>>; Kelleher Nightingale Consulting, 2020, *Pyrmont Peninsula Place Strategy: Indigenous Cultural Heritage Report*, prepared for Department of Planning, Industry and Environment, p. 14

²⁷ NPWS Bioregional Assessment, 2003.

²⁸ Kelleher Nightingale Consulting Pty Ltd, 2020, pp. 18-19.

²⁹ Artefact, *The Bays Market Precinct Rezoning*, 2017, p. 16.

³⁰ Irish, P. 2017, *Hidden in Plain View*, p. 13; Attenbrow, V. 2010, *Sydney's Aboriginal Past*, pp. 18-21.

fished in its waters....³¹ Women married into neighbouring clans and individuals had responsibilities in other clan lands to which they were linked through parents, grandparents or by marriage....³²

So while it is probably correct to say that Ultimo, on the western shore of Tumbalong is Wanngal land, we should remember that this land also had meaning to the Aboriginal people living across the saltwater clans of coastal Sydney who linked back to the Wanngal. Based on this, we should avoid the temptation to assume (as many early Europeans did) that any Aboriginal person observed in a particular area was necessarily 'from' that clan. This is very important to bear in mind when we look at how Aboriginal people lived around and on the waters of Tumbalong....³³

Rock shelters located in the sandstone outcrops around Sydney Harbour provided ideal habitation areas for Aboriginal people and would have been used for campsites, with some likely to have contained charcoal and pigment artworks. However, any of these shelters that may have once been present across the Ultimo-Pyrmont Peninsula are likely to have been destroyed by early European quarrying and development....³⁴ Despite massive changes to the shoreline around Tumbalong, traces of Aboriginal fishing camps have survived. Shell middens have been found on both sides of the Harbour, showing that Aboriginal people fished rock oysters, cockles, and mud whelks out of the mudflat. Stone artefacts have been found at camps to the southwest of the Powerhouse Ultimo site....³⁵

At the time of European invasion in 1788, the Aboriginal population of the Sydney Cove region has been estimated at around 1500-2000 people,...³⁶ a population that was severely and disproportionately impacted in the subsequent years, disposed and relocated from their traditional lands by the swiftly expanding European incursion. The Aboriginal community around Tumbalong would have been devastatingly impacted by the smallpox epidemic which swept across the harbour in 1789, resulting in a massive loss of life for the Aboriginal people of Sydney....³⁷

Ethnohistorical accounts provide some early descriptions of the use of the Pyrmont Peninsula and wider Port Jackson area by Gadigal and Wangal people, as well as their experiences and interactions with European arrivals. Compared with other nearby areas of Sydney, the Ultimo-Pyrmont Peninsula remained largely undeveloped for many years following European arrival, affording retention of a stronger measure of Aboriginal presence in the earlier years of the NSW colony that was not equalled in adjacent areas such as Sydney and Farm Coves. Aboriginal people on the Ultimo-Pyrmont Peninsula continued to live traditionally for decades after the arrival of Europeans, as is demonstrated through both the historical and archaeological records. Archaeological evidence demonstrates how new materials were adopted into traditional practices, such as fashioning a tool from a piece of glass....³⁸ Colonial descriptions and images depict Aboriginal people continuing to camp and fish around Tumbalong into the 1820s....³⁹

It was not until the late 1830 and early 1840s that the colonists began to turn their attention to the Pyrmont Peninsula for more 'rural' uses, resulting in land clearance and further dislocation of Aboriginal people from their traditional land. However, the Ultimo area remained significantly under-

³¹ Coast History & Heritage, 2022, *Aboriginal History Overview – Powerhouse Ultimo*, Final Draft, April 2022, p.4

³² Ibid, p.4.

³³ Ibid.

³⁴ Kelleher Nightingale Consulting Pty Ltd, 2020, p. 18.

³⁵ Coast History & Heritage, 2022, p.6.

³⁶ Attenbrow, 2010, p. 17; Irish 2017, p. 19.

³⁷ Coast History & Heritage, 2022, p.7.

³⁸ Ibid.

³⁹ Ibid.

developed in comparison to the nearby larger industrialised areas like Darling Harbour until the late 1880s, and historic records suggest that the area continued to be used by local Aboriginal people during the mid-19th century for gathering oysters and cockles from the shore....⁴⁰

3.2. Ultimo-Pyrmont Peninsula and 19th Century Occupation (1803-1894)

John Harris, a surgeon and former naval officer, leased land in the Ultimo area from as early as 1796, before being granted 34 acres by Governor King in 1803 for land 'between the Church land and the ground used as a brickfield without the town of Sydney.' Harris proceeded to clear and cultivate the land, establishing Ultimo House in 1804 (Figure 3.1). Harris received additional land grants at Ultimo in 1806 of 135 acres and 9 ¼ acres, resulting in his ownership of the majority of the land of the Pyrmont peninsula, only really excluding the estate of John Macarthur in the north. The Powerhouse Ultimo site appears to be within the boundaries of Harris' 1806, 135-acre land grant. In the 1820s Harris employed around 30 convicts and free workers on his Ultimo property, while he himself moved in 1821 to a property he owned at St Mary's, leasing Ultimo house and only using it on occasion when he was in Sydney.

From the 1830s, other areas of Darling Harbour began to be reclaimed and developed, including construction at the northern Pyrmont end of Harris Street in c.1836 as part of Edward Macarthur's (John Macarthur's son) subdivision and development of Pyrmont. ...⁴¹ During this time, the Powerhouse Ultimo site would have remained fairly marshy, while the nearby harbour became increasingly silted-over and polluted.

After the death of John Harris in 1838, complication arose regarding his Will after leaving the Harris Estate and surrounding properties to his brothers, William and George Harris. The brothers were able to receive rent from properties, but unable to subdivide the land. ...⁴² This in turn meant that while development occurred in surrounding areas into the mid-19th century, the Harris Estate remained sparsely populated and underdeveloped during this time. ...⁴³ Following the deaths of William and George, the land was subdivided in 1859. ...⁴⁴

In the 1840s and 1850s, Harris Street ran along the western boundary of the Powerhouse Ultimo site, while Pyrmont Street did not yet extend to the site, instead ending at Union Street in Pyrmont. Small parcels of land across the Ultimo area were rented out, and the 1845 Sydney rates assessment books record that several huts of mud, brick, wood or wattle with bark roofs had been constructed on the Harris Estate land (Figure 3.5). The visual landscape of the area is evident in Elyard's 1860s watercolours (Figure 3.2).

The relatively underdeveloped nature of the Harris Estate with only a sparse scatter of cottages across the land continued into the later 19th century and up until commencement of land resumption around the turn of the century for the construction of the Ultimo Power House. The only 19th century houses that remained within the site boundaries by the late 1880s were those at 137 William Henry Street, as well as several along Pyrmont and Harris.

⁴⁰ Coast History & Heritage, 2022, p.9.

⁴¹ Fitzgerald, S. & Golder, H., 1994. *Pyrmont & Ultimo Under Siege*, Hale & Iremonger, p. 26.

⁴² Godden et al. 1984. *The History and Technology of the Ultimo Power House Sydney*. A report for the Government Architects Branch, Public Works Department of New South Wales, p. 29.

⁴³ Fitzgerald & Golder, 1994., p. 45.

⁴⁴ Godden et al.1984 p. 29.

Other relevant significant developments around Ultimo and the Pyrmont Peninsula during the 19th century included construction and operation of the Darling Harbour Goods Line (1855) and the Pyrmont Bridge (1858). While the opening of the Pyrmont Bridge improved general accessibility to the Pyrmont peninsula, the location of the bridge also made it easier for traffic from the eastern side of Darling Harbour to bypass Ultimo completely.

The transport association of the study area commenced in 1871, when the newly formed Sydney Omnibus Company⁴⁵ constructed stables and a hay shed on Block 20 of the Ultimo Estate subdivision (Figure 3.3) (the block on which the Harwood Building is now situated). Later known as the Sydney Tramway & Omnibus Company (STOC), this horse-drawn omnibus company was one of Sydney's main private companies providing transport services for most of Sydney's Eastern suburbs.

The subdivision of the Ultimo Estate, subsequent development, construction of the Ultimo Power House, and subsequent increasing population of Ultimo in the late 1800s, resulted in a branch of the Government Savings Bank opening in Ultimo in rented premises in 1881. The rented premises on Harris Street were eventually superseded by a purpose-built Post Office constructed in 1901.

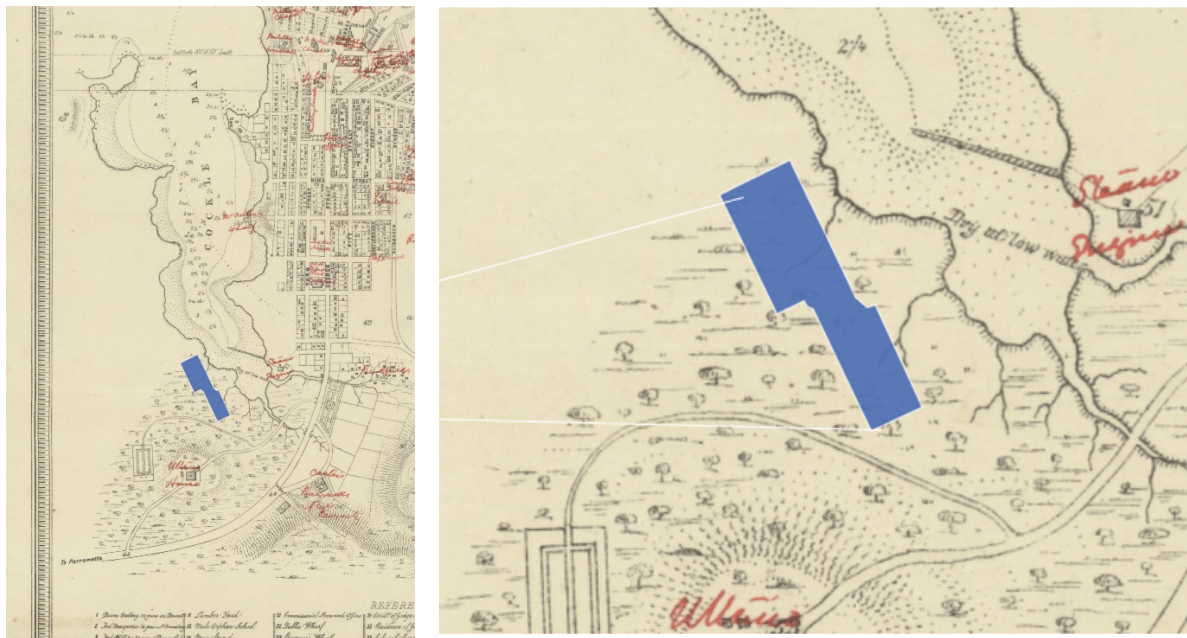


Figure 3-1: 1822 Plan of Sydney with Curio overlay showing early context of Powerhouse Ultimo site (shaded blue). Ultimo House located south west of the present day site. (Source: National Library of Australia with Curio overlay)

⁴⁵ STOC operated from the 1870s until the 1910s when availability of cable and electric trams made this transportation method obsolete.



Figure 3-2: Elyard c.1864 Watercolour showing the view from Harris Street to Darling Harbour. (Source: State Library of NSW)



Figure 3-3: 1878 view across the study area from Town Hall tower, sandstone quarrying in the vicinity evident along the eastern side of the peninsula near the site. Sydney Omnibus Stables on Block 20 indicated (Source: State Library FL1226925)



Figure 3-4: Map of Ultimo Estate, Powerhouse Ultimo site shaded in blue. Ultimo House is visible to the south east (Source: Office of the Registrar General, Doc: CP 00002-1543 P)

3.2.1. Darling Harbour Goods Line

Upon formation in 1849, the Sydney Railway Company approached the Harris family to request the purchase of seven acres of land for construction of a railway connecting what is now Central Station and the new wharfing facilities proposed for Darling Harbour.⁴⁶ This land was eventually purchased from the Harris family in 1853, although management of the railway and the land was taken over by the NSW Government in 1854 after the failure of the Sydney Railway Company.⁴⁷ A plan of the land resumed for the proposed railway line is shown in Figure 3.5. A new embankment was constructed along the western edge of Darling Harbour to support the Goods Line, requiring importation of substantial volumes of soil.

At its opening in 1855, the Darling Harbour Goods Line extended along the eastern boundary of Ultimo and ended just south of the future location of the Pyrmont Bridge. The presence of the Goods Line in this location effectively severed the direct connection between Darling Harbour and Harris Street, with the Powerhouse Ultimo site located in between. This isolation of Harris' land from Darling Harbour led to the area around the railway and across the Harris estate being described in 1863 as '*dilapidated, the railway merely an embankment with the rails set on and the terminus undeveloped*'.⁴⁸

⁴⁶ Birch, A., 1994. 'The Sydney Railway Company 1848-1855' in *Royal Australian Historical Society Journal and Proceedings*, Vol. 43 part 2, 1857; SHI Listing *Darling Harbour Rail Corridor*; Fitzgerald & Golder, p. 45.

⁴⁷ Fitzgerald & Golder, 1994, p. 45.

⁴⁸ Legislative Assembly of New South Wales, 1863. *Minutes of Evidence taken before the Select Committee on the Railways through Ultimo Estate*, 20 Oct 1863

Government reclamation of the southern end of Darling Harbour and construction of the Iron Wharf in 1874 eventually allowed the reactivation of the Goods Line in the 1870s, which went on to become vital in the transportation of wool, coal, shale, timber, and wheat in and out of Sydney. The location of the Goods Line would also become vital in the transportation of the large quantities of coal required by the Power House for its operation, after its opening in 1899.⁴⁹

The Darling Harbour Goods Line was closed in 1984 after port functions and wool stores moved away from Sydney in the 1960s. The Goods Yards were redeveloped as part of the NSW government bicentenary project.

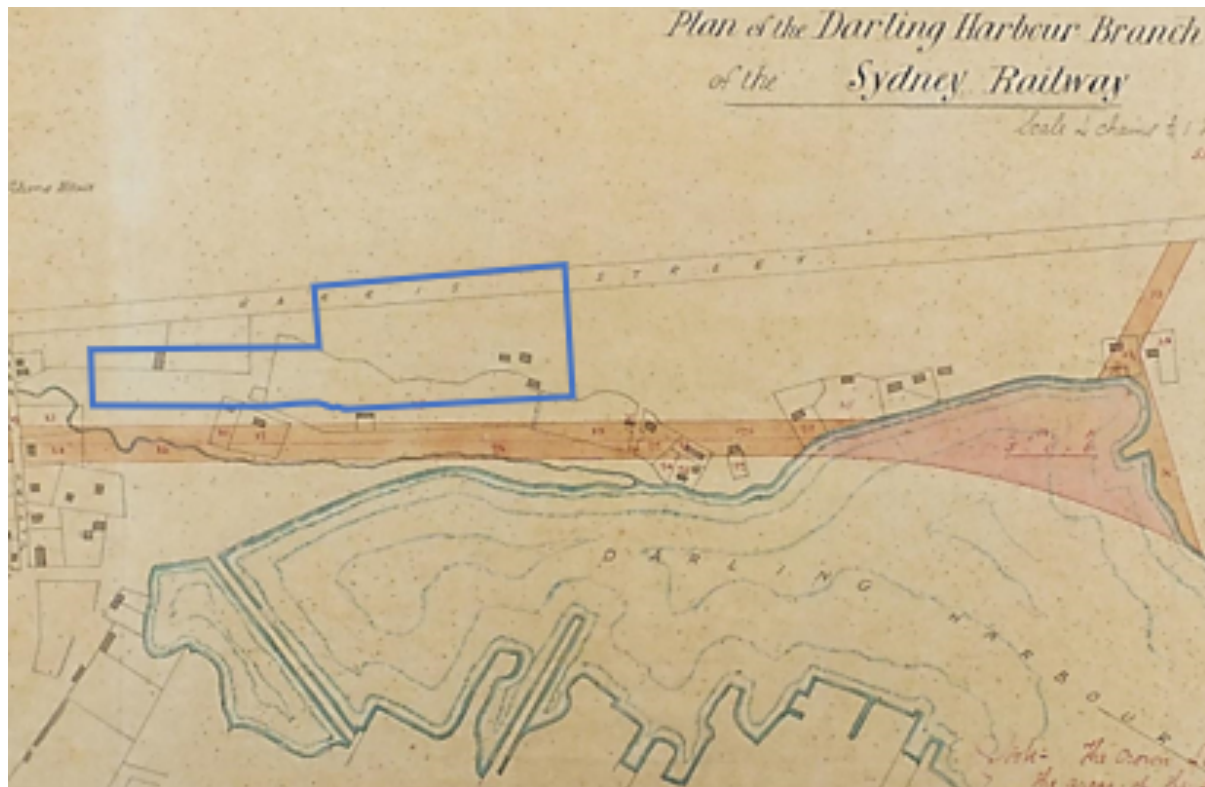


Figure 3-5: c.1853 plan showing the Darling Harbour Goods line resumption in orange and sparse early buildings in the northeast. The study area is outlined in blue. (Source: State Records Authority of NSW, AO Map 6381)

3.3. Ultimo Power House, Tram Shed and Post Office (1895-1940s)

In 1895, the Minister for Public Works commenced investigations into the construction of an electric tramway between Circular Quay and Pyrmont (George Street to Harris Street), a proposal that was accepted by majority in 1896, and soon followed by general policy to electrify all Sydney's existing tram lines. An Act of Parliament that sanctioned the construction of the George Street and Harris Street Electric Tramway, along with a supporting Power House and Car House at Ultimo, was approved in September 1896.⁵⁰

⁴⁹ SHI Listing *Darling Harbour Rail Corridor*; Transport Heritage NSW, 'Sydney's Metropolitan Goods Line', *Transport Heritage NSW* (website), accessed January 2021

⁵⁰ Godden et al, 1984, p. 32; NSW Department of Public Works, 1898. *Report of the Department of Public Works for the Year ended 30th June 1897*, p. 26.

The Ultimo Power House was the original generation station for the supply of electricity to the Sydney electric tram network and general distribution of electrical power in the area. It was the first large-scale electric power plant constructed in Australia - a title which it retained for many years.

The final location of the Power House was selected on the basis of a number of factors including the access to the Darling Harbour Rail Corridor (The Goods Line) for coal supply and the disposal of the ashes, access to Darling Harbour for adequate sea water supply for the condensers and the distribution of electrical current, as well as the low cost of the land and space for expansion.⁵¹

In c.1897, J. Stewart & Co was contracted to build the Ultimo Power House and Tram Shed,⁵² and Justin McSweeney contracted to construct the water conduit connecting Darling Harbour to the Boiler House supplying seawater to the condensers (i.e. the Water Cooling System and Manifold).⁵³ Construction of the Ultimo Power House commenced in 1898 (Figure 3.6 and Figure 3.7).

The original building constructed for the Power House occupied the north of the block bounded by William Henry Street in the north, and consisted of the Engine House, Office, (Old) Boiler House, and Pump House, with the original pump house chimney stack constructed with 890,000 bricks extending 300 feet (c.91m) above flue level.⁵⁴

The Ultimo Car House (Tram Shed), constructed at the same time as the Power House on the southern block bounded by Macarthur Street in the north, Mary Ann Street in the south, Omnibus Lane to the west, and the Darling Harbour Goods Line to the east and was the first of the electric tram depots opened for the early 20th century Sydney Tram network. A Store and Repairing Shop, contracted to T. E. Spencer & Co, adjoined the Car House at the rear and featured the same sawtooth design of the Car House.⁵⁵

The first electricity was supplied to the tramway for an experimental tram ride on 22 November 1899. The Ultimo Power House was officially completed on 29 November 1899, powering the official opening of the Harris and George Street tramline on 8 December 1899.⁵⁶ The tramline was incredibly popular and carried 95,000 passengers in the first two days of operation.⁵⁷ Originally supplying power for electric traction for the George Street and Harris Street tramlines, the Ultimo Power House later extended its supply of electricity to the Eveleigh Railway Workshop (1900) and Central Station (1907).

Sydney's demand for electricity increased rapidly, and almost immediately following its completion in 1899 it became apparent that the Ultimo Power House required expansion to increase its output capacity. Therefore in 1902, just three years after opening, the first extension to the Ultimo Power House was undertaken. The 1902 extension consisted of a southern extension to the Engine House (later renamed the Turbine Hall) and construction of a new larger Boiler House, stretching a further 54m south than the old Boiler House building.

⁵¹ Godden et al 1984 p. 27-29; Casey & Lowe, 2016. *Archaeological Assessment and Impact Statement ICC Hotel, Darling Harbour*, p. 41

⁵² NSW Department of Public Works, 1899. *Report of the Department of Public Works for the Year ended 30th June 1898*, p. 24.

⁵³ Casey & Lowe, 2016. p. 41.

⁵⁴ Matthews, 1982. p. 83.

⁵⁵ NSW Department of Public Works, 1900 Report, pp. 23- 24.

⁵⁶ Godden et al, 1984. p. 32-33

⁵⁷ TKD Architects, 2015. p. 5.

The 1902 extensions transformed the Ultimo Power House from a smaller scale electricity generation plant to a substantial sized power station more in line with modern power plants elsewhere in the world, said at the time to resemble the New York Metropolitan Street Railway Company's 96th Street Power House....⁵⁸

By 1910, the Ultimo Power House was approaching capacity, with the majority of its power earmarked to serve Sydney's expanding tramway network. Thus, in 1912, the White Bay Power Station was constructed to meet Sydney's growing need for electricity for lighting and general use.

At commencement of operation in 1899, cooling water required for the operation of the Power House (used in the condensers) was sourced via a water conduit connecting Darling Harbour to the Boiler House, constructed at the same time as the main Power House buildings in 1898. Land reclamation works around Darling Harbour in the 1920s, as well as the larger water requirements of new turbines in the Turbine Hall, necessitated installation of new, longer, intake and outlet conduits for the Power House at this time. Conduit installation works commenced in 1923-24, and completed by 1928, proving to be one of the most expensive works undertaken during the modernisation of the Power House..

Between 1927 and 1932, the Ultimo Power House underwent a major period of modernisation and remodelling to achieve greater efficiency of operation, including replacement and upgrade of much of the industrial equipment and plant, installation of a new pneumatic coal handling plant, and construction of a new concrete coal store with a storage capacity of 10,000 tonnes to the south of the Boiler House. The new coal storage bin allows continued operation of the Power House in the case of strikes on the coalfields....⁵⁹ Following completion of modernisation works in 1932, the Ultimo Power House was for a time the largest generating plant in the Southern Hemisphere (Figure 3.8)....⁶⁰

⁵⁸ Sykes F. G. S. 1902, 'The Sydney, Australia Tram System' in *The Electrical World and Engineer*, Dec 6 1902, Vol XL pp. 889-893.

⁵⁹ Godden et al. 1984 p. 74

⁶⁰ 'Massive Turbines at Ultimo', *The Sun*, 9 Oct 1932, p. 7

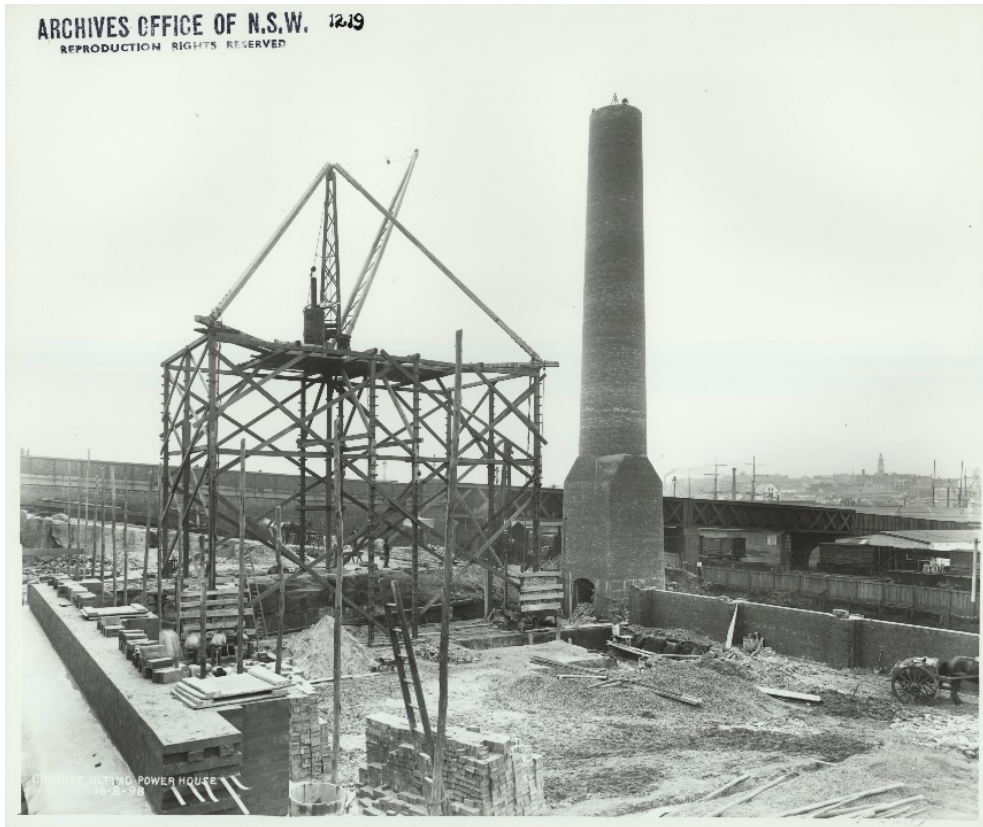


Figure 3-6: Construction of the Pump House 1898 (Source: State Archives and Records Authority of New South Wales, NRS-4481-2-[4/8645]-1219)



Figure 3-7: Ultimo Post Office, early 1900s (Source: State Archives and Records Authority of New South Wales, NRS-4481-2-[4/8610]-55)

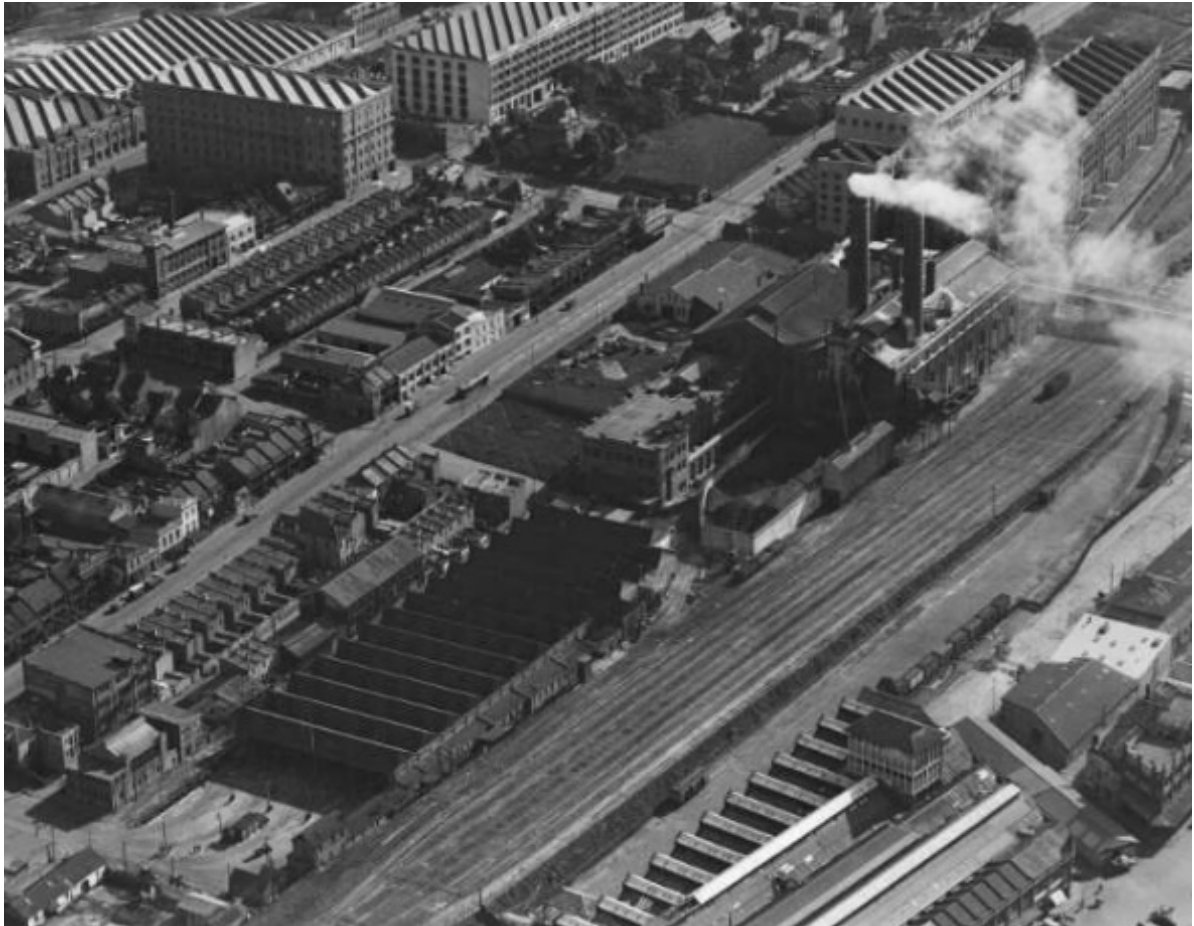


Figure 3-8: 1932 Aerial view showing Power House with new concrete coal store south of Boiler House. Tram Shed to the south, Goods Line along the eastern boundary (Source: NLA 161864278)

3.4. Site Modifications, Closures, and Abandonment (1940s-1979)

The Ultimo Power House was subject to numerous adaptations and modifications over time, as necessary to meet the ongoing requirements for the power station. During WWII, precautions were made at the Power House in the case of an air raid, including the construction of air raid shelters and barricading the lower windows of buildings with sandbags. A severe impact to NSW coal supply in the 1940s as a result of industrial action at the coalfields, resulted in conversion of the boilers to operate on fuel oil in 1947.

The Commissioner of Railways purchased 550 Harris Street in April 1948 providing a frontage to the street.⁶¹ A Tramway Instruction Room was vacated in 1953 when a new training school opened in Randwick, and by 1954 it was being used as a storeroom for the Electrical Commission of NSW. The building is recorded on the 1963 Sydney Water Plan of the site, and appears to have remained until the development of Stage 2 of the Powerhouse required its demolition as it was recorded when Godden et al reviewed in the site in 1984.⁶² The State Railways operated the Power House until 1953 when the Ultimo Power House, along with all other Railway Department Power Houses, were transferred to the Electricity Commission of NSW.⁶³

⁶¹ Godden et al 1984 p. 30

⁶² Godden et al 1984 p. 1

⁶³ Matthews M. R., 1982. *Pyrmont & Ultimo: A History*, Southwood Press, p. 85; Godden et al 1984, p. 144.

In the 1950s, tramways were slowly phased out of use across NSW and replaced by buses. This decline of Sydney's tramways resulted in the closure of the Ultimo Power House on 11 October 1963.⁶⁴ By this stage, the Power House was only used as a minor component in the Electricity Commission's grid (mostly for tram function only), having been superseded in its output capacity since 1923 by White Bay Power Station.⁶⁵ Much of Ultimo's plant and equipment was disassembled and removed between 1965-1966, following which the Power House buildings fell into disrepair and was subsequently damaged by decay, squatters, and vandals. In 1968 a large proportion of the former Pump House and chimney was demolished for the construction of the William Henry Street bridge, while the two brick chimneys at the southern end of the Boiler House were demolished to the roofline in 1976-77, resulting in severe damage to the Boiler House roof.⁶⁶

3.5. The Powerhouse Museum (1981 to Present)

Suggestions for use of the Power House site for a museum were made as early as 1964, when plans were developed to convert the former Ultimo Tram Depot (Harwood Building) to a Transport Museum. These were initially abandoned when it appeared there was a conflict with the route of the 1965 Western Distributor.⁶⁷ However, when the freeway plans were finally curtailed in 1977 avoiding the Power House site, its possible use of the site as a Museum re-emerged

On the 13th of August 1979, NSW Premier Neville Wran announced the Ultimo Power Station and Tram Depot was to become the new home of the Museum of Applied Arts and Sciences (MAAS).

Works undertaken to the former Power House buildings during the adaptive reuse of the site for the Powerhouse Museum mostly resulted in the industrial buildings remaining as shells only, with the majority of their original equipment, plant, machinery, and finishes removed, and interiors refurbished with modern exhibits, amenities, and services as required for the modern museum. The substantial bulk of the alterations and additions to the Power House Ultimo site were focused along the Harris Street frontage, including construction of the new Wran Building. The water conduit (Water Cooling System and Manifold) connecting the Power House and Darling Harbour was repurposed to serve as part of the museum's air conditioning system (and continues to do so to this day). According to project architect Lionel Glendenning, the design of the Wran Building responded to the 'the golden mean proportion' of the Turbine Hall, with Vault 1 making architectural reference to MAAS's first home in the Garden Palace, and Vault 2 referring to the arches of the Boiler House.

⁶⁸

*The existing buildings, which include the former turbine, switch and boiler houses, have been stripped back to the bare essential structure. Exhibits, including airplanes, motor vehicles and helicopters, are hung in space. The new work was largely confined to the Wran Wing, a barrel-vaulted room, partially glazed with an external colonnade along Harris Street. From the entry, ramps, escalators and lifts lead the visitor to the various parts of the museum and the interactive displays.*⁶⁹

⁶⁴ Fitzgerald & Golder 1994, p. 112.

⁶⁵ Matthews 1982, p. 85.

⁶⁶ Rowe, D. M., '1988. Modern Engineering Preserving our Engineering Heritage: Air Conditioning in the Powerhouse Museum, Sydney' in *Fourth National Conference on Engineering Heritage 1988 (Papers)*, Sydney, p. 12.

⁶⁷ Fitzgerald & Golder, 1994. p. 113.

⁶⁸ Architectural Projects, 2003. p. 47.

⁶⁹ Watermark Press Sydney, 1997. p. 189 cited in Architectural Projects 2003 pp. 35-36.

Stage One of the Powerhouse Museum at Ultimo was opened by NSW Premier Neville Wran on 4 September 1981, and consisted of the adaptive re-use of the former Ultimo Tram Depot as a temporary public gallery, conservation and fabrication area and storage space. A commemorative time capsule was buried in the Mary Ann Street carpark at the 1981 opening, with items including a 1981 bottle of Penfold's Grange red wine, a Space Invaders Game, newspapers, a UBD street directory, Sydney telephone books, and photographs of the museum trustees and staff⁷⁰ In 1984 the Ultimo Tram Depot was formally renamed the Harwood Building, in honour of Norm Harwood, the former curator of the Museum of Applied Arts and Sciences.

Stage Two of the Powerhouse Museum at the Ultimo site opened on 10 March 1988, constituting the adaptive re-use of the former Power House buildings along with the newly constructed Wran Building (Figure 3-9- Figure 3-10). The new museum was well received and was awarded the Sulman Award for architectural merit for that year. With the opening of Stage Two of the Powerhouse Museum, the exhibits temporarily located in the Stage One development (i.e. the Harwood Building), were relocated across to the Power House buildings and the Harwood building was converted into conservation labs and office space. While the construction of the Wran building was innovative for its adaptive reuse of the site at the time, it also impacted the visibility and legibility of the State Heritage listed buildings within the site, including the former Power House buildings, and the Ultimo Post Office.

The opening of the Sydney Monorail in July 1988 provided access to the new Powerhouse Museum from Darling Harbour. The raised monorail line ran past the Boiler House aside the light rail line, it, also included the construction of a nearby station (named Powerhouse Museum Station in 2002....⁷¹) and a covered walkway from the station to the Powerhouse Museum.

The Powerhouse Museum at Ultimo has been subject to a number of alterations and systematic changes since its establishment in the 1980s, most notably the 2011-2013 revitalisation project, The first significant renewal to occur to the buildings since the 1988 opening, focusing on the Harris Street entrance and courtyard, including café and shop, as well as revisions to the interior spaces of the buildings and exhibitions.

Over the course of the recent few years, the museum has seen immense changes occur at a legislative, corporate and social level. The Powerhouse Museum has been maintained as per the charter of the Museum of Applied Arts and Sciences to keep buildings to its best standards, and since the Revitalisation Program of 2010-2012, there have been no major developments to the site.

On 4 July 2020 the NSW Government announced that the Powerhouse Museum at Ultimo would be retained and renewed as the anchor of the Powerhouse Museum, complementing the future flagship Powerhouse Parramatta, Powerhouse Castle Hill, and the Sydney Observatory.

⁷⁰ MAAS staff presentation 17 Feb 2021

⁷¹ Powerhouse Museum, *Annual Report 2002-2003*, p. 1



Figure 3-9: The Powerhouse Museum, April 1998 shortly after opening (Source: Powerhouse)



Figure 3-10: South elevation of the Powerhouse Museum 1988 (Source: National Trust)

4. Site Description

4. Site Description

4.1. Site and Setting

The Powerhouse Ultimo site is situated upon the lands of the Gadigal People of the Eora Nation in the suburb of Ultimo, within the City of Sydney LGA. The site is bounded by William Henry Street to the north, Harris Street to the west, Mary Ann Street to the south and the Goods Line to the east. The topography of the site has some significant variance in elevation, with almost nine metres difference in level between Harris Street to the west and the Goods Line to the east.

The Powerhouse Ultimo Site is located at the southern end of the Ultimo-Pyrmont peninsula proximal to Tumbalong (Darling Harbour). The natural landscape is characterised by plateaux and ridges consisting of quartz sandstone, with thin layers of shale caps throughout.⁷² This natural landscape composition encouraged development of a diverse range of natural environments in this area of Sydney including maritime/coastal, saltmarshes/estuaries and swamps, freshwater creeks, and woodland, that in turn supported a large range of natural faunal and floral resources that supported Aboriginal people in this area for thousands of years.

Remaining relatively undeveloped throughout the late 18th and 19th centuries, The Ultimo-Pyrmont Peninsula was first developed in the late 19th century as an industrial centre '*often enveloped in dirty air and surrounded by polluted water*'⁷³. It weathered the process of de-industrialisation and has grown into a contemporary residential and creative neighbourhood. While the Pyrmont Bridge provides access from the western shoreline of Darling Harbour to the Sydney CBD, the physical division created by the former Darling Harbour Goods Line and Goods Yard between the study area and the harbour, means the Powerhouse Ultimo site is relatively isolated from the Sydney CBD. The Powerhouse Ultimo Site consists of an amalgamation of several earlier sites with varying historical significance and built elements.

Since the preparation of the 2003 CMP, a significant volume of new development has been constructed around the Powerhouse Ultimo site, resulting in a substantial change to the existing built context and setting of the site as a whole. New development works have particularly concentrated to the east and northeast of the site (Haymarket and Darling Harbour respectively), including construction of numerous high-density multi-storey commercial and residential (student housing) buildings along the Goods Line, as well as the recent landscaping of the Goods Line reserve itself as a public park/reserve (Figure 4.1 and Figure 4.2). The taller of these new eastern developments are visually apparent to the east, rising above the Power House buildings and forming the built urban context of the site, even when viewed from Harris Street (Figure 4.3 and Figure 4.4). The northern elevation of the site is dominated by the overbridge and road approaches along and above William Henry Road (Figure 4.5), while the site's western boundary along Harris Street has an elevation to the lower density urban environment of Ultimo (Figure 3.6).

⁷² NPWS Bioregional Assessment 2003

⁷³ Fitzgerald & Golder, 1994, p. 11.



Figure 4-1: Existing context of the eastern side of the site, view north along Goods Line public park, Harwood Building in left. Context of recent high density commercial and residential (Urbanest- student housing) immediately east of the site (Curio 2020)



Figure 4-2: View south along the Goods Line park, Harwood Building in right. Existing surrounding built context including UTS Chau Chak building in background. (Curio 2020)



Figure 4-3: Existing surrounding built context of site, recent student housing multi-storey development visible behind Power House buildings to east. View from Harris Street, Wran Building in back left. (Curio 2020)



Figure 4-4: Existing surrounding built context of site. View southeast across Harris Street forecourt, UTS Chau Chak Building visible in background right, new development east of site visible behind Power House buildings (Curio 2020)



Figure 4-5: View west along William Henry Street bridge, northern elevation context/setting of Powerhouse Ultimo site. Boiler House visible in left of image with Darling Harbour Goods Line in the foreground. (Curio 2020)



Figure 4-6: View north along Harris Street. Wran Building to the right, Ultimo Post Office visible on corner of Harris and William Henry Streets in background (Curio 2020)

4.2. Built Elements



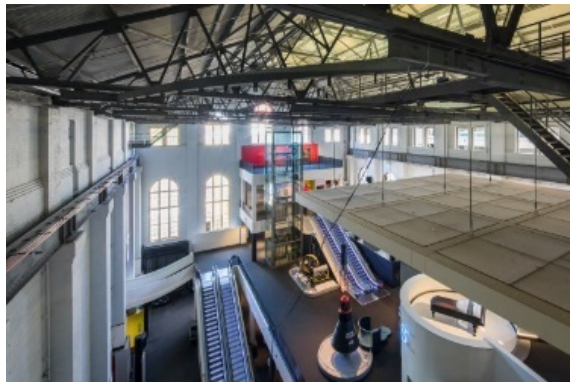



The primary built elements of the Powerhouse Ultimo site include the former Power House Buildings (North Annex, Engine House, Turbine Hall, Pump House (remains), Boiler House, and Switch House), former Ultimo Post Office, the Harwood Building (former Ultimo Tram Shed), and the Wran Building. A section of the Goods Line (former Darling Harbour Rail Corridor) borders and enters the site along the eastern boundary, and the heritage listed Water Cooling System and Manifold is located within the site as a subterranean element, accessible via the basement of the former Turbine Hall.






The development of the Powerhouse Ultimo site over time is evident in its built form as an amalgamation of several earlier sites and a number of buildings. The single storey brick Ultimo Post Office (1901) on the corner of Harris and William Henry Streets was designed by Government Architect Walter Liberty Vernon in the Queen Anne architectural style and provides a stark visual contrast to the industrial architecture of the former Power House buildings (1899-1902) and the modern 1980s museum additions (Wran Building) that rise behind it.

The former Power House structures themselves are strong, substantial warehouses, characteristic of the Federation era, constructed of solid brick with rendered brick detailing on the cornices and window sills, complemented by the later (1927) Switch House to the south that features a highly decorative façade. When it was completed, the 1988 Wran Building addition provided a contemporary response to both the history of the Museum and the extant Power House buildings.

Table 4.1 provides a summary of key built structures within the study area.

Table 4.1: Summary of Key Built Structures

HARWOOD BUILDING	NORTH ANNEX
<p>Constructed: 1899</p> 	<p>Constructed: 1899</p> 
TURBINE HALL	BOILER HOUSE
<p>Constructed: 1902</p> 	<p>Constructed: 1902-1905</p> 
WRAN BUILDING	WATER COOLING SYSTEM & MANIFOLD
<p>Constructed: 1988</p> 	<p>Constructed: 1898-1901</p> 

PUMP HOUSE (FORMER)	ENGINE HOUSE
<p>Constructed: 1899</p> 	<p>Constructed: 1899</p> 
SWITCH HOUSE	ULTIMO POST OFFICE
<p>Constructed: 1927</p> 	<p>Constructed: 1901</p> 
THE GOODS LINE	
<p>Constructed: 1853-1911</p> 	

5. Heritage Significance

5. Heritage Significance

The Assessment of Significance of the Powerhouse Ultimo site is based on the principles and definitions previously consolidated in *The Burra Charter*, and the NSW Heritage Manual. This literature provides guidelines and criteria for the assessment of the heritage significance of a place. The Burra Charter defines cultural significance as:

Cultural significance means aesthetic, historic, scientific, social or spiritual value for past, present or future generations.

Cultural Significance is embodied in the place itself, its fabric, setting, use, associations, meanings, records, related places and related objects.

Places may have a range of values for different individuals or groups.

Furthermore, the NSW Heritage Manual correlates the assessment of the significance of a place with the understanding and description of its main uses, association with individuals or groups, archaeological potential and overall meaning of the cultural significance within those groups. This assessment is done by comparing the significance of a place with the NSW Heritage assessment criteria, in which a place can meet more than one criterion. Such process will determine the level of significance of a place – either for the local government area, for the state of NSW or the broader Australian community – and will assist in preparing a brief statement of heritage significance.

For the assessment of local or State significance of an item, the NSW Heritage Guidelines indicates that the item must meet one or more of the following criteria:

- *Criterion (a)—an item is important in the course, or pattern, of NSW's cultural or natural history (or the cultural or natural history of the local area);*
- *Criterion (b)—an item has strong or special association with the life or works of a person, or group of persons, of importance in the cultural or natural history of NSW (or the cultural or natural history of the local area);*
- *Criterion (c)—an item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW (or the local area);*
- *Criterion (d)—an item has strong or special association with a particular community or cultural group in NSW (or the local area) for social, cultural or spiritual reasons;*
- *Criterion (e)—an item has potential to yield information that will contribute to an understanding of NSW's cultural or natural history (or the cultural or natural history of the local area);*
- *Criterion (f)—an item possesses uncommon, rare or endangered aspects of NSW's cultural or natural history (or the cultural or natural history of the local area);*
- *Criterion (g)—an item is important in demonstrating the principal characteristics of a class of NSW's (or a class of the local areas):*
 - *Cultural or natural places; or*
 - *Cultural or natural environments*

In addition to the significance criteria as presented above, archaeological significance is generally further informed by three key questions:

- Can the site contribute knowledge that no other resource can?
- Can the site contribute knowledge which no other site can?

- Is this knowledge relevant to general questions about human history or other substantive questions relating to Australian history, or does it contribute to other major research questions?

5.1. Previous Statements of Significance

The following Statements of Significance relate to the NSW Heritage Council State Heritage Register (SHR) listing for the 'Ultimo Power House (SHR Item No. 02045) and the City of Sydney listing of the 'Powerhouse Museum Former Warehouse Buildings, including Interiors' within Schedule 5 of the Sydney Local Environmental Plan (LEP) 2012.(LEP Item No. I2030), along with listing information provided for the Former Ultimo Post Office (SHR Item No. 00502/LEP Item No. I2030).

5.1.1. Ultimo Power House - NSW Heritage Council SHR Statement of Significance

The SHR listing for the Ultimo Power House (SHR #02045) includes the Office Building, Engine Room, Turbine Hall, Switch House, Boiler House, Water Cooling System and Manifold. It does not include the Wran Building or the public domain surrounding the buildings. The SHR listing provides the following Statement of Significance:

The Ultimo Power House is of state significance historically for being the first large state-owned electricity generating station in NSW and the original generating station for the supply of electricity to power the electric tramway network throughout Sydney. It was one of the largest and most important generating stations in NSW for many years. It was the site where most major technological advancements in electrical generation, including steam turbines and large-scale, alternating-current generation, were trialled by NSW electricity authorities. The station also played a major part in the development of the Ultimo/Pymont area.

This Federation power station has associations with the electrification of the suburban tramway and railway systems and with the general reticulation of electrical power in Sydney. The power house also supplied power to and has close association with Pymont Bridge (SHR No. 1618), Glebe Island Bridge (SHR No. 1914), Sewage Pumping Station No.1 (SHR No. 1336) at Ultimo (and 15 other low level sewage pumping stations in Sydney).

The power house is of state heritage significance for its major part in the 20th century development of the Ultimo/Pymont area and in the wider heritage conservation movement in NSW. The transition of a major industrial location to a cultural, educational and tourism precinct was part of the Darling Harbour Bicentennial citywide adaptation project.

The historical purpose and function of the former power station is readable today through the building fabric, structure, in-situ engineering structures, gantry cranes and chimney bases.

These power station buildings are of state significance as a landmark group of buildings which relate closely to the visual and architectural industrial context of the area. It is of museological and architectural significance as a landmark early example of the adaptive reuse of a large-scale industrial heritage site, which was then a radical and exhilarating new approach to museum making for NSW. The transformation of the Power House through conservation and adaptation was recognised with several awards and was influential in the urban design of the later

buildings in the precinct. It's fabric, form and uses is held in demonstrable public esteem by engineers, architects, museum associates and the wider public.⁷⁴

5.1.2. Ultimo Power House City of Sydney LEP Statement of Significance

Schedule 5 of the Sydney LEP 2012 lists the 'Powerhouse Museum former warehouse buildings, including interiors.'

The online State Heritage Inventory contains a statement of significance for this listing as follows:

The former Ultimo Power House, dating from 1899, is historically significant for being the original generating station for the supply of electricity to power the tramway network throughout Sydney. It was also one of the largest and most important generating stations in NSW for many years and has associations with the electrification of the suburban railway system and with the general reticulation of electrical power. It was the first place where turbine driven alternators were tried in Australia, in 1905. It was amongst the largest of any generating stations operating in Australia with Ultimo and the White Bay Power being purpose built for the Railway and Tramways Department generating stations. The abandoned status of the power station and tramway system provided a potential to reveal a past transport system which ceased in favour of motor buses, which was underway from the 1950s.

The building dates from one of the key period of layers for the development of Ultimo as a direct result of subdivision of the Harris and Macarthur Estates and industrial redevelopment of the area at the turn of the century.

It represents a good example of a Federation industrial building which makes a positive contribution to the streetscape. The subsequent alterations undertaken for the building's conversion to the Powerhouse Museum is significant both for its successful re-use of the buildings and as a modern design, awarded the Sulman medal.⁷⁵

It is important to note that the listing does not apply to the entirety of the lot and therefore excludes the public domain and any buildings outside of this lot. The LEP listing describes the item as 'Powerhouse Museum – Former Warehouse Building, including Interiors.' The vault associated with the Wran Building is highlighted in the LEP map, however, it is not described in either the LEP listing or included within the SHR listing for the site. It is considered that this is as a result of a mapping discrepancy at the time of the LEP gazettal and not a deliberate intention to include the vault component of the Wran Building within the local LEP listing. The map for the State Heritage listing that relates to the same former warehouse buildings does not include the vault (see Figure 2-4).

There is also a discrepancy in relation to the Wran building itself. The Wran building is not listed on the State or local heritage listings. However, on 23 November 2020, the Wran building was added to the physical description of the State Heritage Inventory data sheet for the local listing. The LEP has not been amended to include the Wran building in the local listing. We are therefore of the opinion

⁷⁴ SHR Listing—*Ultimo Power House*

⁷⁵ State Heritage Inventory, NSW Office of Environment & Heritage, *Powerhouse Museum Former Warehouse Buildings, including interiors* (Local), accessed December 2020, <<https://www.environment.nsw.gov.au/heritageapp/ViewHeritageItemDetails.aspx?ID=2424493>>

that the Wran building is not a locally listed item. However, in our opinion the Wran building meets some of the significance criterion as set out in section 5.4.

In addition, the LEP listing does not include the North Annex/Office Building within the heritage listing for the site. This too, is likely to be an anomaly but is also important to note.

5.2. Potential Aboriginal Cultural Heritage Significance

The Aboriginal Cultural Heritage Assessment Report (ACHAR)⁷⁶ prepared for the Powerhouse Ultimo Renewal SSD in 2022, includes the following Statement of Significance, which was prepared and endorsed by the Registered Aboriginal Parties involved in the project:

The area surrounding Sydney Harbour is recognised to be highly significant to both Aboriginal and non-Aboriginal people as the location of first contact between the local Aboriginal groups and Europeans. The Pyrmont Peninsula, within which the current study area, is situated is recognised as being of both archaeological and cultural significance to the to the contemporary Aboriginal community in providing both tangible and intangible links to the Aboriginal past. The location of the study area on the original western shoreline of Cockle Bay/ Darling Harbour means that the area would have been attractive to past Aboriginal people as a location for fishing, resource gathering and other activities and therefore shares the significance attributed to the Sydney Harbour region more broadly.

The extensive modification and disturbance of the original environment of the area since European colonisation, however, has had a considerable impact on Aboriginal archaeological resources within the region. The results of numerous previous excavations within the local region have confirmed that the survivability of Aboriginal archaeological deposit is highly variable and strongly dependent upon the nature and extent of past disturbance associated with specific locations. Nevertheless, numerous Aboriginal sites are located in close proximity to the study area that provide physical evidence for the continued occupation of the Sydney foreshore and immediate surrounds from at least 7,000 years ago.

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 more akin to present conditions. The study area also has the potential to contain evidence of contact archaeology in the form of flaked glass artefacts.

Should archaeological deposits be present within the study area, for the local Aboriginal community, this would represent a tangible and meaningful connection to their ancestors.

*The study area is therefore considered to have **high social and spiritual significance** to the local Aboriginal community, including both Gadigal people as well as Aboriginal people from other Nations who live in the area.*

*The study area may have **moderate historical significance** for the early interactions and connections between Aboriginal people and early white settlers in this area of the coastal Sydney region should evidence for contact archaeology be identified within the potential sub-surface natural deposits associated with the study area.*

⁷⁶ Curio Projects 2022, *Aboriginal Cultural Heritage Assessment Report: Powerhouse Ultimo Renewal Project*, report prepared for The Department of Enterprise, Investment and Trade (Create NSW), final V2 Aug 2022.

*Should sub-surface Aboriginal objects be present within the remnant nature soil profiles within the study area, the study area may have **moderate scientific significance** for its ability to contribute knowledge to the archaeological record about Aboriginal occupation of this area of coastal Sydney. The scientific significance of any Aboriginal objects, however, will be based on the number and extent of the artefacts, the types of artefacts present (including whether specific formal tool types such as backed artefacts are present) and the degree of integrity of the deposits from which they derive.*

This statement of significance will require updating should Aboriginal objects and/or sites be identified during any further assessment completed within the study area for this Project.⁷⁷

5.3. Potential Historical Archaeological Significance

The historical archaeological significance for the study area has been assessed in consideration of the historical overview for the study area and surrounds, in relation to the comparative analysis of other relevant historical archaeological sites in Sydney, as well as the nature of potential structural and cultural remains that may exist on study area and the historical periods to which they may belong. The archaeological significance assessment presented here is in relation to each of the historical phases of use of the study area and has been assessed in accordance with the 'NSW Heritage Criteria for Assessing Significance related to Archaeological Sites and Relics'.

Associations with Individuals, Events, or Groups of Historical Importance (NSW Heritage Criteria A, B & D)

The archaeological resource of the study area has associative significance at a local level for its ability to provide further information about ordinary people and groups who lived and worked within the study area. The archaeology is associated with historical groups such as the early European settlers living on small domestic structures on the Ultimo Estate and working groups associated with the running and production of the Powerhouse and associated structures.

In addition to early domestic occupation the archaeological resources of the study area could demonstrate and provide physical evidence for key phases in the later expansion of the site for industrial uses within the Ultimo and Darling Harbour areas, for example, the expansion of the Goods Railway and the 1920s saltwater inlet conduits connecting the Power House and Darling Harbour. The study area is also associated with the cultural history of Ultimo.

Aesthetic or Technical Significance (Criterion C)

The study area has little potential archaeological resources that would be considered to display a high degree of technical and creative achievement associated with the early domestic occupation of the site.

Archaeological excavations would likely reveal remains associated with technical aspects of the development of the site for the Power House. The potential archaeological resources are likely to have heritage significance at a local level in terms of this criterion.

Historical Archaeological Research Potential (Criterion E)

The historical information indicates the study area was used for domestic premises from as early as the 1840s with later 1870s residential buildings constructed until later demolished in the early 20th century. Archaeological resources from these features may provide insight into the lives, working conditions and activities of the residents and general population of the area in the mid to late 19th century in this area of Sydney.

⁷⁷ Curio Projects 2022, *Aboriginal Cultural Heritage Assessment Report: Powerhouse Ultimo Renewal Project*, report prepared for The Department of Enterprise, Investment and Trade (Create NSW), final V2, p. 78.

The Ultimo Power House, Tram Shed, Goods Line and Ultimo Post Office are historically significant for their construction during the main development era of Ultimo and Pyrmont when the major estates of the peninsula were subdivided and sold for State government, residential, and commercial purposes. The Ultimo Power House is historically significant as the first state-owned, large electricity generating station, constructed in Sydney to power the Sydney electric tramway network. From 1899 to 1963 it was the largest and most important electricity generating station in the State. The Ultimo Power House site is historically significant as a place where the NSW electricity authorities trialled significant technological advancements in the generation of electricity. This included large scale alternating-current generation and steam turbines. The Water-Cooling System and Manifold is historically significant for its integral role in the function of the Ultimo Power Station and the Ultimo Tram Shed is historically significant as the first tram depot shed in NSW.

The beginning of the 20th century saw numerous extensions and additions to the ever-growing Power House and structures located within the study area. The Power House and associated structures were a historically important site which saw the evolution of the early industry in Sydney as the site was the main supplier of electricity in the southern hemisphere for an extended period of time during the early 20th century.

There is potential for archaeological resources from the early 19th to early 20th century to survive within the study area and are considered to give information that would illustrate and enhance historical knowledge connected with the historic themes of land tenure, commerce, accommodation, early industry, and domestic life. The site is assessed as of local significance according to this criterion.

Ability to Demonstrate the Past through Archaeological Remains (Criteria A, C, F & G)

Any archaeological resource associated with the buildings and associated with occupation deposits at the site have the potential to provide information about the daily lives of the people living and working at this location from the mid to the late nineteenth century. Archaeological investigations of nearby sites such as Bullecourt Place at 287 Pyrmont Road, 24-50 Mary Ann Street, 14-28 Ultimo Road, 50-72 Union Street, 9-13 Hay Street and Jackson's Landing Bowman Street, which are important comparative examples for the proposed excavation at the study area, with 50-72 Union Street providing substantial artefact information related to the lives of the occupants.

The potential archaeological features and deposits from the site should be considered significant for their potential to yield information relating to the domestic, commercial, and industrial activities of the site from at least the early 1850s. The potential archaeological resources at the study area have the potential to yield an account of the cultural history of the site and local area as the site if intact, would represent a rare opportunity to investigate such an area.

Any specific information of the physical development of the site during the 19th century could also be explored through these remains and potential archaeological remains within the site. Information like the urban development in this area of Ultimo/Pyrmont, evolution of industry related to the Power House and associated structures/ activities, provision of services to the site, and changing land use patterns (i.e., Outbuildings, cess pits, wells, industrial features) may be revealed by archaeological investigation of the study area. Investigation of broad scale research questions designed to generate a greater understanding of wider social, industrial, and economic change may be explored through comparative analysis with other archaeological sites from similar urban contexts. The site is assessed as of local significance in accordance with this criterion.

5.3.1. Statement of Historical Archaeological Significance

The study area was occupied as early as the 1840s and was used continuously for residential premises until the early 20th century, including 137 William Henry Street, 517 Pyrmont Street, and 554- 556 Harris Street. In the early 19th century, sandstone quarrying activities occurred along Harris Street. From the 1890s until the 1960s, the Ultimo Power House and associated structures made up the largest electricity generating station in the state and located in the eastern half of the study area. The Ultimo Power House is significant as the first state-owned, large electricity generating station, constructed in Sydney to power the Sydney electric tramway network. The archaeology is associated with historic groups such as the early European settlers in the Ultimo area and working groups associated with the running and production of the Power House and associated structures. The history of the site reflects change in residential, commercial, and industrial development and occupancy behaviour at a local level and potentially state level.

Although there was substantial bulk excavation within the northeastern part study area, associated with the construction of the basements for the Engine Hall/ Turbine Hall and Boiler House within the Powerhouse site, there is potential for the survival of subsurface archaeological resources. These archaeological resources have the potential to be associated with both the 19th century residential structures and evolution of the Powerhouse in the 20th century. The potential historical archaeological resources of the study area have the potential to demonstrate significant aspects of the social, economic and industrial characteristics of the site's former occupants, uses and industrial evolution. The potential deposits within the Powerhouse Ultimo study area would meet the criteria of Local Significance.

5.4. Ultimo Power House—Updated Statement of Heritage Significance

The heritage significance of the Powerhouse Ultimo site has been assessed according to each of the above criterion and has been updated to include information pertaining to potential Aboriginal Cultural Heritage Significance, potential archaeological significance. As part of this assessment the SHR and LEP curtilages and listing descriptions for the heritage-listed items were reviewed, and where any inconsistencies occur, the assessment of significance has been updated to reflect the most recent assessment of significance for the site (completed by Heritage NSW for listing on the State Heritage Register in 2021), with Curio additions.⁷⁸

5.4.1. Criterion (a)—Historical Significance

- The study area may have moderate historical significance for the early interactions and connections between Aboriginal people and early white settlers in this area of the coastal Sydney region should evidence for contact archaeology be identified within the potential sub-surface natural deposits associated with the study area.
- The Ultimo Power House and Ultimo Post Office are historically significant for their construction during the main development era of Ultimo and Pyrmont when the major estates of the peninsula were subdivided and sold for State government, residential, and commercial purposes.

⁷⁸ Curio Additions relate specifically to the potential Aboriginal Cultural Heritage Values, including archaeological values, potential historical archaeological values which have not been previously assessed as part of the site's overall significance. These values have been derived from the Aboriginal and Historical (archaeological) assessments undertaken for the Powerhouse Ultimo Renewal Project.

- The Ultimo Power House is historically significant as the first state-owned, large electricity generating station, constructed in Sydney to power the Sydney electric tramway network. From 1899 to 1963 it was the largest and most important electricity generating station in the State.
- The Ultimo Power House site is historically significant as a place where the NSW electricity authorities trialled significant technological advancements in the generation of electricity. This included large scale alternating-current generation and steam turbines.
- The Water Cooling System and Manifold is historically significant for its integral role in the function of the Ultimo Power Station.
- The 1988 museum adaption of the site has historic significance to the Ultimo /Pyrmont area providing a new overlay to the Power House buildings and represents an early example of successful adaptive re-use of heritage assets in NSW.

5.4.2. Criterion (b)—Associative Significance

- The area surrounding Sydney Harbour is recognised to be highly significant to both Aboriginal and non-Aboriginal people as the location of first contact between the local Aboriginal groups and Europeans. The Pyrmont Peninsula, within which the current study area, is situated is recognised as being of both archaeological and cultural significance to the to the contemporary Aboriginal community in providing both tangible and intangible links to the Aboriginal past.
- The potential historical archaeology is associated with early European settlers in the Ultimo area and the evidence of industrial workers associated with the running of the Power House and associated structures.
- The Ultimo Power House is associated with the cultural history of Ultimo.
- The Ultimo Post Office has associative significance as one of a group of approximately 32 buildings constructed in a similar style by NSW Government Architect Walter Liberty Vernon between 1890 and 1910 in Sydney.
- The 1988 museum adaption is associated with the work of architect Lionel Glendenning, exhibitions designer Richard Johnson, Powerhouse Director Dr Lindsay Sharp and the former NSW Premier Neville Wran.

5.4.3. Criterion (c)—Aesthetic Significance

- The Ultimo Power House has aesthetic significance as the group of power station buildings are a good example of one of the most important and intact group of power station buildings in the State.
- In its day, the Boiler House was one of the largest brick buildings in NSW and for seventy years its chimneys were significant landmarks.

5.4.4. Criterion (d)—Social Significance

- The study area is considered to have high social and spiritual significance to the local Aboriginal community, including both Gadigal people as well as Aboriginal people from other Nations who live in the area.⁷⁹
- The Ultimo Power House has social significance as demonstrated by the public esteem of its form, fabric and uses as held by architects, engineers, educators, donors, volunteers, visitors and communities.
- Both the individual buildings and the site as a whole has social significance for their long historical association with the industrial working class of Ultimo, with the Ultimo Power House being a major employers in the area. The buildings dominated the landscape and the resident's daily lives were affected by the state of the smoke leaving the buildings.
- Following the conversion into a museum in the 1980s the Powerhouse Ultimo site has retained a level of social significance for the local community and industry.
- The Powerhouse Museum has social significance for its innovative adaptive reuse of the Ultimo Power House.⁸⁰
- The Powerhouse site has social significance for the community response to the potential relocation of the Museum from the site and the decision to retain and renew the Museum on site.

5.4.5. Criterion (e)—Scientific Significance

- There is a moderate to high potential for in situ Aboriginal archaeological deposits to be present within the study area, where natural soil profiles remain intact. These areas within the Powerhouse Ultimo site include beneath the Wran Building forecourt, north of the Wran building in space between Wran and the Post Office, south of the Boiler House, south of the Harwood Building, and carpark spaces along the eastern boundary of the study area.⁸¹
- There is potential for the survival of subsurface historical archaeological resources. These archaeological resources have the potential to be associated with evidence of structures and activities of former mid 19th century houses at 137 William Henry Street, 554-556 Harris Street, and 517-523 Pyrmont Street, evidence of the former Sydney Omnibus Company Stables and City Carrying Co Stables, as well as evidence of the evolution of the Powerhouse in the 20th century. The potential historical archaeological resources of the study area have the potential to demonstrate significant aspects of the social, economic and industrial

⁷⁹ Curio Projects 2022, *Aboriginal Cultural Heritage Assessment Report: Powerhouse Ultimo Renewal Project*, report prepared for The Department of Enterprise, Investment and Trade (Create NSW), final V2, pp. 74-5.

⁸⁰ Aurecon, 2022. *Powerhouse Ultimo – Conservation Management Plan Engagement*, p. 24.

⁸¹ Curio Projects 2022, *Aboriginal Cultural Heritage Assessment Report: Powerhouse Ultimo Renewal Project*, report prepared for The Department of Enterprise, Investment and Trade (Create NSW), final V2, p. 77.

characteristics of the site's former occupants, uses and industrial evolution. The potential deposits within the Powerhouse Ultimo study area would meet the criteria of Local Significance and if highly intact, they would be of potential State significance.

- The Water Cooling System and Manifold has potential to provide information on the underground construction and day to day functioning of the early water cooling systems in Sydney.

5.4.6. Criterion (f) - Rarity

- As separate buildings, the former Ultimo Power House buildings and Ultimo Post Office, are representative examples of their types but not considered to be rare.
- The potential archaeological resources at the study area have the potential to yield an account of the cultural history of the site and local area as the site, including evidence of post-contact archaeology. If intact, the archaeological resource would provide a rare opportunity for investigation and interpretation.

5.4.7. Criterion (g)—Representativeness

- Should intact Aboriginal archaeological deposits be present within natural soil profiles within the study area, these may be representative of the use of the study area by Aboriginal people. This would depend on the presence and condition of an Aboriginal archaeological deposit in this location.⁸²
- The Ultimo Post Office is a representative example of an early 20th century, inner city post office.
- Collectively, the former Ultimo Power House buildings are a representative example of an early 20th Century power station.
- The Wran Building is representative of post-modernist architectural designs associated with large scale commercial developments of the 1980s and 1990s in Sydney. However, its integrity has been reduced through unsympathetic modifications made to the building between 2003 and 2015, which were required to enable the building to continue to function more readily as part of the existing museum.

5.5. Ultimo Power House -Summary Statement of Significance

The location of the Powerhouse Ultimo site on the original western shoreline of Tumbalong / Darling Harbour and is recognised to have high social and spiritual significance to the local Aboriginal community.

Should sub-surface Aboriginal objects be present within the remnant nature soil profiles within the study area, the study area may have scientific significance for its ability to

⁸² Curio Projects 2022, *Aboriginal Cultural Heritage Assessment Report: Powerhouse Ultimo Renewal Project*, report prepared for The Department of Enterprise, Investment and Trade (Create NSW), final V2, p. 77.

contribute knowledge to the archaeological record about Aboriginal occupation of this area of coastal Sydney.⁸³ Depending on the resource this may vary from local to State significance.

The Ultimo Power House may have moderate historical significance for the early interactions and connections between Aboriginal people and early settlers in this area should evidence for contact archaeology be identified within the potential sub-surface natural deposits associated with the study area. If found, it would meet the criteria of Local Significance, and if highly intact, may be of State Significance.

The potential historical archaeological resources of the study area have the potential to demonstrate significant aspects of the social, economic and industrial characteristics of the site's former occupants, uses and industrial evolution, and if found would meet the criteria of Local Significance and if highly intact, may be of State significance.

The Federation-Era Ultimo Power House is of State significance historically for being the first state-owned large electricity generating station in NSW. Built in 1899, it was the first power station constructed to provide electricity for Sydney's "new" electric tram system. It was one of the largest and most important generating stations in NSW and was the site where most major technological advancements in electrical generation, including steam turbines and large-scale, alternating-current generation, were trialled by NSW electricity authorities.

The Ultimo Power House also has associations with the electrification of the suburban tramway, railway systems, and with the general reticulation of electrical power in Sydney. The Ultimo Power House supplied power to and has close association with Pyrmont Bridge (SHR No. 1618), Glebe Island Bridge (SHR No. 1914), Sewage Pumping Station No.1 (SHR No. 1336) at Ultimo (and 15 other low level sewage pumping stations in Sydney). There is historical significance in the relationship between the Ultimo Tram Depot and the Ultimo Power House, in addition to the relationship between the Goods Line and the Ultimo Power House.

The Ultimo Power House is of State significance, aesthetically, as a landmark group of buildings which relate closely to the visual and architectural industrial context of the area, with the historical purpose and function of the former power station readable today through the building fabric, structure, in-situ engineering structures, gantry cranes and chimney bases. The landmark Power House played a major role in the development of the Ultimo/Pyrmont area.

The Ultimo Power House and the site as a whole has social significance, at a local level, for their long historical association with the industrial working class of Ultimo, with the Ultimo Power House being a major employers in the area. The buildings dominated the landscape and the resident's daily lives were affected by the state of the smoke leaving the buildings.

The Ultimo Power House is of State heritage significance for its transformative role in the 20th century redevelopment of the Ultimo/Pyrmont area from a major industrial location to a cultural, educational and tourism precinct that was part of the Darling Harbour Bicentennial citywide adaptation project. Specifically, the Ultimo Powerhouse is significant as a landmark early example of the successful adaptive reuse of a large-scale industrial heritage site for as a publicly accessible cultural asset in the form of a museum, which was at the time in the

⁸³ Adapted from Curio Projects 2022, *Aboriginal Cultural Heritage Assessment Report: Powerhouse Ultimo Renewal Project*, report prepared for The Department of Enterprise, Investment and Trade (Create NSW), final V2, p. 78. This significance will require updating should Aboriginal objects and/or sites be identified during any further assessment completed within the Powerhouse Ultimo site.

1980s considered a radical and exhilarating new approach to museum making for NSW. The transformation of the Ultimo Power House was recognised with several awards.

The site has associative significance with the former NSW Premier Neville Wran, the work of architect Lionel Glendenning, exhibitions designer Richard Johnson and Powerhouse Director Dr Lindsay Sharp as a result of the 1988 museum adaption of the Power House.

Following the conversion into a museum in the 1980s the Ultimo Powerhouse Museum has retained a level of social significance for its cultural and educational contribution to the State of NSW. This includes the social significance that the museum holds for the local community, as demonstrated by the community response to the potential relocation of the Museum from the site.

5.5.1. Ultimo Post Office (SHR 00502/LEP I2030)

The SHR listing for the Ultimo Post Office (SHR #00502) does not provide a statement of significance, however the following Statement of Significance is provided under the LEP listing for the Post Office:

The building dates from one of the key period of layers for the development of Ultimo/Pymont as a direct result of subdivision of the Harris and Macarthur Estates. It is a good example of a Federation Post Office on a prominent corner site which makes a positive contribution to the streetscape.

The former Ultimo Post Office, built in 1901, is historically significant for its associations with the development of Ultimo/Pymont as a predominantly industrial and warehouse precinct by the turn of the century. Construction of the post office helps to reflect the degree of development and consolidation by that time (Criterion A.4) (Historic Theme: 3.6 Establishing lines and networks of communication). The building reflects characteristics of Federation Classical and Federation Romanesque architectural styles and is important for its connection with NSW Government Architect W L Vernon (Criteria D.2 and H.1). Owing to its styling and its location on a major intersection, the former post office is an important element in the Ultimo streetscape. Further, it emphasises the scale of the former Ultimo Power House (now the Power House Museum) behind (Criterion E.1).⁸⁴

In addition, to the statement of significance, it is important to note that the:

Ultimo Post Office has associative significance as one of a group of approximately 32 buildings constructed in a similar style by NSW Government Architect Walter Liberty Vernon between 1890 and 1910 in Sydney.

5.5.2. Water Cooling System and Manifold

The s170 listing for the Water Cooling System and Manifold provides the following Statement of Significance (although it is also noted that the Water Cooling System and Manifold is specifically included within the 2020 SHR Listing of the Ultimo Power House site):

The water cooling system and manifold was an integral component of the operating system of the Power Station. The former Ultimo Power Station, (now the Powerhouse Museum) dating from 1899, is historically significant for being the original generating station for the supply of electricity to power the electric tramway network

⁸⁴ State Heritage Inventory, *Former Ultimo Post Office Including Interior*, Local Environmental Plan Item, accessed April 2022, <<https://www.hms.heritage.nsw.gov.au/App/Item/ViewItem?itemId=2424431>>

*throughout Sydney. It was also one of the largest and most important generating stations in NSW for many years and has associations with the electrification of the suburban railway system and with the general reticulation of electrical power. The station also played a major part in the development of the Ultimo/Pymont area.*⁸⁵

5.5.3. Goods Line (Darling Harbour Rail Corridor)

The s170 listing for the Goods Line (Darling Harbour Rail Corridor) provides the following Statement of Significance:

*The Darling Harbour goods line was part of the first railway opened in New South Wales in 1855, the current corridor corresponds with that purchased from the Harris family in 1853 for this purpose. It therefore has a high degree of significance as a place. The Ultimo Road Bridge is believed to be constructed in the 1850s, and is therefore one of the only remaining features of the original railway which joined Darling Harbour and Granville (Parramatta Junction) in 1855. The siting of the railway along what was the edge of Darling Harbour strongly influenced the development of Pymont and Ultimo. Because of it, wool stores, engineering works and other industries were built here after the 1870s, giving this part of Ultimo its industrial, rather than residential, flavour. The site also contains two railway bridges. The Railway Square road overbridge (outside the curtilage of this listing) built in 1855 is historically significant as the oldest railway bridge to be constructed and still in use in New South Wales. It is a strong connection to the first railway construction and the original Redfern (Sydney) Station. The Ultimo railway underbridge is a mid 19th century construction with classic revival inspired cast iron columns and mid 19th century sandstock brick abutments. Both items are assessed individually as historically rare, scientifically rare, archaeologically rare and socially rare.*⁸⁶

5.6. Significant Views

The 2022 CMP⁸⁷ identifies several key views of heritage significance for the Powerhouse Ultimo site in relation to external heritage items and landscape character that influence, enhance, and contribute to the significance of the heritage items contained within the site, as well as the site in its wider heritage context in Ultimo. These key views are identified as:

1. Views from Darling Harbour
2. Views to the site from Harris and William Henry Streets
3. Views from William Henry Street Bridge
4. Views from the Goods Line
5. Views and Access from Darling Drive, Exhibition light Rail Station, and Hay Street

5.6.1. Views from Darling Harbour

Historically, the main view line of the Ultimo Power House was from Darling Harbour, although the chimneys were a dominant element within the wider Ultimo skyline from many directions. The 2003 CMP described an opportunity to enhance the view of the Power House buildings from Darling Harbour, however recent development in Darling Harbour, the creation of Darling Square, and most notably the 2016 development of the high rise Urbanest student accommodation adjacent to the

⁸⁵ SHFA, *Water Cooling System and Manifold*, Section 170 Register, accessed April 2022,

⁸⁶ Sydney Harbour Foreshore Authority (Property NSW) Section 170 Register, *Darling Harbour Rail Corridor*

⁸⁷ Ibid, section 4.5.

Powerhouse Ultimo site on Darling Drive, has significantly reduced the ability for views from Darling Harbour to the site.

The impact of the construction of the Urbanest development on view lines between Darling Harbour and the Powerhouse Ultimo site was noted in the 2013 Statement of Heritage Impact for the Urbanest Development (TKD Architects), concluding:

Views to the Powerhouse Museum will be affected by the two residential blocks in the Haymarket Precinct situated within the Rail Corridor, which will also be impacted. However, the principal views to the Powerhouse Museum are available from Harris Street and will not be affected by the proposed development, while views to the building are of secondary importance. Also, the presence of the residential blocks will have no impact on the physical fabric of the Darling Harbour Rail Corridor because the area of the Corridor on which they stand was modified in the recent past with the formation of Darling Drive. There will be little impact on appreciation of the Corridor or interpreting it – apart from the loading dock associated with the proposed Exhibition Centre (see above), there are other no impacts on the Rail Corridor resulting from development on the SICEEP site....⁸⁸

5.6.2. View from William Henry Street Bridge

While the construction of the William Henry Street overbridge resulted in a significant visual impact to the Power House buildings from this elevation, obscuring the lower sections of the northern façade of the North Annex and Boiler House, the upper sections of the Federation brick buildings remain a dominant feature from this road approach - a view that is important to retain. The bridge provides excellent views to the northern and eastern facades of the Boiler House and the northern façade of the North Annex. The pedestrian walkway along the William Henry Street Bridge affords the only publicly accessible location from which the remains of the former Pump House (demolished during construction of the overbridge) is visible.

5.6.3. Views from The Goods Line

The Powerhouse Ultimo site is visible on approach from The Goods Line to the east. There is an opportunity to enhance the accessibility and visibility of the Powerhouse Museum from the Powerhouse end of The Goods Line encouraging future foot traffic through this area, particularly considering the recent revitalisation and development of this area as a pedestrian and cycleway connection from Central station to Darling Harbour. At present the view of the Power House heritage buildings east from The Goods Line is obscured and hindered by the presence of the boxy, rectangular café in the Level 1 courtyard and the brightly coloured lift shafts adjoining the southern façade of the Boiler House. There is an opportunity to enhance views to the site from The Goods Line.

5.6.4. Views and Access from Darling Drive, Exhibition Light Rail Station and Hay Street

While development over the past decade has hindered the ability for the Powerhouse Ultimo site to be viewed from Darling Harbour, the site is still visible from closer locations in the east, notably from Darling Drive, the Exhibition Light Rail Station, and Hay Street. The visibility of the Powerhouse Ultimo site from these eastern locations presents an opportunity for the introduction of effective heritage

⁸⁸ Tanner Kibble Denton Architects Pty Ltd, 2013. Letter to Urbanest re Statement of Heritage Impact, 10 September 2015.

interpretation and wayfinding elements to encourage foot traffic from Exhibition Light Rail Station, Darling Drive, and Hay Street. Museum signage is presently visible on the southern and eastern façades of the Level 1 Courtyard café.



Figure 5-1: View of the Powerhouse Museum from the western side of Harris Street



Figure 5-2: View of the Powerhouse Museum looking towards the Ultimo Post Office from the sidewalk adjacent to Harris Street



Figure 5-3: View of the Ultimo Post Office from the western side of Harris Street



Figure 5-4: View of the Ultimo Powerhouse Museum complex from the opposite corner of the intersection of Harris and William Henry Street



Figure 5-5: A close-up view of the Ultimo Powerhouse Museum complex from the opposite corner of the intersection of Harris and William Henry Street



Figure 5-6: View of the Ultimo Powerhouse Museum complex from the opposite side of William Henry Street

5.7. Gradings of Significant Components

In order to develop a holistic understanding of the significance of the wider Powerhouse Ultimo site, it is important to assess the level of heritage significance of the individual elements that compose the historical fabric of the existing buildings, with relation to their contribution to the overall heritage values of the place. Some individual heritage elements of a place may contribute to a greater or lesser degree than others to the overall heritage values of a place, as well as possessing varying distinct levels of intactness and integrity depending on the development history and condition of each element.

The assessment of significance for each built element of the site, as well as the individual elements of each heritage building, has been ranked in accordance with the Heritage NSW criteria, as defined by the NSW Heritage Manual (2001)⁸⁹, and summarised in Table 5.1.

This section presents an overall summary of the key elements of the Powerhouse Ultimo site as a whole, and their relevant heritage significance. Grading of significant components of which each individual heritage item is composed have been provided in the individual section for each building in Part C of the 2022 Powerhouse CMP.⁹⁰

⁸⁹ NSW Heritage Office, *NSW Heritage Manual - Assessing Heritage Significance* (vol. 2), NSW Heritage Office, 2001.

⁹⁰ Curio Projects 2022b, Conservation Management Plan, Powerhouse Ultimo, prepared for The Powerhouse and Create NSW, Part C.

Table 5.1: Gradings of Significant Components (After Heritage NSW guidelines)

GRADING	JUSTIFICATION	RECOMMENDATION	STATUS
Exceptional	<i>Rare or outstanding element directly contributing to an item's local or State significance</i>	Retain, conserve (restore/ reconstruct) and maintain. Intrusive elements and fabric should be removed. Sensitive adaptation of heritage items of exceptional significance may be appropriate provided that it is in accordance with Burra Charter principles and with the specific guidance provided in this CMP.	Fulfils criteria for local or State Listing
High	<i>High degree of original fabric. Demonstrates a key element of the item's significance. Alterations do not detract from significance.</i>	Retain, conserve (restore/ reconstruct) and maintain. Intrusive elements and fabric should be removed. Adaptation is appropriate provided that it is in accordance with Burra Charter principles and with the specific guidelines provided in this CMP.	Fulfils criteria for local or State Listing
Moderate	<i>Altered or modified elements. Elements with little heritage value, but which contribute to the overall significance of the item.</i>	Retain, adapt and maintain. Demolition/removal may be acceptable provided that there is no adverse impact on the significance of the place. Retention in some cases may depend on factors other than assessed values, including physical condition and functionality.	Fulfils criteria for local or State Listing
Little	<i>Alterations detract from significance. Difficult to interpret.</i>	Retain, alter or demolish/remove as required provided that there are no adverse impacts on the heritage significance of the place. Sensitive alteration or demolition/removal may assist with enhancing the heritage significance of components of greater heritage significance.	Does not fulfil criteria for local or State listing
Intrusive	<i>Damaging to the item's heritage significance.</i>	Demolish/remove when the opportunity arises while ensuring there are no adverse impacts on the significance of other more significant components. Components that are actively contributing to the physical deterioration of components of higher significance should be removed as a matter of priority.	Does not fulfil criteria for local or State listing

5.7.1. Overall Powerhouse Ultimo Precinct Gradings of Significance

Table 5.2 has been extracted from the 2022 CMP⁹¹, and presents the gradings of significance for the key built elements of the Powerhouse Ultimo Site, within the broader context of the Powerhouse Precinct. These gradings are depicted in Figure 5.7.

Table 5.2: Grading of Significant Components of Powerhouse Ultimo Site

GRADING	ELEMENTS
Exceptional	North Annex Engine House Turbine House Boiler House Switch House Ultimo Post Office (excluding 1980s extension) Water Cooling System and Manifold Goods Line (section of track located within site boundary)
High	Harwood Building (outside of the study area) Former Pump House (remains)
Moderate	Wran Building
Little	Harris Street Forecourt Modern shade sails/structures in Level 1 courtyard 1980s extension to Post Office
Intrusive	Level 1 Café Covered Walkways (Rear yard of Post Office, between Boiler House and Harwood Building) Lattice security fence (Harris Street) Coloured vertical coverings over modern lifts and stairs along southern façade of Boiler House

⁹¹ Curio Projects 2022b , Conservation Management Plan, Powerhouse Ultimo, prepared for The Powerhouse and Create NSW



Figure 5-7: Gradings of Significance of Powerhouse Ultimo Precinct elements (Source: CMP, Curio 2022)

6. Description of Concept Plan

6. Description of Concept Plan

The Concept DA establishing the planning, design, and assessment framework for the Powerhouse Ultimo Renewal Project including the indicative land uses, maximum building envelopes, general parameters for the future layout of the site, and strategies to guide the subsequent detailed design phases of the project including Urban Design Guidelines and Design Excellence Strategy.

6.1. Concept Plan

Concept approval is sought for the following:

- A maximum building envelope across part of the site for any new buildings and alterations or additions to existing buildings retained on site.
- A maximum gross floor area of 40,000 square metres across the site.
- A minimum public domain area of 2,200 square metres within the site.
- Use of the site as an 'information and education facility' including:
 - museum exhibition spaces
 - education and learning spaces
 - creative industries studio spaces
 - back of house functional spaces to support museum operations
 - retail food and beverage offerings
 - administration offices
 - provision for ancillary and related uses contributing to the operation of Powerhouse Ultimo.
- Design Excellence Strategy and Urban Design Guidelines to guide the detailed design of the project.
- General functional parameters for the future design of the site including principles and strategies for the management of heritage, transport and access, noise and vibration, utilities and services.

The Urban Design Guidelines, Design Excellence Strategy and Powerhouse Ultimo CMP work together to ensure that all heritage-listed buildings within the Powerhouse Ultimo study area will be retained and will be sensitively adaptively reused and renewed. The parameters for development require any new elements and/or works to be designed so that the intangible and tangible heritage values of associated with the heritage-listed buildings are appropriately interpreted, conserved and enhanced as part of the renewal of the site.

Non-heritage listed buildings within the site, including the Wran building have the flexibility to be revitalised, adaptively reused and/or demolished as part of the proposed Concept Plan. We discuss this further in sub-section 7.0 below.

The impacts to heritage are restricted by the additional limitations on the maximum building envelope and a maximum allowable gross floor area of 40,000, combined with a minimum of 2,200 square metres within the site.

The following sub-section 7.0 Assessment of Heritage Impact assesses the potential heritage impacts with respect to the Concept SSD proposal.

Figures 6.1 to Figure 6-6 present the concept design envelope.

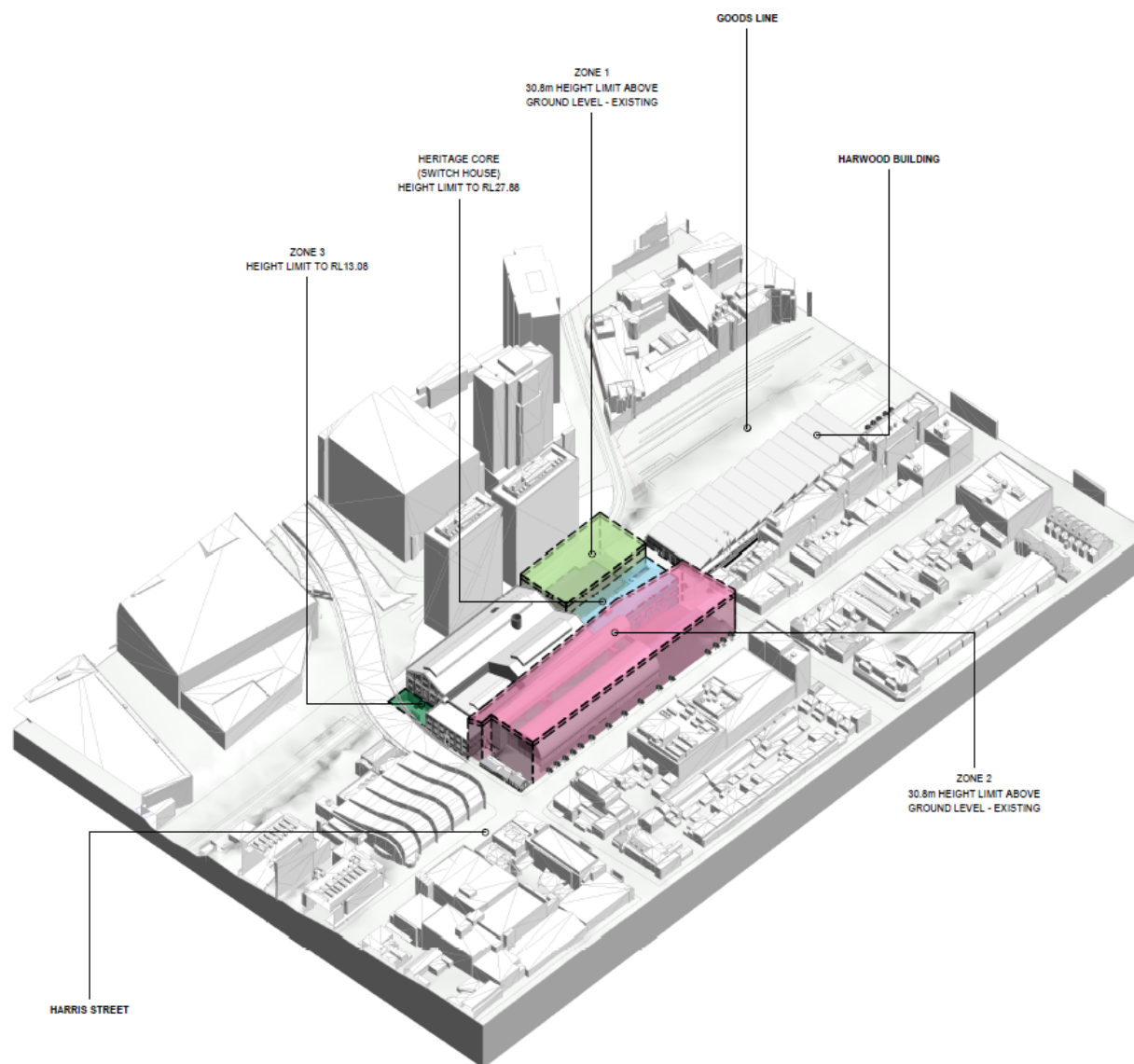


Figure 6-1: Ultimo Powerhouse- Building Envelope from the NW corner 3D Views (Source: John Wardle Architects, Feb 2022)

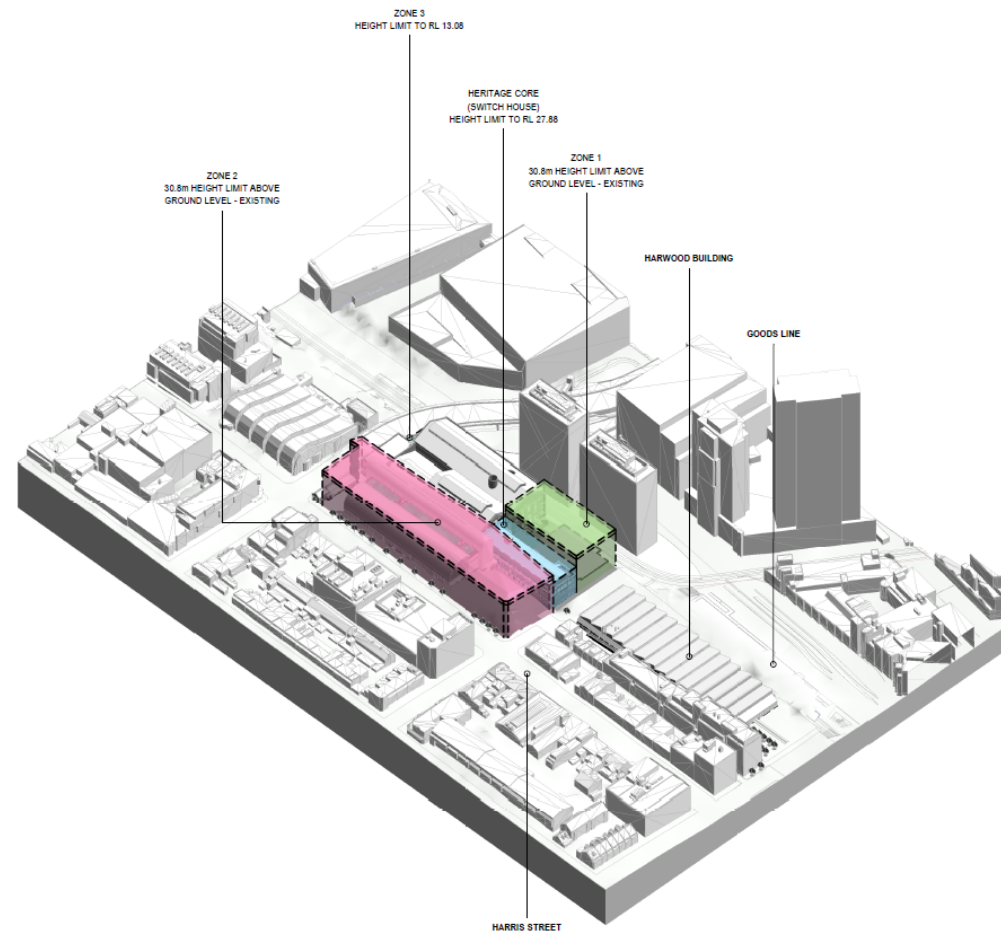


Figure 6.2 Ultimo Powerhouse- Building Envelope from the SW corner 3D Views (Source: John Wardle Architects, Feb 2022)

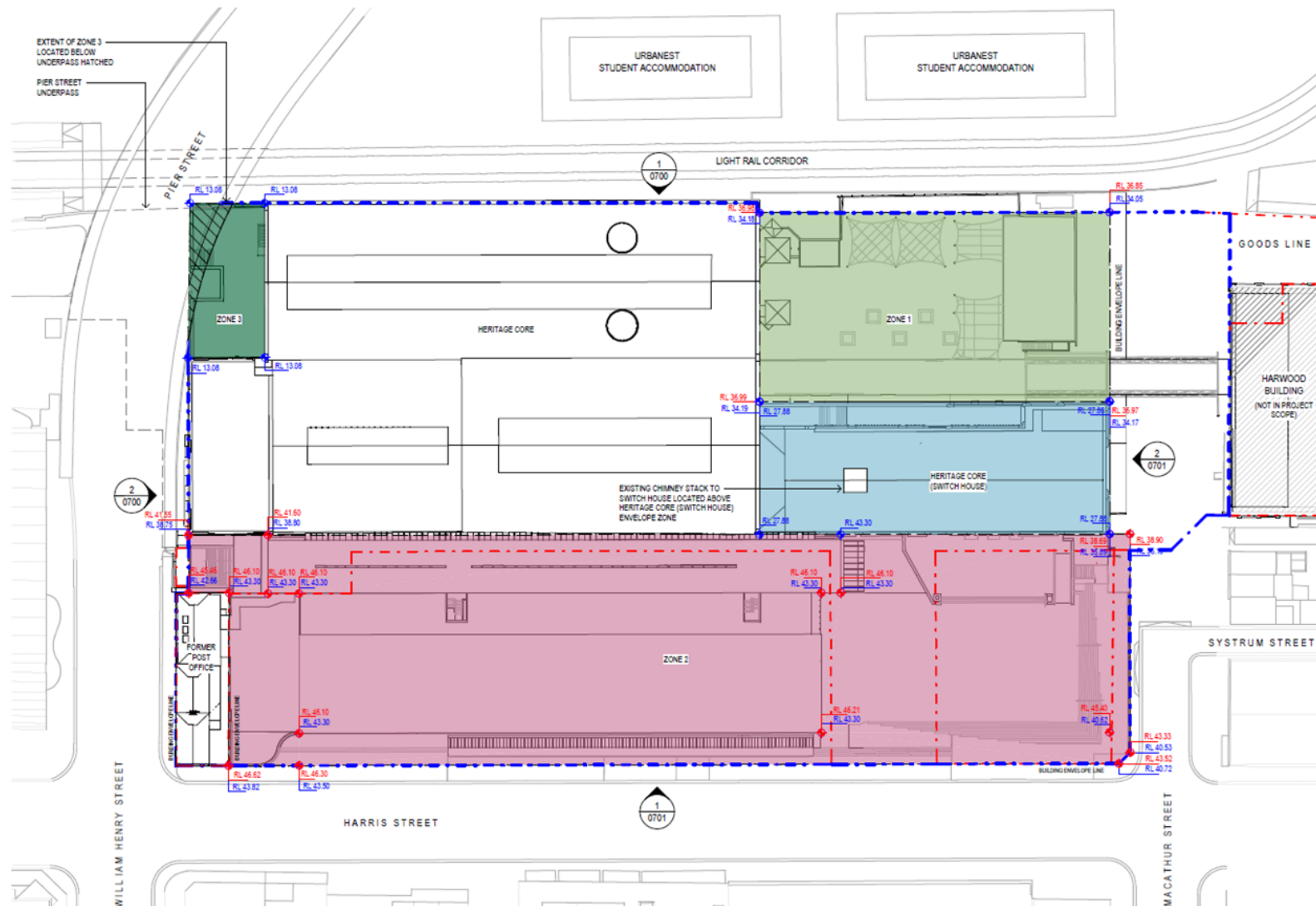


Figure 6-2: Ultimo Powerhouse- Building Envelope Existing Site Plan (Source: John Wardle Architects, 22 Feb 2022)

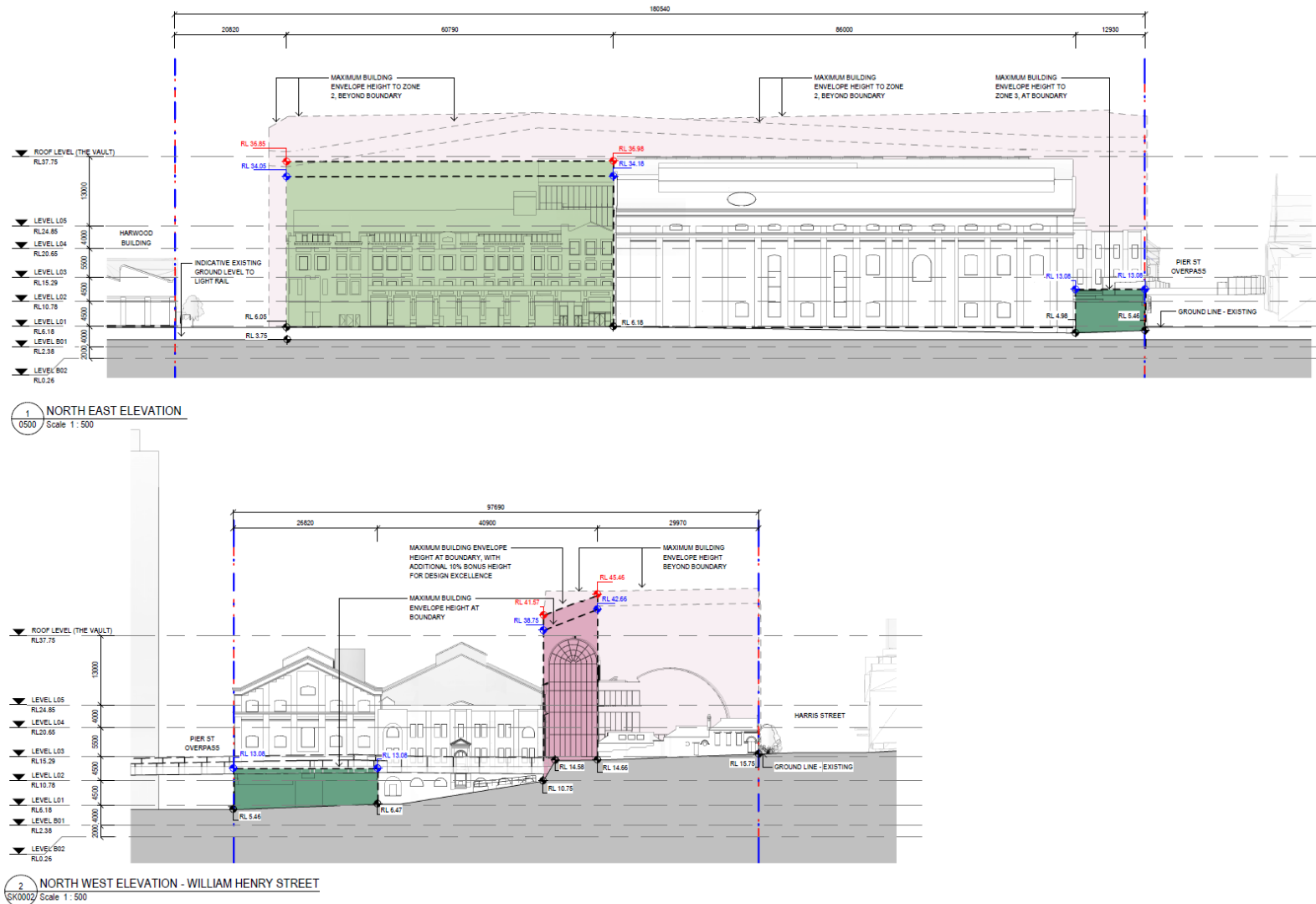


Figure 6-4: Ultimo Powerhouse- Building Envelope NE & NW Elevation (Source: John Wardle Architects, 22 Feb 2022)

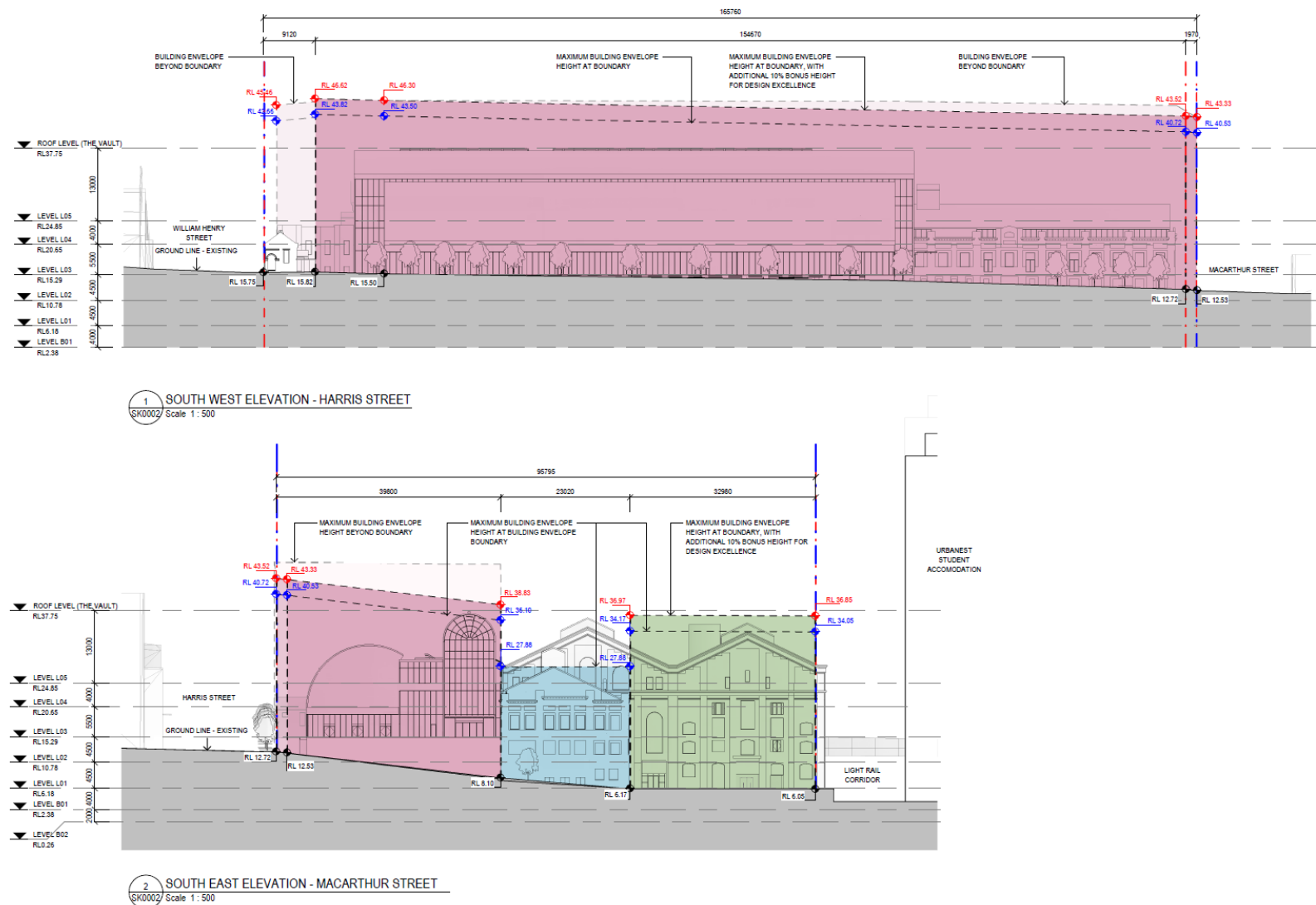


Figure 6-5: Ultimo Powerhouse- Building Envelope SE & SW Elevation (Source: John Wardle Architects, 22 Feb 2022)

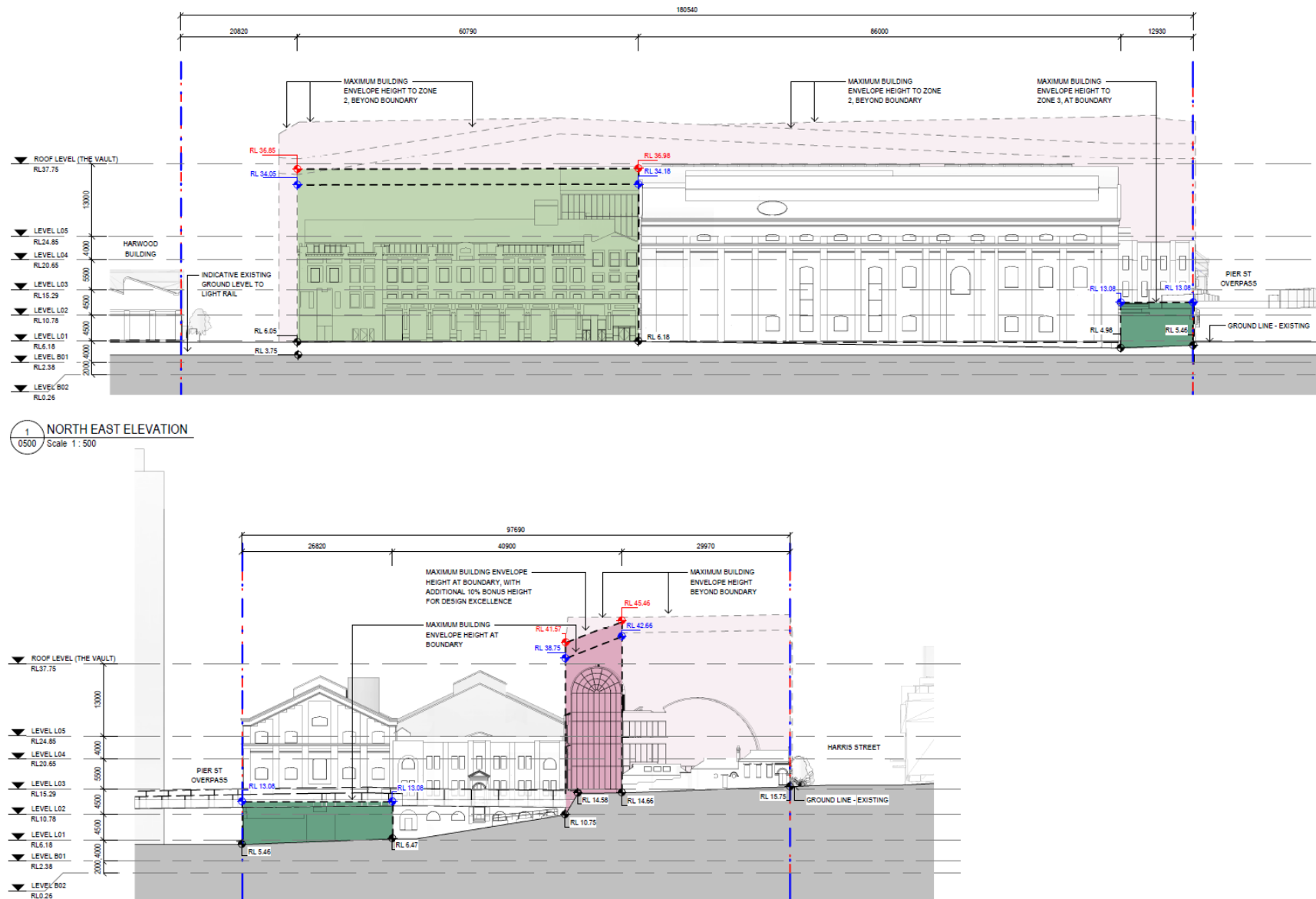


Figure 6-6: Ultimo Powerhouse- Reference Design NE & NW Elevations (Source: John Wardle Architects, 22 Feb 2022))

7. Assessment of Heritage Impact

7. Assessment of Heritage Impact

This HIS has been prepared specifically to accompany the Stage 1 Concept SSDA, which does not seek approval for physical works at the site. However, it assesses the impact of the Concept Proposal on the heritage significance of the heritage items particularly in respect of the proposed envelope, height, GFA and use under the proposal. It also assesses any impacts to the heritage significance of non-listed buildings, such as the Wran building (including the Vault). Furthermore, as the process and strategies outlined in the Concept SSD will guide and influence the realisation of the Stage 2 detailed design, it is possible to also make some wider commentary regarding potential heritage impacts under the proposed direction of the project (to be realised as part of the Design Excellence Competition and as part of the Stage 2 SSDA).

Once the Stage 2 impacts are known, a revised HIS should be prepared for the site renewal to accurately assess the physical and/or visual impacts that the final design and construction may have on the environmental heritage values of the study area and surrounds.

7.1. Discussion

7.1.1. Heritage Buildings

The Concept Plan retains the existing 'Heritage Core' (Figure 6.3) of the original Heritage Listed Power House buildings, including the Boiler House, Turbine Hall, Engine House, North Annex, Switch House and Former Ultimo Post Office. The building envelope (as shown in Figures 6.1-6.3) does not provide any additional building envelope for the 'Heritage Core' or any additional building envelope for the Former Ultimo Post Office, except for the 'Switch House' within the heritage core.

The building envelope above the Switch House has been designed to accommodate the existing modern mezzanine addition (RL of 27.88) above the Switch House to allow the flexibility in the future to either retain, adaptively reuse, demolish and/or replace the existing modern addition with a new element of similar scale and height to the existing. The height of the envelope above the Switch House is limited to RL 27.88.

The Concept SSD retains and adaptively re-uses the key heritage items within the site as museum exhibition space (Turbine and Engine Hall, Boiler House, North Annex/Office Building, Switch House and Ultimo Post Office). The Concept SSD does not propose any physical impacts to significant heritage fabric and makes provisions for the removal of the interior modern museum fit-out within the Engine Hall, Turbine Hall, Boiler House, and Switch House and the flexibility to design sympathetic new interior fitouts as part of Design Excellence Competition and Stage 2 SSD detailed design.

There is the flexibility to either retain, adaptively reuse, demolish and/or replace modern elements within the heritage buildings such as the modern stairs and southern mezzanine, which are assessed in the CMP as elements of little or intrusive significance:

The modern inserts including extension of the north gallery to divide the Engine House into two distinct exhibition spaces, the southern mezzanine, etc are modern fabric installed as part of the 1980s adaptive reuse of the site for the Powerhouse Museum, and are of little heritage significance.

The existing fit out in the Engine Room, including modern stairs and museum displays, obscures the significant fabric (columns, beams and trusses and views to gantry cranes) and special volume of the Engine Room....⁹²

Removal and/or adaption of the existing modern fit out within the heritage core buildings, and its replacement has the ability to be a major positive visual impact to the interior of the heritage items. In particular, the Concept SSD provides the flexibility to remove, adapt and/or replace the modern fitout to improve the overall museum visitor experience, and interpret original spatial volumes and visual sightlines to significant internal heritage elements such as the full-height of the columns, the overhead gantry cranes, overhead gantry tracks and associated remnant industrial fabric.

7.1.2. Former Ultimo Post Office

The Concept Proposal does not propose any physical impact to the Ultimo Post Office and encourages improved access both physically and visually to the State-Significant asset. Adaptive reuse of the Post Office through the site renewal would allow public access of this State significant building to be restored.



Figure 7-1: Removal of the modern insertions in the Engine Room could allow the space to be reinstated or interpreted more sympathetically to its original spatial volume

7.1.3. Wran Building

The Concept SSD proposal allows for a flexible approach to the treatment of the non-heritage listed Wran building, ranging from retention and renewal, through to demolition and replacement,

⁹² Curio Projects, 2022b, Conservation Management Plan, Powerhouse Ultimo, prepared for The Powerhouse and Create NSW, p. 165.

provided any new works, including new elements do not detract from the significance of the identified 'heritage core', including the Ultimo Powerhouse and Former Post Office.

The Wran Building is a dominant, modern building within the study area that is readily identified as being part of the Powerhouse Museum, particularly from views to the site from the north and northeast.

As a modern building that is not heritage listed, the Wran Building presents the best opportunity for either upgrade and renewal, or replacement to meet future spatial, functional and upgrade needs of the Powerhouse as a modern museum, without increasing the need for unnecessary intervention in the SHR-listed heritage core buildings of the museum.

At present, the Wran Building dominates the landscape around the SHR-listed Ultimo Post Office, impacting its legibility and its presence on the site and obstructs visibility to and from the Ultimo Power House exteriors, on approach from Harris Street. Revitalisation and/or replacement of the Wran Building introduces an opportunity for more appropriate viewscales and physical connection to be re-established with the surrounding historic precinct and within the site itself, between the Ultimo Powerhouse, Switch House and the Post Office building, both visually and functionally, within the wider Powerhouse Ultimo site.

The significance of the Wran building is an intangible heritage value that is largely associative with the use of the site as a museum. This value remains even though the Wran building has been modified from its original form. Any alteration or demolition of this building would have a physical impact, however the intangible value of the site's ongoing continued use as a museum will be retained by the Concept Proposal.

Notwithstanding the assessed intangible value, should the Wran building (including the Vault) be considered an item of environmental heritage (which in our opinion it is not), any alteration or demolition has the potential to be a negative impact. However, this impact will not affect the significance of the history of the site, other listed items of heritage significance or the intangible value of the ongoing continued use of the site as a museum. Any impact to fabric of the Wran building (including the Vault) should be subject to archival recording (including 3D scanning and traditional photographic recording) as well as interpretative elements within the new museum design. Such mitigations would result in a neutral impact to heritage (based on the assumption that that Wran building held the status of environmental heritage).

7.1.4. Former Pump House

The maximum building envelope in Zone 3 is limited to RL 13.08 to ensure that the key views and vistas to the Ultimo Powerhouse Buildings are retained and to provide opportunities to re-establish and enhance the physical and visual connection between the streetscape and the Ultimo Power House.

The Concept SSD proposal allows for a moderate built form envelope that would principally serve as a connection area in the northeast of the site and the creation of a new northern entry from Pier Street, via the remains of the former Pump House to the north of the Turbine Hall. The Pump House site currently reads as an above-ground archaeological ruin, with the only remaining parts of the c.1898 Pump House being sections of the northern and eastern facades, a portion of the chimney and a few remnant pieces of the former roof truss. These remains are proposed to be retained.

Creation of a usable space introduces the potential for the renewal of the site to have a major positive impact to the former Pump House, both via integration of historic fabric into landscaping and public domain works (as the Concept Plan requires the retention and integration of Pump

House remains), as well as the introduction of opportunities for interpretation and introduction of public access to the former Pump House space.

The requirement to retain the Pump House remains as part of the Concept Proposal, together with the opportunity to open this part of the site for public access has an overall positive heritage impact.



Figure 7-2: Remnant northern façade of the former Pump House is currently only visible from beneath or at street level of the William Henry Street bridge. Public domain renewal in this location would be a major positive outcome for the site, allowing public access to this area of the site, and allowing for the access and interpretation of the former pump house structure in this forgotten' area of the site.

7.1.5. Building Envelope—Harris St Forecourt

The introduction of a new building envelope along Harris Street will be limited in height as part of 'Zone 2' to 28m (with potential to increase by 10% at the discretion of the consent authority) above ground level - which is a height generally consistent with the existing Wran Building on the northern section of this lot. Therefore, visually a new built form to Harris Street within this envelope would be consistent in height, scale, and bulk with the existing Wran Building.

It is noted that the forecourt on Harris Street was intended to house staff accommodation in a separate building which never eventuated as part of the original 1988 museum development - demonstrating the precedent for a building to be situated in this location.

Any new built form along Harris Street has the potential to impact on existing views from Harris Street east to the heritage core buildings, namely the Switch House and will need to consider the policies of the Powerhouse Ultimo CMP, as well as compliance with the Urban Design Guidelines to ensure that any new elements do not detract from the visual and physical significance of the Switch House. Compliance with the guidelines as part of the Design Excellence Competition process and Stage 2 SSD detailed design would allow for a neutral to positive overall outcome for the site.

The introduction of a maximum gross floor area of 40,000 square metres across the site (10,000 square metres greater than existing), combined with a minimum public space requirement of 2,200 square metres, including at least one public space of no less than 1,800 square metres that is connected at grade to an adjacent public space or pathway also provides a restriction on the ability to fill the proposed envelopes with built form. Whilst additional built form within this zone of the site could have a negative impact on heritage significance of heritage items on the site, the parameters outlined in the revised Urban Design Guidelines in terms of maintaining (or creating views) to heritage items, minimum open space requirements, restricting physical impacts on heritage fabric

and utilising transparent, lightweight and reversible materials will assist in reducing such impacts to neutral or positive. The envelope is not considered to have any impact on the heritage items within the vicinity of the site.

7.1.6. Building Envelope—Goods Line Forecourt

The introduction of a new building envelope to the south of the Boiler House will be limited in height as part of Zone 1 to 28m (with potential to increase by 10% at the discretion of the consent authority) above ground level.

Built form within this envelope has the potential to impact on the heritage significance of heritage items on the site by obstructing existing views to those items from the Goods Line. Further any built form that abuts the heritage items has the potential for impacts associated with damage to fabric. However, any new built form within this area would need to comply with the requirements of the revised Urban Design Guidelines in respect of protecting views to heritage listed buildings and designing built form to be sympathetic to heritage. It is understood that this envelope has been retained in order to allow for a degree of flexibility and creativity through the design competition. Possibilities for built form that are limited in height, are located in a manner to not obstruct key views or through use of transparent, lightweight and reversible materials would allow such creativity whilst ensuring a neutral or positive heritage impact.

The cumulative impact of built form within this envelope adjacent to the Switch House, with built form within the envelope of Zone 2 (Harris Street) also adjacent to the Switch House could lead to a negative heritage impact. Again, the operation of the Urban Design Guidelines, in requiring retention of views to heritage items (which includes the Switch House) as well as the limitation of GFA within the site and the minimum public open space requirements, means that the impacts of the Concept Proposal in its entirety is neutral or positive. In the myriad of design options that could result from the design competition, a design solution that exceeded the maximum GFA and built out to the maximum extent of each envelope would not meet the heritage requirements of this heritage impact statement.

7.1.7. Public Domain Renewal

The Concept SSD proposal requires a minimum 2,200sqm of public open space within the Stage 1 SSDA building envelopes, in addition to the retention of Zone 4 as a public space. •

In addition, there is a requirement to provide at least one significant public space of no less than 1800sqm that is connected at grade to an adjacent public space or pathway to allow gathering for events and programming. •

From a heritage perspective, the requirements for public open space, when combined with the maximum gross floor area of 40,000 and maximum building envelopment height controls limits the potential for the whole of site to be 'built out.' The site currently includes 2,200 sqm of public open space in the Harris Street forecourt and the area adjacent the Wran Building on Harris Street. The maintenance of this quantum of public open space will have a neutral effect on the heritage significance of the heritage items. The revised Urban Design Guidelines provide qualitative parameters that the public domain design is required to meet. If followed, these qualitative parameters would ensure that a redesigned public domain would have an overall positive impact on the heritage significance of the heritage items in the site and surrounding the site.

When combined with the guiding principles of the Urban Design Guidelines and CMP recommendations, the proposed public open space has the potential to greatly improve physical and visual access and connectedness to the site. It also provides the opportunity to enhance the interpretative relationship between the Ultimo Powerhouse and the Goods Line.

Powerhouse Ultimo Renewal Zoning Diagram

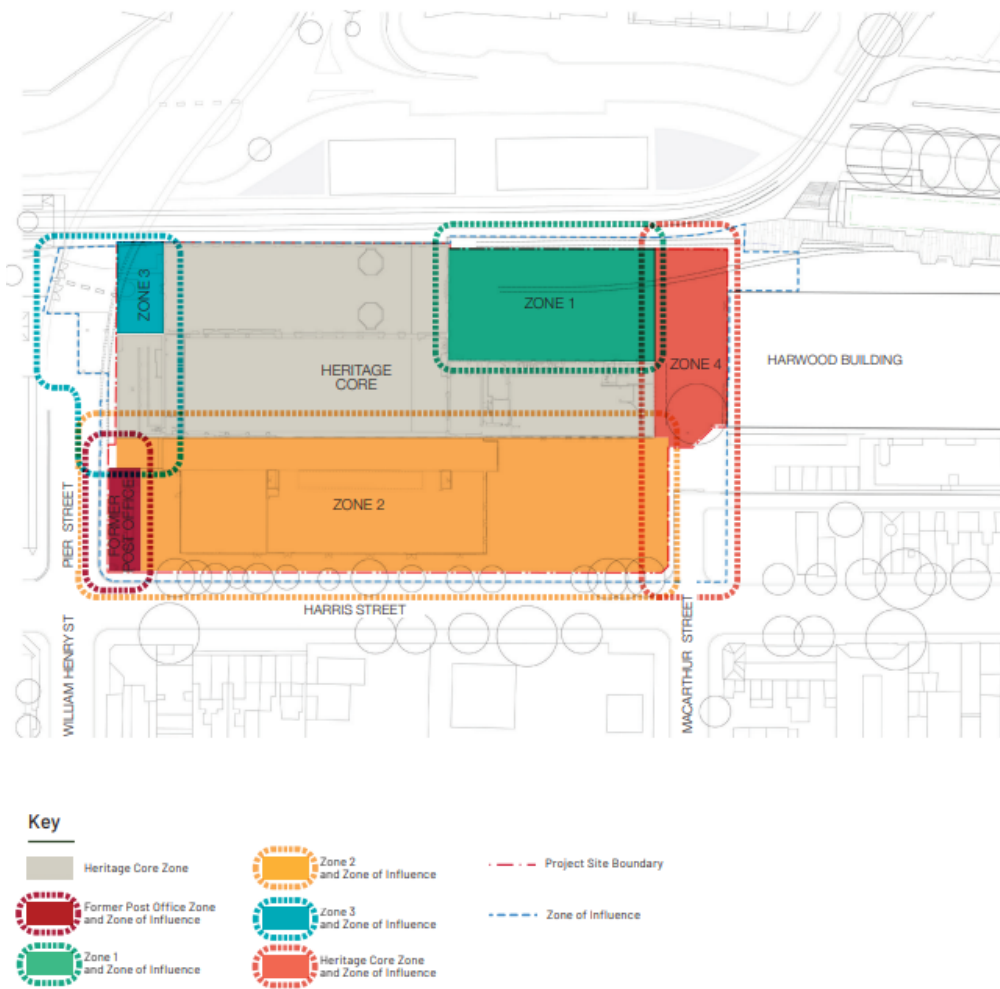


Figure 7-3: Powerhouse Ultimo Renewal Urban Design Report – Powerhouse Ultimo Renewal Zoning Diagram (John Wardle Architects & Aspect Studios)



Figure 7-4: Removal of the Wran Colonnade along Harris Street and replacement with improved public domain, along with creation of the Post Office Plaza presents the ability for a positive visual impact to the Post Office.

7.1.8. Views and Vistas

The Powerhouse Ultimo CMP⁹³ identified five key views of heritage significance for the Powerhouse Ultimo (Ethos Urban has conducted a Visual Impact Assessment for the Powerhouse Ultimo Renewal, images from which have been included below).⁹⁴ This report can be referred to for a more detailed analysis of the visual impact assessment of the proposal.

Each of these views has been assessed with respect to the potential visual impact that the Concept Plan and the degree to which the proposed renewal of the site may affect these heritage vistas.

View 1. Harris Street and William Henry Street- proposed view

The Concept Proposal will retain and/or allow for improved views of the site from the corner of Harris and William Henry Streets. It provides the flexibility to either retain the overall presentation of the site from this direction, including the dominant presentation of the heritage items and the Wran Building from this elevation of the site or to provide new, improved views to and from the site, should the Wran Building be altered, updated, demolished or replaced with a new built form of lesser visual and physical impact to the Ultimo Power House. The activation and revitalisation of the Post Office as proposed under the Stage 2 design has the potential to have a minor positive visual impact to this view, potentially allowing for an improved visual integration and interaction between the Ultimo Post Office with the wider Powerhouse Ultimo site.

⁹³ Curio Projects 2022b, Conservation Management Plan, Powerhouse Ultimo, prepared for The Powerhouse and Create NSW, Section 4.5.

⁹⁴ Ethos Urban 2022, *Visual Impact Assessment, 500 Harris Street Ultimo, Powerhouse Ultimo Renewal, on behalf of Create NSW*, 6 May 2022.



Figure 7-5 View from Harris Street and William Henry Street, existing view and proposed building envelope (Source: Ethos Urban 2022 pp. 41-42)

View 2: Pier Street – proposed view

The proposal will retain significant views of the site from Pier Street. The proposal will have no impact to the visibility of the dominant feature of this approach: being the upper sections of the Federation brick building of the Boiler House and the northern façade of the North Annex.



Figure 7-6: View from Pier Street, existing view (Source: Ethos Urban 2022 pp. 45-46)

View 3: The Goods Line and Macarthur Street – proposed view

The Concept Plan allows the museum to also address to the new south-eastern forecourt in addition to Harris Street. This has the potential for a minor to major negative visual impact to views to the Powerhouse Ultimo site from The Goods Line, depending on the final design intent of any new element.

The concept plan presents the opportunity to enhance the accessibility and visibility of the Powerhouse Museum from the Powerhouse end of The Goods Line encouraging future foot traffic through this area.

The proposed envelope in this location has the potential for significant impacts to this view should the envelope be built out in its entirety. The Urban Design Guidelines require the preservation of views to heritage fabric and ‘revealing’ of heritage fabric, both of which could not be met if significant built form was located within this envelope. In order to maintain this important view, any new built form within this location would be required to preserve views to the heritage fabric through either limitation of height or transparency of materials. There are further opportunities to improve this view through removal of the existing (unused) café and brightly coloured fire stairs fronting the Boiler House.



Figure 7-7: View from The Goods Line and Macarthur Street , existing view and proposed building envelope (Source: Ethos Urban 2022 pp. 49-50)

View 4: The Goods Line- proposed view

Similar to view 3 above, the Concept Proposal could have a minor to major negative impact to this view of the Switch House and Boiler House, resulting from the improved visibility and access to the museum and heritage core from the re-orientation of the museum entry towards The Goods Line and removal of intrusive elements from the southeast forecourt.



Figure 7-8: View from The Goods Line , existing view and proposed views (Source: Ethos Urban 2022 pp. 53-54).

View 5: Harris Street and Macarthur Street- proposed view

The Concept Proposal provides for an envelope that may result in a considerable impact on the views of the site from Harris and Macarthur Streets. While a new built form in this location could potentially obstruct existing views from Harris Street east to the heritage core buildings, namely the Switch House, historically, the 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.



Figure 7-9: View from Harris Street, existing view and proposed views (Source: Ethos Urban 2022 pp. 61-62).

The key points that were made in the 2022 Ethos Urban Visual Impact Assessment report are as follows⁹⁵:

- Overall, the sensitivity of the site to the nature of change proposed is moderate
- The magnitude of visual impact ranges between negligible to considerable.
- The greatest magnitude of change resulting from any development within Harris Street Forecourt New Build would be to the Harris Street and Macarthur Street intersection

⁹⁵ These key points are taken directly from Ethos Urban 2022, *Visual Impact Assessment, 500 Harris Street Ultimo, Powerhouse Ultimo Renewal*, on behalf of Create NSW, 6 May 2022, p. 66.

- The greatest magnitude of change resulting from the planning envelope will be to the Harris Street and William Henry Street intersection and The Goods Line and Macarthur Street intersection
- Considering sensitivity and magnitude, the significance of visual impact ranges between low to moderate

7.2. Summary of Physical Impacts

The Concept Proposal proposes no major negative physical impacts to significant heritage fabric and includes the future provision for the improved retention and adaptive re-use of all heritage-listed items as part of the proposed renewal of the Powerhouse Ultimo. The Concept Proposal is considered to provide an overall positive outcome and is supported on heritage grounds for the following reasons:

- Provision for the removal of the interior modern elements of little or intrusive heritage significance within the Engine Hall, Turbine Hall, Boiler House, and Switch House (as part of Stage 2 SSD detailed design) is a positive opportunity for the renewal, interpretation and appreciation of significant internal heritage spaces and fabric, including the insitu, remnant industrial machinery.
- As a modern building that is not heritage-listed but nevertheless has value for its key role in the redevelopment of the site for the Powerhouse Museum in the 1980s, the Wran Building, presents the most flexible opportunity for upgrade, replacement, demolition and/or and renewal to meet future spatial and functional needs to ensure that the Powerhouse Ultimo can meet the standards of a world-class modern museum, without additional intervention or impact to the SHR-listed heritage core buildings. Any such demolition or substantial alteration would have the potential to effect the intangible heritage value of the Wran building but that impact can be adequately addressed through archival recording and interpretative elements within the new museum design.
- Should the Wran building (including the Vault) be considered an item of environmental heritage (which in our opinion it is not), any alteration or demolition would have the potential to be a negative impact. However, this impact will not affect the significance of the history of the site, other listed items of heritage significance or the intangible value of the ongoing continued use of the site as a museum. As identified above, any impact to fabric of the Wran building (including the Vault) should be subject to archival recording (including 3D scanning and traditional photographic recording) as well as interpretative elements within the new museum design. Such mitigations would result in a neutral impact to heritage (based on the assumption that that Wran building held the status of environmental heritage).
- There is the opportunity to interpret the significance of the Wran Building and its role in the redevelopment of the site for a museum in the 1980s as part of any overall heritage interpretation plan, should the Stage 2 SSD require extensive changes to, or demolition of the Wran Building in order to achieve the broader renewal objectives for the Powerhouse Ultimo.
- Creation of a connection to the north through Zone 3 introduces the potential for the renewal of the site to have a major positive impact to the former Pump House, both via integration of historic fabric into landscaping and public domain works (with retention and integration of Pump House remains), as well as the introduction of opportunities for interpretation and introduction of public access to the former Pump House space.
- Establishment of new entries to the site has potential to be a major positive physical impact via conservation and improved visibility of the fabric of the heritage-listed buildings and their improved physical and visual integration into public domain.
- The envelopes within zones 1 and 2 have the potential for significant negative impacts on heritage items on the site. However, those envelopes are only a component of the Concept Plan which also requires a limit on GFA to a maximum of 40,000sqm and a minimum of

2,200sqm of public open space. The envelopes identify the parts of the site where such future development could occur and provide a degree of latitude for the design excellence competition. The Concept Proposal seeks approval for the proposed envelopes in tandem with the Conservation Management Plan and Urban Design Guidelines. The impact of these documents on the potential built form of the envelopes is to confine the built form (in quantitative and qualitative ways) to ensure an appropriate design response. Through implementation of the Urban Design Guidelines and Conservation Management Plan, the impact of the envelopes on the heritage items on the site and within its vicinity would be neutral or positive.

The above summarises the direct impacts on heritage significance in respect of the existing site. There are no assessed indirect impacts on heritage.

7.3. Summary of Visual Impacts

The visual heritage impacts of the proposed Concept are summarised as follows:

- The potential to remove, adapt and/or replace the internal modern insertions within the heritage core buildings (Engine Room, Turbine Hall, Boiler House) has the ability to be a major positive visual impact to the interior of the heritage items and provides the opportunity to reinstate and/or reimagine the original spatial volume and visual sightlines to significant internal heritage elements such as the full-height of the columns, the overhead gantry cranes, overhead gantry tracks and associated remnant industrial fabric.
- At present, the Wran Building dominates the landscape around the SHR-listed Ultimo Post Office, impacting its legibility and its presence on the site and obstructs visibility to and from the Ultimo Power House exteriors, on approach from Harris Street. Revitalisation and/or replacement of the Wran Building introduces an opportunity for more appropriate views and physical connection to be re-established with the surrounding historic precinct and within the site itself, between the Ultimo Powerhouse, Switch House and the Post Office building, both visually and functionally, within the wider Powerhouse Ultimo site.
- The maximum building envelope in Zone 3 is limited to RL 13.08 to ensure that the key views and vistas to the Ultimo Powerhouse Buildings are retained and to provide opportunities to re-establish and enhance the physical and visual connection between the streetscape and the Ultimo Power House.
- The building envelope in Zone 2 (Harris Street) has the potential to impact on existing views from Harris Street east to the heritage core buildings, namely the Switch House and will need to consider the policies of the Powerhouse Ultimo CMP, as well as compliance with the Urban Design Guidelines to ensure that any new elements do not detract from the visual and physical significance of the Switch House. Compliance with the guidelines as part of the would allow for a neutral to positive overall outcome for the site.
- The building envelope in Zone 1 (Goods Line Forecourt) has the potential to impact on existing views from the Goods Line north to the heritage core buildings. However, the overall impacts of the Concept Proposal are assessed to be neutral or positive given the limitations on GFA, the minimum public open space requirement and the requirements of the Urban Design guidelines. Any new built form in this location will need to consider the policies of the Powerhouse Ultimo CMP, as well as compliance with the Urban Design Guidelines to ensure that any new elements do not detract from the visual and physical significance of the Switch

House, Boiler House or Turbine Hall. Compliance with the guidelines as part of the design competition would allow for a neutral to positive overall outcome for the site.

- The introduction of a maximum gross floor area of 40,000 square metres, combined with a minimum public space requirement of 2,200 square metres, including at least one public space of no less than 1,800 square metres that is connected at grade to an adjacent public space or pathway also provides a restriction on the ability of the site to be built out with new elements.

7.4. Archaeological Impacts

Separate reports have been prepared by Curio for the project assessing the historical and Aboriginal archaeology of the site: a Historical Archaeological Assessment report (HAA)⁹⁶ and Aboriginal Cultural Heritage Assessment Report (ACHAR)⁹⁷ respectively. The findings of these reports have been summarised and used below to assess the potential for the Concept Plan proposal to impact on the potential historical and Aboriginal archaeological resources of the site.

The bulk excavation that would be necessary to accommodate a basement for the new built form fronting Harris Street does have potential to impact to the potential archaeological resource of the site (both Aboriginal and historical), and will require archaeological management strategies and mitigation, as summarised from the HAA and ACHAR reports in the following subsections.

7.4.1. Historical Archaeology

With respect to historical archaeological potential in the study area, the HAA concluded that:

*Overall, there is **moderate to high potential** for an archaeological resource of local and potentially State significance to be present within the Powerhouse Ultimo site, particularly in areas that have not previously been impacted via the construction of basements for the Ultimo Power House construction in the early 20th century.*⁹⁸

- The study area is located within John Harris's fifth land grant of 125 acres received in 1806
- Several early 1840s and 1850s dwellings were located across the study area and later demolished by the 1860s.
- Residential buildings constructed in the 1870s included 137 William Henry Street, 517-523 Pyrmont Street and 554-556 Harris Street which were later demolished by the early 20th century.
- In the eastern half of the study area, Ultimo Power House was constructed in 1898 and continued to be in use until the 1960s as was the largest and most important electricity generating station in the State.
- The study area retains potential for historical archaeological resources associated with Phase 1 and 2 of historical occupation and use to be present in a sub-surface capacity, particularly in the south east and south western corners of the study area.

⁹⁶ Curio Projects 2022a (DRAFT), Historical Archaeological Assessment, Powerhouse Ultimo Renewal Project, prepared for Create NSW.

⁹⁷ Curio Projects, 2022c, (DRAFT) Aboriginal Cultural Heritage Assessment Report, Powerhouse Ultimo Renewal Project, prepared for Create NSW.

⁹⁸ Curio Projects 2022a (DRAFT), Historical Archaeological Assessment, Powerhouse Ultimo Renewal Project, prepared for Create NSW, p. 89.

- Archaeological remains associated with the first phase of historical occupation will likely have been subject to high levels of disturbance in areas across the Power House footprint and basement levels, however this disturbance is unlikely to have removed all historical archaeological deposits and relics across the study area.
- In this assessment Curio have only been able to assess the impacts to a relatively general level based on the information currently available.
- The potential archaeological deposit within the study area would be of local and therefore meet the criteria for classification as archaeological 'relics' as defined and protected by the NSW Heritage Act.
- The proposed development works across the site require bulk excavations below the ground surface in the south western corner of the study area in order to accommodate a new two-level basement, and therefore will destroy the entirety of any potential archaeological resource that survives in a sub-surface capacity within the study area.
- The Water Cooling System and Manifold is an historically important operating element association with the day to day operations of the former Ultimo Powerhouse and requires in situ retention, conservation and protection throughout any development process.

Recommended mitigation measures and strategies to address this historical archaeological impact are summarised in Section 8.2.1 below.



7.4.2. Aboriginal Archaeology

Findings from the ACHAR⁹⁹ concluded that there is potential for Aboriginal archaeological deposits to be located within the study area. The Aboriginal archaeological potential within the site includes the Harris Street forecourt, where bulk excavation would be required for the basement of the new building proposed in this location under the concept plan.

Therefore, the indicative proposal for the project has potential to impact Aboriginal archaeological resources (should they remain within the site), and will require mitigation measures recommended by the ACHAR, in the form of Aboriginal Archaeological Investigation; and Aboriginal Heritage Interpretation.

Recommended mitigation measures and strategies to address this Aboriginal archaeological impact are summarised in Section 8.2.2 below.

7.5. Statement of Heritage Impact

The updated Concept SSDA minimises impacts to the heritage significance and values of the site by avoiding any major physical impacts to local and SHR-listed heritage items, including significant fabric, instead locating new floor space and facilities into features with a higher tolerance for change and intervention and sensitive placement of a new built form external to the listed buildings.

The updated Concept SSDA has significantly reduced the size and extent of the proposed building envelopes surrounding the State and local listed heritage items. There is no envelope over the buildings comprising the 'heritage core' other than an envelope above the listed Switch House limited in height to RL 27.88 to provide for a re-imagining of the existing modern intervention. The envelope in Zone 3 on the northern elevation of the heritage items has been reduced in extent and facilitates an opportunity for the detailed design stage to incorporate the Pump House remains as an important feature of that design. The envelope has been removed over the Post Office building and there exists opportunity to integrate this important State and local listed item within the Powerhouse Ultimo site.

The envelopes within zones 1 and 2, with a maximum height of 28m have the potential for significant negative impacts on heritage items within the site. However, those envelopes are a component of the Concept Proposal that also requires a limit on GFA to a maximum of 40,000sqm and a minimum 2,200sqm of public open space. The envelopes identify the parts of the site where such future development could occur and provide a degree of latitude for the design excellence competition. The Concept Proposal seeks approval for the proposed envelopes in tandem with the Conservation Management Plan and Urban Design Guidelines. The impact of these documents on the potential built form of the envelopes is to confine the built form (in quantitative and qualitative ways) to ensure an appropriate design response. Through implementation of the Urban Design Guidelines and Conservation Management Plan, the impact of the envelopes on the heritage items would be neutral or positive.

⁹⁹ Curio Projects, 2022c, (DRAFT) Aboriginal Cultural Heritage Assessment Report, Powerhouse Ultimo Renewal Project, prepared for Create NSW

8. Conclusions and Recommendations

8.1. Stage 2 Detailed Design

8.1.1. Conclusion

The Concept Proposal proposes no major negative physical impacts to significant heritage fabric and includes the future provision for the improved retention and adaptive re-use of all heritage-listed items as part of the proposed renewal of the Powerhouse Ultimo. The Concept Proposal is considered to provide an overall positive framework for the management of the renewal of the Powerhouse Ultimo and is supported on heritage grounds for the following reasons:

1. The Concept Proposal provides a clear framework for the management of heritage-listed assets, Aboriginal Cultural Heritage Significance and potential Aboriginal and non-Aboriginal archaeological values associated with the site.
2. The Design Excellence Guidelines, Urban Design Guidelines, Powerhouse Ultimo Conservation Management Plan, "Powerhouse Museum Design Principles: Lionel Glendenning & Richard Johnson," prepared by Design 5, 2021, provided with the EIS will inform the next stages of the development with respect to the Design Excellence Competition and the Stage 2 SSD detailed design to ensure that the heritage-listed values of the site are retained, enhanced, where possible as part of the renewal of the museum.
3. The Concept Proposal ensures the ongoing use of the Ultimo Power House as a Museum for current and future generations whilst providing protection for the heritage-listed elements on site.
4. The Concept Proposal encourages and promotes the integration of Aboriginal Cultural Heritage Values into the site design, management and ongoing legacy.
5. The Concept Proposal encourages interpretation, education and understanding of the significance of the site, and its layered history as part of any future renewal program.
6. The Concept Proposal seeks consent for building envelopes that will allow a variety of design expressions through the design competition. Further, consent is also sought for the Conservation Management Plan, the Urban Design Guidelines, a maximum GFA of 40,000sqm within the site and a minimum open space of 2,200sqm. Together these factors ensure that the Concept Proposal will have a neutral or positive impact on the heritage items within the site as well as the heritage items and heritage conservation area surrounding the site.

8.1.2. Recommendations

The following recommendations have been developed in respect of heritage and are complemented by the requirements in the Urban Design Guidelines and Conservation Management Plan:

- Any new works to the site must be undertaken in accordance with the Urban Design Guidelines.
- The Design Excellence Competition and Stage 2 SSDA detailed design is to be guided by best practice heritage principles, as outlined in the Powerhouse Ultimo Conservation Management Plan, to avoid adverse impact to individual heritage-listed items, as well as impacts to the significant heritage character and context of the site within its broader setting.

11. The Design Excellence Competition and Stage 2 SSDA detailed design must consider Aboriginal and Torres Strait Islander connections to the site and continuing practice. The NSW Government Architect's Better Placed: Draft Connecting with Country framework¹⁰⁰ and Draft Designing with Country Discussion Paper¹⁰¹ should guide this process supported by the Powerhouse Caring for Country Principles which have been developed through community consultation with First Nations and Aboriginal communities with connections to the site.
- New works to; within; or within close vicinity to heritage items identified in the CMP, including alterations and/or additions to heritage-listed items should retain, protect and enable visibility of significant heritage fabric, key architectural features and insitu heritage elements such as the gantry beams and cranes, roof trusses, columns, and overhead tracks, in accordance with the recommendations of the CMP.
 - Any new elements proposed to be built adjacent to and within heritage spaces as part of Stage 2 SSDA detailed design should be designed as stand-alone lightweight, contemporary elements that respect the significance of original fabric and spaces; can be easily read as new work and are readily reversed in the future, with minimal to no impact to significant fabric where possible.
 - Introduced new elements, either internal or external should not dominate, distort, obscure or negatively detract from the significance of heritage-listed items identified in the CMP. In particular, all new work must respect scale, materiality and key architectural features associated with the heritage-listed items and their broader setting. [
 - Where possible, all proposed, new work should aim to improve upon the existing visibility to the fabric of the heritage-listed items, and in particular, aim to improve the visibility and readability of the external facades of the Ultimo Powerhouse, the Post Office Building, including where possible, their relationship with one another and the broader precinct, including the Goods Line.
 - The spatial volumes and remnant industrial elements of the Engine Room, and Turbine Hall are significant heritage features of these spaces and should be retained and interpreted as part of the Stage 2 SSD detailed design, in accordance with the policies and guidelines outlined in the Powerhouse Ultimo Conservation Management Plan ('the CMP')¹⁰².
 - Detailed design should avoid application of any activities or elements proposed for the Engine and Turbine Halls and Boiler House that would require closing in the open roof plan or conversion of the spaces into a 'black box' or similar (i.e. such as a false ceiling). Covering of, and/or impacts to the significant industrial architecture of these items including roof trusses, and insitu industrial equipment such as the gantry crane, columns etc should be avoided as it would have a detrimental visual and physical impact on the significance of the building and would not be compatible or consistent with the requirements of the CMP

¹⁰⁰ GANSW, 2020. Better Placed: Draft Connecting with Country

¹⁰¹ GANSW 2020. Designing with Country.

¹⁰² Curio Projects, 2022. Powerhouse Ultimo Conservation Management Plan

- Any proposal as part of the Stage 2 SSDA detailed design to convert the heritage core spaces (particularly the Engine Room, Turbine Hall and Boiler House) will need to consider how to manage elements such as light spill and acoustics so that there are no detrimental impacts to the original physical fabric of the building, including spatial volume and overall visual aesthetic.
- New work should be readily identifiable as such. It must respect and have minimal impact on the heritage significance of the place.

8.2. Archaeology

8.2.1. Historical Archaeology

The Powerhouse Ultimo Renewal project is currently at Concept stage only, that is, the SSDA that this HIS accompanies does not seek approval for commencement of any physical works at the site. However, there is the potential for below-ground impacts to be required within an area of historical archaeological potential as part of the Stage 2 SSD detailed design

Recommendations for the management of the potential historical archaeology have been developed as a result of the research undertaken for the Historical Archaeological Assessment undertaken by Curio in 2022¹⁰³, as outlined below:

The following recommendations are made with respect to mitigation measures and strategies for historical archaeology for the Powerhouse Ultimo Renewal project:

- Once further impacts for the Stage 2 SSDA are identified and their design finalised then reassessment of these impacts should take place prior to works commencing.
- Historical archaeological investigation of the study area will be required prior to commencement of development works.
- An Archaeological Research Design and Excavation Methodology (ARD + EM) should be developed to guide the approach and methodology for archaeological investigation.
- An Excavation Permit under Section 140 of the Heritage Act will be required to allow archaeological works to be undertaken..¹⁰⁴ Submission of a s140 permit application to Heritage NSW should be accompanied by a copy of this report and the ARD + EM as supporting documents.
- It is noted that once SSD consent has been granted, the requirement for permits under the Heritage Act will no longer apply for the site. However, it is important to note that issue of SEARs for SSD projects is not sufficient to switch off the provisions of the Heritage Act for projects, and as such, any early works/investigation activities etc at the site prior to SSD approval, will still require the relevant permits under the Heritage Act.

¹⁰³ Curio Projects 2022a (DRAFT), Historical Archaeological Assessment, Powerhouse Ultimo Renewal Project, prepared for Create NSW, pp. 88-89.

¹⁰⁴ Section 60 permit (within the curtilage of SHR listing), or a Section 140 Excavation Permit for areas outside of SHR curtilage

Curio recommends that historical archaeological investigations be undertaken as early as possible through the planning process, to allow time for the archaeological resource to be properly investigated and managed, as well as to avoid potential time and development delays at a later stage.

8.2.2. Aboriginal Archaeology

Recommendations from the 2022 ACHAR¹⁰⁵ for Aboriginal archaeological impacts are:

Recommendation 1 –Stage 2 ACHAR

- A secondary, Stage 2 ACHAR to be completed following finalisation of concept designs for the Project and when ground disturbing impacts are known. The Stage 2 ACHAR to be completed with Aboriginal community consultation and in accordance with the relevant guidelines. The Stage 2 ACHAR will inform any future assessment requirements and/or Aboriginal archaeological test excavation (Recommendation 2).

Recommendation 2-Aboriginal Archaeological Test Excavation following completion of Stage 2 ACHAR

- Archaeological test excavations are required to determine the nature, extent and significance of any sub-surface Aboriginal objects and archaeological resources within the study area. This Stage 1 ACHAR has determined that future assessment in the form of a Stage 2 ACHAR will be required as part of Stage 2 works (Recommendation 1) and that an Aboriginal archaeological test excavation will likely be required prior once the intended potential impacts to the site have been determined (to be confirmed during completion of Stage 2 ACHAR as part of the Stage 2 SSD detailed design process).
- As an SSD, the Powerhouse Ultimo Renewal Project is exempt from the requirement to seek an Aboriginal Heritage Impact Permit (AHIP) under Section 90 of the National Parks and Wildlife Act 1974 (NPW Act). An Archaeological Research Design (ARD) and Methodology should only be prepared following finalisation of Stage 2 Project concept designs, when impacts to any potential archaeology can be more accurately determined. Should the detailed design require any impacts to potential Aboriginal objects, sub-surface archaeological test excavations will be required to be undertaken in accordance with the Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales (DECCW 2010). The program of Aboriginal archaeological excavation should be coordinated with historical archaeological investigation works required for the development to ensure that there are no unintended impacts to historical archaeological resources as part of the testing program. Aboriginal test excavations should be undertaken in accordance with the ARD by appropriately qualified archaeologists and with participation of representatives of Registered Aboriginal Parties (RAPs) for the Project.
- The results of the test excavations must be incorporated into the Stage 2 ACHAR or documented in an addendum document and supplied to the project RAPs for comment in accordance with Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 (DECCW, 2010).

¹⁰⁵ Curio Projects, 2022c, Aboriginal Cultural Heritage Assessment Report, Powerhouse Ultimo Renewal Project, prepared for Create NSW.

- Final decision of long-term management of any artefacts located during the test excavation process will require management under a Care and Control Agreement under s.85A(1)(c) of the NPW Act. The details of the Care and Control Agreement are to be decided upon in consultation/discussion with Project RAPs, Create NSW, Powerhouse Museum, and Curio Projects, prior to the conclusion of archaeological investigations within the study area.

Recommendation 3–Aboriginal Community Consultation

- Create NSW should continue to consult with the identified Aboriginal stakeholders (RAPs) throughout the lifetime of the Project. The consultation outlined as part of this ACHAR is valid for six months and must be maintained by the Proponent for it to remain continuous.
- Should Aboriginal community consultation be restarted as part of Stage 2 ACHAR assessment, the RAPs identified for this Stage 1 ACHAR be included in any future registration of Aboriginal stakeholders.

Recommendation 4 –Aboriginal Cultural Heritage Induction

- Prior to commencement of future site works, site contractors should undergo an Aboriginal cultural heritage induction, to be lead/delivered by Project RAPs, to communicate the significance of site, deposits, and need to protect and conserve.
- The induction material should include an overview of the types of sites to be aware of (i.e. artefact scatters or concentrations of shells that could be middens), obligations under the NPW Act, and the requirements of an archaeological finds' procedure (refer to Recommendation 2).

Recommendation 5-Aboriginal Heritage Interpretation

- Potential options and opportunities for appropriate and feasible Aboriginal cultural heritage interpretation for the Powerhouse Ultimo Renewal Project will be developed in consultation between Create NSW the First Nations Directorate of the Powerhouse Ultimo, the Project RAPs and the Project archaeologists throughout the Project process, including throughout the Stage 1 Concept Proposal and Stage 2 SSD detailed design. Through the direct discussion between Project RAPs and the proponent, the consultation process and the review of the ACHAR, the identification of the most meaningful outcome for the Project can be established, with some examples already put forth including the possibility for a Keeping Place on site, as well as the reinstatement of natural vegetation and any other management and mitigative initiatives that may be discussed in future.

8.3. Heritage Interpretation

While the Powerhouse Museum continues to play an extremely important role in the history of the Ultimo site and in the cultural history of NSW, there is also a significant opportunity to interpret the multi-layered significance of the site, from its original environmental and enduring Aboriginal Cultural Heritage significance through to its history as early 19th century farming and residential uses, followed by the industrial legacy that many of the historic structures on the site represent today. There is also the opportunity to further explore the social history of the site, including the legacy of the site's redevelopment for the Powerhouse Museum in the 1980s. Given the remit of the Powerhouse as a world-class museum and cultural attraction, there is the opportunity to explore the tangible and intangible history of the site, including the former uses of the site in innovative and sustainable ways.

An overarching Heritage Interpretation Strategy for the Powerhouse Ultimo site should be developed in conjunction with the Stage 2 SSD development works, with particular focus on integration of meaningful interpretation within the new museum, including the public domain and landscaping design. The Heritage Interpretation Strategy should be submitted for approval as part of the Stage 2 SSD application.

9. References

9. References

- Architectural Projects, 2003, *Conservation Management Plan: The Powerhouse Museum*, prepared for the Powerhouse Museum.
- Artefact, 2017, *The Bays Market Precinct Rezoning: Aboriginal Cultural Heritage Assessment Report (ACHAR)*, prepared for Infrastructure NSW.
- Attenbrow, V., 2010, *Sydney's Aboriginal Past: Investigating the Archaeological and Historical Records*, Sydney, UNSW Press.
- Australia ICOMOS, 2013, *Australia ICOMOS Charter for Places of Cultural Significance, The Burra Charter*.
- Birch, A., 1957, 'The Sydney Railway Company 1848-1855' in *Royal Australian Historical Society Journal and Proceedings*, Vol. 43 part 2.
- Coast History & Heritage, 2022, *Aboriginal History Overview – Powerhouse Ultimo*, Final Draft, April 2022.
- Cracknell & Lonergan Architects, *Assessment of Heritage Significance, Ultimo Tramways, Power House Museum*, Independent Review prepared for Heritage NSW (Rev B. 30 Jan 2020), 2020
- Curio Projects, 2022a, (DRAFT) Historical Archaeological Assessment, Powerhouse Ultimo Renewal Project, prepared for Create NSW.
- Curio Projects, 2022b, (DRAFT) Conservation Management Plan, Powerhouse Ultimo, prepared for The Powerhouse and Create NSW.
- Curio Projects, 2022c, (DRAFT) Aboriginal Cultural Heritage Assessment Report, Powerhouse Ultimo Renewal Project, prepared for Create NSW.
- Ethos Urban 2022, *Visual Impact Assessment, 500 Harris Street Ultimo, Powerhouse Ultimo Renewal, on behalf of Create NSW*, 6 May 2022.
- Fitzgerald, S. & Golder, H., 1994, *Pymont & Ultimo Under Siege*, Hale & Iremonger.
- Godden D, E Higginbotham, E Pinder, J Whittaker, R Young, 1984, *The History and Technology of the Ultimo Power House Sydney*. A report for the Government Architects Branch, Public Works Department of New South Wales.
- Irish, Paul, 2017, *Hidden in Plain View*, New South Publishing.
- JWA & Aspect 2022, *Powerhouse Ultimo Renewal Urban Design Report*, Rev. 4, dated 14 April 2022.
- JWA 2022, *Powerhouse Ultimo Renewal Architectural Drawing Set*, Rev. 3, dated 17 May 2022
- Kelleher Nightingale Consulting Pty Ltd, 2020, *Pymont Peninsula Place Strategy: Indigenous Cultural Heritage Report*, prepared for Department of Planning, Industry and Environment.
- Legislative Assembly of New South Wales, *Minutes of Evidence taken before the Select Committee on the Railways through Ultimo Estate*, 1863.

Matthews, M. R. 1982, *Pyrmont & Ultimo: A History*, Southwood Press.

NSW Department of Planning and Environment, *NPWS Bioregional Assessment*, 2003 ,
<<https://www.environment.nsw.gov.au/bioregions/bioregions.htm>>

NSW Heritage Branch Department of Planning. *Assessing Significance for Sites and 'Relics'*, 2009, accessed April 2022, < <https://www.environment.nsw.gov.au/-/media/OEH/Corporate-Site/Documents/Heritage/assess-significance-historical-archaeological-sites-relics.pdf>>

NSW Heritage Office, *NSW Heritage Manual - Assessing Heritage Significance* (vol. 2), NSW Heritage Office, 2001.

NSW Department of Public Works, *Report of the Department of Public Works for the Year ended 30th June 1897*, 1898, p. 26

NSW Department of Public Works, *Report of the Department of Public Works for the Year ended 30th June 1898*, 1899

Powerhouse Museum, *Annual Report 2002-2003*, Powerhouse Museum, 2003.

Property NSW, *Water Cooling System and Manifold*, Section 170 Register, accessed April 2022, <http://www.shfa.nsw.gov.au/sydney-About_us-Heritage_role-Heritage_and_Conservation_Register.htm&objectid=177>

Rowe, D. M., 'Modern Engineering Preserving our Engineering Heritage: Air Conditioning in the Powerhouse Museum, Sydney' in *Fourth National Conference on Engineering Heritage 1988 (Papers)*, Sydney, 1988, pp. 12-16.

SHI Listing *Darling Harbour Rail Corridor* ; Transport Heritage NSW, 'Sydney's Metropolitan Goods Line', *Transport Heritage NSW* (website), accessed January 2021, <<https://www.thnsw.com.au/post/sydney-s-metropolitan-goods-lines>>

State Heritage Inventory, *Powerhouse Museum Former Warehouse Buildings, including interiors* , Local Environmental Plan Item, accessed April 2022, <<https://www.hms.heritage.nsw.gov.au/App/Item/ViewItem?itemId=2424493>>

State Heritage Inventory, *Ultimo Power House*, State Heritage Register Item, accessed April 2022, <<https://www.hms.heritage.nsw.gov.au/App/Item/ViewItem?itemId=5055576>>

State Heritage Inventory, *Ultimo Post Office*, State Heritage Register Item, accessed April 2022, <<https://www.hms.heritage.nsw.gov.au/App/Item/ViewItem?itemId=5045092>>

State Heritage Inventory, *Former Ultimo Post Office Including Interior*, Local Environmental Plan Item, accessed April 2022, <<https://www.hms.heritage.nsw.gov.au/App/Item/ViewItem?itemId=2424431>>

Sykes. F. G. S., 1902, 'The Sydney, Australia Tram System' in *The Electrical World and Engineer*, Dec 6 1902, Vol XL pp. 889-893, reproduced at Hathi Trust < <https://babel.hathitrust.org/cgi/pt?id=mdp.39015048964434&view=1up&seq=8>>

Tanner Kibble Denton Architects Pty Ltd, Letter to Urbanest re 2013 Statement of Heritage Impact, 10 September 2015.

NEWSPAPER ARTICLES

1932: 'Massive Turbines at Ultimo' in *The Sun*, 9 Oct 1932, p. 7



5 Blackfriars Street, Chippendale NSW 2008 | 02 8014 9800 | curioprojects.com.au