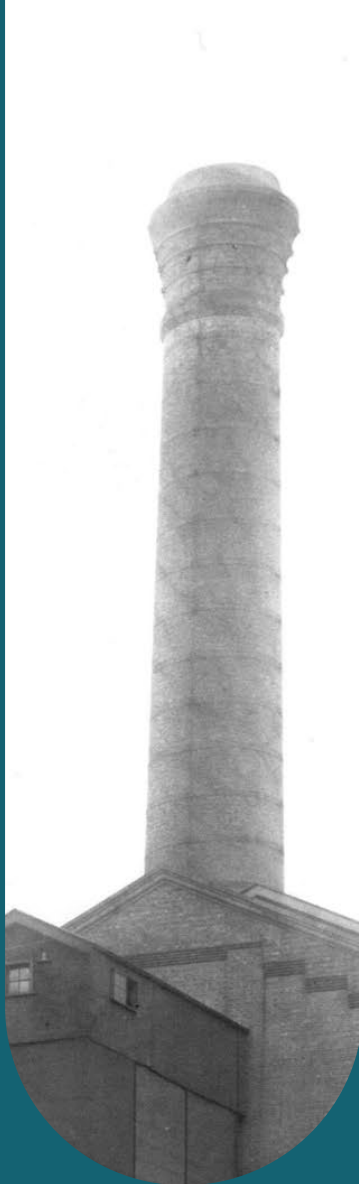


Appendix I

Heritage Impact Statement





Heritage Impact Statement

Powerhouse Ultimo Renewal Project

May 2022

Document Information

Citation

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

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Cover Image

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

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3	24 May 2022	Final		Mikhaila Chaplin	Alex Thorn

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.

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Curio Projects Pty Ltd
5 Blackfriars Street
Chippendale NSW 2008

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

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 02045 ¹) and the Ultimo Post Office (SHR 00502 ²), both of which are listed on the State Heritage Register under the *NSW Heritage Act 1977* (Heritage Act).

The purpose of this report is to:

- Identify any potential heritage impact that the proposed development may have on any heritage items of significance within, and/or in the vicinity of, the study area;
- To identify whether or not Aboriginal objects are, or are likely to be, present within the study area and if the proposed development would be likely to harm Aboriginal objects (if present). This will determine whether the proposed activities would require consent in the form of an Aboriginal Heritage Impact Permit (AHIP), or not; and
- To identify whether or not the study area has the potential to contain 'relics', as defined under the NSW Heritage Act and whether, or not, the proposed development of the site would be likely to disturb or expose those relics (if present), and therefore to determine whether the works would require further reporting to obtain a consent in the form of a Section (s) 140 Excavation Permit.

While summarised in this report, for further detail regarding the 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 (DRAFT), *Historical Archaeological Assessment, Powerhouse Ultimo Renewal Project*, prepared for Create NSW.
- Curio Projects 2022 (DRAFT), *Conservation Management Plan, Powerhouse Ultimo*, prepared for Powerhouse and Create NSW.

¹ State Heritage Inventory, *Ultimo Power House*, State Heritage Register Item

² State Heritage Inventory, *Ultimo Post Office*, State Heritage Register Item

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

Statement of Heritage Impact:

The concept plan and indicative design response minimises impacts to heritage significance and values of the site by avoiding physical impact to SHR heritage items or significant fabric, instead locating new floor space and facilities into features with a higher tolerance for change and intervention (i.e. the Wran Building) and sensitive placement of a new built form within the Harris Street forecourt.

The key elements of the indicative concept proposal (i.e. the size and placement of the new built envelope fronting Harris Street, etc) will allow for sympathetic renewal of the Powerhouse Ultimo site, with an overall neutral to positive impact to the heritage values and significance of the site.

Conclusions and Recommendations:

The design excellence competition and Stage 2 detailed design should be guided by best practice heritage principles to avoid adverse impact to heritage items and the significant heritage character and context of the site. Recommendations for detailed design include:

- The design excellence competition and Stage 2 detailed design should consider Aboriginal and Torres Strait Islander connections to the site and continuing practice.
- 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 through Stage 2 design.
- New insertions within heritage items should retain and encourage visibility of industrial heritage features and elements such as gantry beams and cranes, columns, overhead tracks, etc, and respect the internal scale and sense of space.
- Any new elements proposed for introduction into the heritage spaces as part of Stage 2 detailed design should act as stand-alone lightweight elements that can be readily reversed in the future.
- 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 and/or impacts to the significant industrial architecture of these items including roof trusses, 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 remnant significant fabric and space.
- Any proposal as part of the Stage 2 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 fabric of the building, as well as its spatial volume and overall visual aesthetic.
- Detailed design for adaptive re-use of heritage items should make use of design elements and techniques that are lightweight, fully reversible, and commensurate with the heritage character and style of the heritage item.

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

The purpose of this report is to:

- Identify any potential heritage impact that the proposed development may have on any heritage items of significance within, and/or in the vicinity of, the study area;
- To identify whether or not Aboriginal objects are, or are likely to be, present within the study area and if the proposed development would be likely to harm Aboriginal objects (if present). This will determine whether the proposed activities would require consent in the form of an Aboriginal Heritage Impact Permit (AHIP), or not; and
- To identify whether or not the study area has the potential to contain 'relics', as defined under the NSW Heritage Act and whether, or not, the proposed development of the site would be likely to disturb or expose those relics (if present), and therefore to determine whether the works would require further reporting to obtain a consent in the form of a Section (s) 140 Excavation Permit.

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

- 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);
- Department of Environment, Climate Change and Water, 2010. *Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW*; and
- Australia ICOMOS, 2013. *Australia ICOMOS Charter for Places of Cultural Significance, The Burra Charter*

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

- 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.

- 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

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 1, DP216854- Harwood Building
- Lot 3, DP631345- Forecourt (Harris St)
- Lot 1, DP77031- Ultimo Post Office

The site contains two heritage-listed buildings, being the Ultimo Power House (Turbine Hall, Engine House, Boiler House, North Annex and Switch House) (SHR 02045 ³) and the Ultimo Post Office (SHR 00502 ⁴), both of which are listed on the State Heritage Register under the *NSW Heritage Act 1977* (Heritage Act).

Other buildings within the site include the former tram shed (Harwood Building) and 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

³ State Heritage Inventory, *Ultimo Power House*, State Heritage Register Item

⁴ State Heritage Inventory, *Ultimo Post Office*, State Heritage Register Item

corner of Harris Street and Macarthur Street is a forecourt that acts as the main public entrance to the site, but provides limited activation and is disconnected from higher-quality urban spaces including The Goods Line.

The primary focus of the Powerhouse Ultimo Renewal project is the Powerhouse Museum to the north of Macarthur Street and bounded by Harris Street, Pier Street and the light rail corridor. However, it also includes some enabling and minor decoupling works which will occur within the broader Powerhouse Ultimo precinct.

No substantive works or changes in use are proposed to the Harwood Building located between Macarthur Street and Mary Ann Street.



Figure 1-1: Aerial view showing key built elements of the study area and its immediate surrounds (Source: Ethos Urban, 2022)

1.3. Overview of the Development

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

Concept approval is sought for the following:

- A maximum building envelope for any new buildings and alterations and additions to existing buildings retained on the site.
- Use of the new spaces and built form as an ‘information and education facility’ including exhibition, education, and back of house spaces, and a range of related and ancillary uses to contribute to the operation of Powerhouse Ultimo.
- Endorsement of Urban Design Guidelines and a Design Excellence Strategy to guide the detailed design of the future building, internal spaces, and public domain areas that will be the subject of a competitive design process and a separate and future DA (Stage 2).
- An updated Draft Conservation Management Plan to ensure that future development occurs in a manner that is compatible with, and facilitates the conservation of, the heritage values of the site
- General functional parameters for the future design, construction, and operation of buildings and uses on the site including the principles and strategies for the management of transport and access, flooding, sustainability, heritage and the like.

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 Archaeological Assessment—Summarised in Section 7.4 and 8.2, full Historical Archaeological Assessment attached as an Appendix.

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
The design excellence competition and Stage 2 detailed design should be guided by best practice heritage principles to avoid adverse impact to heritage items and the significant heritage character and context of the site.	<i>Through Design Excellence Process and at the detailed Stage 2 SSDA stage</i>
Historical and Aboriginal archaeological investigation	<i>Prior to Stage 2 SSDA issue</i>

1.6. Limitations and Constraints

The report has been prepared using the available historical data and documentation available for the study area and surrounds, including relevant archaeological reports and assessments. It is based on readily available information and has been considered in accordance with the best practice 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 redevelopment of the study area.

1.7. Authorship

This report has been prepared by Mikhaila Chaplin, Graduate Archaeologist and Heritage Specialist, and Sam Cooling, Cultural Heritage Manager, both of Curio Projects Pty Ltd. Senior review of the report and specialist heritage input and advice was undertaken by Natalie Vinton, Curio CEO and Principal.

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 4.1 of the EP&A Act identifies and defines SSD projects as those declared under Section 89C of the EP&A Act. SSDs and State Significant Infrastructure projects (SSI), replace 'Concept Plan' project approvals, in accordance with Part 3A of this Act, which was repealed in 2011.

Under Part 4, developments with capital investment exceeding \$10 million can be declared SSD for the purposes of the EP&A Act, with the Minister for Planning the consent authority for the project.

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 House⁵ (I2031, 14 Dec 12), and the Ultimo Post Office⁶ (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.

⁵ State Heritage Inventory, *Powerhouse Museum Former Warehouse Buildings, including interiors*, Local Environmental Plan Item.

⁶ 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).

Listing of a heritage asset on a heritage and conservation register does not in itself create an obligation to obtain the NSW Heritage Council's approval for works. (The Heritage Council's approval will only be required for assets listed on the SHR, or subject to an interim heritage order under the Heritage Act). It does, however, require that not less than 14 days written notification to be provided to the Heritage Council of the intention to (a) remove any item from its register, (b) transfer ownership of any item entered in its register, or c) cease to occupy or demolish any listed place.

The Water Cooling System and Manifold is listed on the Property NSW s170 register⁷, 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.

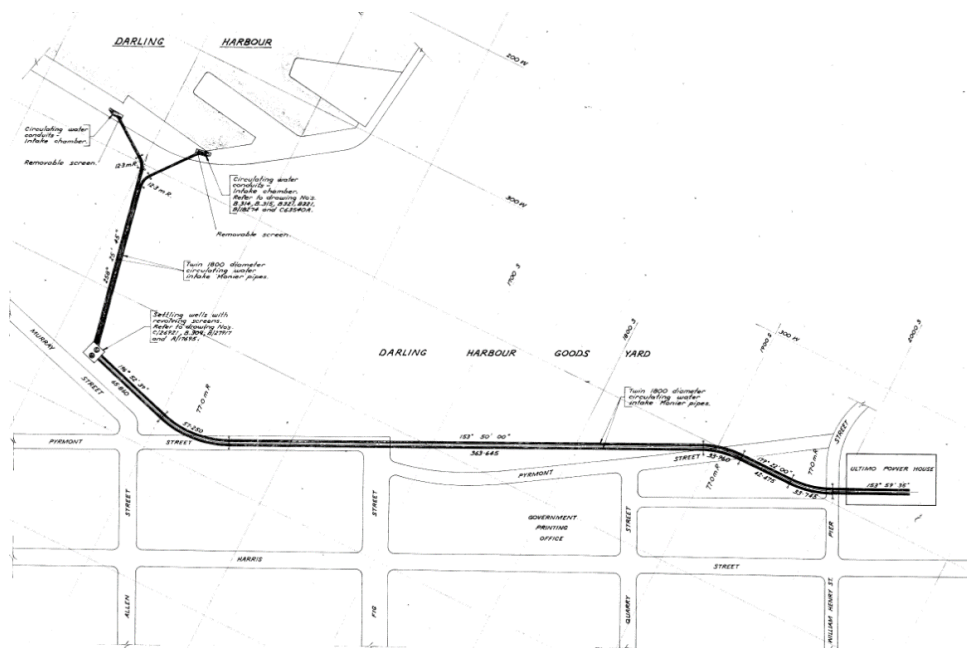


Figure 2-1: Plan of Powerhouse Seawater Conduits (Source: GAO Plan C82-079G/SC-001, Nov 1982)

⁷ 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.⁸

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 #02045⁹). 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), and excludes the 1988 additions to the site (the Wran Building) and does not include the Harwood Building.

⁸ NSW Heritage Branch Department of Planning. 2009. Assessing Significance for Sites and ‘Relics’

⁹ State Heritage Inventory, *Ultimo Power House*, State Heritage Register Item



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

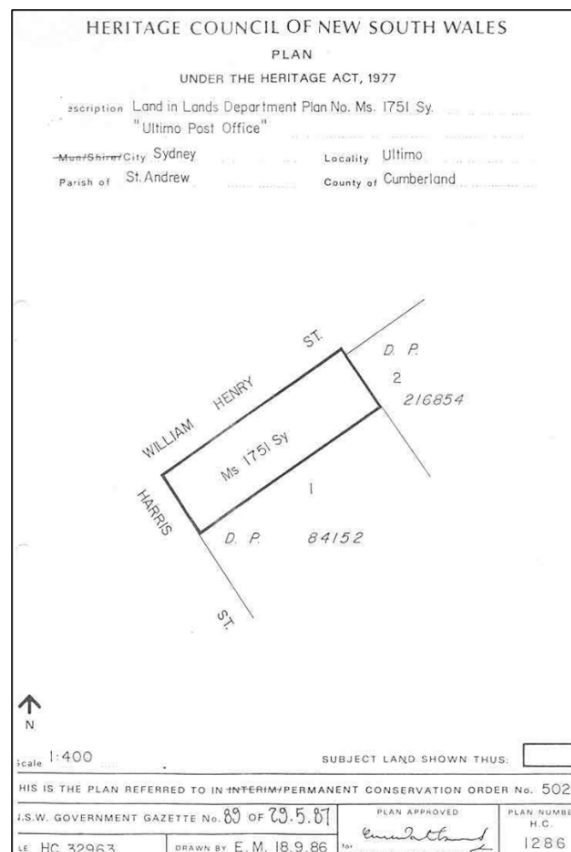


Figure 2-3: Ultimo Post Office SHR Listing

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 ¹⁰) (Figure 2.3).

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) 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 on the SHR – determined on 30 September 2020 by the NSW Heritage Council to not meet the criteria for listing on the SHR. The Harwood Building was also listed on the (now defunct) Register of the National Estate.

2.4. Conservation Management Plan (CMP)

In 2003, Architectural Projects prepared the CMP for the site, titled *Conservation Management Plan: The Powerhouse Museum*, prepared for the Powerhouse Museum ¹¹. The CMP, being more than 17 years old is no longer relevant in many key areas because it does not reflect any of the major changes to NSW heritage and planning legislation since 2003, nor does it reflect the current principles, both internationally and locally, for the management of heritage assets. As a result, much of the significance assessment, policy development and guidelines, which were best practice at the time, are now not considered to be commensurate with current best practice heritage management. 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. For this reason, the NSW Heritage Council generally require CMPs to have a policy that requires the CMP to be updated and/or reviewed at least every 5-10 years.

Create NSW and the Powerhouse have commissioned Curio Projects to prepare a revised CMP for the site. The Draft CMP ¹² will be submitted to support the concept SSD.

¹⁰ State Heritage Inventory, *Ultimo Post Office*, State Heritage Register Item

¹¹ Architectural Projects, *Conservation Management Plan: The Powerhouse Museum*, prepared for the Powerhouse Museum, 2003.

¹² Curio Projects 2022b (DRAFT), *Conservation Management Plan, Powerhouse Ultimo*, prepared for The Powerhouse and Create NSW.

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

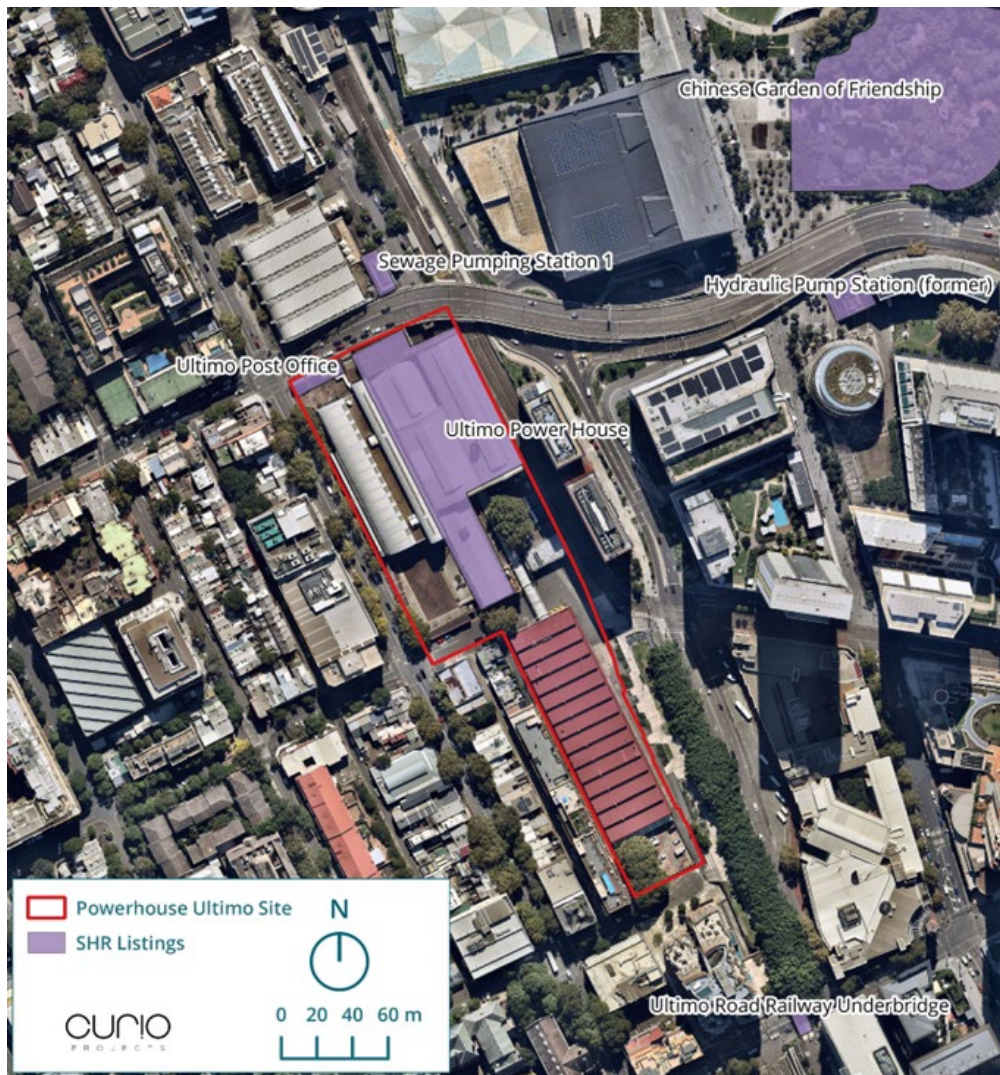


Figure 2-4: SHR listings in and surrounding the study area (Source: Curio 2021 from HNSW Shapefile, over Nearmaps aerial 2021)



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

Refer to the Draft 2022 CMP for a more detailed history of the Powerhouse Ultimo site. A visual timeline of the key historical events has been attached as an appendix to this report.

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.¹³ 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.¹⁴ 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.¹⁵ 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.¹⁶

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.¹⁷ 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

¹³ 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

¹⁴ NPWS Bioregional Assessment, 2003.

¹⁵ Kelleher Nightingale Consulting Pty Ltd, 2020, pp. 18-19.

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

¹⁷ Irish, P. 2017, *Hidden in Plain View*, p. 13; Attenbrow, V. 2010, *Sydney's Aboriginal Past*, pp. 18-21.

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’) fished in its waters.¹⁸ Women married into neighbouring clans and individuals had responsibilities in other clan lands to which they were linked through parents, grandparents or by marriage.¹⁹

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.²⁰

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.²¹ 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.²²

At the time of European invasion in 1788, the Aboriginal population of the Sydney Cove region has been estimated at around 1500-2000 people,²³ 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.²⁴

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.²⁵ Colonial descriptions and images depict Aboriginal people continuing to camp and fish around Tumbalong into the 1820s.²⁶

¹⁸ Coast History & Heritage, 2022, *Aboriginal History Overview – Powerhouse Ultimo*, Final Draft, April 2022, p.4

¹⁹ Ibid, p.4.

²⁰ Ibid.

²¹ Kelleher Nightingale Consulting Pty Ltd, 2020, p. 18.

²² Coast History & Heritage, 2022, p.6.

²³ Attenbrow, 2010, p. 17; Irish 2017, p. 19.

²⁴ Coast History & Heritage, 2022, p.7.

²⁵ Ibid.

²⁶ Ibid.

It was not until the late 1830s 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 underdeveloped 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.²⁷

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.²⁸ 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.²⁹ 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.³⁰ Following the deaths of William and George, the land was subdivided in 1859.³¹

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.

²⁷ Coast History & Heritage, 2022, p.9.

²⁸ Fitzgerald, S. & Golder, H., 1994. *Pyrmont & Ultimo Under Siege*, Hale & Iremonger, p. 26.

²⁹ 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.

³⁰ Fitzgerald & Golder, 1994., p. 45.

³¹ 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 Company³² 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.

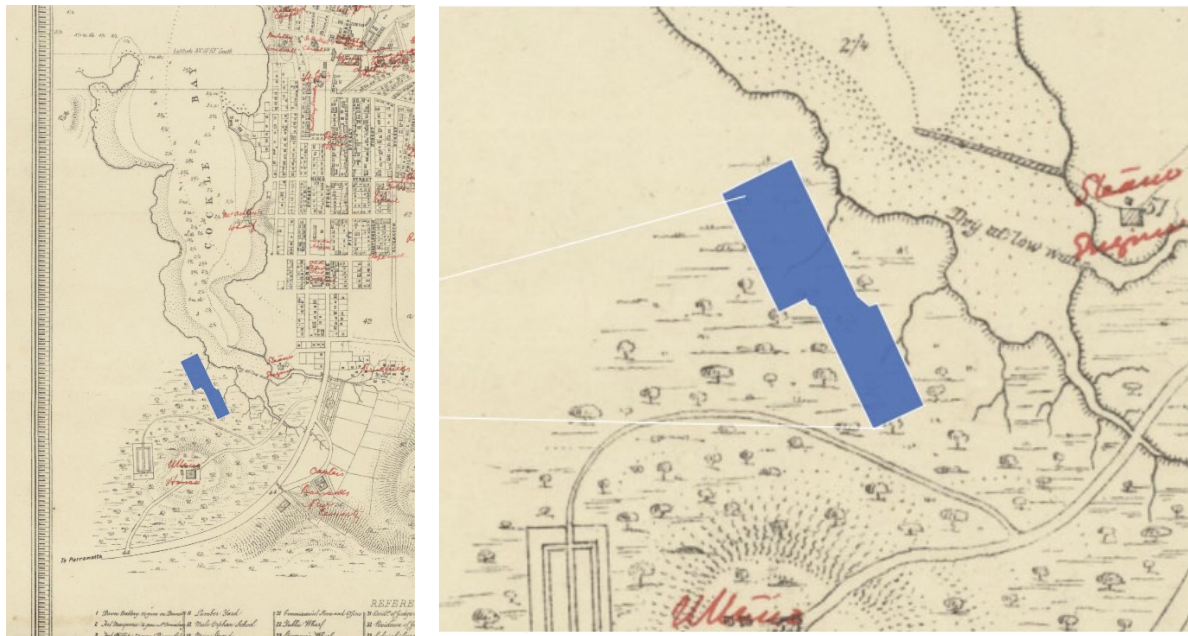


Figure 3-1: 1822 Plan of Sydney with Curio overlay showing early context of Powerhouse Ultimo site (shaded blue). Ultimo House located south west of the present day site. (Source: National Library of Australia with Curio overlay)

³² 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)

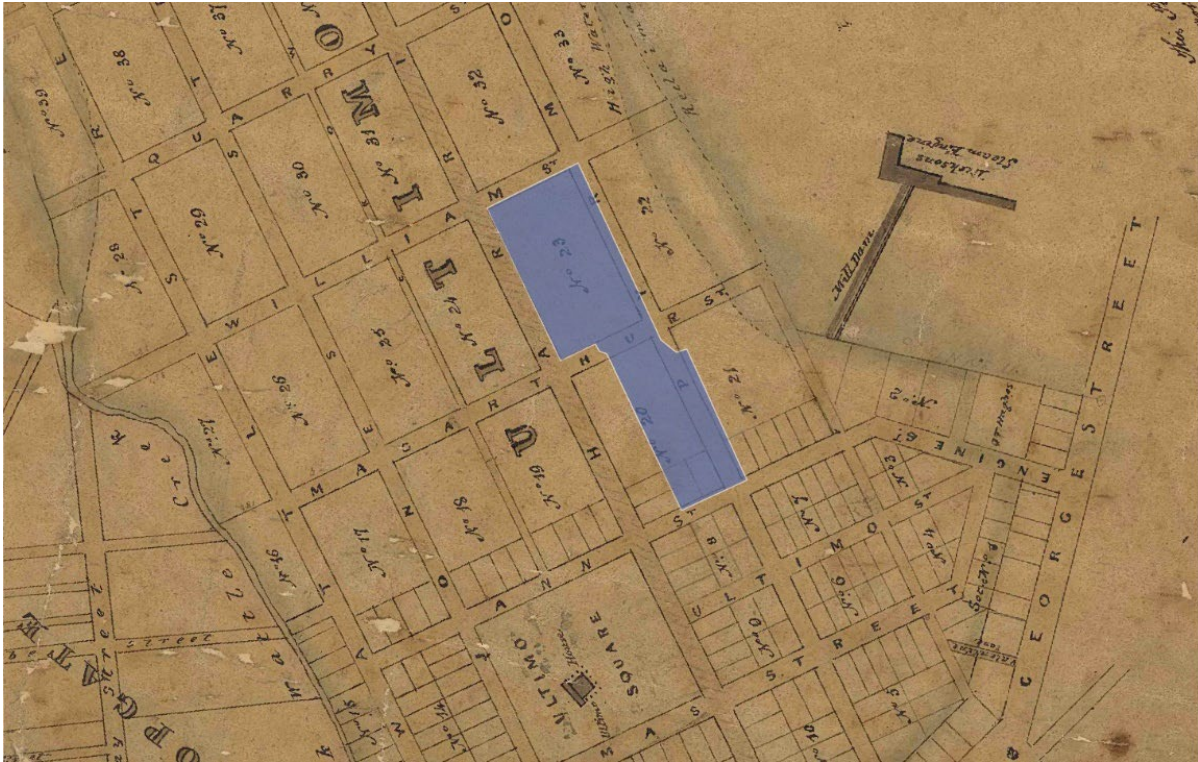


Figure 3-4: Map of Ultimo Estate, Powerhouse Ultimo site shaded in blue. Ultimo House is visible to the south east (Source: Office of the Registrar General, Doc: CP 00002-1543 P)

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.³³ 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.³⁴ 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*'.³⁵

³³ 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.

³⁴ Fitzgerald & Golder, 1994, p. 45.

³⁵ 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 1899.³⁶

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.

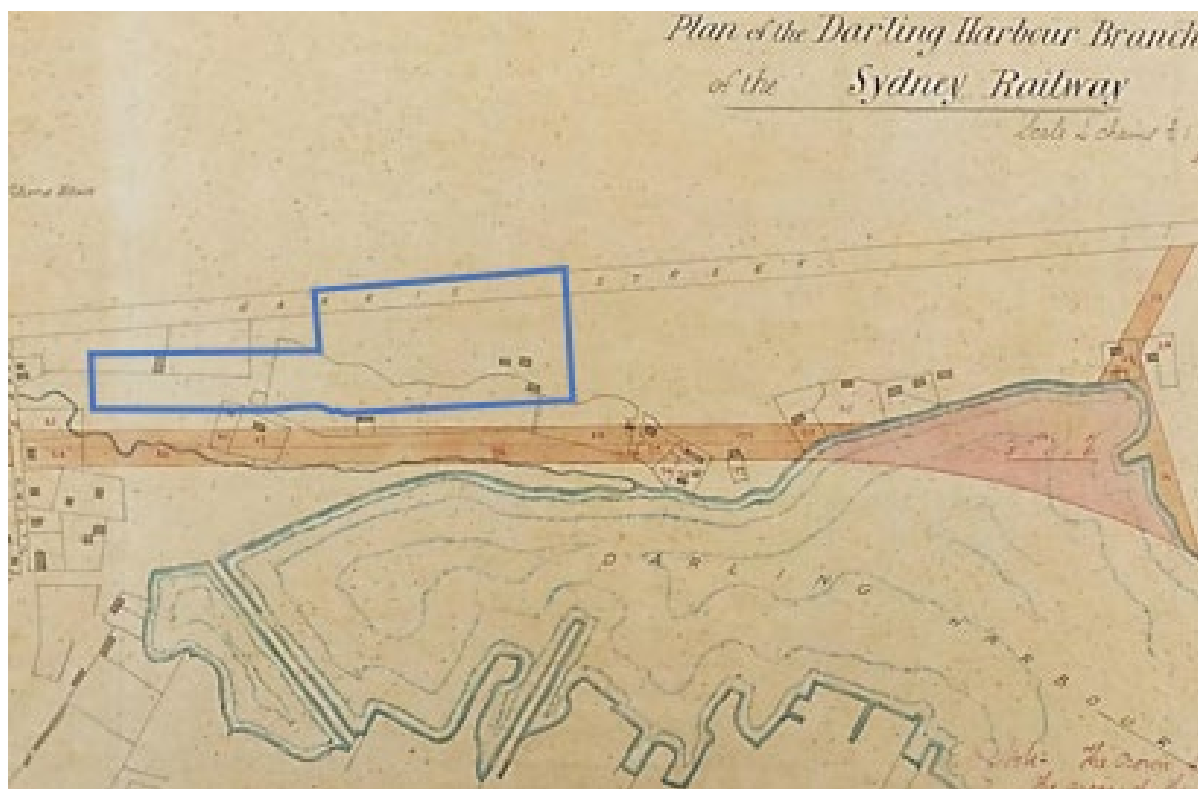


Figure 3-5: c.1853 plan showing the Darling Harbour Goods line resumption in orange and sparse early buildings in the northeast. The study area is outlined in blue. (Source: State Records Authority of NSW, AO Map 6381)

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 1896.³⁷

³⁶ SHI Listing *Darling Harbour Rail Corridor*; Transport Heritage NSW, 'Sydney's Metropolitan Goods Line', *Transport Heritage NSW*(website), accessed January 2021

³⁷ 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.³⁸

In c.1897, J. Stewart & Co was contracted to build the Ultimo Power House and Tram Shed,³⁹ 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).⁴⁰ 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.⁴¹

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.⁴²

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 1899.⁴³ The tramline was incredibly popular and carried 95,000 passengers in the first two days of operation.⁴⁴ 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.

³⁸ Godden et al 1984 p. 27-29; Casey & Lowe, 2016. *Archaeological Assessment and Impact Statement ICC Hotel, Darling Harbour*, p. 41

³⁹ NSW Department of Public Works, 1899. *Report of the Department of Public Works for the Year ended 30th June 1898*, p. 24.

⁴⁰ Casey & Lowe, 2016. p. 41.

⁴¹ Matthews, 1982. p. 83.

⁴² NSW Department of Public Works, 1900 Report, pp. 23- 24.

⁴³ Godden et al, 1984. p. 32-33

⁴⁴ 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.⁴⁵

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.⁴⁶ 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).⁴⁷

⁴⁵ Sykes F. G. S. 1902, 'The Sydney, Australia Tram System' in *The Electrical World and Engineer*, Dec 6 1902, Vol XL pp. 889-893.

⁴⁶ Godden et al. 1984 p. 74

⁴⁷ '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)

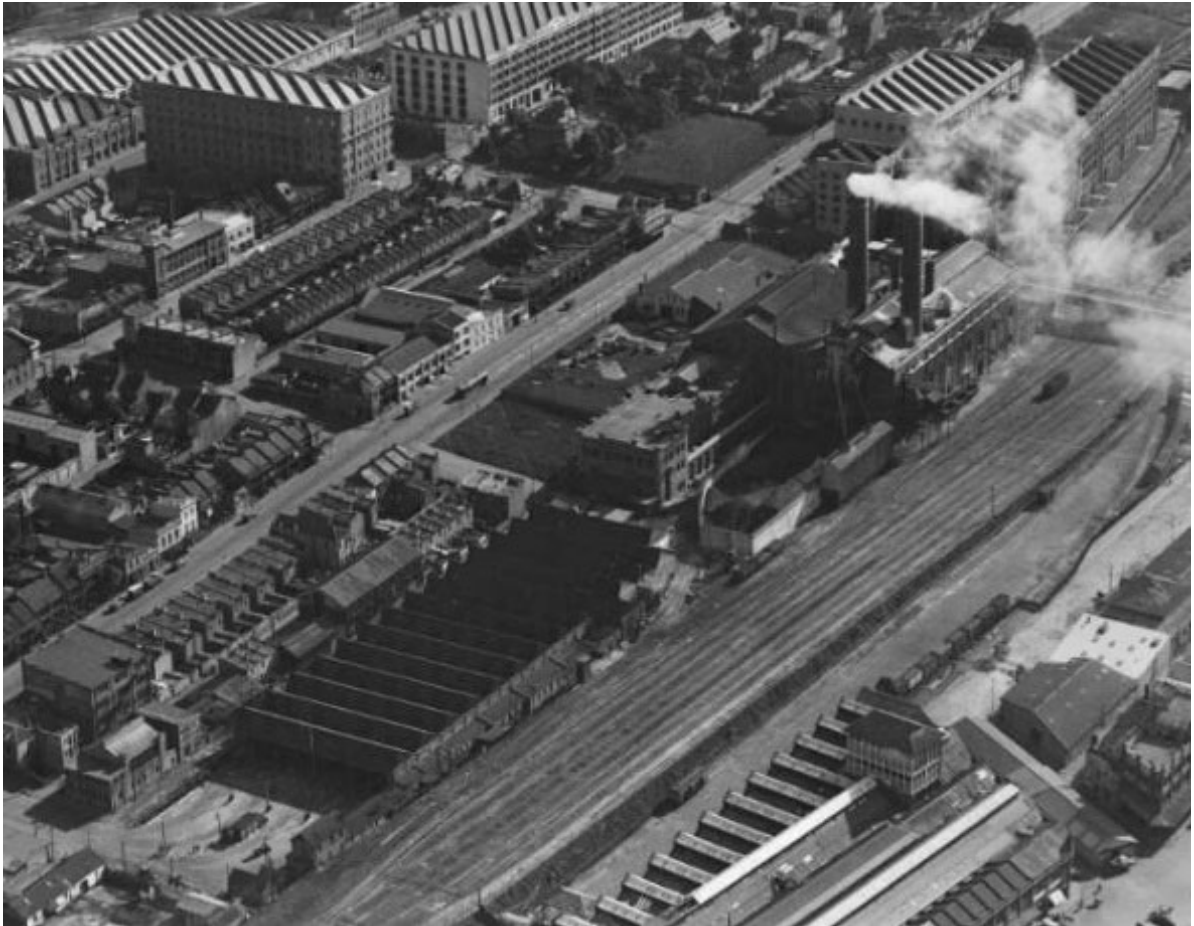


Figure 3-8: 1932 Aerial view showing Power House with new concrete coal store south of Boiler House. Tram Shed to the south, Goods Line along the eastern boundary (Source: NLA 161864278)

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.⁴⁸ 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 1984.⁴⁹ 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.⁵⁰

⁴⁸ Godden et al 1984 p. 30

⁴⁹ Godden et al 1984 p. 1

⁵⁰ 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 1963.⁵¹ 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.⁵² 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.⁵³

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.⁵⁴ 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.⁵⁵

*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.*⁵⁶

⁵¹ Fitzgerald & Golder 1994, p. 112.

⁵² Matthews 1982, p. 85.

⁵³ 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.

⁵⁴ Fitzgerald & Golder, 1994. p. 113.

⁵⁵ Architectural Projects, 2003. p. 47.

⁵⁶ 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 staff.⁵⁷ 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 2002⁵⁸) 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.

⁵⁷ MAAS staff presentation 17 Feb 2021

⁵⁸ 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.⁵⁹ 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*'⁶⁰. 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).

⁵⁹ NPWS Bioregional Assessment 2003

⁶⁰ 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



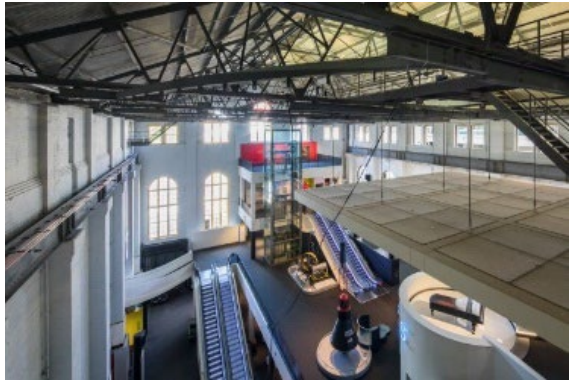



The primary built elements of the Powerhouse Ultimo site include the former Power House Buildings (North Annex, Engine House, Turbine Hall, Pump House (remains), Boiler House, and Switch House), former Ultimo Post Office, the Harwood Building (former Ultimo Tram Shed), and the Wran Building. A section 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 rails of the 1853 Goods Line extend along the east of the property alongside the 1899 Harwood Building with its industrial heavy brick walls and sawtooth roof. 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 NSW Heritage Manual Guideline—Assessing Heritage Significance, prepared by the NSW Heritage Division (Heritage NSW), provides a framework for assessing significance of sites and heritage items, with the main aim of producing a succinct statement of significance to summarise an item or site's heritage values. The guidelines are predicated on the five types of cultural heritage value, as presented in The Burra Charter 2013: historical, aesthetic, scientific, social, and spiritual significance. The NSW heritage assessment criteria provides the following criterion for the assessment of heritage significance.

An item will be considered to be of State (or local) heritage significance if, in the opinion of the Heritage Council of NSW, it meets one of 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.*

The assessment of heritage significance identifies whether a place (or element of a place) may be considered important and valuable to the community. A place may also have a range of values important to different individuals or groups, within different communities.

The terms 'cultural significance', 'heritage value' and 'heritage significance' are synonymous, interchangeably used in practice generally and in Australia by organisations such as the NSW Heritage Council, the National Trust of Australia (NSW) and Heritage NSW.

The following statements of significance for the site and surrounding heritage items in its vicinity have been prepared in accordance with the above-mentioned guidelines, extracted from the draft

CMP (in the case of the significance of the Ultimo Powerhouse SHR group) and/or compiled from the relevant State Heritage Inventory (SHI) listings (for surrounding heritage items).

5.1. Statements of Significance

5.1.1. 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).⁶¹

5.1.2. 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 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.⁶²

5.1.3. Goods Line (Darling Harbour Rail Corridor)

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

⁶¹ 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/View/Item?itemId=2424431>>

⁶² SHFA, *Water Cooling System and Manifold*, Section 170 Register, accessed April 2022,

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 Pyrmont 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.⁶³

5.2. Ultimo Power House—Statement of Heritage Significance

The 2022 Draft CMP has assessed the heritage significance of the Powerhouse Ultimo site according to each of the above significance criterion, summarising the heritage significance of the site in 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. 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/Pyrmont area.

The Federation-Era Ultimo Power House has associations with the electrification of the suburban tramway and railway systems and with the general reticulation of electrical power in Sydney. The Ultimo Power House also 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). The Ultimo Power House is historically significant as the first state-owned, large electricity generating station constructed in Sydney. Built in 1899, it was the first power station constructed to provide electricity for Sydney's "new" electric tram system. 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 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 was part of the Darling Harbour Bicentennial citywide adaptation project.

⁶³ Sydney Harbour Foreshore Authority (Property NSW) Section 170 Register, *Darling Harbour Rail Corridor*

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.

The Ultimo Power House buildings are of State significance as a landmark group of buildings which relate closely to the visual and architectural industrial context of the area.

The Ultimo Power House, Tram Shed, Goods Line and 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, residential, and commercial purposes. Within the site both the former Ultimo Power House buildings and Post Office are of State Significance.

The Powerhouse site is of museological and architectural significance as a landmark early example of the adaptive reuse of a large-scale industrial heritage site, which was at the time in the 1980s considered 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..⁶⁴

5.3. Significant Views

The 2022 Draft CMP⁶⁵ identified 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

5.3.1. 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 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

⁶⁴ Curio Projects 2022b (DRAFT), Conservation Management Plan, Powerhouse Ultimo, prepared for The Powerhouse and Create NSW, Section 4.3.

⁶⁵ Ibid, section 4.5.

*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.*⁶⁶

5.3.2. 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.

5.3.3. 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.

5.3.4. 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 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.

⁶⁶ Tanner Kibble Denton Architects Pty Ltd, 2013. Letter to Urbanest re Statement of Heritage Impact, 10 September 2015.



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

5.4. 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)⁶⁷, 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 Draft Powerhouse CMP.⁶⁸

⁶⁷ NSW Heritage Office, *NSW Heritage Manual - Assessing Heritage Significance* (vol. 2), NSW Heritage Office, 2001.

⁶⁸ Curio Projects 2022b (DRAFT), 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.	Fulfil 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.	Fulfil 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.	Fulfil 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

5.4.1. Overall Site Elements

Table 5.2 has been extracted from the 2022 Draft CMP⁶⁹, and presents the gradings of significance for the key built elements of the Powerhouse Ultimo Site. 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 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

⁶⁹ Curio Projects 2022b (DRAFT), Conservation Management Plan, Powerhouse Ultimo, prepared for The Powerhouse and Create NSW



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

6. Description of Concept Plan

6. Description of Concept Plan

This Concept DA sets the vision for the renewal of Powerhouse Ultimo and the creation of the Powerhouse Creative Industries Precinct, with the detailed design, construction, and operation of the project to be sought at a separate and future stage (Stage 2).

6.1. Concept Plan

As part of the Concept SSDA, an Indicative Design Response was prepared, the purpose of which is to demonstrate a hypothetical 'fit' with the guidelines and strategies. It is not intended that this response is a definitive solution. Instead, it is presented as only one of many possible outcomes which would embody an appropriate response to the design guidelines.

The Indicative Design Response assumes the retention and renewal of all key existing buildings on the Powerhouse Ultimo site in a form which responds to the Urban Design and Public Realm guidelines and strategies. It retains the existing heritage core of the original Heritage Listed Power House buildings including the Boiler House, Turbine Hall, Engine House, North Annex, Switch House and the heritage listed former Ultimo Post Office.

In this response, the Museum re-orientates its address toward The Goods Line and the city via a new public square adjacent to the east side of the Switch House. At ground level the Switch House presents an opportunity for a retail and food and beverage offering, providing an active edge to the new public square.

The Indicative Design Response considers a new building on Harris Street, to occupy the existing Harris Street forecourt. This new building would accommodate increased museum space over a number of levels (including new loading dock and back of house facilities below) as well as additional flexible presentation and learning space.

Additional ground level pedestrian connections are contemplated, providing access from Harris Street and Macarthur Street into the centre of the site. The north end of the Switch House within the Powerhouse buildings is suggested as a possible vertical and east-west connection through the museum. This connection provides an opportunity for a more direct pedestrian linkage between Harris Street, the new public square and The Goods Line.

Figures 6.1 to Figure 6-18 present the concept design envelope and the indicative design response documentation.

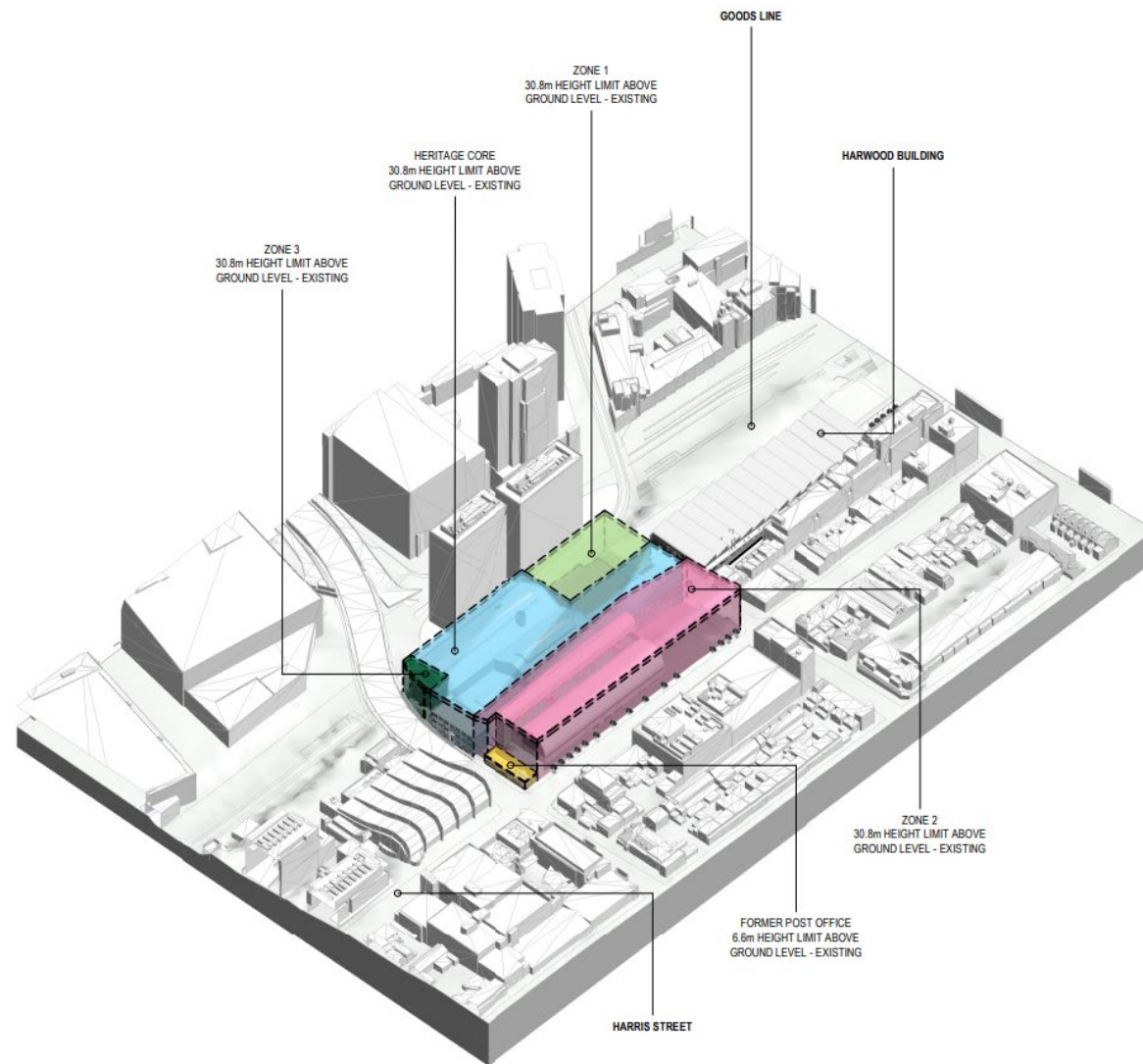


Figure 6-1: Ultimo Powerhouse- Building Envelope 3D Views (Source: John Wardle Architects, 17 May 2022)

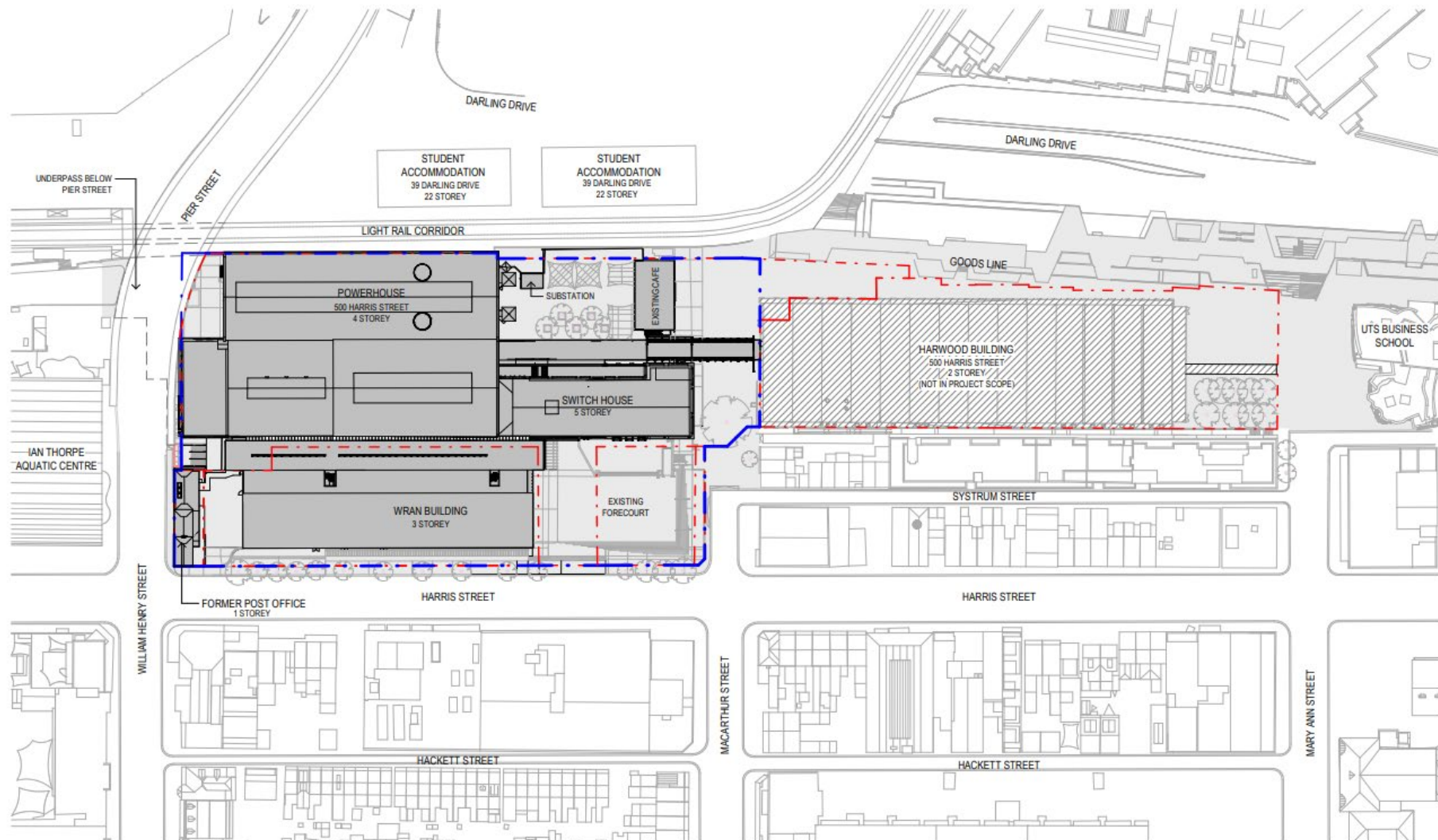


Figure 6-2: Ultimo Powerhouse- Building Envelope Existing Site Plan (Source: John Wardle Architects, 17 May 2022)

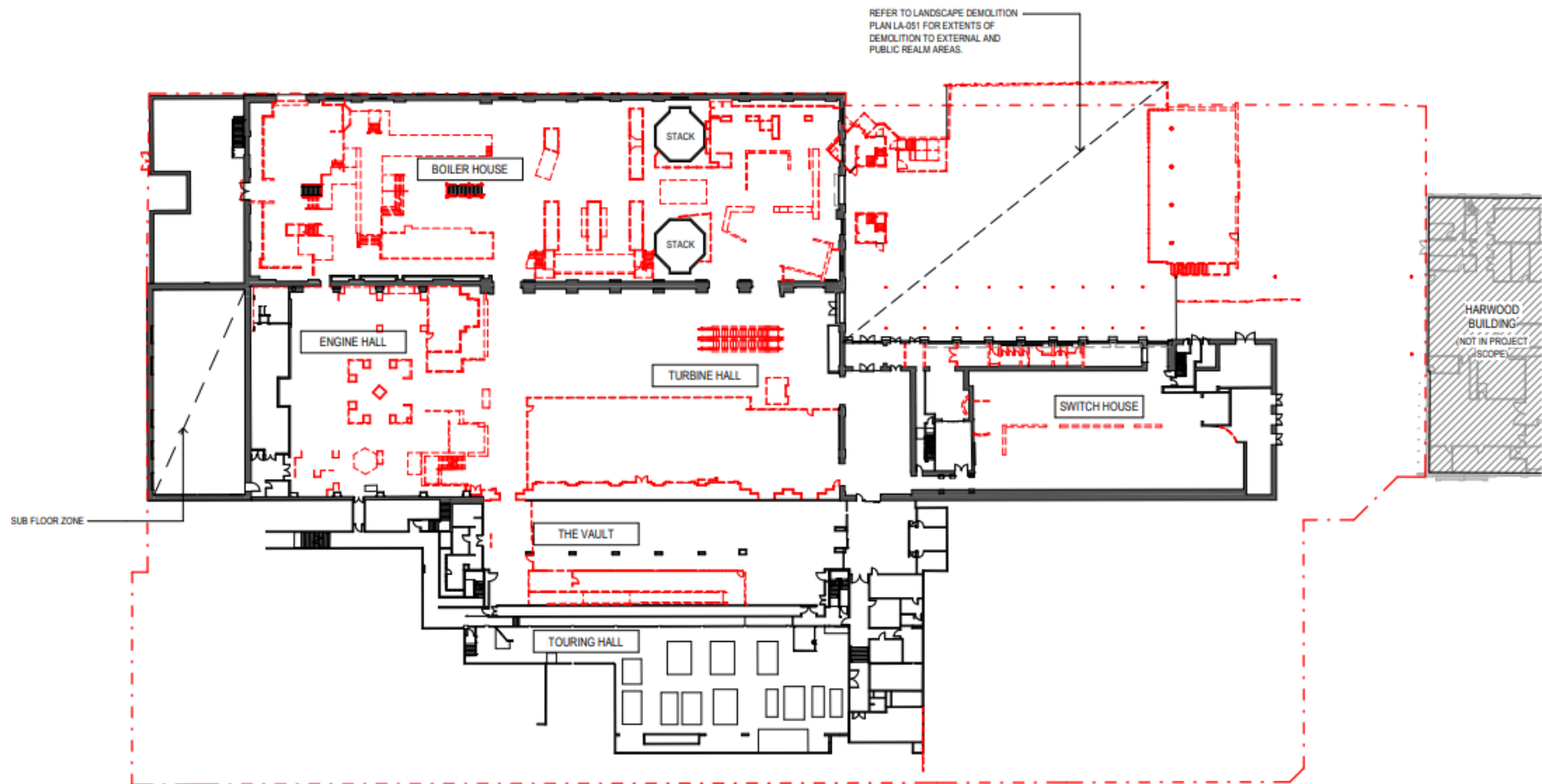


Figure 6-3: Ultimo Powerhouse- Reference Design Demolition Level L01 Plan (Source: John Wardle Architects, 17 May 2022)

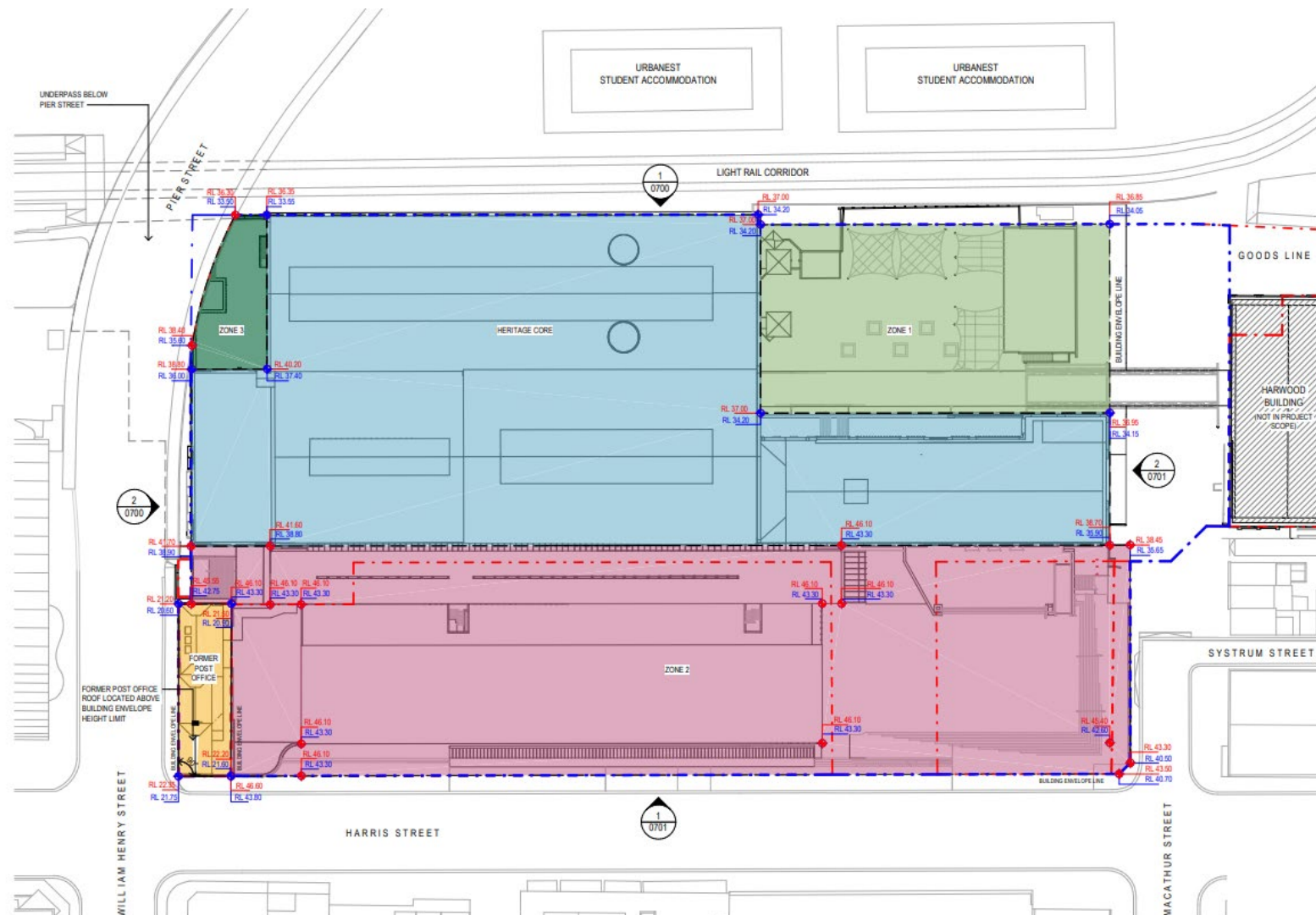


Figure 6-4: Ultimo Powerhouse- Building Envelope Plan (Source: John Wardle Architects, 17 May 2022)

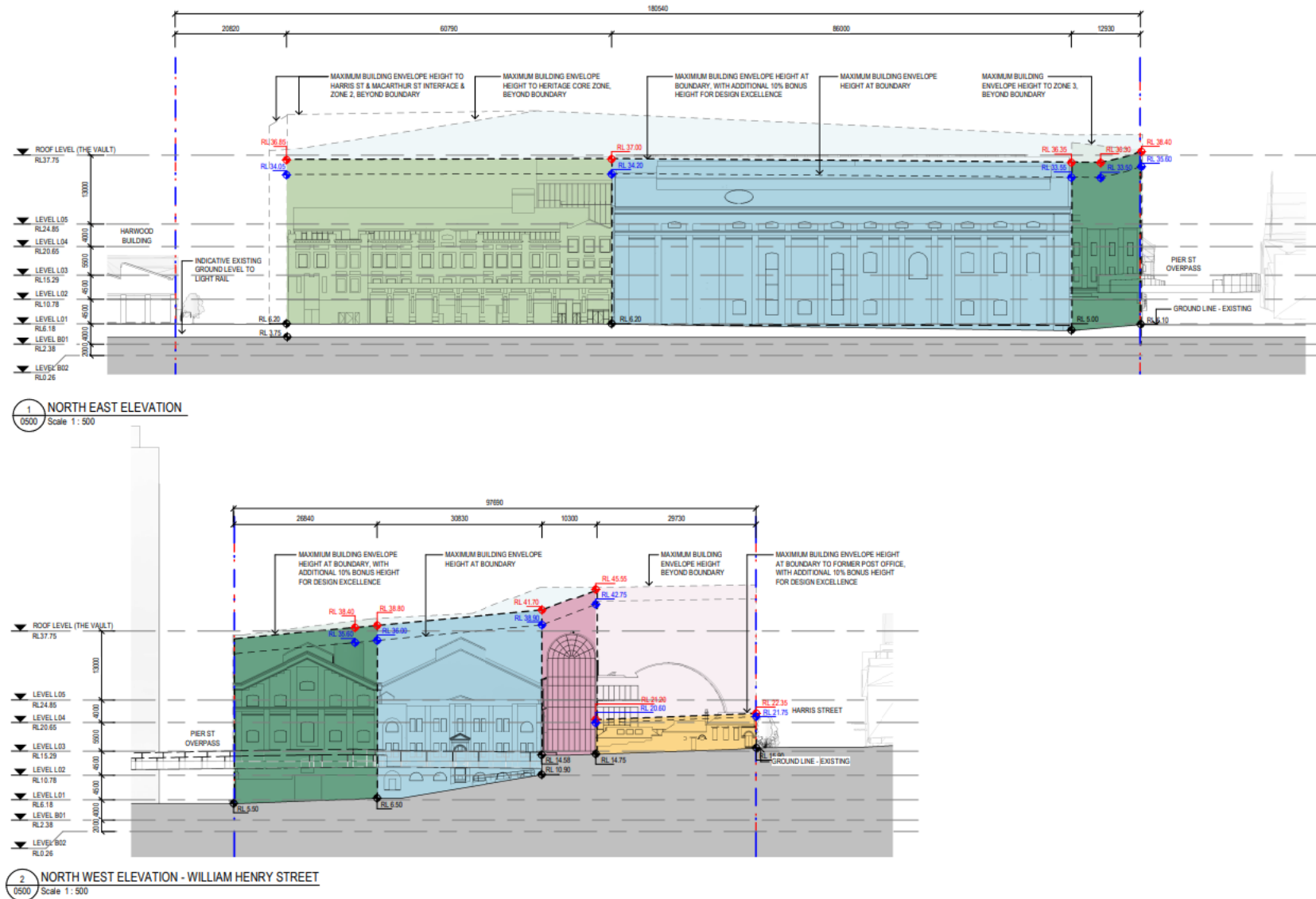


Figure 6-5: Ultimo Powerhouse- Building Envelope NE & NW Elevation (Source: John Wardle Architects, 17 May 2022)

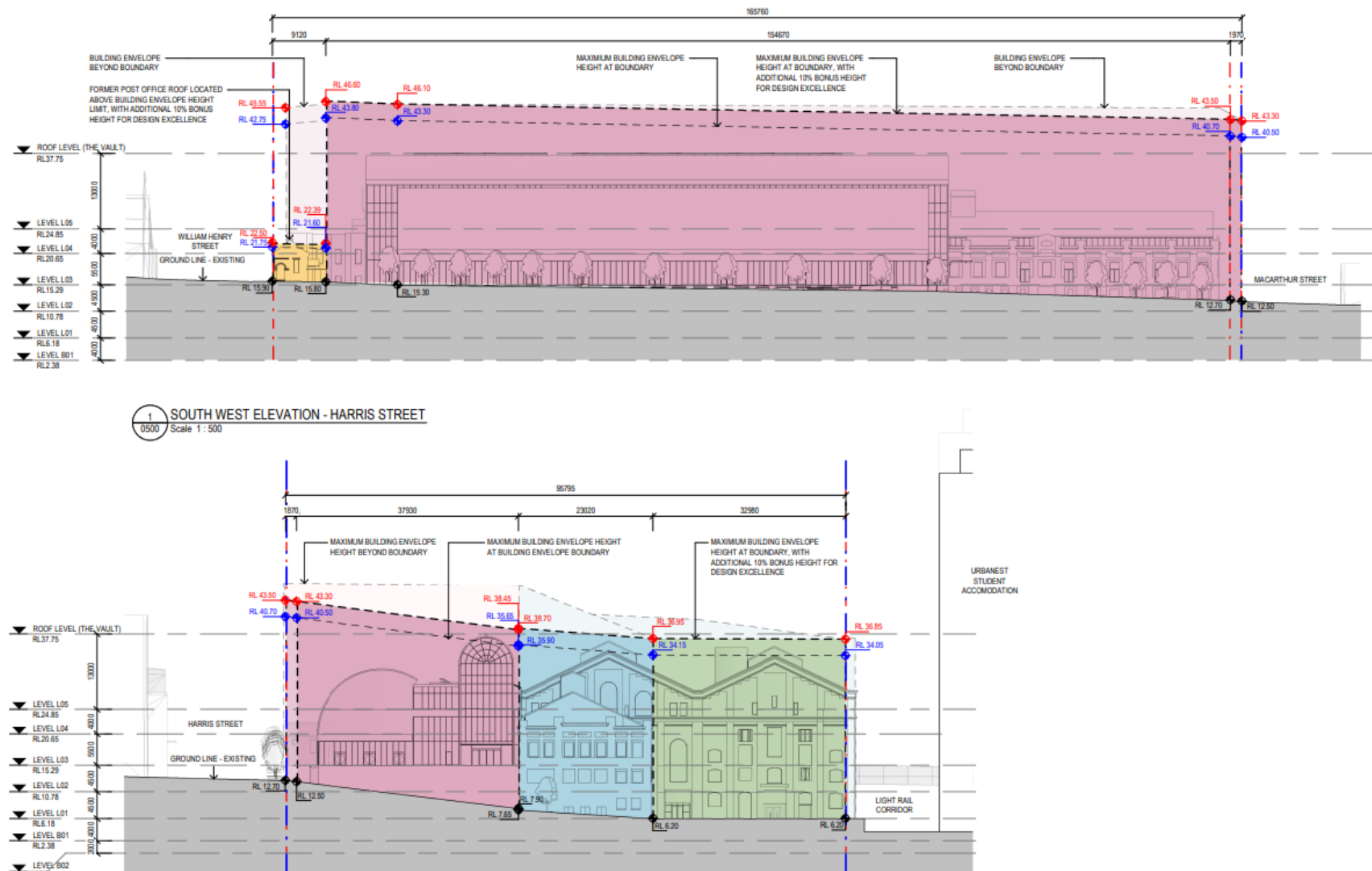


Figure 6-6: Ultimo Powerhouse- Building Envelope SE & SW Elevation (Source: John Wardle Architects, 17 May 2022)

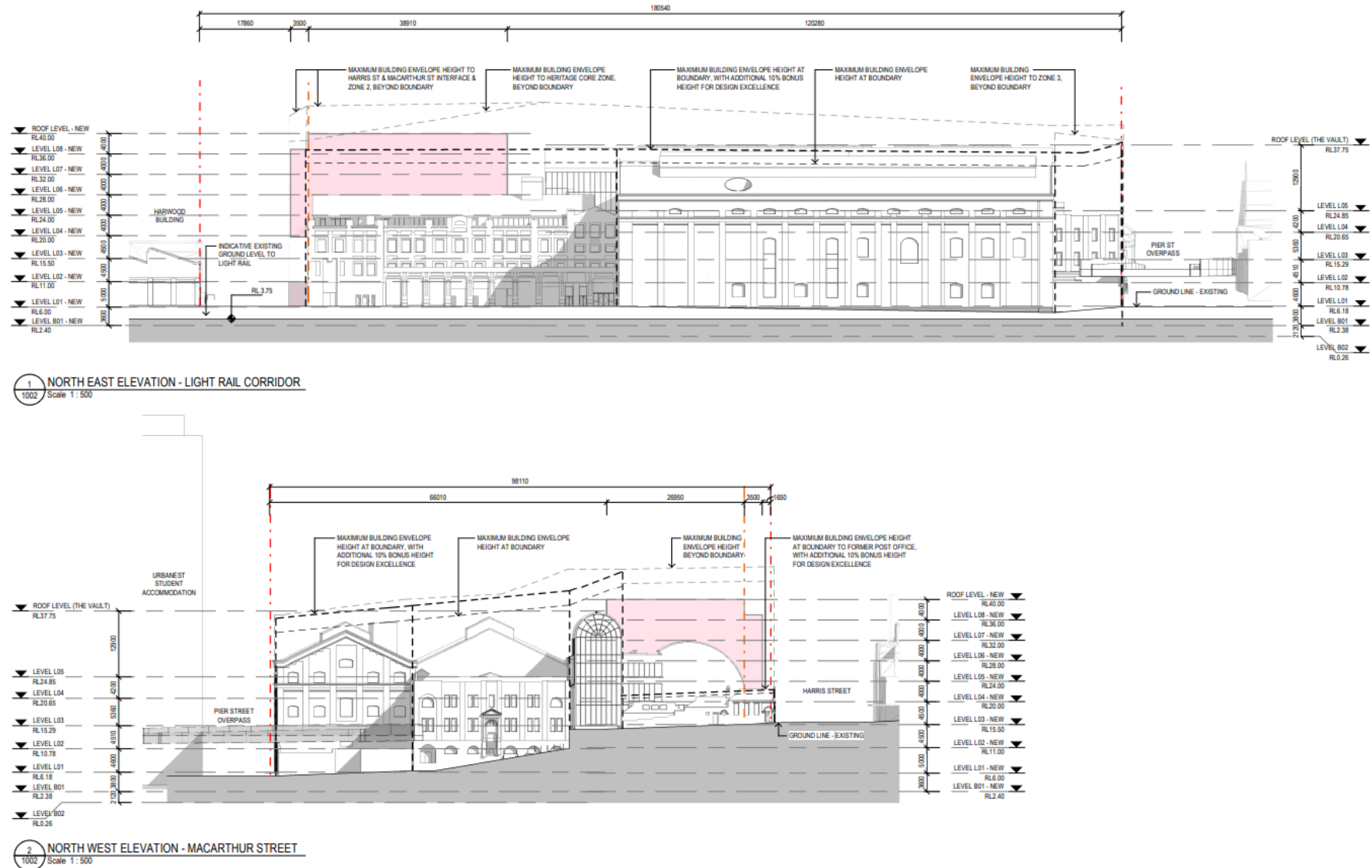


Figure 6-7: Ultimo Powerhouse- Reference Design NE & NW Elevations (Source: John Wardle Architects, 17 May 2022)

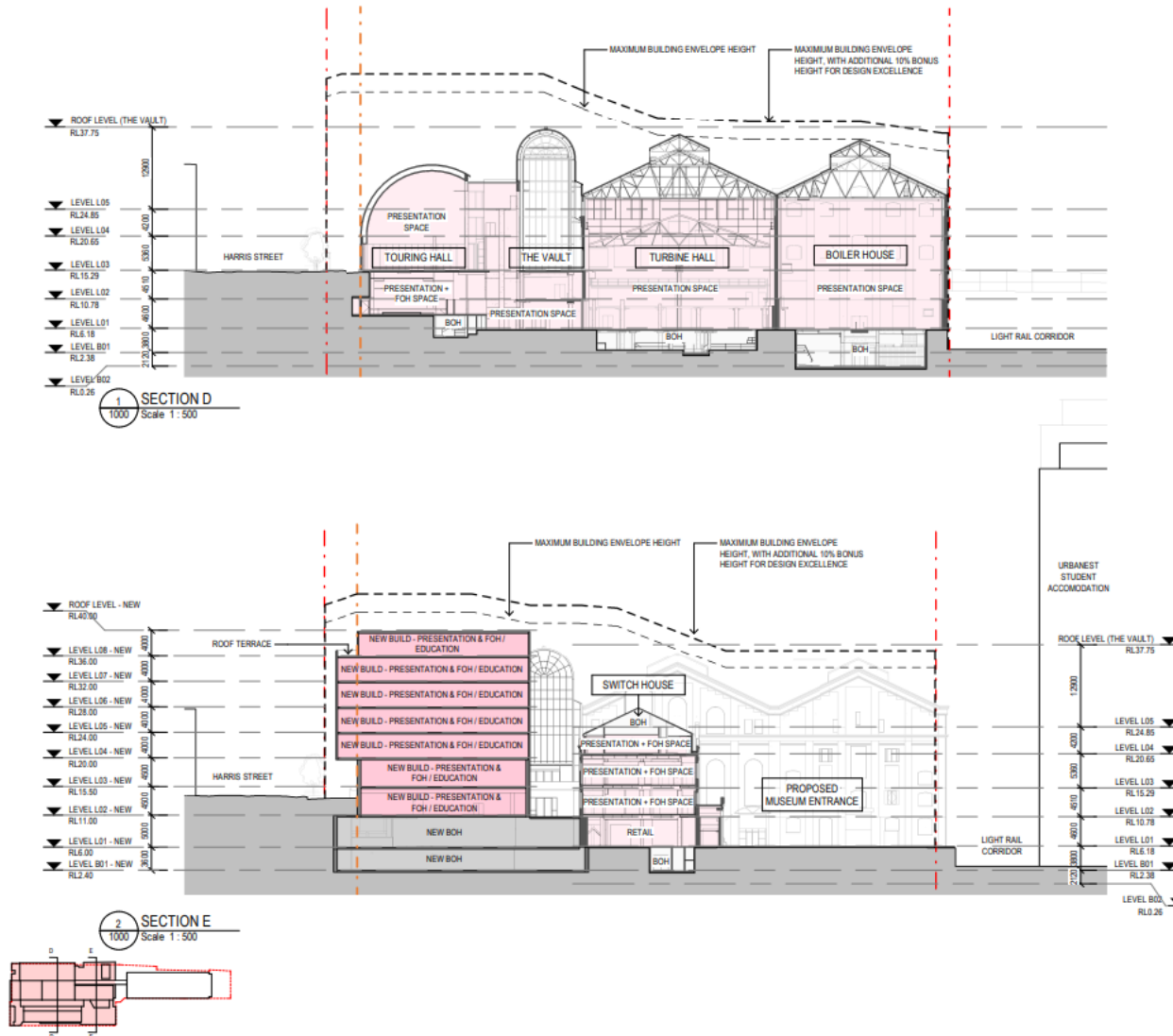


Figure 6-8: Ultimo Powerhouse- Harris St Sections 1 & 2 (Source: John Wardle Architects, 17 May 2022)

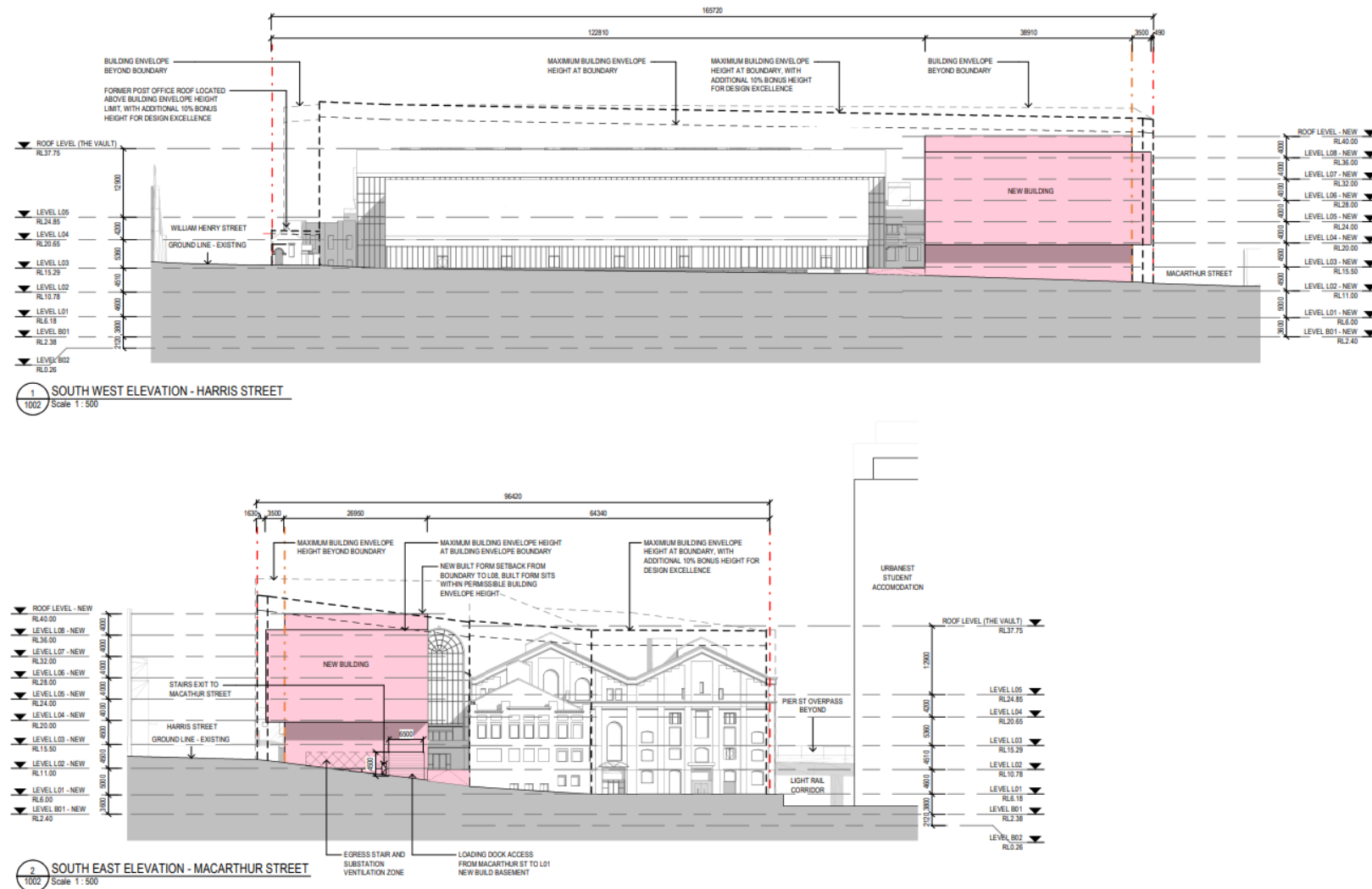


Figure 6-9::Ultimo Powerhouse- Reference Design SE & SW Elevations(Source: John Wardle Architects, 17 May 2022)

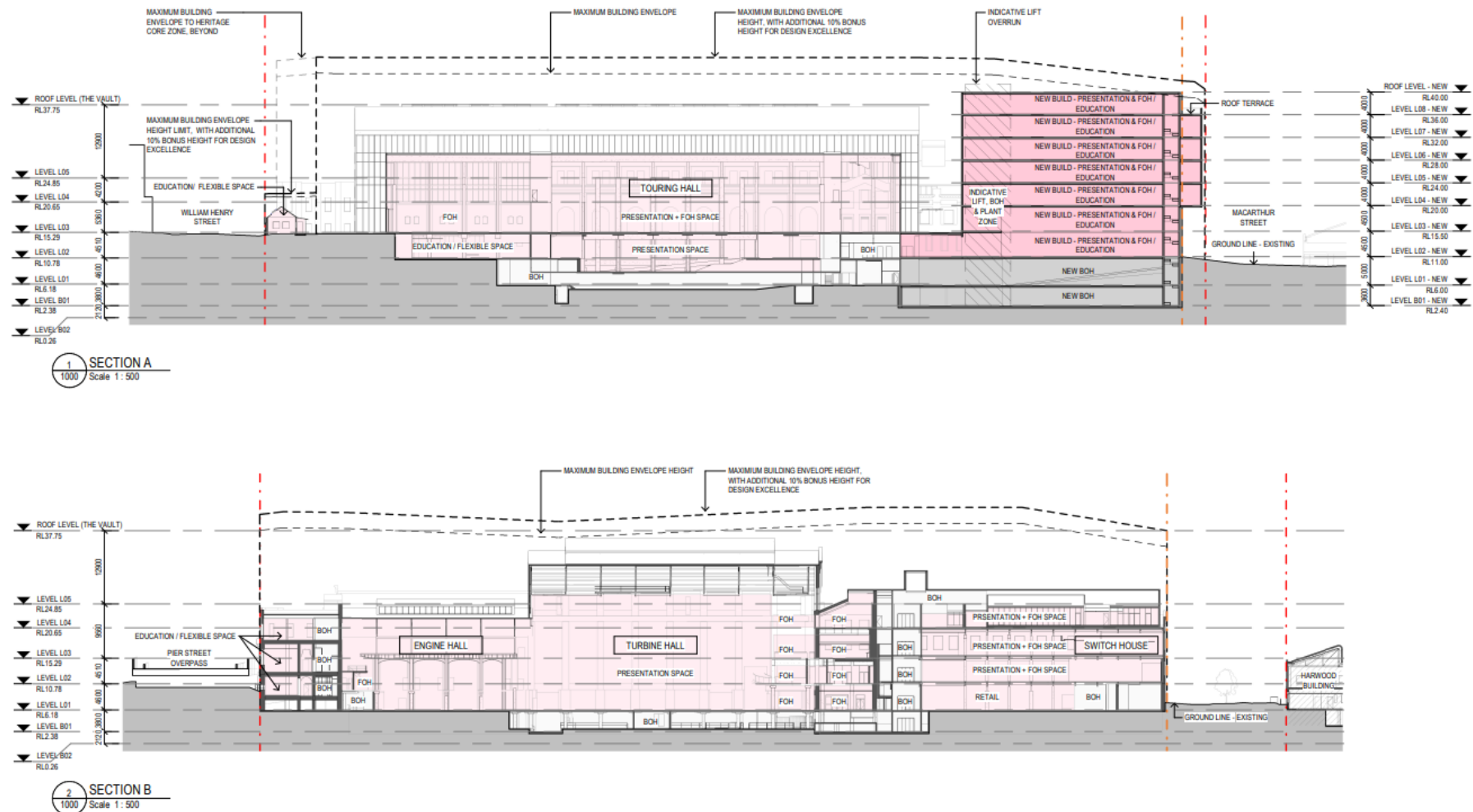


Figure 6-10: Ultimo Powerhouse- Powerhouse Sections 1 and 2 (Source: John Wardle Architects, 17 May 2022)

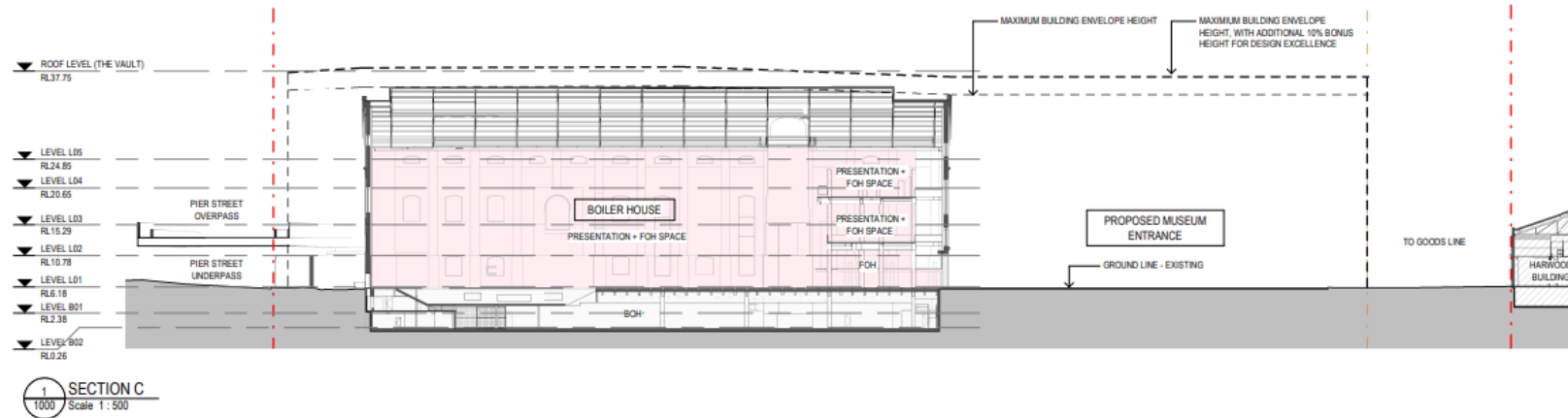


Figure 6-11 Ultimo Powerhouse- Powerhouse Sections 3 (Source: John Wardle Architects, 17 May 2022)

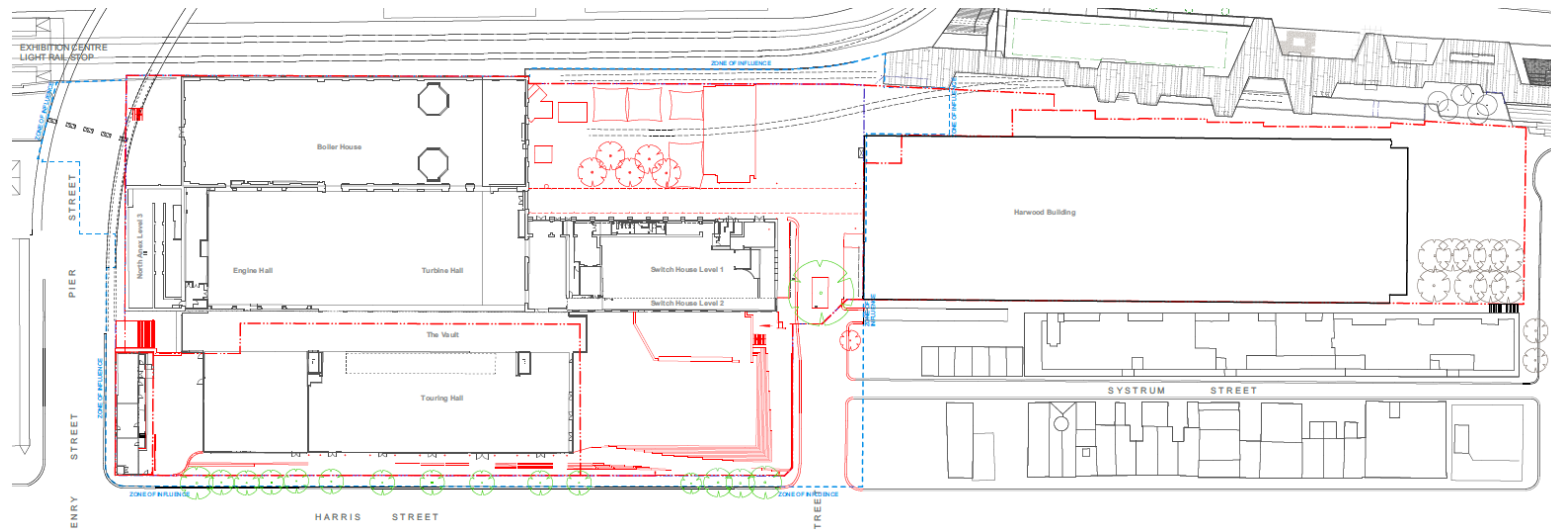


Figure 6-12: Powerhouse Ultimo Renewal- Landscape Demolition Plan LA-051 Rev B (Aspect Studios 2022)

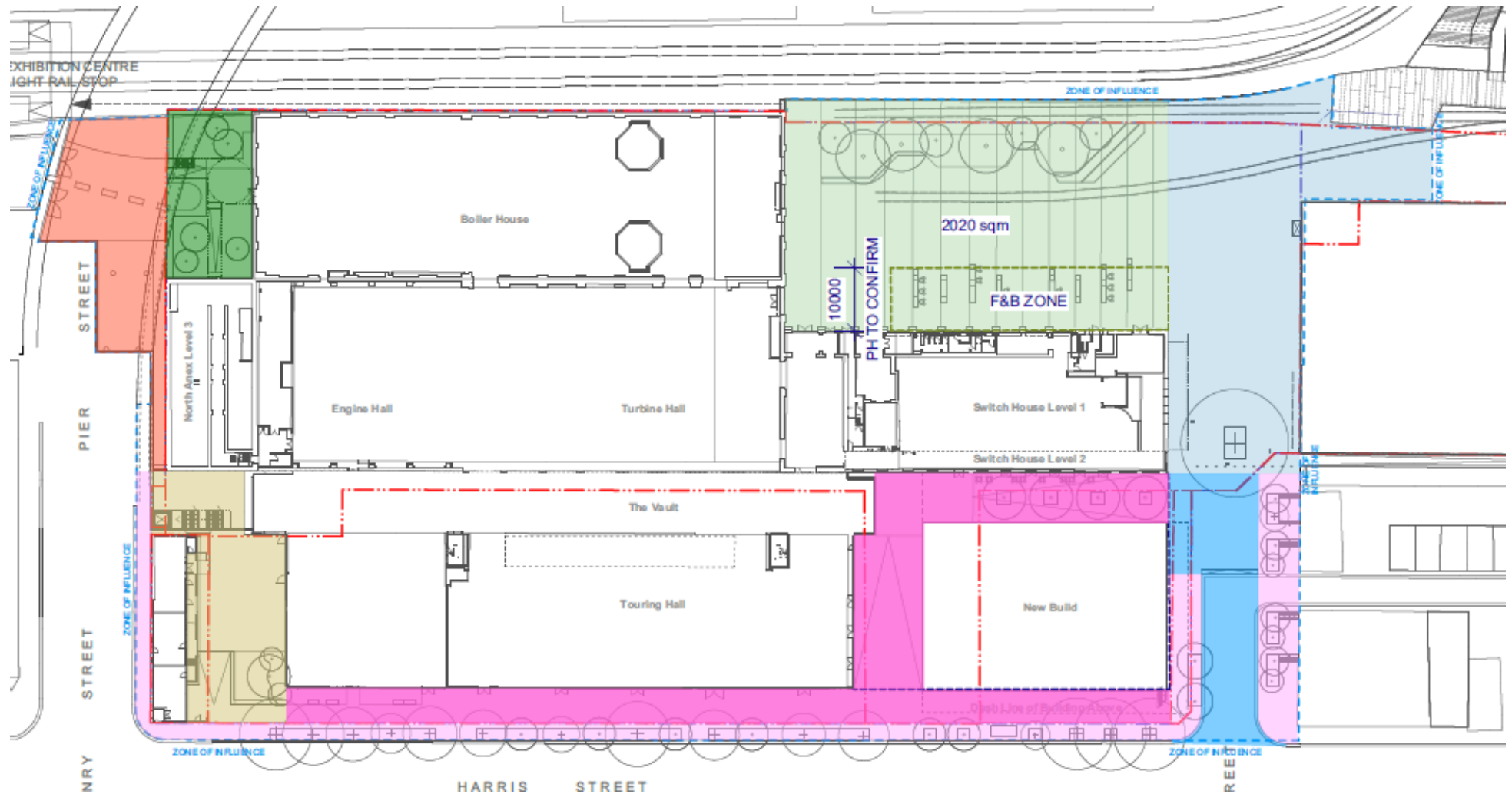


Figure 6-13: Powerhouse Ultimo Renewal- Zonal Plan LA-100 Rev B (Aspect Studios 2022)

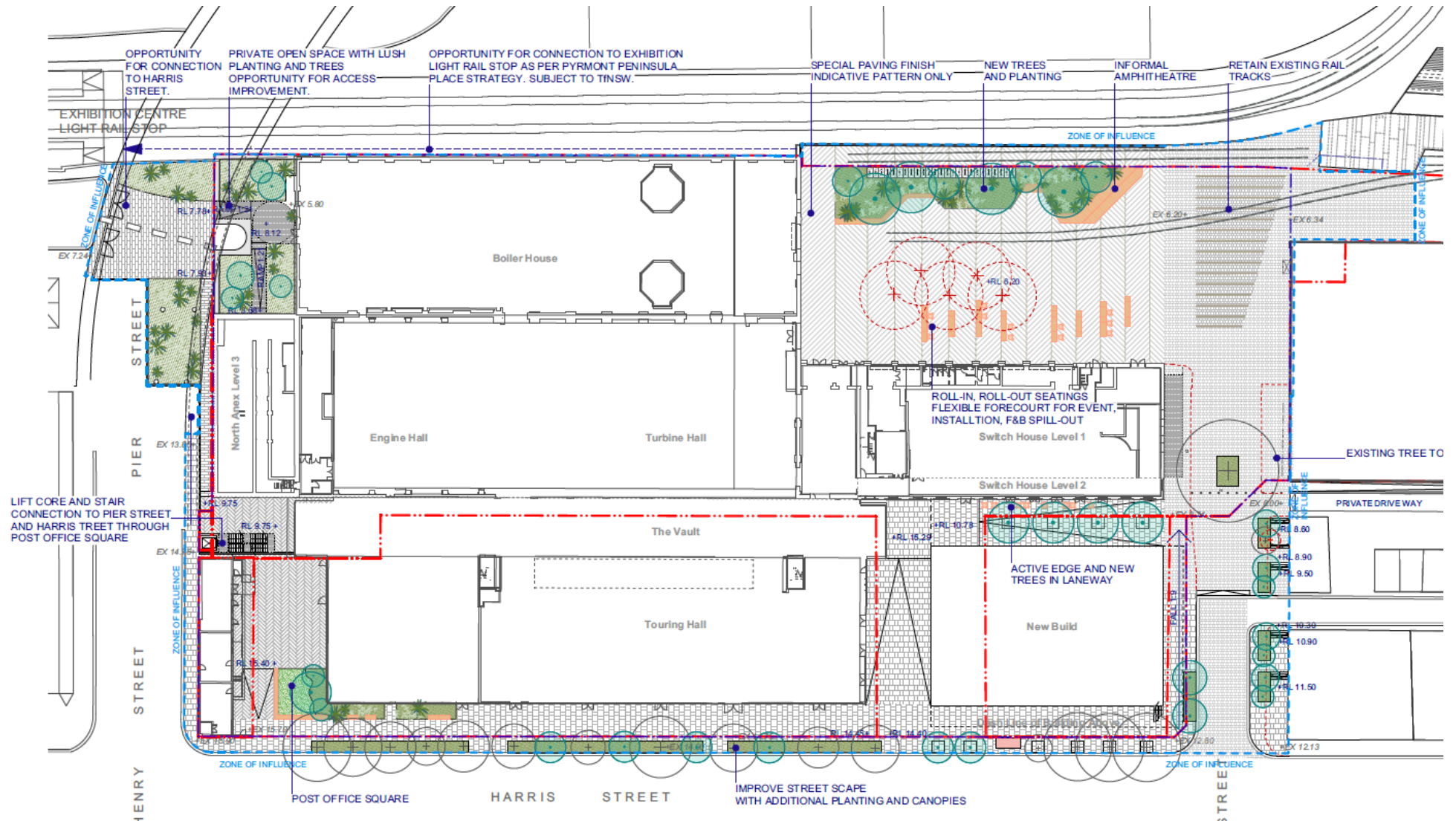


Figure 6-14: Powerhouse Ultimo Renewal- Landscape Plan LA-101 Rev B (Aspect Studios 2022)

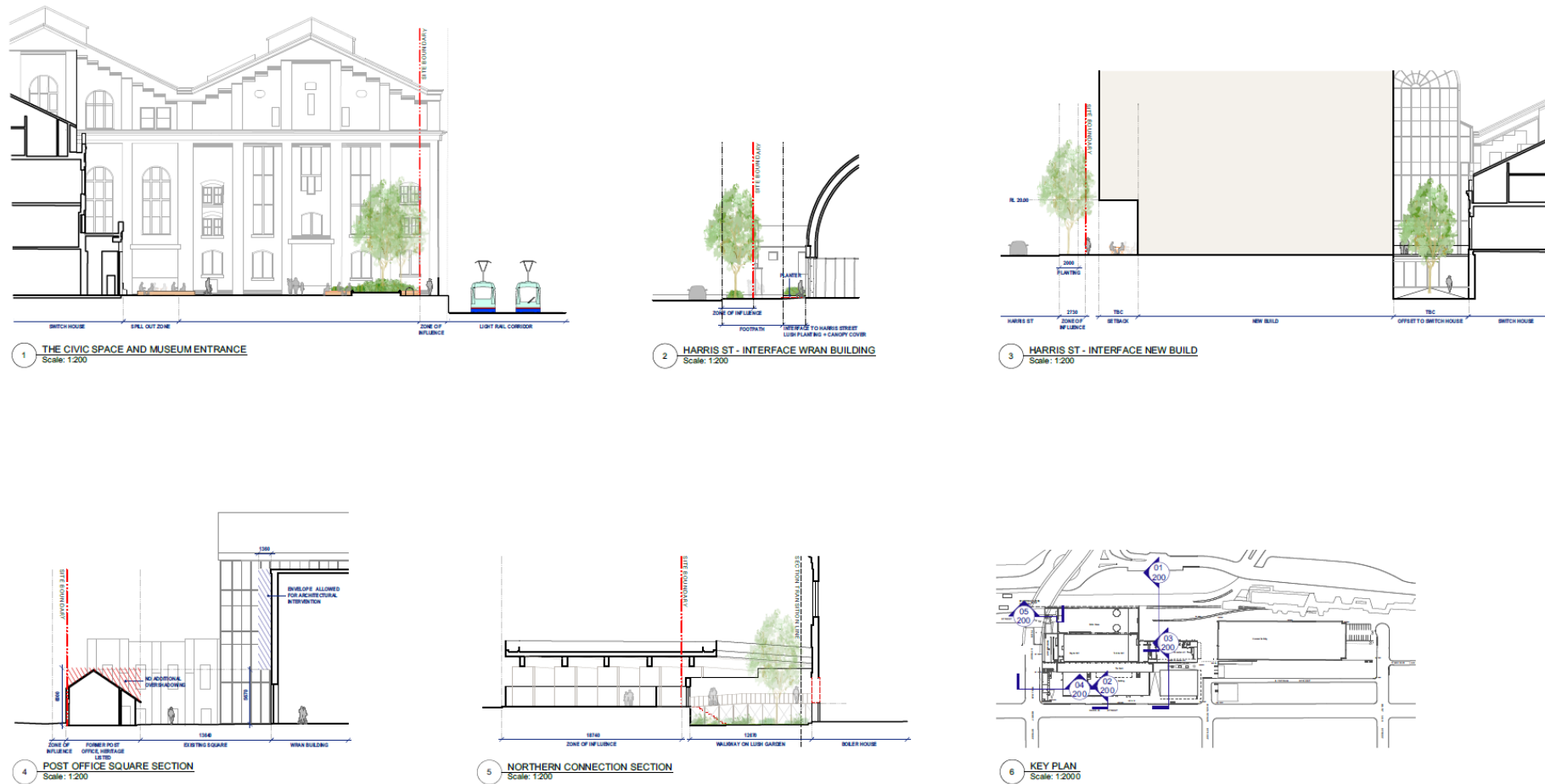


Figure 6-15: Powerhouse Ultimo Renewal- Sections LA-200 Rev B (Aspect Studios 2022)

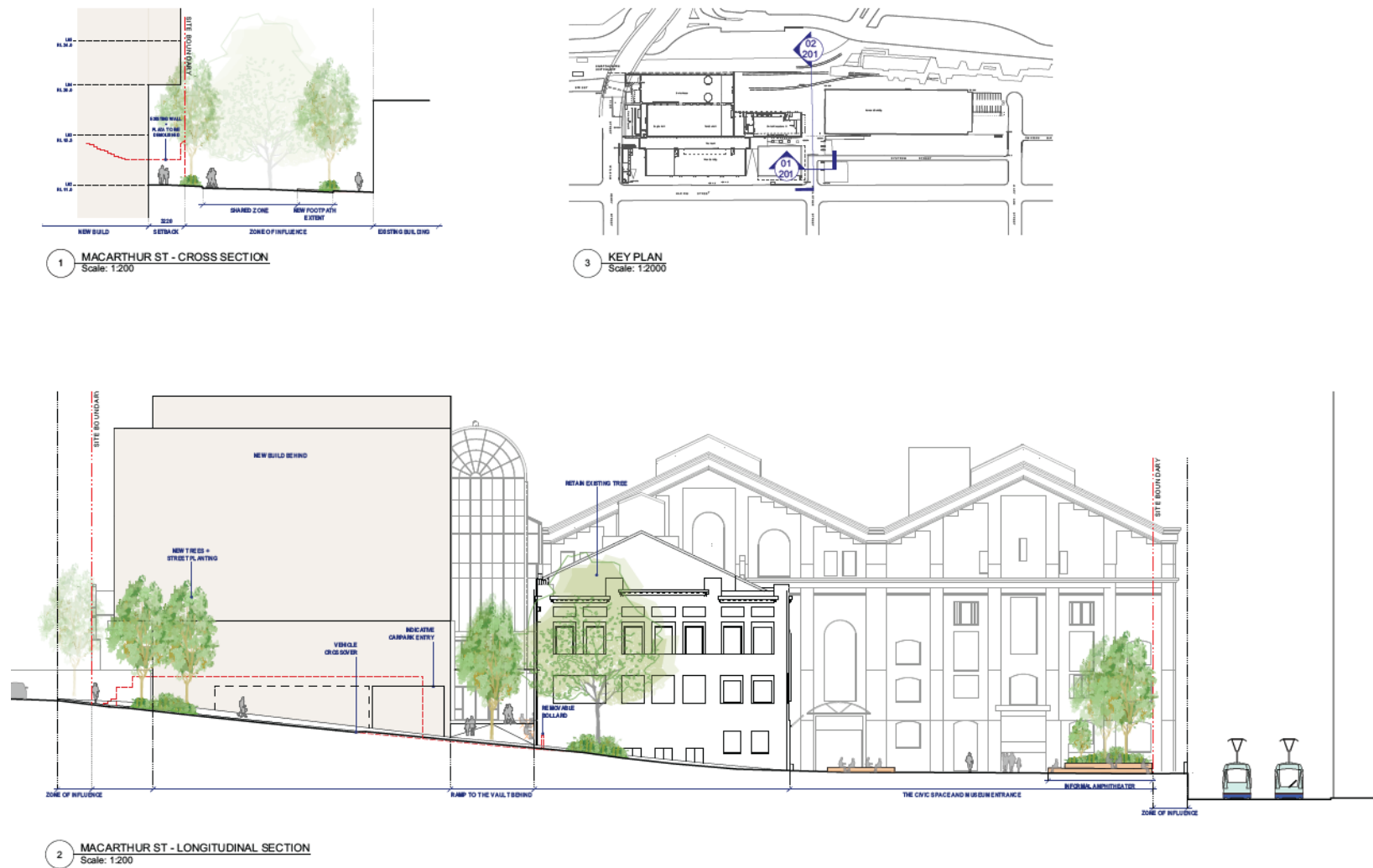


Figure 6-16: Powerhouse Ultimo Renewal- Sections LA-201 Rev B (Aspect Studios 2022)

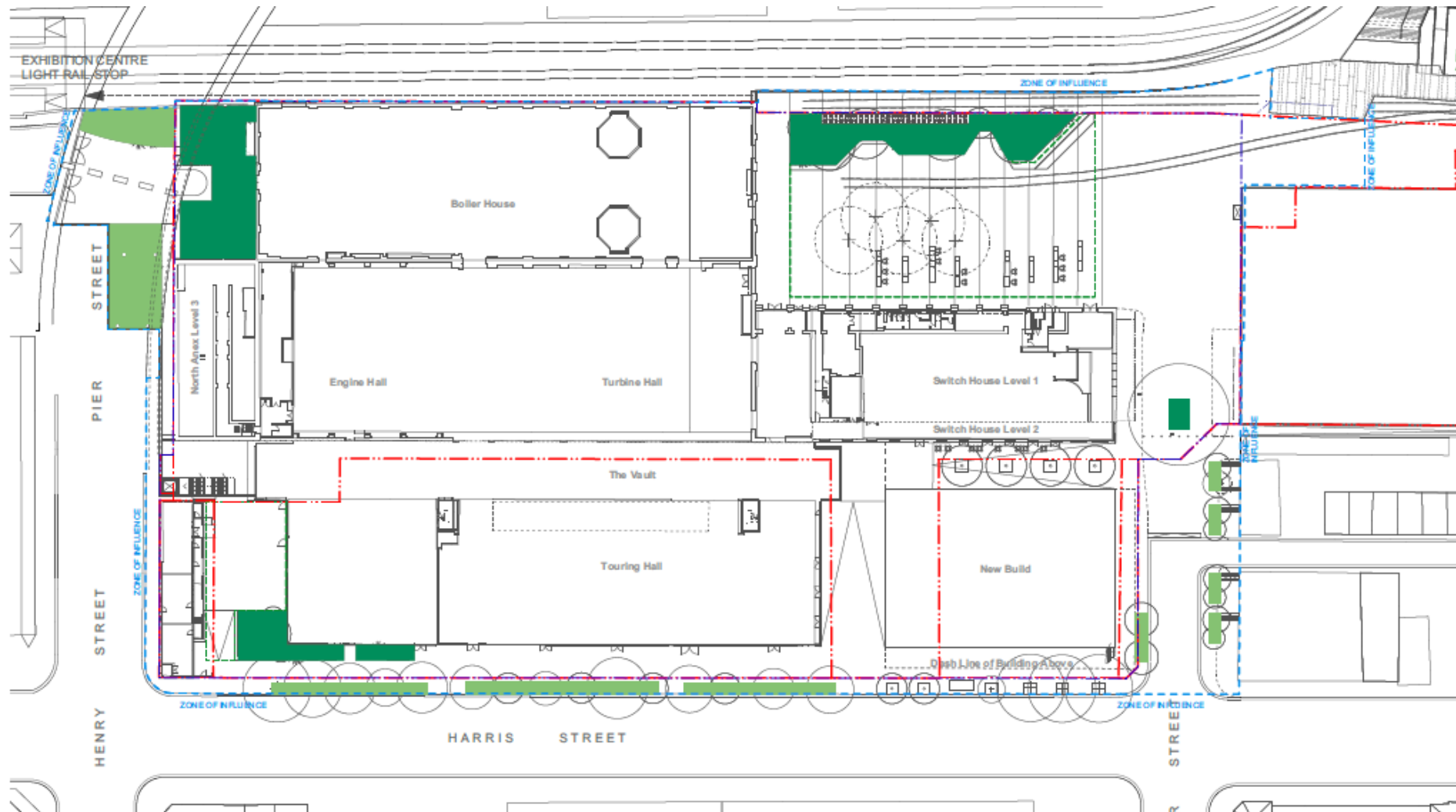


Figure 6-17: Powerhouse Ultimo Renewal- Deep Soil Diagram LA-500 Rev B (Aspect Studios 2022)

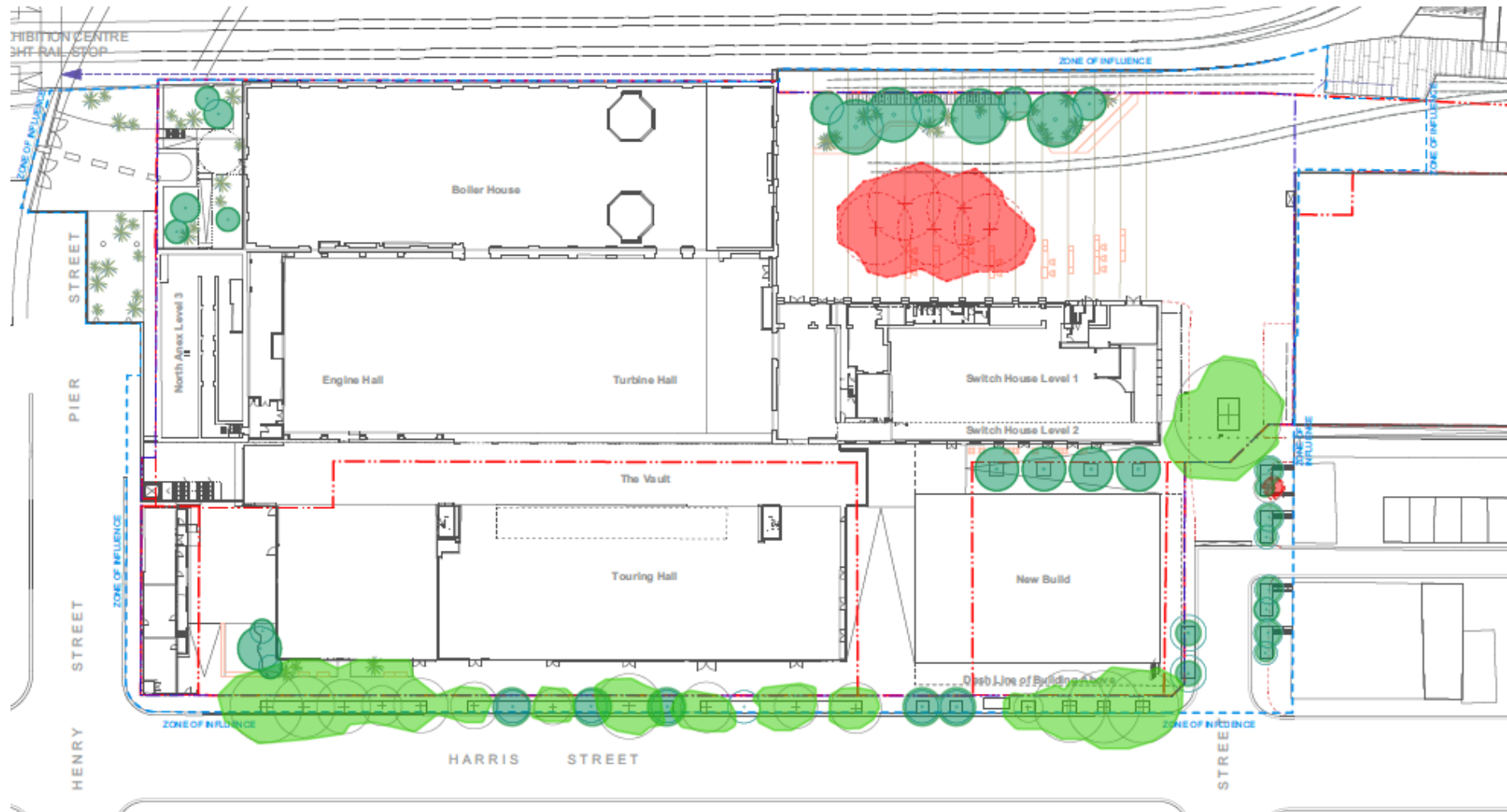


Figure 6-18: Powerhouse Ultimo Renewal- Tree Canopy LA-501 Rev B (Aspect Studios 2022)

7. Assessment of Heritage Impact

7. Assessment of Heritage Impact

This HIS has been prepared specifically to accompany the Stage 1 DA, which technically does not include approval for physical works at the site. However, as the process and strategies developed through the Concept Phase 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 in Stage 2).

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 cultural heritage values of the study area and surrounds.

The heritage impacts of the indicative design response are discussed below in relation to the key features of the site (heritage buildings, landscaping, new built form etc), followed by a summary of the physical, visual, and archaeological impacts presented by the proposal.

7.1. Discussion

7.1.1. Heritage Buildings

The indicative design response 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 indicative design response 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 as part of Stage 2 design.

The modern inserts in the heritage buildings such as the modern stairs and southern mezzanine, 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.⁷⁰

Removal of the existing modern fit out within the heritage core buildings has the ability to be a major positive visual impact to the interior of the heritage items. Removal of the modern fitout provides the opportunity for Stage 2 detailed design to reinstate 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.

The Concept proposal does not propose any physical impact to the Ultimo Post Office. Adaptive reuse of the Post Office through the site renewal would allow public access of this State significant building to be restored.

⁷⁰ Curio Projects, 2022b (DRAFT), Conservation Management Plan, Powerhouse Ultimo, prepared for The Powerhouse and Create NSW, p. 165.

The Concept Public Domain Plan proposes a new public domain zone around the Post Office, which has the potential to be a major positive impact to the heritage asset (see Public Domain Renewal section below).

At present, the Wran Building dominates the landscape around the SHR-listed Ultimo Post Office, impacting its legibility and its presence on the site. Revitalisation of the public domain around the Post Office introduces the opportunity for a more appropriate curtilage to be established around this heritage item, while at the same time allowing for an improved integration of the Post Office building, both visually and functionally, with the wider Powerhouse Ultimo site.



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

7.1.2. Wran Building

The indicative design response proposes to retain and renew the Wran Building as a museum space, while also allowing for removal and refit of the interior elements of the Wran Building as part of Stage 2 detailed design.

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. The indicative design response includes the retention and renewal of the Wran Building as a museum space, retaining the landmark form of the structure within the site. As a modern building that is not heritage listed, the Wran Building also presents the best opportunity for upgrade and renewal to meet future spatial, functional and upgrade needs of the Powerhouse as a modern museum. The retention and renewal of the Wran Building for functional museum space will in turn allow the necessary upgrades for the museum facilities and future use without the need for unnecessary intervention in the SHR-listed heritage core buildings.

7.1.3. New Building—Harris St Forecourt

The indicative design response proposes the introduction of a new building envelope at the Harris Street forecourt. The new building envelope will be limited in height as part of 'Zone 2' area to 30.8m height above ground level - which is a height generally consistent with the existing Wran Building on the northern section of this lot. Therefore, visually the new built form to Harris Street would be consistent in height, scale, and bulk with both the Wran Building, as well as the wider built levels across the site.

The new built form in the Harris Street forecourt would obstruct existing views from Harris Street east to the heritage core buildings, namely the Switch House. However, this direct view from Harris Street to the heritage items was only established as part of the 1980s museum redevelopment of the site. Historically, the Ultimo Power House did not have a frontage to Harris Street, with this part of the site occupied by a series of previous structures including late 19th century terrace row along Harris Street (demolished in 1922), the Sydney Glass Company warehouse, Ampol Service Station and Manassen building (Figure 7.2).

Further, 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.

Construction of a new built form within the Harris Street forecourt has the ability to have a neutral visual impact on the heritage values of the site, assuming that the new built form is appropriately scaled and sensitively designed as part of Stage 2.

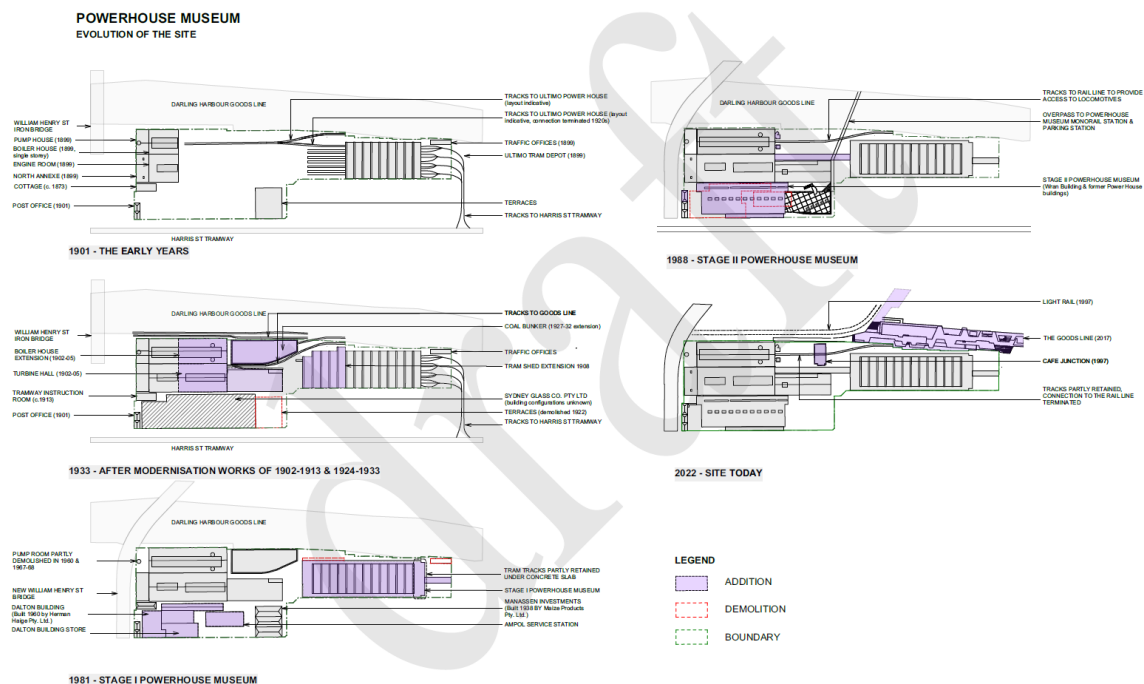


Figure 7-2: Diagram showing the evolution of the Powerhouse Museum site from the 2022 Draft CMP. Showing the presence of buildings between the Switch House and Harris Street as a consistent feature of the site built form until 1988.

7.1.4. Public Domain Renewal

The indicative design response creates six public domain key spaces, each with a different goal, vision and principles, discussed below with respect to heritage impact. These are shown below in Figure 7-3 and include:

- Proposed Museum Entrance
- Macarthur Street
- Circulation
- Harris Street
- Post Office Square
- Northern Connection

Additional maps below include:

- Levels (Figure 7-4)
- Deep Soil (Figure 7-5)
- Materials and Finishes (Figure 7-6)
- Tree Canopy Cover (Figure 7-7)
- Indicative Planting Selection (Figure 7-8)

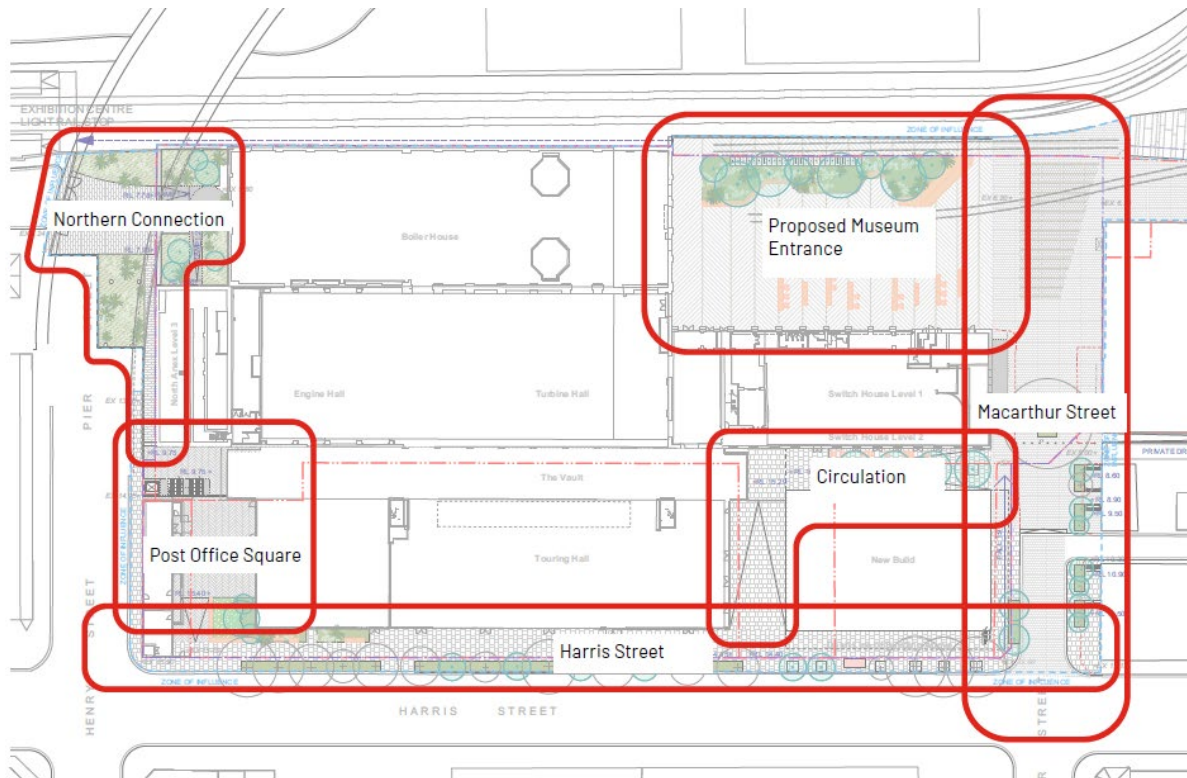


Figure 7-3: Powerhouse Ultimo Renewal Urban Design Report – Public Domain Key Spaces, 9 May 22 (John Wardle Architects & Aspect Studios)

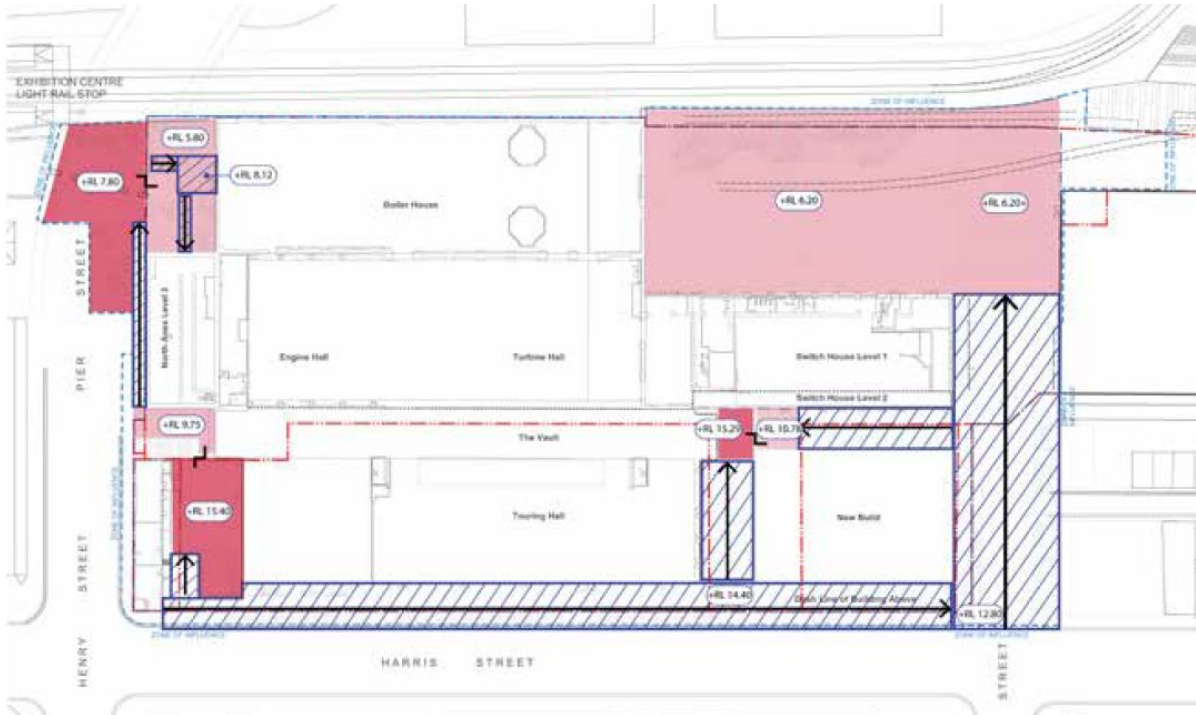


Figure 7-4: Powerhouse Ultimo Renewal Urban Design Report – Levels 9 May 22 (John Wardle Architects & Aspect Studios)

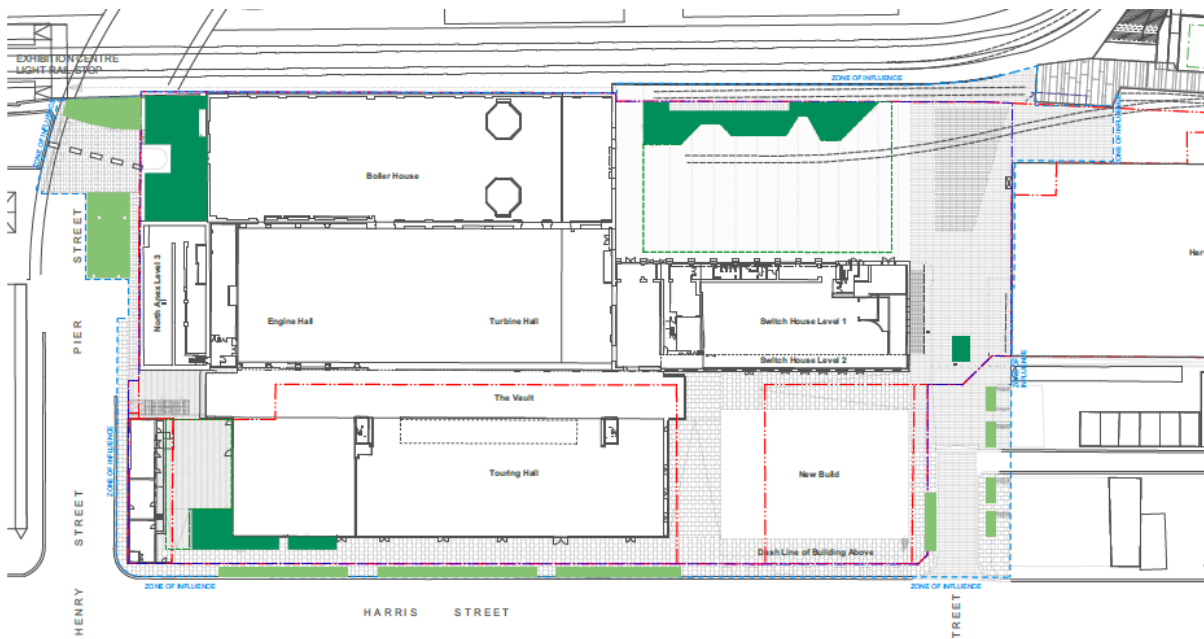


Figure 7-5: Powerhouse Ultimo Renewal Urban Design Report – Deep Soil 9 May 22 (John Wardle Architects & Aspect Studios)

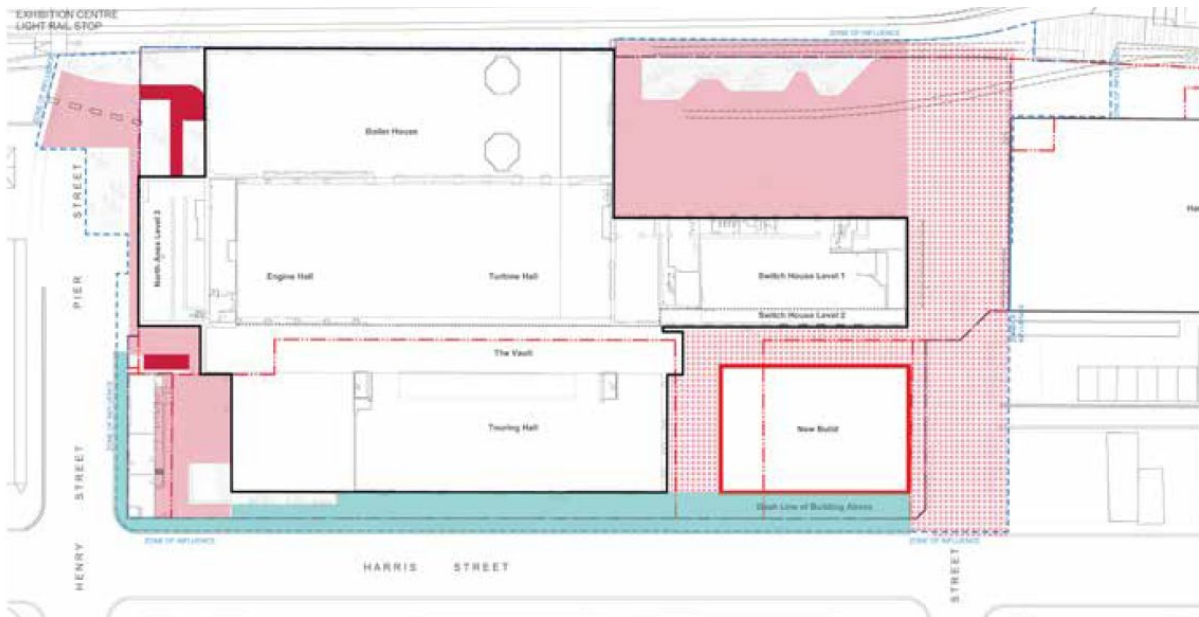


Figure 7-6: Powerhouse Ultimo Renewal Urban Design Report – Materials and Finishes 9 May 22 (John Wardle Architects & Aspect Studios)

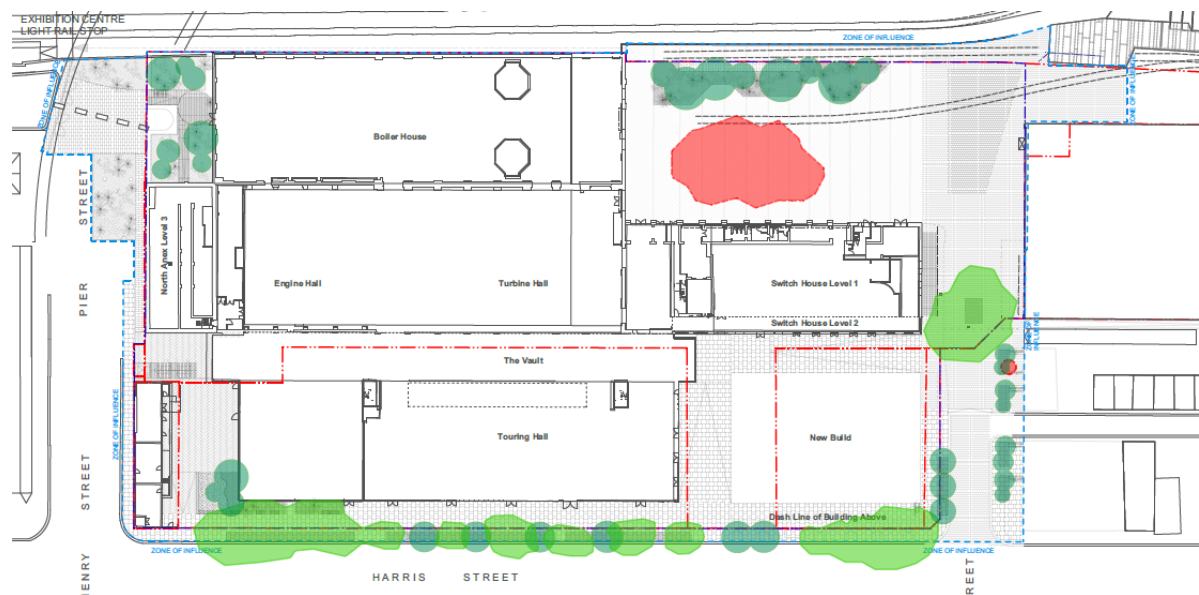


Figure 7-7: Powerhouse Ultimo Renewal Urban Design Report – Tree Canopy Cover 9 May 22 (John Wardle Architects & Aspect Studios)



Figure 7-8: Powerhouse Ultimo Renewal Urban Design Report – Indicative Planting Selection 9 May 22 (John Wardle Architects & Aspect Studios)

Proposed Museum Entrance

The south-eastern public domain area would re-orient the Museum's primary address and arrival point towards The Goods Line and the city, via a new public square adjacent to the east side of the Switch House. From a heritage perspective, the re-orientation of the museum entry from Harris Street to The Goods Line would have a neutral impact to the heritage significance and values of the place. However, relocating the key visitor arrival space to be directly into the heritage core of the site would be an overall positive heritage outcome for the site's activation and future use, encouraging visitors to connect immediately with the heritage core, fabric, and history of the place immediately upon arrival to the museum.

Establishment of this area of the public domain would include removal of the café kiosk, covered walkway, substation, and lift coverings along the southern façade of the Boiler House, all of which are identified in the 2022 Draft CMP as elements of little or intrusive significance. Removal of these intrusive element would be a positive visual impact for the visibility and presentation of the heritage items, and the site as a whole.

Northern Connection

The Northern Connection public domain area in the northeast of the site would create 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 are sections of the northern and eastern facades, a portion of the chimney and a few remnant pieces of the former roof truss. Regarding the significance of the former Pump House site, the 2022 Draft CMP states that:

While views of the remnant facades and chimney have been predominantly obscured by the 1968 extension and raising of the William Henry Street bridge, these elements retain aesthetic significance as the only remaining evidence of the original Boiler House of the 1899 Ultimo

Power House, which could be further enhanced and communicated by introduction of heritage interpretation initiatives in this location.⁷¹

The 2022 Draft CMP also identifies the opportunity for the Pump House area for the:

Creation of a careful through-site pedestrian access directly from William Henry Bridge/Light Rail Station via the former Pump House site through to the Former Ultimo Power House could be explored to improve site access to the Powerhouse. Site-through access directly to the William Henry Bridge approaches that would allow for this unique historical 'ruin' to be accessed more easily and provide an opportunity to interpret this 'forgotten' area of the site.⁷²

Creation of the Northern Connection introduces the potential for the renewal of the site to have a major positive impact to the former Pump House, both via integration of heritage fabric into landscaping and public domain works (assuming retention and integration of Pump House heritage fabric in Stage 2 design), as well as the introduction of opportunities for interpretation and introduction of public access to the former Pump House space.



Figure 7-9: 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.

Harris Street

Revitalisation and activation of the public domain along Harris Street will have a neutral to minor positive visual impact to the heritage significance and values of the Power House site. While this location does not have a direct interface with the former Ultimo Power House heritage buildings, the proposed removal of the Wran Colonnade along Harris Street and replacement with improved public domain, along with creation of the Post Office Plaza, is likely to improve the visual amenity of the SHR-listed Post Office.

⁷¹ Curio Projects 2022b (DRAFT), Conservation Management Plan, Powerhouse Ultimo, prepared for The Powerhouse and Create NSW, section 9.3.

⁷² Curio Projects 2022b (DRAFT), Conservation Management Plan, Powerhouse Ultimo, prepared for The Powerhouse and Create NSW, section 9.4.



Figure 7-10: 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.

Post Office Square

The SHR-listed Ultimo Post Office is currently an under-utilised and neglected heritage feature of the site. Activation of square and public domain around Post Office (i.e. 'Post Office Square/Plaza' proposed by the public domain concept plan) has opportunity to be a positive visual impact for the integration of the heritage item into the site, re-introducing public use and access to the area, and allowing for connection of the Post Office into the wider Powerhouse Ultimo site.

7.1.5. Views and Vistas

The Powerhouse Ultimo Draft CMP⁷³ identified five key views of heritage significance for the Powerhouse Ultimo (as summarised in Section 5.3 above). Ethos Urban has conducted a Visual Impact Assessment for the Powerhouse Ultimo Renewal, images from which have been included below.⁷⁴ 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 indicative proposal may present, and the degree to which the proposed renewal of the site may affect these heritage vistas.

⁷³ Curio Projects 2022b (DRAFT), Conservation Management Plan, Powerhouse Ultimo, prepared for The Powerhouse and Create NSW, Section 4.5.

⁷⁴ Ethos Urban 2022, *Visual Impact Assessment, 500 Harris Street Ultimo, Powerhouse Ultimo Renewal, on behalf of Create NSW*, 6 May 2022.

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

The proposal will retain significant views of the site from the corner of Harris and William Henry Streets. It will 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. 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.

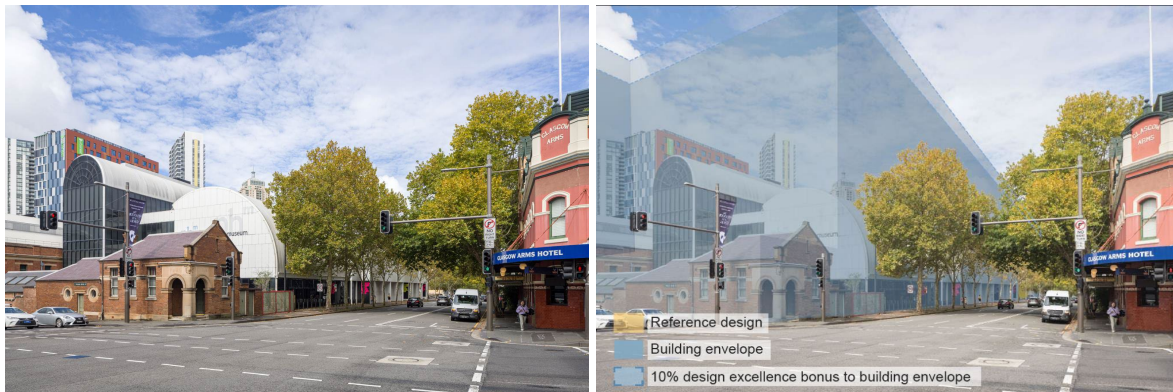


Figure 7-11 View from Harris Street and William Henry Street, existing view and proposed views (Source: Ethos Urban 2022 pp. 41-42)

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 7-12: View from Pier Street, existing view and proposed views (Source: Ethos Urban 2022 pp. 45-46)

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

Re-orientation of the museum primary address to the new south-eastern forecourt will have a minor to major positive visual impact to views to the Powerhouse Ultimo site from The Goods Line. 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, and presenting a positive impact to this significant view line via the proposed removal of existing intrusive features in the south-eastern courtyard (i.e. the boxy, rectangular café in the Level 1 courtyard and the brightly coloured lift shafts adjoining the southern façade of the Boiler House).



Figure 7-13: View from The Goods Line and Macarthur Street , existing view and proposed views (Source: Ethos Urban 2022 pp. 49-50)

View 4: The Goods Line- proposed view

Similar to view 3 above, the concept proposal will have a neutral to minor positive impact to this view, 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 7-14: 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 will have a considerable impact on the views of the site from Harris and Macarthur Streets. While the new built form would 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 7-15: 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 follows ⁷⁵:

- 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 the Harris Street Forecourt New Build will be to the Harris Street and Macarthur Street intersection
- 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

⁷⁵ 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.

7.2. Summary of Physical Impacts

The physical heritage impacts of the Indicative Design Response are summarised as follows:

- The concept proposal proposes no physical impact to significant heritage fabric, and includes retention and adaptive re-use of all heritage items
- Provisions for the removal of the interior modern insertions of little and intrusive heritage significance within the Engine Hall, Turbine Hall, Boiler House, and Switch House (as part of Stage 2 design) will be a positive outcome for interior heritage spaces.
- As a modern building that is not heritage listed, the Wran Building presents the best opportunity for upgrade and renewal to meet future spatial, functional and upgrade needs of the Powerhouse as a modern museum, without additional intervention or impact to the SHR-listed heritage core buildings. Retention and renewal of the Wran Building as a museum space will retain the landmark form of the Wran Building within the site, while also allowing the opportunity and flexibility for site upgrades and development.
- Establishment of the new northern public domain entry to the site from Pier Street has potential to be a major positive physical impact to the remnant fabric of the former Pump House, via conservation and integration of heritage fabric into landscaping and public domain works (assuming retention and integration of pump house heritage fabric in Stage 2 design).

7.3. Summary of Visual Impacts

The visual heritage impacts of the Indicative Design Response are summarised as follows:

- Removal of 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, providing the opportunity for Stage 2 detailed design to reinstate 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. Revitalisation of the public domain around the Post Office introduces the opportunity for a more appropriate curtilage to be established around this heritage item, while at the same time allowing for an improved integration of the Post Office building, both visually and functionally, with the wider Powerhouse Ultimo site.
- The proposed new built form at the Harris Street forecourt would be consistent in height, scale, and bulk with both the Wran Building, as well as the wider built levels across the site.
- While the new built form would 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.
- Construction of a new built form within the Harris Street forecourt has the ability to have a neutral visual impact on the heritage values of the site (assuming that the new built form is appropriately scaled and sensitively designed as part of Stage 2 detailed design).

- Adaptive reuse of the Post Office and creation of a new public domain zone surrounding this SHR item has the potential to be a major positive impact for this heritage asset.
- From a heritage perspective, the re-orientation of the museum entry from Harris Street to The Goods Line would have a neutral impact to the heritage significance and values of the place. However, relocating the key visitor arrival space to be directly into the heritage core of the site would be an overall positive heritage outcome for the site's activation and future use, encouraging visitors to connect immediately with the heritage core, fabric, and history of the place immediately upon arrival to the museum.

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) ⁷⁶ and Aboriginal Cultural Heritage Assessment Report (ACHAR) ⁷⁷ 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.* ⁷⁸

- 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.
- 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

⁷⁶ Curio Projects 2022a (DRAFT), Historical Archaeological Assessment, Powerhouse Ultimo Renewal Project, prepared for Create NSW.

⁷⁷ Curio Projects, 2022c, (DRAFT) Aboriginal Cultural Heritage Assessment Report, Powerhouse Ultimo Renewal Project, prepared for Create NSW.

⁷⁸ Curio Projects 2022a (DRAFT), Historical Archaeological Assessment, Powerhouse Ultimo Renewal Project, prepared for Create NSW, p. 89.

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.



Figure 7-16: Overview of Archaeological Potential within the study area (Source: Curio Projects)

7.4.2. Aboriginal Archaeology

Findings from the ACHAR ⁷⁹ 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 concept plan and indicative design response minimises impacts to heritage significance and values of the site by avoiding physical impact to SHR heritage items or significant fabric, instead locating new floor space and facilities into features with a higher tolerance for change and intervention (i.e. the Wran Building) and sensitive placement of a new built form within the Harris Street forecourt.

The key elements of the indicative concept proposal (i.e. the size and placement of the new built envelope fronting Harris Street, etc) will allow for sympathetic renewal of the Powerhouse Ultimo site, with an overall neutral to positive impact to the heritage values and significance of the site.

⁷⁹ 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

The design excellence competition and Stage 2 detailed design should be guided by best practice heritage principles to avoid adverse impact to heritage items and the significant heritage character and context of the site. Recommendations for detailed design include:

- The design excellence competition and Stage 2 detailed design should consider Aboriginal and Torres Strait Islander connections to the site and continuing practice.
- 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 through Stage 2 design.
- New insertions within heritage items should retain and encourage visibility of industrial heritage features and elements such as gantry beams and cranes, columns, overhead tracks, etc, and respect the internal scale and sense of space.
- Any new elements proposed for introduction into the heritage spaces as part of Stage 2 detailed design should act as stand-alone lightweight elements that can be readily reversed in the future.
- 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 and/or impacts to the significant industrial architecture of these items including roof trusses, 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 remnant significant fabric and space.
- Any proposal as part of the Stage 2 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 fabric of the building, as well as its spatial volume and overall visual aesthetic.
- Detailed design for adaptive re-use of heritage items should make use of design elements and techniques that are lightweight, fully reversible, and commensurate with the heritage character and style of the heritage item.

8.2. Archaeology

8.2.1. Historical Archaeology

Recommendations from the 2022 Draft HAA⁸⁰ are:

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 physical works at the site. However, the location of the new built form including a basement on Harris Street is located within an area of historical archaeological potential that will require historical archaeological investigation.

⁸⁰ Curio Projects 2022a (DRAFT), Historical Archaeological Assessment, Powerhouse Ultimo Renewal Project, prepared for Create NSW, pp. 88-89.

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.⁸¹ 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.

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 Draft ACHAR⁸² 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

⁸¹ Section 60 permit (within the curtilage of SHR listing), or a Section 140 Excavation Permit for areas outside of SHR curtilage

⁸² Curio Projects, 2022c, (DRAFT) Aboriginal Cultural Heritage Assessment Report, Powerhouse Ultimo Renewal Project, prepared for Create NSW.

that an Aboriginal archaeological test excavation will likely be required prior to ground works (to be confirmed during completion of Stage 2 ACHAR).

- 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 be prepared following finalisation of Stage 2 Project concept designs to allow for the sub-surface archaeological excavations 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. 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).
- 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 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 Project RAPs and the Project archaeologists throughout the Project process, including both Stage 1 and Stage 2. Through the direct discussion between Project RAPs and the proponent, the consultation process and the review of the draft 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 has played an important role in the history of the Ultimo site, there is also a significant opportunity to interpret the original structures and function of the site in an innovative and sustainable way.

A Heritage Interpretation Strategy for the Powerhouse Ultimo site should be implemented in conjunction with the development works, with particular focus on integration with new public domain and landscaping design.

9. References

9. References

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10. Appendices

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