

Submissions and Amendment Report

Powerhouse Ultimo Revitalisation

500 Harris Street, Ultimo, NSW, 2000

Submitted to the Department of Planning, Housing and Infrastructure
on behalf of Infrastructure NSW

SSD-67588459



'Gura Bulga'

Liz Belanjee Cameron

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



'Dagura Buumarri'

Liz Belanjee Cameron

'Dagura Buumarri' – translates to Cold Brown Country. Representing Victoria.



'Gadalung Djarri'

Liz Belanjee Cameron

'Gadalung Djarri' – translates to Hot Red Country. Representing Queensland.

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

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

In supporting the Uluru Statement from the Heart, we walk with Aboriginal and Torres Strait Islander people in a movement of the Australian people for a better future.

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Version No.

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Final

03/09/2024

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Contents

| | |
|---|-----------|
| Executive Summary | 8 |
| 1.0 Introduction | 10 |
| 2.0 Analysis of Submissions..... | 11 |
| 2.1 Breakdown of Submissions..... | 11 |
| 2.2 Categorisation of Issues..... | 11 |
| 3.0 Assessment and Engagement undertaken since EIS Lodgement | 14 |
| 3.1 Community and Stakeholder Engagement..... | 14 |
| 3.2 Project Refinements | 14 |
| 3.3 Further Assessment | 14 |
| 4.0 Description of Project Amendments..... | 15 |
| 4.1 Project Amendments Since Exhibition..... | 15 |
| 4.2 Revised Proposal Overview | 20 |
| 4.3 Updated Mitigation Measures..... | 22 |
| 5.0 Response to Submissions..... | 23 |
| 6.0 Further Assessment of Amended Project..... | 24 |
| 6.1 Strategic and Statutory Context | 24 |
| 6.2 Heritage | 24 |
| 6.3 Built Form..... | 27 |
| 6.4 Museum Operations and Functionality | 36 |
| 6.5 Construction Management..... | 39 |
| 6.6 Economic, environmental and social impacts | 40 |
| 6.7 Other | 45 |
| 7.0 Updated Project Justification | 46 |
| 7.1 Ecologically Sustainable Development..... | 46 |
| 7.2 Likely Impacts of Development..... | 48 |
| 7.3 Public Interest | 49 |
| 8.0 Conclusion..... | 50 |

Figures

Figure 1 Exhibition Spaces37

Figure 2 Existing view – Harris Street..... 41

Figure 3 Proposed view – Harris Street 41

Tables

Table 1 Summary of Raised Issues11

Table 2 Summary of Design Changes15

Table 3 Key Project Information..... 20

Table 4 Pyrmont Peninsula Place Strategy, Ultimo Sub-Precinct Plan, Better Placed.....27

Table 5 Assessment of built form against proposed amended design.....35

Appendices

| Appendix | | Author |
|----------|---|-----------------------|
| A. | Submissions Register | <i>Ethos Urban</i> |
| B. | Updated SEARs Table | <i>Ethos Urban</i> |
| C. | Updated Mitigation Measures | <i>Ethos Urban</i> |
| D. | Detailed Response to Submissions Table | <i>Ethos Urban</i> |
| E. | Amended Architectural Drawings | <i>DJB</i> |
| F. | Amended Design Report | <i>DJB</i> |
| G. | Community and Stakeholder Engagement Outcomes Report | <i>Aurecon</i> |
| H. | Structural Sequencing Diagram | <i>Arup</i> |
| I. | Amended Embodied Carbon Report | <i>Slattery</i> |
| J. | Amended Historical Archaeological Assessment | <i>Curio Projects</i> |
| K. | Amended Aboriginal Cultural Heritage Assessment Report | <i>Curio Projects</i> |
| L. | Amended Heritage Impact Statement | <i>Curio Projects</i> |
| M. | Amended Design Excellence Strategy and Design Review Report | <i>Ethos Urban</i> |
| N. | Amended Landscape Plans | <i>Tyrrell Studio</i> |
| O. | Amended Transport Impact Statement | <i>JMT</i> |
| P. | Amended Visual Impact Assessment | <i>Ethos Urban</i> |
| Q. | Amended Public Domain and Landscape Statement | <i>Tyrrell Studio</i> |
| R. | Remedial Action Plan | <i>JBS&G</i> |
| S. | Noise and Vibration Impact Assessment Addendum Report | <i>Arup</i> |
| T. | Environmental Wind Assessment Statement | <i>Arup</i> |
| U. | Connecting with Country Report | <i>Yerrabingin</i> |
| V. | Updated Statutory Compliance Table | <i>Ethos Urban</i> |
| W. | Amended Social Impact Assessment | <i>Aurecon</i> |
| X. | Amended Flood Study | <i>Arup</i> |

Abbreviations and Key Terms

| Abbreviation | Meaning |
|-----------------|---|
| ACHAR | Aboriginal Cultural Heritage Assessment Report |
| ACM | Asbestos containing materials |
| AEP | Annual exceedance probability |
| ASS | Acid sulfate soils |
| BCA | Building Code of Australia |
| BC SEPP | <i>State Environmental Planning Policy (Biodiversity and Conservation) 2021</i> |
| BDAR | Biodiversity development assessment report |
| BOSCAR | Bureau of Crime Statistics and Research |
| CIV | Capital investment value |
| CMP | Construction management plan |
| Concept SSDA | Concept Development Application – SSD32927319 |
| COPC | Contaminant of potential concern |
| CPTED | Crime prevention through environmental design report |
| CPTMP | Preliminary construction pedestrian and traffic management plan |
| DPHI | Department of Planning, Housing and Infrastructure |
| DSI | Detailed site investigation |
| DTS | Deemed to satisfy |
| EIS | Environmental Impact Statement |
| EP&A Act | <i>Environmental Planning and Assessment Act 1979</i> |
| EP&A Regulation | <i>Environmental Planning and Assessment Regulation 2021</i> |
| EPBC Act | <i>Environmental Protection and Biodiversity Act 1999 Act (Cth)</i> |
| ESD | Ecologically sustainable development |
| FSR | Floor space ratio |
| GANSW | Government Architect NSW |
| GFA | Gross floor area |
| GLVIA3 | Guidelines for landscape and visual impact assessment version 3 |
| GSW | General soil waste |
| GTP | Green travel plan |
| HAA | Historical archaeological assessment |
| HIS | Heritage impact assessment |
| HVAC | Heat, ventilation, air conditioning |
| LEC | Land and Environment Court |
| MNES | Matters of national environmental significance |

| Abbreviation | Meaning |
|------------------|---|
| MRV | Medium rigid vehicle |
| NCA | Noise catchment areas |
| NCC | National Construction Code |
| NPfI | Noise policy for industry |
| NVIA | Noise and vibration impact assessment |
| OSD | On-site stormwater detention |
| PASS | Potential acid sulfate soils |
| PMF | Probable maximum flood |
| PPPS | Pyrmont Peninsula Place Strategy |
| PSI | Preliminary site investigation |
| RAP | Remedial Action Plan |
| RWP | Remedial works plan |
| SEARs | Secretary's Environmental Assessment Requirements |
| SHR | State Heritage Register |
| SHR Listing 2024 | The Powerhouse Museum Complex was listed on the State Heritage Register on 12 July 2024 |
| SIA | Social impact assessment |
| SRV | Small rigid vehicle |
| SSDA | State significant development application |
| SSP | State significant precinct |
| Sydney LEP | Sydney Local Environmental Plan 2012 |
| TPZ | Tree protection zone |
| TRH | Total recoverable hydrocarbons |
| UTS | University of Technology |
| VIA | Visual impact assessment |
| WHS | Work health safety |

Executive Summary

This Submissions and Amendment Report has been prepared by Ethos Urban on behalf of Infrastructure NSW (the Applicant) to address the matters raised during the public exhibition of the State Significant Development Application (SSDA) for the Powerhouse Ultimo Revitalisation (SSD-67588459) located at 500 Harris Street, Ultimo.

The SSDA was publicly exhibited by the NSW Department of Planning, Housing and Infrastructure (DPHI) from 3 May 2024 to 30 May 2024. The SSDA, as exhibited sought approval for construction, and operation of the revitalised Powerhouse Ultimo. This includes retention and adaptive reuse of the Heritage Core buildings, alterations and additions to the Wran Building, demolition of fabric and structures identified as having no heritage significance and the introduction of a New Building in the southwest corner of the site.

Overview of Submissions

In relation to the public exhibition of the SSDA, a total of 125 submissions were received during the exhibition period. Of the 125 submissions received, 5 were in support, 11 were to comment and 109 were objecting to the proposal.

Following the exhibition period, a further 37 late submissions were received. Of the 37 late submissions, 8 were to comment and the remaining 29 were objecting to the proposal.

Submissions were received from the following government agencies:

- NSW Police Force;
- Jemena Gas Networks NSW;
- Heritage Council NSW;
- NSW Environment Protection Authority;
- Heritage NSW;
- Department of Climate Change, Energy, Environment and Water (Biodiversity, Conservation and Science Group);
- Transport for NSW;
- Fire and Rescue NSW;
- City of Sydney NSW;
- Sydney Water; and
- Ausgrid.

In addition to the above submissions, the DPHI provided a request for additional information outlining further matters to be addressed in the Response to Submissions (DPHI Request).

The submissions related to a range of issues that included but are not limited to:

- Architectural and public domain design;
- Heritage;
- Museum operations and functionality;
- Transport and access;
- Procedural matters, including community engagement; and
- Construction management.

Project Amendments

A number of minor design changes have occurred since the exhibition of the EIS and are proposed in accordance with Section 37 of the *Environmental Planning and Assessment Regulation 2021* (EP&A Regulation). These updates have been prepared in response to the DPHI Request, submissions by government agencies as well as organisations and public submissions. The proposed design changes will not relate to any substantive changes to the project or an increase in environmental impacts from those previously assessed and found to be acceptable in the EIS. The proposed design changes are set out in **Section 4.0**.

Further Assessment and Mitigation Measures

Further assessment of the amended proposed development has been undertaken by the expert project team as required. Revised and addendum technical studies have been prepared where required to respond to matters raised in submissions and/or provide further assessment taking into account the proposed changes to the exhibited project. Where required, this assessment has informed updates to the project Mitigation Measures.

Since the exhibition of the EIS, on 12 July 2024 the Powerhouse Museum Complex was listed on the State Heritage Register (SHR Listing 2024). It is understood the SHR Listing 2024 extends the curtilage of the listing of the Ultimo Power House (former) to the entire site and amends the existing SHR listing. The Statement of Heritage Impact annexed to the Environmental Impact Statement has been updated to assess the impacts of the proposed development as a result of the SHR Listing 2024 (Amended HIS). The Amended HIS also responds

to the DPHI Request to consider the new Statement of Significance as recommended by the Heritage Council. The new Statement of Significance is set out in the SHR Listing 2024.

Conclusion

This Submissions and Amendment Report outlines the design changes and amendments that have been made following exhibition of the Environmental Impact Statement and in response to the submissions received. The design amendments are attributed to responding to the comments made during the exhibition period and further detailed design. They do not give rise to any additional environmental impacts. It is noted that Curio has recommended further design amendments to the proposed roof annex over the Switch House in order to ensure the new roof annex does not have an adverse impact on the heritage significance of the Switch House, the Turbine Hall and the Powerhouse Museum Complex.

The amended development remains consistent with the objectives of the exhibited development and is consistent with the project justification, including the suitability of the site and the public interest. The design as amended continues to be consistent and appropriate for the existing and future character of the locality as set out in Section 2.3 of the EIS. The amendments respond to the matters raised during the exhibition period as well as further design development undertaken to refine the proposal.

1.0 Introduction

This Submissions and Amendment Report has been prepared by Ethos Urban on behalf of Infrastructure NSW (INSW) (the Applicant) to address the matters raised during the exhibition of the SSDA for Powerhouse Revitalisation Ultimo (SSD-67588459) located at 500 Harris Street, Ultimo, NSW, 2000.

The SSDA was lodged with the DPHI and was publicly exhibited for 28 days from 3 May 2024 until 30 May 2024. The subsequent request for a response to submissions was issued by DPHI on 4 June 2024. A total of 12 submissions were received from relevant government agencies while a total of 125 submissions were received from the public during the exhibition period. A further 37 submissions were received after the exhibition period.

This Submissions and Amendment Report provides an analysis of submissions, actions taken since consideration of the public submissions, the Applicant's response to submissions and provides an updated justification of the proposed development. It is accompanied by supporting information and technical reports (refer to the Table of Contents).

This Submissions and Amendment Report, as required under section 59(2) of the *Environmental Planning and Assessment Regulation 2021* (EP&A Regulation), has been prepared in accordance with the DPHI's *State Significant Development Guidelines*, including *Appendix C – Preparing a Submissions Report* and *Appendix D- Preparing and Amendment Report*. Exhibited Development

The SSDA, as exhibited, sought approval for the Powerhouse Ultimo Revitalisation at 500 Harris Street, Ultimo, NSW, 2000. Specifically, the exhibited development sought consent for the following:

- Site preparation works, including site services and infrastructure works, tree removal, earthworks, remediation and the erection of site protection hoardings and fencing.
- Demolition of existing buildings on the site, including:
 - Harris Street forecourt.
 - Structures in the forecourt entrance at The Goods Line, including the café.
 - Internal demolition of non-heritage elements of the Ultimo Power house building.
- Construction and use of new museum spaces along the Harris Street and Macarthur Street frontages, including the following uses:
 - Loading dock and ancillary back of house amenities.
 - Creative industry studios.
- Alterations to the Wran Building including an auditorium upgrade and upgrade of exhibition spaces.
- Conservation and adaptive reuse of the existing Ultimo Power House and Ultimo Post Office heritage items for museum purposes.
- Construction of new public open spaces including:
 - At the south-eastern corner of the site to connect with the Ultimo Goods Line.
 - An internal courtyard garden wrapped by the building alterations fronting Harris Street.
 - A courtyard between the Ultimo Post Office and Wran Building.

2.0 Analysis of Submissions

This section analyses the submissions received by providing a breakdown of the type of submissions received and identifies the issues raised.

2.1 Breakdown of Submissions

A total of 125 submissions were received from the public during the exhibition period. Of the 125 submissions received, 5 were in support, 11 were to comment and 109 were objecting to the proposal. A further 39 submissions were received after the exhibition period. Following the exhibition period, a further 37 late submissions were received. Of the 39 late submissions, 8 were to comment and the remaining 31 were objecting to the proposal.

Submissions were received from the following government agencies:

- NSW Police Force.
- Jemena Gas Networks NSW
- Heritage Council NSW
- NSW Environment Protection Authority
- Heritage NSW
- The Biodiversity, Conservation and Science (BCS) Group within the Department of Climate Change, Energy, Environment and Water
- Transport for NSW
- Fire and Recuse NSW
- City of Sydney NSW
- Sydney Water
- Ausgrid

A submissions register is provided at **Appendix A**, which identifies where issues raised in each submission have been addressed in this report. A response to each of the issues raised in the submission is provided in **Appendix D**.

2.2 Categorisation of Issues

A summary of the key issues raised in submissions received is provided in **Table 1**. The submissions register provided at **Appendix A** provides further detail as to issues raised by individual submissions, with a response to all key issues raised provided in **Appendix D**.

Table 1 Summary of Raised Issues

| Category | Issue |
|-------------|--|
| The project | Design <ul style="list-style-type: none">• Accessibility and connectivity.• Harris Street shelter and frontage.• Connecting with Country.• Landscape design. |
| | Museum Uses <ul style="list-style-type: none">• Exhibition space retention.• Shift towards creative industry space rather than museum use.• Boiler House and use of internal exhibition spaces.• Naming of Powerhouse. |
| | Functions <ul style="list-style-type: none">• Retention of exhibition collections.• Educational space use, location and retention.• Clarification requested on the ongoing function of museum spaces.• Theatre space suggestion. |

| Category | Issue |
|--|---|
| Procedural matters | Transparency <ul style="list-style-type: none"> Government distrust. |
| | Merit <ul style="list-style-type: none"> Merit of Environmental Impact Statement. Clarity requested on architectural plans. Qualifications to support the documentation concern. Public accessibility of reports supporting the proposal. Final Version of the Aboriginal Cultural Heritage Assessment Report (ACHAR) is to be provided. |
| | Community Engagement <ul style="list-style-type: none"> Dissatisfaction with engagement processes and reporting Concern on what documentation was made public |
| | Museum Closure <ul style="list-style-type: none"> Premature closure of museum. |
| | Heritage documentation <ul style="list-style-type: none"> Concerns on the validity of Heritage Impact Statement. Concern on the validity of the Conservation Management Plan. |
| | MAAS (Museum of Applied Arts and Science) <ul style="list-style-type: none"> Concerns on the project's alignment with the <i>Museum of Applied Arts and Sciences Act 1945</i> (MAAS Act). Distrust in MAAS management of the Powerhouse. |
| Economic, environmental and social impacts | Biodiversity <ul style="list-style-type: none"> Tree removal |
| | Tourism <ul style="list-style-type: none"> Impacts on tourism due to closure and change to exhibition collection. |
| | Views <ul style="list-style-type: none"> View impacts to residents. |
| | Construction Management <ul style="list-style-type: none"> Vehicle access. Construction noise. Sequencing of works to the Wran Building. |
| | Heritage <ul style="list-style-type: none"> Concern about the heritage implications on the Hall of Steam. Concern about the heritage value of the Wran Building as a result of the proposal. Belief that all buildings on the site should be heritage listed. Concern that the heritage value of the Powerhouse will be disturbed. Concern that historical objects will not be retained at the Powerhouse Ultimo site. Belief that the heritage and cultural values of the Powerhouse will be adversely impacted by the proposal. Belief that conservation of Powerhouse has not been adequately managed. |
| The justification and evaluation of the project as a whole | Sustainability of the proposal <ul style="list-style-type: none"> Sustainability of the project. |
| | Justification <ul style="list-style-type: none"> Alterations would be better suited rather than the proposed revitalisation. Concerns about the merit of the application. |

| Category | Issue |
|---|--|
| | Cost <ul style="list-style-type: none"> • Documentation supporting cost accuracy. • Justification of the cost of the application. |
| Issues that are beyond the scope of the project | Harwood building <ul style="list-style-type: none"> • Plans for the Harwood building. |

3.0 Assessment and Engagement undertaken since EIS Lodgement

Since lodgement of the Environmental Impact Statement (EIS), additional environmental assessment and stakeholder engagement has been undertaken as outlined in the following sections.

3.1 Community and Stakeholder Engagement

The Applicant is committed to ongoing community consultation through the project lifecycle. The approach to community engagement is informed by DPPI's *Undertaking Engagement for State Significant Projects* (2024). The project team recognises the need to genuinely consider feedback received as part of the planning and design process.

Consultation relating to the project has been extensive, including engagement with the local community, neighbours, key stakeholders and government authorities throughout the life of the project, including engagement during the preparation of the previous Stage 1 approval (which is no longer being pursued), as well as prior to the submission of the application, as documented in the EIS prepared by Ethos Urban and dated 11 April 2024.

Consultation during and after the exhibition period with the key stakeholders and the community has been documented by Aurecon in **Appendix G** and is summarised in this section. During the consultation period, multiple channels were used to engage with the community and stakeholders. Approximately 520,000 people were reached and 42,802 people were engaged. Of note, the following have been held since the submission of the SSDA:

- Two in person community consultation sessions were held in the Harwood building. A total of 134 people were engaged at these face-to-face sessions. One session was held on 18 May 2024 and the second session was held on 21 May 2024.
- An in person key stakeholders of Powerhouse Ultimo information session was held in the Harwood building. A total of eight stakeholders from the Powerhouse Museum Alliance, Pyrmont Action Group, Save the Powerhouse, International Council of Museums (ICOM) and the Sydney City Skywatchers attended the information sessions where they had the opportunity to ask the project team questions and provided feedback.
- An online information session was held on 21 May 2024 from 11am to 1pm to provide further opportunities for the community members to ask questions regarding the proposal.
- Infrastructure NSW managed an 1800 number and email to manage community and stakeholder enquiries during the consultation phase. The 1800 number and email were accessible for the entire engagement period. Emails were sent out stakeholders, the local community, local businesses and the Powerhouse Museum registered subscribers of the engagement period and how to get involved.

3.2 Project Refinements

In response to matters raised in the submissions, and as a consequence of ongoing design development, the Applicant has refined the project for which consent is sought as described in **Section 4.0**.

3.3 Further Assessment

In response to matters raised in the submissions and as a consequence of the project amendments described in **Section 4.0**, the Applicant has undertaken further environmental assessment of the project as undertaken in **Section 5.0** and **Section 7.0**. As set out above in the Executive Summary, further assessment of the heritage impacts of the proposed development has also been undertaken as a result of the SHR Listing 2024.

4.0 Description of Project Amendments

This section sets out the amendments made to the project since public exhibition of the EIS, which have been made as a result of ongoing design development and project refinement, and in response to matters raised in submissions.


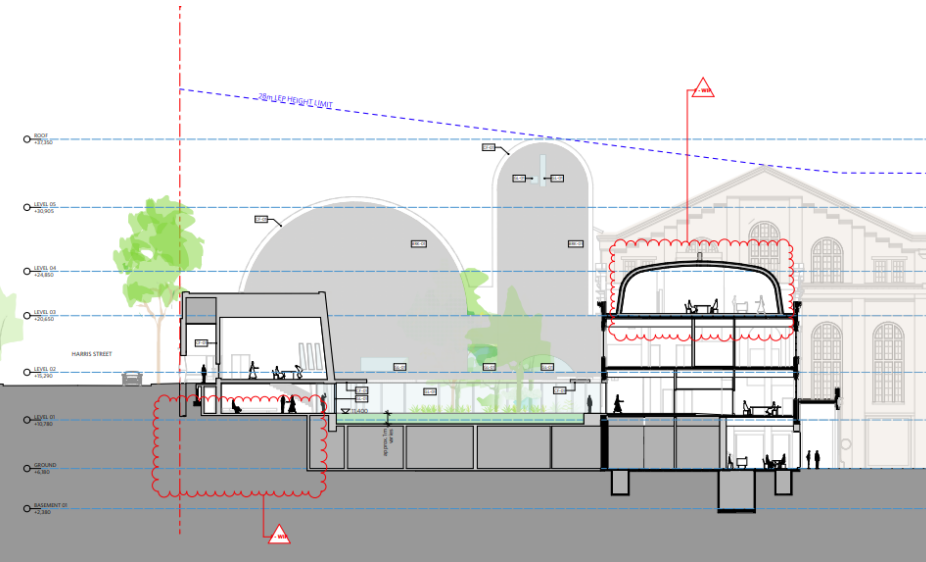
4.1 Project Amendments Since Exhibition

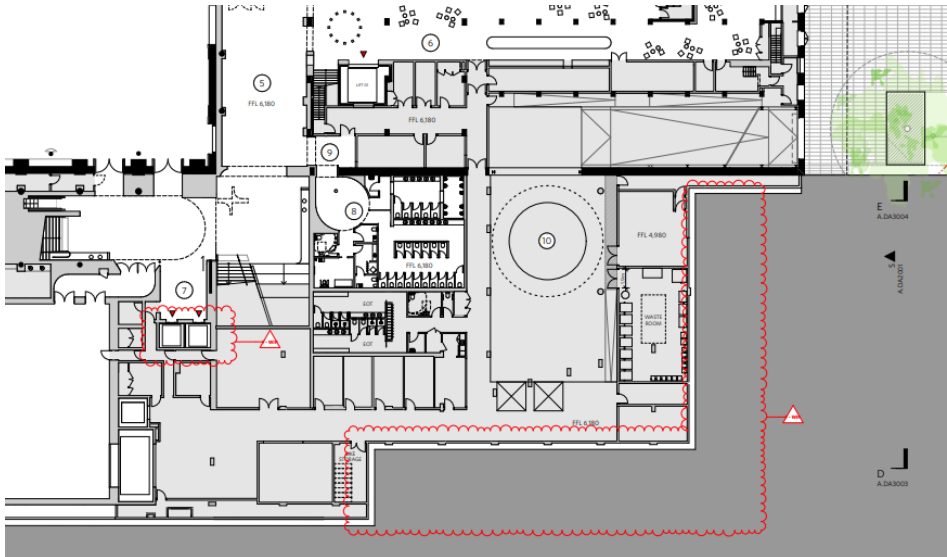
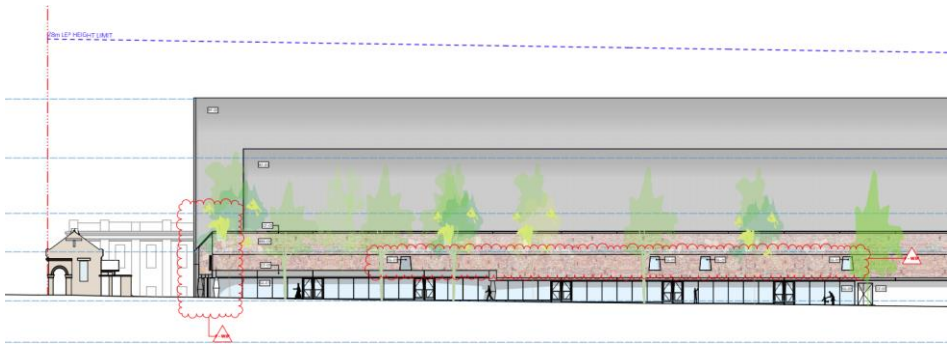
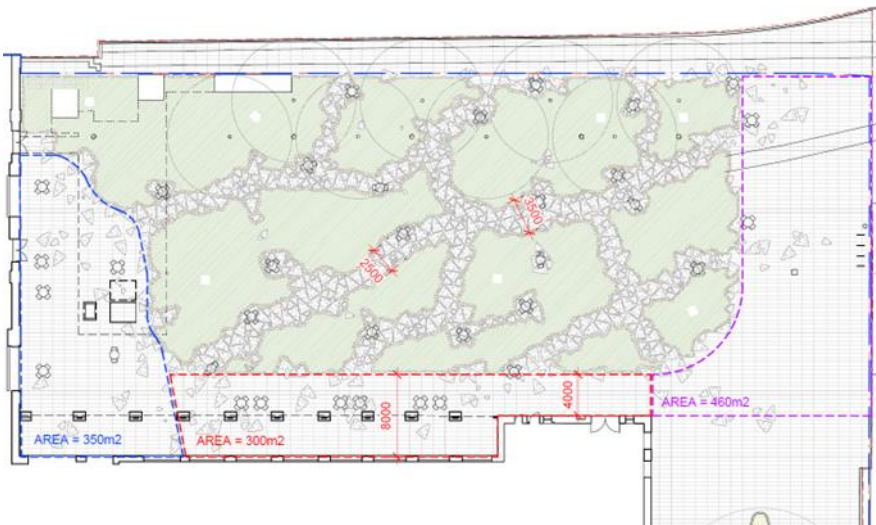
Pursuant to section 37 of the EP&A Regulation, an applicant may, at any time before a development application is determined, apply to the consent authority for an amendment to a development application. In order to respond to matters raised in this the submissions received, as well as a result of ongoing design development, a number of amendments to the project are proposed.

The proposed amendments to the development are described below in **Table 2**. These amendments are explained in more detail in the Amended Architectural Design Report by prepared by DJB (**Appendix F**). Design changes are illustrated on the Amended Architectural Drawings at **Appendix E**.

Table 2 Summary of Design Changes

| Description of Proposed Amendment | Illustration |
|--|--------------|
| Architectural Drawings | |
| Circulation | |
| <ul style="list-style-type: none">Adjustments have been made to the lift locations within the intersections of the core spines.The central circulation follows a simple east-west and north-south arrangement.The major east-west circulation connects the concierge at the Goods Line Terrace to Harris Street via grand stairs and bleachers.The north-south circulation connects the ground floor to the exhibition space 4 (Wran Building) within the Galleria via a grand stair and escalator.An existing lift is retained at the Switch house. | |

| Description of Proposed Amendment | Illustration |
|--|--|
| <p>Central Courtyard</p> <ul style="list-style-type: none"> • The Central Courtyard has been modified to include a greater density of planting. A 60:40 ratio of soft landscaping to hard landscaping as a result. • The stairs between Macarthur Street and the Central Courtyard have been narrowed and altered in shape. • The extent of the stairs in this location has been reduced. • The pathway design has been adjusted maintaining a 1,500mm path width. • Sufficient soil volume has been provided through a 1m set down slab and planted beams up to 400mm above the paved level. • Paving will be placed on stratavault (a type of structure capable of accommodating load and landscaping) where required to accommodate root growth. • Refer to Appendix N for further detail. |  |
| <p>Switch House</p> <ul style="list-style-type: none"> • The design of the food and beverage structure on the Switch House Rooftop has been further developed with an addition of amenities and continuation of the lift from the ground floor. • The external form of the structure has been modified to include a curved roof. • The Switch House roof additionally incorporates trees. |  |

| Description of Proposed Amendment | Illustration |
|---|--|
| <p>Basement</p> <ul style="list-style-type: none"> An overall reduction in the footprint of the loading dock and consequently a reduction in excavation. |  |
| <p>Creative Industries</p> <ul style="list-style-type: none"> The creative industry studio at the corner of Harris Street and the Post Office Courtyard has been increased in size. Two creative industry studios have had mezzanine levels added. |  |
| <p>Public Domain and Landscaping</p> | |
| <p>The Terrace</p> <p>Various design changes are proposed to the public domain and landscape design:</p> <ul style="list-style-type: none"> A new 4m wide path is proposed at the Switch House edge. Beneath the path, the path widens to 8m. The paths through the landscape have been rationalised allowing greater width. The diagonal line to the Goods Line to the museum entrance has been widened between 2.5m-3.5m. A new hardscape area of approximately 350m² is proposed at the new entrance to the Powerhouse. |  |

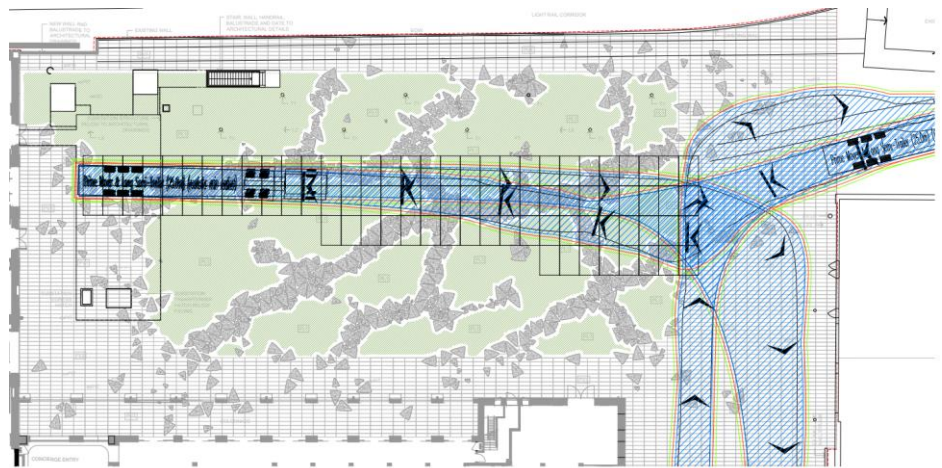
Description of Proposed Amendment

Illustration

- An additional 300m² hardscape along the edge of the Switch House.
- 460m² of hardscape is proposed at the south of the terrace. A total of 1110m² of hardscape is proposed.

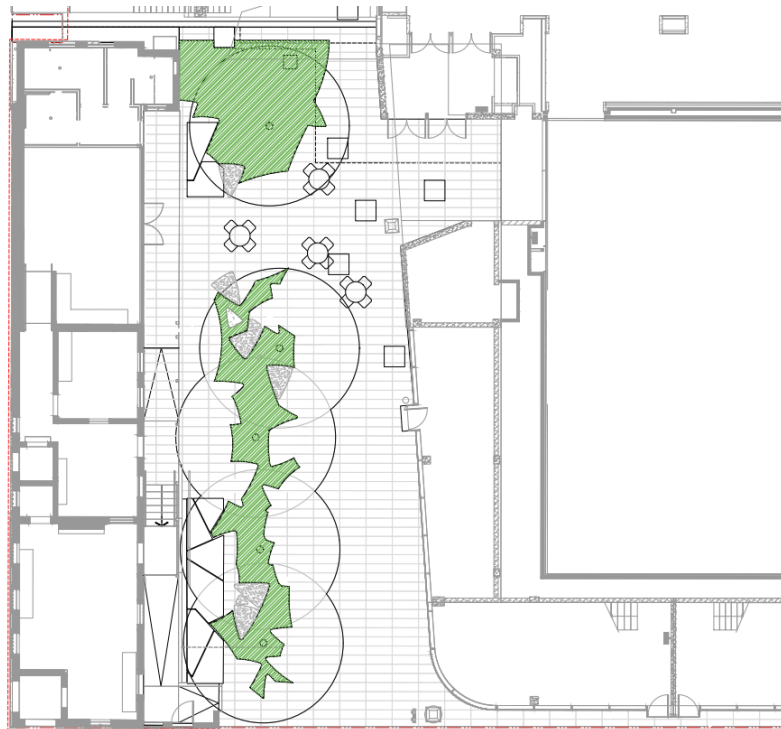
Terrace Loading

A swept path plan has been provided to detail the layout of panels for vehicle access to the Boiler House for the loading of large objects.



Post Office Courtyard

The design of the Post Office Courtyard has been updated to include 5 *Angophora costata* tree to replace the previous proposal of 15 *Eucalyptus racemose* trees.

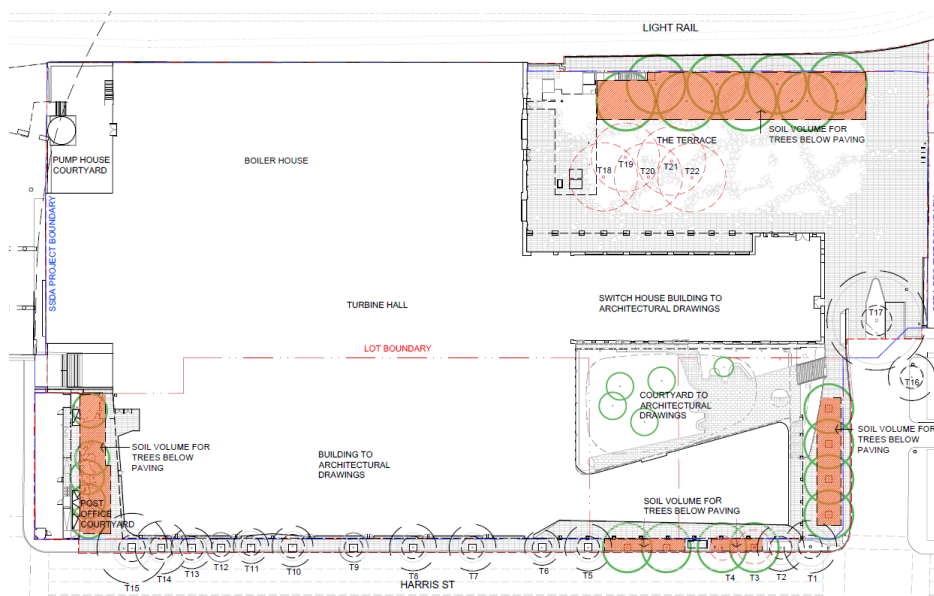


Description of Proposed Amendment

Illustration

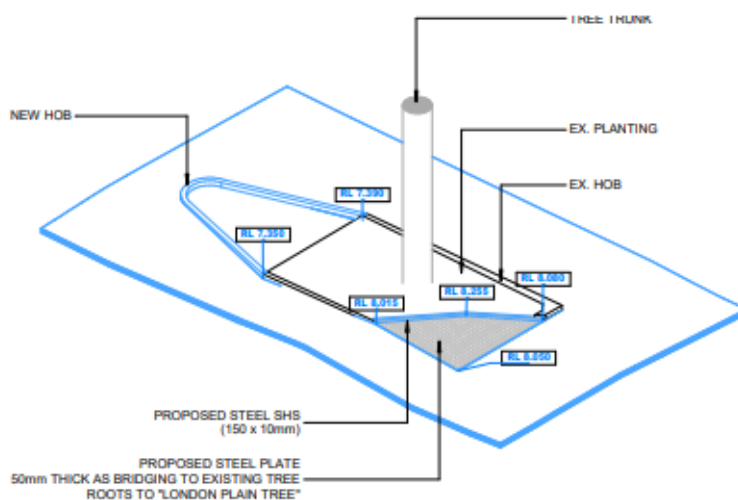
Soil and Tree Management

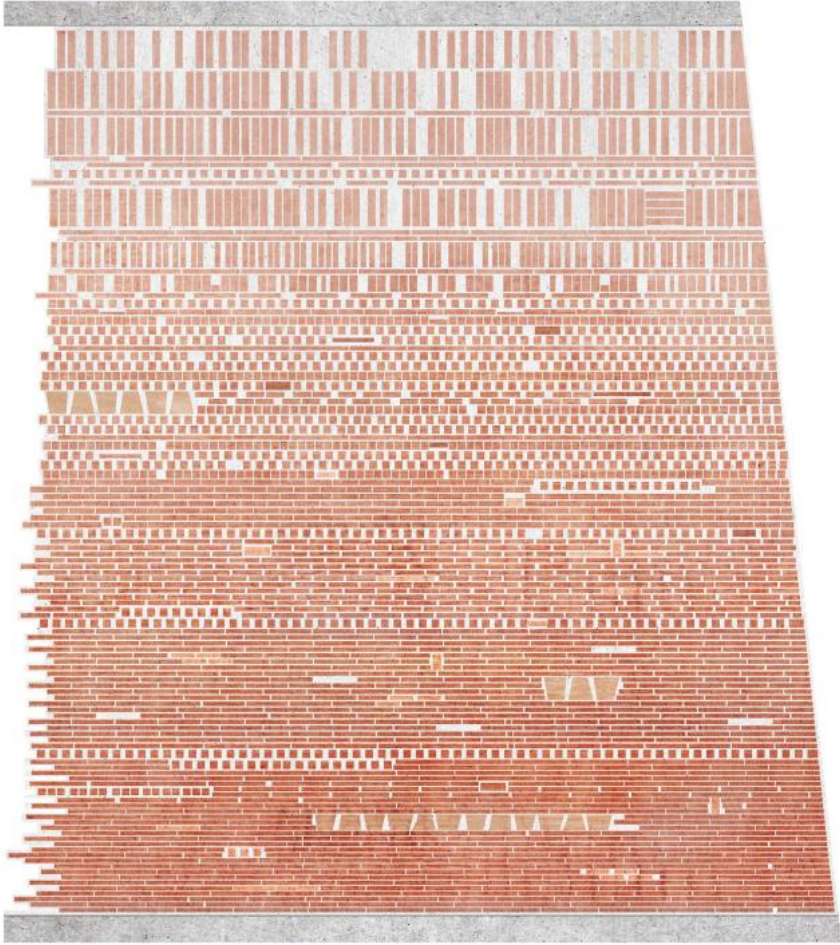
- New trees are within tree grilles as per the plan.
- Provision for scaffolding has been tested on Harris Street allowing for retention of the Plane Trees,
- 2 Plane trees are proposed for removal.
- Soil volumes have been detailed in the Amended Landscape Drawings at **Appendix N**.



Tree 17

The structural engineer has designed a slip-resistant road plate and kerb that bridges the existing roots of the tree to allow loading dock access as per the plan. Further detail is provided in the Public Domain and Landscape Statement at **Appendix Q**.



| Description of Proposed Amendment | Illustration |
|---|---|
| Materials | |
| <ul style="list-style-type: none"> The brick façade of the New Building and the proposed new external brick fabric of the Wran Building has been further developed. Refer to the Amended Design Report at Appendix F and the Connecting with Country Report at Appendix U. It is proposed to incorporate First Nations co-design representing the stratigraphy of the land. The colour of the brick façade pattern will be generally consistent with the illustration. |  <p>Brick Facade Pattern</p> |

4.2 Revised Proposal Overview

The proposal seeks consent under Division 4.7 of the EP&A Act for the Powerhouse Ultimo Revitalisation including the construction and operation of the refurbished Powerhouse Ultimo inclusive of the retention and adaptive reuse of existing buildings, demolition of non-significant structures and fabric and the construction of a New Building in the southwestern corner of the site.

As a consequence of the project changes outlined in **Section 4.1**, the key project information has been updated and outlined in **Table 3**.

Table 3 Key Project Information

| Component | Submitted Project | Proposed Amendments |
|-----------------------------------|--|---|
| Project Summary | Revitalisation of Powerhouse Ultimo | No change |
| Site Area | 17,419.3m ² | No change |
| Project Address | 500 Harris Street, Ultimo, NSW, 2000 | No change |
| Proposed Use | Information and education facility – Museum | No change |
| Physical Layout and Design | <ul style="list-style-type: none"> Construction and use of new museum spaces along the Harris Street and Macarthur Street frontages, including the following uses: <ul style="list-style-type: none"> – Loading dock and ancillary back of house amenities. | <p>No changes to overall description. Key updates to the physical layout and design include:</p> <ul style="list-style-type: none"> Internal circulation adjustments |

| Component | Submitted Project | Proposed Amendments |
|------------------------------------|---|--|
| | <ul style="list-style-type: none"> – Creative industry studios. • Alterations to the Wran Building including an auditorium upgrade and upgrade of exhibition spaces. • Conservation and adaptive reuse of the existing Ultimo Power House (former) and Ultimo Post Office heritage item for museum purposes. • Construction of new public open spaces including: <ul style="list-style-type: none"> – At the south-eastern corner of the site to connect with the Ultimo Goods Line. – An internal courtyard garden wrapped by the building alterations fronting Harris Street. – A courtyard between the Post Office and Wran Building. | <ul style="list-style-type: none"> • Greater density of planting in the courtyard. • Switch House Rooftop food and beverage structure amendments. • Reduction in overall loading dock and reduction in excavation. • Increase in size of creative industry studio at the intersection of Harris Street and Post Office Courtyard. • Area plans have been updated to add further detailed design. • Demolition plans updated. • Terrace plans have undertaken further design development. • Brick façade design has been further developed. |
| Site Preparation Activities | <p>Demolition works:</p> <ul style="list-style-type: none"> • Site preparation works, including site services and infrastructure works, tree removal, earthworks, remediation and the erection of site protection hoardings and fencing. • Demolition of existing buildings on the site, including: <ul style="list-style-type: none"> - Harris Street forecourt. - Structures in the forecourt entrance at The Goods Line, including the café. - Parts of the Wran Building, including Harris Street colonnade, northern and southern facades and interior elements, including columns, mezzanine floors and walls • Internal demolition of non-heritage elements of the Ultimo Power House (former) buildings. | <p>No change to overall description.</p> <p>Demolition plans have been amended as per the Amended Architectural Drawings at Appendix E to provide further clarity of the works proposed.</p> |
| Maximum Height | Tallest building is RL 45.83 (complies with maximum building envelope and Sydney LEP) | No change |
| Car spaces | No on-site parking is proposed for visitors | No change |
| Loading spaces | Five loading spaces | Ability to accommodate 2 x medium rigid vehicle and 1 x small rigid vehicle concurrently. |
| Patron Capacity | The Powerhouse currently facilitates up to 800,000 visitors per annum. The revitalisation will result in an approximate increase of 1,200,00 visitors totalling to an estimated 2,000,000 visitors per annum. | No change |
| Exhibition Space | Exhibition spaces are primarily located on the Ground Floor and Level 1 of the Powerhouse (within the Boiler House, Turbine Hall, Switch House and the Wran). Exhibition Space 1 is to be located within the Boiler House and will facilitate a full height exhibition space. | No change |
| Tree Removal | Seven (7) proposed to be removed(non-native, London plane trees) | No change |
| Proposed Tree Planting | 41 new trees throughout the site | The Post Office Courtyard has been updated to include 5 Angophora costata trees to replace the previous proposal of 15 Eucalyptus racemose trees. |

| Component | Submitted Project | Proposed Amendments |
|---------------------------|--|--|
| Landscaped Area | Central Courtyard 330sqm planting 760sqm paving | Central Courtyard 620sqm planting 440sqm paving |
| Deep Soil Area | 7.5% | 6.2% |
| Jobs | Approximately 200 operational total jobs. 400 people to be employed across all Powerhouse sites once complete | No change |
| Operational Hours | The proposed hours of operation are 7 am to 12 pm, daily. | No change |
| Construction Hours | <ul style="list-style-type: none"> Monday to Friday: 7am-6pm Saturday 8am-1pm No works on Sunday or Public Holidays | No change |

It is noted that the development as described in the EIS is consistent with the development as described in the request for Secretary's Environmental Assessment Requirements (SEARs), with the main difference being that the EIS clarified alterations proposed to the Wran Building including an auditorium upgrade and upgrade of exhibition spaces. As set out above, a further assessment of the proposed works to the Wran Building is provided in this Response to Submissions and the Amended HIS as a result of the SHR Listing 2024 of the Powerhouse Museum Complex. At the time of the request for SEARs only the Ultimo Power House (former) and Ultimo Post Office were listed on the State Heritage Register (SHR).

4.3 Updated Mitigation Measures

As a consequence of the project amendments described in **Section 4.0** the matters raised in submissions discussed at **Section 5.0**, and the further environmental assessment outlined in **Section 6.0**, the Mitigation Measures for the project have been reviewed and updated. The updated Mitigation Measures are outlined in **Appendix C**.

5.0 Response to Submissions

The Detailed Summary of Submissions Tables at **Appendix D** provides a comprehensive overview of the submissions raised by government agencies key stakeholders, organisations, and the community. It includes detailed responses to each of the issues raised during the consultation period.

6.0 Further Assessment of Amended Project

The following section provides further environmental assessment undertaken in respect of the project, including as a result of the project amendments outlined in **Section 4.0** and the submissions discussed in **Section 5.0** and **Appendix D**.

6.1 Strategic and Statutory Context

Since SSDA lodgement, there have been no relevant changes to the strategic or statutory context that would affect the site or the proposed development. The Statutory Compliance Table has been updated to accompany this Submissions and Amendment Report, including considering the amendments outlined in **Section 4.0**, and is provided at **Appendix V**.

6.2 Heritage

Submissions received during the public exhibition period raised matters in respect of heritage, including:

- The heritage implications of the proposed works on the Hall of Steam.
- Concern about the heritage value of the Wran Building because of the proposal.
- Belief that all buildings on the site should be heritage listed.
- Concern that the heritage value of the Powerhouse will be disturbed.
- Concern that historical objects will not be retained at the Powerhouse Ultimo site.
- Belief that the heritage and cultural values of the Powerhouse will be adversely impacted by the proposal.
- Belief that conservation of the Powerhouse has not been adequately managed.

These matters are discussed in the following sections, which should be read in conjunction with the following technical studies prepared by Curio Projects:

- Amended Historical Archaeological Assessment at **Appendix J**.
- Amended Aboriginal Cultural Heritage Assessment Report at **Appendix K**.
- Amended Heritage Impact Statement at **Appendix L**.

6.2.1 Heritage Listing of Powerhouse Museum Complex

As detailed in the Summary of Submission Table at **Appendix D**, a number of submissions stated a view that the State Heritage Listing should be applied to the entire Powerhouse site.

In July 2024 the SHR listing of the site was revised to expand the boundary of the listing comprising the Ultimo Power House (former) to include all of the land owned by the Powerhouse Museum¹. The revised listing of the 'Powerhouse Museum Complex' updated the Statement of Significance and elements of the criteria assessment, including:

- *The Powerhouse Museum Complex is on Gadigal land and for many thousands of years was used by Aboriginal people for traditional practices such as ceremony, fishing and resource gathering. Despite the impacts of colonisation Aboriginal people express an ongoing connection to Gadigal Country and enduring social significance. This tangible and intangible connection to Country is expressed via potential sources of pre and early contact information, and as a symbol of strong cultural resilience demonstrated in historic Aboriginal protests against the Bicentenary celebrations.*
- *The Powerhouse Museum Complex has State aesthetic and technical significance for its successful reuse as a purpose-designed and built museum successfully integrating old buildings with new.*
- *The Powerhouse Museum Complex has State architectural and technical significance as a major early example of the adaptive reuse of large-scale industrial heritage site, which was then a radical and exhilarating new approach to museum making for NSW.*
- *The spatial relationships achieved in the adaptive reuse resulted in the complex's harmonious sense of place, with intentional visual connections between individual buildings. The remains of the two Boiler House chimneys were re-purposed for ventilation and access, internal refurbishment and interpretation undertaken, and the Wran building erected on the western side.*

¹ The Trustee of the Museum of Applied Arts and Sciences is the registered proprietor as set out in section 2.1.1 of the EIS

- *The distinctive roof form (comprising two arches), and general scale of the Wran Building characterises the architectural influence of the 1988 museum redevelopment. The transformation of the Power House through conservation and adaptation was recognized with several awards has been influential in the urban design of later buildings in the surrounding urban areas.*
- *The changes to the Powerhouse Museum buildings and spaces since opening demonstrate the need for museums to continually evolve in response to contemporary museum standards.*

The Amended HIS at **Appendix L** assesses the heritage impacts of the proposal, including with regard to the updated description of the site under the SHR.

6.2.2 Wran Building

The key issues raised in submissions about the Wran Building included the specific elements of the Wran Building to be retained, the proposed materiality of the Wran Building and potential concealment of the Wran Building by new elements of the proposal. Further justification has been provided for these works in the Amended HIS prepared by Curio at **Appendix L**. The justification of the approach to the works for the Wran Building is summarised in this section.

As detailed in the Amended HIS prepared by Curio at **Appendix L**, the proposed development involves major external modifications and internal changes to the fabric of the Wran Building to meet future spatial, functional and upgrade needs of the Powerhouse in order to:

- improve circulation through the site and the building, allowing for greater clarity for visitors to the museum; and
- remove the current operational constraints for internal exhibition space (within the Wran Building) that was constructed in 2011-2013.

The Powerhouse Museum Complex is identified within the Powerhouse Museum Complex Statement of Significance 2024 as having '*State historic, social and associative significance*' in the context of the adaptive reuse as the Powerhouse Museum in the 1980s, including the Wran Building. The Statement of Significance 2024 also states '*...the contribution of the purpose-built Wran building, with its distinctive roof form (comprising two arches), and general scale, characterises the architectural influence of the 1988 museum redevelopment. Together with the complex it has State significance for its associations with political, design and museum figures including Neville Wran, Jack Ferguson, Lionel Glendenning, Richard Johnson, Lindsay Sharp and Norman Harwood.*' The Statement of Significance 2024 does not state that the Wran Building itself has technical or aesthetic significance. With respect to the Wran Building, as an individual building within the Powerhouse Museum Complex, the aesthetic and technical significance is limited to the distinctive roof form (comprising two arches) and general scale of the building. Furthermore, the external fabric itself used in the construction of the Wran Building is not identified as having aesthetic and technical significance in the Statement of Significance 2024, nor is it assessed as significant in the Amended HIS.

As outlined in the Amended HIS, the Wran Building was not designed as an exhibition space but rather it was converted to one during 2011 to 2013, requiring the tinting of all external glazing, including the glass along the Harris Street frontage that was originally designed to be transparent. This change significantly reduced activation of Harris Street in a manner that is not consistent with the intended function of this important movement corridor as a cultural and creative hub under the *Pymont Peninsula Place Strategy* or consistent with good urban design. The 2011-2013 works also required other internal fabric changes within the Wran Building to the extent that there is no longer any internal fabric of significance within the building.

Retaining the Wran Building in this current form prevents the establishment of operational spaces necessary to support the revitalisation of the Powerhouse and the re-activation of Harris Street. Demolishing the internal fit-out of the Wran Building will allow for larger exhibition spaces within its unique curved vaults. Converting office and non-exhibition areas into exhibition spaces will offset the need for new exhibition areas, particularly considering the planned decluttering and mezzanine removals in the Heritage Core buildings.

The interpretation of the curved roof, scale and form of the Wran Building, comprising two arched roof forms, remains a key feature of the proposal. The proposed extension of the western elevation of the Wran Building to reestablish a colonnade along the Harris Street frontage does not alter the general scale of the Wran Building. Similarly, the proposed demolition of the south eastern portion of the Wran Building reveals the significant original industrial heritage fabric on the western elevation of the Switch House. The proposed alternative materiality of the external elevations of the Wran Building, predominately brick (instead of the former glazing and metal), provide a more sympathetic response to the Ultimo Power House (former), the Ultimo Post Office, the Harwood Building, the Harris Street conservation area and the broader Ultimo precinct in terms of its linkages to the past historic brick fabric and former industrial uses of the site. The proposed change in

materiality, in particular the pattern of the brickwork which is proposed to represent the stratigraphy of the land, incorporates First Nations co-design. This design approach also clearly delineates the new spaces from the Wran Building in its Harris Street presentation, allowing for the distinct understanding of the site's evolution.

6.2.3 Heritage Value Retention

A number of submissions received during the exhibition period raised impacts on the heritage values and retention of significant heritage fabric within the site, including with respect to the Ultimo Power House (former) and Ultimo Post Office, as well as other buildings within the Powerhouse Museum Complex. The Amended HIS at **Appendix L** provides a full and detailed assessment of the heritage impacts of the proposal which addresses each of the matters raised in submissions.

The Heritage Core buildings are retained as part of the project, including all significant internal heritage fabric. The works proposed within the existing Ultimo Power House (former) will not remove any items of heritage significance and primarily involve the demolition and removal of 1980s fabric that is intrusive or otherwise not of heritage significance.

The original development of Powerhouse Ultimo was purpose-designed for the display of the permanent Powerhouse collection and there have been extensive modifications to this original design since its opening. A number of design changes have been made to amend, alter or enhance the functionality of the museum. The proposed design seeks to continue the evolution of Powerhouse Ultimo to ensure the collection can continue to be displayed for contemporary audiences whilst providing flexibility to allow a larger proportion of the collection to be displayed through more dynamic programming and display of the honoured national and international exhibits. As discussed in **Section 6.4**, the proposed future exhibits and programming for the museum is regulated under the MAAS Act and does not form part of this SSDA.

The proposal demonstrates a sensitive response to the significance of the whole Powerhouse Museum Complex. The proposal includes extensive heritage conservation works to the former Ultimo Power House (former) buildings on site including:

- Reinstatement of the single-volume spaces of the Turbine Hall, Engine House and Boiler House through the removal of non-significant post-1980s internal and external fabric.
- Reinstatement of external façade windows (where windows were previously bricked up in c.1988),
- Removal of non-significant c.1988 external additions to the Ultimo Power House (former), particularly as they relate to the Boiler House and Switch House to facilitate views to the significant fabric of these buildings and provide public open space, including to experience the views to these buildings..
- Reintroduction of ground-level openings that are currently permanently shuttered or obstructed by security fences.

The proposed works will positively impact both the State and local heritage significance of the Heritage Core buildings. The proposed works will reveal key internal and external features of the Boiler House, Engine Room, Turbine Hall, and Switch House, and enhance the integration of the Post Office and North Annex within the Powerhouse Museum Complex. Specifically, removing the non-significant 1988 roof mezzanine above the Switch House, replacing it with a rooftop garden that exposes the original roof line, and adding a smaller roof annex between the Turbine Hall and Switch House. This will significantly enhance the heritage value of the Switch House and surrounding buildings, including the Harwood building on the southern side of Macarthur Street. Curio has made recommendations to minimise the size of the roof annex above the Switch House, which have been incorporated into the project Mitigation Measures at **Appendix C**. Additionally, removing the non-significant fabric from the 1988 adaptation of the Heritage Core buildings will improve the clarity and interpretation of the Ultimo Power House (former) which has been assessed by Curio as positively impacting the overall heritage significance of the Powerhouse Museum Complex.

As outlined by Curio in **Appendix L**, it is important to acknowledge that the materials and exhibition spaces added as part of the c.1988 adaptive reuse of the site for the museum had significant adverse physical and visual impacts on the Ultimo Power House (former) buildings. Some of note include the intersection of multiple, mezzanine levels that obstructed views to and from significant heritage fabric and spaces within the former Ultimo Power House (former), the bricking up of windows and the removal rather than conservation of much of remnant in situ industrial machinery.

The proposal will have a material beneficial impact in this respect as it will remove a significant amount of the 1980s intrusive fabric and reduce the physical and visual impacts on the significant heritage fabric and spaces within the listed Boiler House, Turbine Hall, Engine Room and Switch House buildings. The proposed works will

result in the Heritage Core buildings being able to be interpreted and appreciated in their original height, scale and volume.

The proposed loading dock will have a minor adverse impact a portion of original fabric on the southern elevation of the Switch House. This impact has been assessed by Curio as acceptable from a heritage perspective because it does not impact on any of the key architectural elements of the façade and is proposed to be inserted in a discrete section of the façade. Curio assesses the loading dock as located in the best placed location on the site. Furthermore, that on balance the loss of fabric in this location compared to the positive outcomes associated with the revealing of the additional portion of the north western façade of the Switch House, the opening up of views and access to the Switch House from the east, south and west and the ability to improve the loading facilities for the museum is a major positive heritage impact for the Powerhouse Museum Complex.

Furthermore, the proposed works continue the historical, associative and social significance of the Wran Building and the role of the Wran Building in the c1988 adaptive reuse of the Powerhouse Museum Complex through its retention and interpretation within the Powerhouse Museum Complex. The proposed works recognise the aesthetic and technical significance of the distinctive arched roof form and general scale of the Wran Building including through the retention of the arched roof form over Vault 1 of the Wran Building and the interpretation of the arched roof form over Vault 2 into a full arch. As set out above, the proposed works also maintain the general scale of the Wran Building.

Accordingly, the proposed works continue the honour and reputation of the notable persons recognised in the Statement of Significance 2024 for the Powerhouse Museum Complex including former NSW Premier Neville Wran; then Minister of Works and Deputy Premier, Jack Ferguson; principal design architect Lionel Glendenning; exhibitions designer and director, Richard Johnson; Powerhouse Museum direct, Dr Lindsay Sharp; transport and engineering curator, Norman Harwood and the NSW Public Works Department and Government Architect's Office.

As set out in the Amended HIS, the proposed works also recognise the need for inclusiveness in design through First Nations co-design and consideration of the future of 1988 Bicentenary landmarks in consultation with First Nations people, particularly given the enduring Connection to Country between First Nations and the site of the Powerhouse Museum Complex as recognised in the SHR Listing 2024.

The proposed works seek to balance the multifaceted history of the site from its cultural significance to the First Nations community; the industrial heritage as the site of the first state-owned, large electricity generating station in NSW; the c1988 adaptive reuse of the industrial site to a museum; and the continued need for the museum to evolve as a museum for the applied arts, sciences and technology for the people of Ultimo, NSW, Australia, interstate and international visitors and future generations.

6.3 Built Form

6.3.1 Consistency with Future Character

A number of submissions raised issues in respect of the proposed architectural and public domain design, including with respect of consistency with the desired future character of the Ultimo-Pyrmont locality. The design as amended in **Section 4.0** continues to be consistent and appropriate for the existing and future character of the locality as set out in Section 2.3 of the EIS. The amendments respond to the matters raised during the exhibition period as well as further design development undertaken to refine the proposal.

As detailed in the exhibited EIS, the proposal directly aligns with the objectives of the PPPS, the Ultimo Sub-Precinct Master Plan and the Better Placed Integrated Design Policy for the Built Environment of New South Wales (2017) in order to ensure that the development is consistent with the desired future character of the locality as set out in **Table 4**.

Table 4 Pyrmont Peninsula Place Strategy, Ultimo Sub-Precinct Plan, Better Placed

| Framework | Response |
|----------------------------------|---|
| Pyrmont Peninsula Place Strategy | <p>The Powerhouse Ultimo Revitalisation is a key government investment that will support the strategic directions and 'big moves' identified in the Pyrmont Peninsula Place Strategy (PPPS). The site is identified under the PPPS as being capable of change, and the Powerhouse is identified as a significant contributor to the growth of knowledge-based jobs, innovation and creative, cultural and community uses within the Peninsula.</p> <p>In accordance with the Pyrmont Peninsula Place Strategy, the proposal will:</p> |

| Framework | Response | | | | | | |
|---|--|---|--|---|--|--|---|
| | <ul style="list-style-type: none"> • Support the PPPS for the Ultimo Creative Industries Precinct to be 'anchored' by the Powerhouse Museum Complex including by providing additional creative industries shop fronts on Harris Street; reactivating the museum's access and connections along Harris Street, Macarthur Street and the Goods Line; opening up views to the industrial heritage of the Heritage Core Buildings; providing new exhibition space in the Wran Building in a manner that retains the distinctive arched roof form and general scale of the Wran Building; and the introduction of the New Building. • Support knowledge based jobs, innovation and creative jobs including in close proximity to UTS, TAFE NSW Ultimo Campus, ABC and Screen Australia. • Connect the Powerhouse to the Goods Line and Pier Street. • Improve through-site connection through the upgrades to the east-west and north-south walking and cyclist paths of travel and the integration of landscaped courtyards within the site. | | | | | | |
| Ultimo Sub-Precinct Master Plan | <p>The Pyrmont Peninsula Sub-Precinct Master Plans and Rezoning were finalised in July 2022. The Sub Precinct Master Plans identify the desired future character of the Pyrmont Peninsula in further detail, including for the Ultimo Sub-Precinct. The Master Plan supports the urban renewal of the Ultimo precinct and identifies the important contribution the project will make to creating an innovative, entrepreneurial, and knowledge-based 24-hour precinct.</p> <p>Powerhouse Objectives:</p> <p>The Sub-Precinct Master Plan identifies specific built form objectives for the Powerhouse Ultimo site in order to support the establishment of a contemporary museum and creative industries precinct. The consistency of the proposal with these objectives is outlined below:</p> | | | | | | |
| | <table> <tr> <td><i>1. Continue to leverage the industrial heritage history of the area to tell the story of the relationship between industry and the city's development.</i></td><td>The proposal seeks to respect and celebrate the industrial heritage of the site through the adaptive reuse and conservation of heritage buildings, including by reinstating the volume of the interiors of the Boiler Hall and Turbine Hall, and the conservation of the fabric of the buildings comprising Ultimo Power House (former), with adaptation to provide for the ongoing requirements of a contemporary museum.</td></tr> <tr> <td><i>2. Explore ways to support and connect to adjacent education, creative and knowledge industries.</i></td><td>The proposal will provide a new, high-quality public facility that will positively impact way of life for visitors, local workers, and residents. The increased floor space and open public space close to public transport is significant, providing a new leisure, creative, innovation and educational space for the surrounding locality. The Powerhouse Museum Complex has a long history of visitation of school groups for educational purposes and that will continue under the proposed development. The proposed reactivation the Powerhouse Museum Complex through new food and drink offerings, creative industries along the colonnade of Harris Street and the integration of three public domain areas within the site will assist in activating the site as a central hub for adjacent education, creative and knowledge industries.</td></tr> <tr> <td><i>3. Consider opportunities to improve community access to the museum and connectivity to public transport, facilities and open spaces.</i></td><td>The proposal allows for the significant improvement of the public domain on and around the site, allowing for improved connection to The Goods Line and surrounding precincts including Darling Square and Darling Harbour. This will reorient the entrance of the museum, improving the experience for visitors and the museum's connectivity to public transport and surrounding precincts. The new public domain between the Ultimo Post Office and the Wran Building will reactive the north west corner of the site which currently is closed off to community access. Similarly, the new access to, and open space between the New Building, Wran Building and the Switch House opens up community access to the southern elevation of the site to Macarthur Street and the adjacent Harris Street conservation area particularly through the removal of the large street wall along Macarthur Street and staircase in front of the Switch House.</td></tr> </table> | <i>1. Continue to leverage the industrial heritage history of the area to tell the story of the relationship between industry and the city's development.</i> | The proposal seeks to respect and celebrate the industrial heritage of the site through the adaptive reuse and conservation of heritage buildings, including by reinstating the volume of the interiors of the Boiler Hall and Turbine Hall, and the conservation of the fabric of the buildings comprising Ultimo Power House (former), with adaptation to provide for the ongoing requirements of a contemporary museum. | <i>2. Explore ways to support and connect to adjacent education, creative and knowledge industries.</i> | The proposal will provide a new, high-quality public facility that will positively impact way of life for visitors, local workers, and residents. The increased floor space and open public space close to public transport is significant, providing a new leisure, creative, innovation and educational space for the surrounding locality. The Powerhouse Museum Complex has a long history of visitation of school groups for educational purposes and that will continue under the proposed development. The proposed reactivation the Powerhouse Museum Complex through new food and drink offerings, creative industries along the colonnade of Harris Street and the integration of three public domain areas within the site will assist in activating the site as a central hub for adjacent education, creative and knowledge industries. | <i>3. Consider opportunities to improve community access to the museum and connectivity to public transport, facilities and open spaces.</i> | The proposal allows for the significant improvement of the public domain on and around the site, allowing for improved connection to The Goods Line and surrounding precincts including Darling Square and Darling Harbour. This will reorient the entrance of the museum, improving the experience for visitors and the museum's connectivity to public transport and surrounding precincts. The new public domain between the Ultimo Post Office and the Wran Building will reactive the north west corner of the site which currently is closed off to community access. Similarly, the new access to, and open space between the New Building, Wran Building and the Switch House opens up community access to the southern elevation of the site to Macarthur Street and the adjacent Harris Street conservation area particularly through the removal of the large street wall along Macarthur Street and staircase in front of the Switch House. |
| <i>1. Continue to leverage the industrial heritage history of the area to tell the story of the relationship between industry and the city's development.</i> | The proposal seeks to respect and celebrate the industrial heritage of the site through the adaptive reuse and conservation of heritage buildings, including by reinstating the volume of the interiors of the Boiler Hall and Turbine Hall, and the conservation of the fabric of the buildings comprising Ultimo Power House (former), with adaptation to provide for the ongoing requirements of a contemporary museum. | | | | | | |
| <i>2. Explore ways to support and connect to adjacent education, creative and knowledge industries.</i> | The proposal will provide a new, high-quality public facility that will positively impact way of life for visitors, local workers, and residents. The increased floor space and open public space close to public transport is significant, providing a new leisure, creative, innovation and educational space for the surrounding locality. The Powerhouse Museum Complex has a long history of visitation of school groups for educational purposes and that will continue under the proposed development. The proposed reactivation the Powerhouse Museum Complex through new food and drink offerings, creative industries along the colonnade of Harris Street and the integration of three public domain areas within the site will assist in activating the site as a central hub for adjacent education, creative and knowledge industries. | | | | | | |
| <i>3. Consider opportunities to improve community access to the museum and connectivity to public transport, facilities and open spaces.</i> | The proposal allows for the significant improvement of the public domain on and around the site, allowing for improved connection to The Goods Line and surrounding precincts including Darling Square and Darling Harbour. This will reorient the entrance of the museum, improving the experience for visitors and the museum's connectivity to public transport and surrounding precincts. The new public domain between the Ultimo Post Office and the Wran Building will reactive the north west corner of the site which currently is closed off to community access. Similarly, the new access to, and open space between the New Building, Wran Building and the Switch House opens up community access to the southern elevation of the site to Macarthur Street and the adjacent Harris Street conservation area particularly through the removal of the large street wall along Macarthur Street and staircase in front of the Switch House. | | | | | | |

| Framework | Response |
|----------------------|--|
| | <p>4. Give consideration to improving the relationship between the museum and the Goods Line, reorientating the museum towards the city</p> <p>The proposal reorientates the museum to The Goods Line, reinstating it as the primary interface to Powerhouse Ultimo. A new public garden entrance (the Terrace) provides a new public square at the end of The Goods Line and the newly revealed heritage edges. The removal of non-significant elements within the former Grace Bros Courtyard reveals views to the significant fabric of the eastern façade of the Switch House and southern façade of the Boiler House enabling the expansive height of the Boiler House to be experienced again from the Goods Line.</p> |
| | <p>5. Create cultural, creative and commercial opportunities to support innovative, entrepreneurial and knowledge based jobs and create a 12, 18 and 24 hour precinct.</p> <p>The Powerhouse Ultimo Revitalisation investment will catalyse a wider Ultimo creative industries precinct that unites existing creative industries workspaces and institutions, including the Tech Central, University of Technology and the ABC. The proposed SSDA allows for the provision of renewed cultural facilities. The Gathering Terrace will be a large space for visitors to dwell and can be utilised for events. The proposed development seeks to reactive not only the daytime visitation to the site but also support a 24 hour precinct including through design which removes a series of non-significant external structures so that the site is activated through open public space between the buildings within the Powerhouse Museum Complex.</p> |
| | <p>6. Investigate opportunities to improve access to Powerhouse spaces for community use.</p> <p>The public domain supports the delivery of a new large scale civic space for passive and active museum programming and community use that facilitates high design quality and integrates seamlessly with the site's surrounds, particularly in respect of the adjacent Ultimo Goods Line. The Post Office will facilitate community uses and the North Annex will facilitate creative industries spaces.</p> |
| | <p>7. Build on existing through-site links to improve connectivity between the Goods Line and Pyrmont Street.</p> <p>The proposed development contains three new or enhanced pedestrian access points to the surrounding street network and public domain.</p> |
| Better Placed | <p>Better Placed - An Integrated Design Policy for the Built Environment of New South Wales (2017) is a policy produced by the Government Architect NSW (GANSW), which seeks to promote good design and capture our collective aspiration and expectations for the places where we work, live and play. Better Placed includes seven objectives for good design. An assessment of the objectives is provided below.</p> |
| | <p>Better fit: contextual, local and in its place</p> <p>The proposed building is designed to integrate with its surroundings by enhancing The Goods Line and Harris Street and introducing new access from Pier Street to the north. The built form aims to reveal views of the site's heritage, aligning with the local context and environment.</p> |
| | <p>Better performance: sustainable, adaptable and durable</p> <p>As detailed in Section 6.9 of the exhibited EIS and Section 5.2.1 of the submitted Ecologically Sustainable Development (ESD) Report, the proposal has been designed to meet a 5-Star Green Star target at minimum. The proposal has been designed to adapt to the changing needs of the museum and business and will be able to flexibly accommodate changes in spatial needs in the future.</p> <p>As set out in the Architectural Statement, the proposed change in materiality of the Wran Building from glazing and metal to predominantly brick seeks to enhance performance of the building in terms of sustainability, adaptability and durability.</p> |
| | <p>Better for community: inclusive, connected and diverse</p> <p>The development enhances accessibility and offers more diverse and flexible spaces within the Powerhouse, accommodating a wider</p> |

| Framework | Response |
|--|--|
| | range of events and programs. This expansion will broaden community access to the facilities. |
| Better for people: safe, comfortable and liveable | The exhibited EIS is accompanied by a CPTED Report (Appendix EE of the EIS) which has provided design feedback on how to improve the environmental safety of the site, which has been incorporated into the design. Further, the design is focused on providing an accessible and comfortable design that is human, responds to programming needs and flexibly adapts to different uses. |
| Better working: functional, efficient and fit for purpose | The proposed built form has been designed to flexibly adapt to the various uses that can be accommodated on the site, including different museum programs and other ancillary uses. This design makes the building fit for purpose and adaptable to the different uses. Additionally, the ESD Report provided at Appendix BB of the EIS outlines the efficiency and sustainability of the building. |
| Better value: creating and adding value | By creating a greater diversity of spaces, both external to the Powerhouse in the public domain, and internally in the form of greater and more useable museum space, the development seeks to improve the value of the site. |
| Better look and feel: engaging, inviting and attractive | <p>The proposed development is of high architectural design quality. The proposal has been designed to improve the activation of the frontages surrounding the site, making it engaging, and inviting to those passing by.</p> <p>Design Excellence</p> <p>The proposed development demonstrates design excellence as a result of retaining aspects of the design that was subject to the competitive design process such as the Harris Street frontage as the location for new built form and the use of brick materials to provide a more sympathetic response to the heritage significance of the Heritage Core buildings, further improving the attractiveness of the development.</p> <p>The proposed works have evolved from the competition winning design to provide for the retention of the Wran Building and in particular the distinctive arched roof form over Vault 1, and an interpretation of the arched roof form over Vault 2 into a full arch, whilst retaining the general scale of the building in accordance with the SHR Listing 2024.</p> <p>In the circumstances the proposed development sets out why a further competitive design process would be unreasonable or unnecessary in the circumstances of the development.</p> <p>Maximising the amount, access to and quality of public spaces</p> <p>The provision of quality public spaces which have been maximised within the heritage constraints of the site through the removal of non-significant structures in existing hardscaped areas and integrating the new landscaped courtyard settings within the Powerhouse Museum Complex to create a better look and feel for the site.</p> |

6.3.2 Internal Amenity

The proposal as amended in **Section 4.0** directly responds to matters raised in submissions regarding visitor circulation, and provides clear legible circulation that facilitate the independent operation of exhibition spaces in order to facilitate a high standard of visitor experience and museum functionality. The proposed amendments described in **Section 4.0** and the Amended Design Report by DBJ provided at **Appendix F** seek to improve circulation by establishing clear, easily navigable paths from the arrival point at the concierge to each exhibition and program area of the museum. This reconfiguration is intended to enhance functionality, accessibility, and overall connectivity throughout the Powerhouse, that will significantly improve visitor experience and achieve good internal environmental amenity. Visitors can access the Boiler House internally via the entrances through the New Building and Switch House.

Further detail of internal amenity and circulation is outlined in the Amended Design Report at **Appendix F**.

The proposal involves a significant change to the visitor experience within the Boiler Hall and Turbine Hall from existing, which has given rise to concerns in submissions about disrupting museum connectivity. The Powerhouse has received extensive feedback regarding existing wayfinding and circulation issues where visitors currently navigate through multiple exhibition spaces before reaching their intended destination. Additionally, the current Powerhouse layout complicates the periodic updating of exhibitions, resulting in static displays. The configuration complexity results in limited access to the extensive stored collection of the Powerhouse from being displayed. Internal demolition of structures including the staircases, internal walls and mezzanines within the Boiler House, Engine House, Power House and Turbine Hall will result in overall improved amenity outcomes. These design initiatives will allow spaces to benefit from exposed heritage fabric and natural light, further enhanced through the restoration of windows that are currently blocked.

The central circulation features a highly legible east-west and north-south layout, with all spaces terminating in daylight and gardens to encourage the use of outdoor spaces and ease of navigation. The grand staircase at the intersection now includes informal bleacher seating for casual gatherings at the Powerhouse's main entrance in the Terrace Courtyard. The east-west circulation connects the concierge at the Goods Line terrace to Harris Street via grand stairs and bleachers, enhancing intuitive wayfinding. Lifts are easily visible from the concierge. The north-south circulation links the ground floor to Exhibition Space 4 (the Wran Building), with visual connections that simplify navigation.

Adjustments have been made to the lift locations at the intersection of the key spines of the Powerhouse to enhance their visibility upon entrance via the main entry from the Terrace Courtyard. Terrace entrance. This improvement will facilitate clearer wayfinding for visitors.

At the north end of the Wran Building, a full-width opening offers a view of the new landscaped space and heritage fabric of the Ultimo Post Office. The northern courtyard between the Ultimo Post Office and the Wran Building which was previously closed to the public is proposed to be open. In particular, as set out in the Amended HIS, the change in materiality of the Wran Building (from glazing and metal to brick, metal, concrete and glazing) improves the relationship between the Wran Building and the Ultimo Post Office.

At the southern end of the Wran Building, an opening creates a window for natural light to enter as well as views from the new Level 1 Courtyard into the Galleria. The proposed removal of non-significance internal fabric and offices within the central spine of the Wran Building improve the internal amenity of the Wran Building and in the case of Vault 2, the spatial volume of the arched roof form will be further interpreted and enhanced under the Proposed Works.

The internal amenity of the Heritage Core buildings is improved by the removal of non-significant internal fabric which reveals views to the significant industrial heritage fabric of those buildings as set out in the Amended HIS.

The New Building also provides a series of glazed permeable openings which create view lines between Harris Street, the internal courtyard and the Switch House.

The proposed development has also been designed to meet a minimum 5 Star Green Star rating, including in respect of internal amenity.

The project as amended will deliver a very high standard of amenity for visitors and staff, providing efficient circulation between and within exhibition spaces and ensuring the delivery of a world-class museum experience.

6.3.3 Harris Street frontage

A number of submissions raised matters in respect of the existing and proposed presentation of the Powerhouse to Harris Street. The Amended HIS (**Appendix L**) and Amended Public Domain and Landscape Statement (**Appendix Q**) set out how the design responds to the site's Harris Street frontage, which continues to play an important role in the functionality and presentation of the Powerhouse in accordance with Harris Street's role as the primary movement corridor for the Pyrmont Peninsula under the *Pyrmont Peninsula Place Strategy*. The amendments to the Wran Building and the proposed New Building along Harris Street will reactivate the street frontage including through the extension of the western elevation of the Wran Building into the location of the heavily modified post 1980s street wall to provide a public colonnade along the Harris Street frontage including for creative industries.

As set out above in **Section 6.3.2**, the removal of intrusive or otherwise non-significant structures in the northern courtyard between the Wran Building and the Ultimo Post Office will also reactive the north west corner of the site which was historically a social hub due to its function as a Post Office.

Whilst the New Building's location will impact some views of the Switch House from Harris Street, this will be mitigated through the incorporation of a range of permeable glazed openings along the New Buildings' western façade. A large, double-glazed atrium at the intersection of the Wran Building's southern façade and the New Buildings' northern façade will offer visual separation between the two buildings and maintain views of the Switch House from Harris Street. Additionally, several sight lines will be preserved along the western facade of the New Building. It is noted that during the period of the Switch House's use as part of the Ultimo Power House (former), views from Harris Street were largely obstructed by other structures associated with that use, and the present views would not generally have been available. The impact of the New Building on the built form setting of Switch House is managed appropriately with the proposed setback and overall building height, which are aligned with those of the Switch House, maintaining consistency with that of the varied building height within the Powerhouse Museum Complex. As set out in the Amended HIS, the height of the New Building is subservient to the heights of the Turbine Hall and Boiler House, which are mirrored in the height of Vault 1 of the Wran Building.

The proposed creative industry space along Harris Street complements the objective of establishing a hub for emerging creative industries that synergise with the Powerhouse. These spaces will significantly enhance activation and passive surveillance of Harris Street, in comparison to the currently inactive street frontage. These spaces will accommodate a variety of creative enterprises, supporting the revitalised vision for the Powerhouse and the broader Ultimo-Pyrmont creative precinct. This initiative includes dedicated workspaces and facilities tailored to creative industries within the Ultimo-Pyrmont precinct. This investment directly supports the strategic initiative to transform the Pyrmont Peninsula, and particularly the role of Harris Street as the active spine of the Peninsula, and the Powerhouse as the anchor for the Ultimo Creative Industries Precinct, as outlined in the PPPS.

Given Harris Street is a classified road, the proposed development reduces the potential impact of traffic noise and vehicle emissions upon the Powerhouse Museum Complex and the proposed development also ensures that it does not compromise the effective and ongoing operation of Harris Street as follows:

- As set out in the EIS, vehicle access for loading purposes is provided via MacArthur Street, rather than Harris Street;
- The design of the built form along Harris Street, including to the Wran Building and the introduction of the New Building, ensure that the Powerhouse Museum Complex is not adversely affected by traffic noise or vehicle emissions across Harris Street. In particular, the New Building's location shelters the central courtyard from the existing traffic of Harris Street,
- The site has strong public transport links and accessibility and as a result, public transport is the encouraged mode of transport to access the Powerhouse Museum, as outlined in the Green Travel Plan (EIS Appendix H). By reducing the amount of parking onsite, the proposal design maximises the amount of public open space and reduces car generate traffic to the Ultimo precinct and its surrounds.
- The original Traffic Impact Assessment (EIS Appendix H) undertook an assessment of any potential impacts to the road network associated with increased visitation to the site. The assessment concluded that the proposal will not have adverse impacts on the Ultimo precinct or its surrounding road network. Additional vehicle movements during the weekday morning peak of 8am-9am (+16 vehicles) and weekday evening peak of 5pm-6pm (+61 vehicles) are minimal within the context of existing road network capacity and vehicle movements and will not result in any change to the level of service within the existing road network.

This further discussed below in **Section 6.7.1**.

6.3.4 Switch House

Further details regarding the design of the proposed Switch House roof scheme were requested, specifically its intended uses, and details of balustrades. The Amended Design Report at **Appendix F** details further amendments to the design of this feature and includes the details requested.

The design of the structure above the Switch House rooftop has been further developed to include amenities and enable the continuation of the lift from the ground floor into this space. This enhances the accessibility of this space and provides improved capacity to utilise and program this space independently from other museum spaces.

The external built form of the rooftop structure has been re-designed to include a curved roof that references the curved roof design of the Wran Building and Galleria buildings. The Switch House amendment has also provided an opportunity to support trees in some locations on this roof as detailed in **Appendix F**.

The Amended HIS is supportive of the removal of the existing roof annex above the Switch House and the proposal for a rooftop garden which reveals the original roof line of the Switch House. The Amended HIS is also supportive of a smaller, discrete rooftop annex between the opening in the façade of the Turbine Hall (which was created for the existing roof mezzanine) and the rooftop garden. The Amended HIS has made recommendations to reduce the size of the roof annex above the Switch House and to revert the curved roof to a more discrete form. This is detailed in the Updated Mitigation Measures at **Appendix C**.

The uses of the Switch House have been adjusted with office and library spaces removed to facilitate additional museum space. The office and library will remain in the Harwood Building, enabling the entire Level 1 of the Switch House to be dedicated as program space for a diverse range of exhibition uses. This amendment results in an additional 300 sqm of museum program spaces being provided.

The recommendations outlined in the Amended HIS have been incorporated into the Amended Mitigation Measures at **Appendix C**.

6.3.5 Connecting with Country

Submissions regarding the proposals' approach to Connecting with Country involved clarification of tangible links to the Connecting with Country principles and the identification that the proposal does not address any public art. The Public Domain and Landscape Statement at **Appendix Q** provides an additional explanation of the landscape design and how it has directly responded to the Country. A separate Connecting with Country Report is provided at **Appendix U**.

The proposal aligns with the Connecting with the Country approach outlined in the Design Report (EIS Appendix E) and the Public Domain Report (EIS Appendix F). These documents emphasise the integration of First Nations people and culture into the revitalisation project, extending to the broader operations and programming of the Powerhouse the latter of which is outside of the scope of this SSDA.

The proposed stratigraphy to be incorporated in the change in external fabric of the Wran Building to brick, and its mirroring in the New Building, has been further developed as part of First Nations co-design of the revitalisation project and the Connecting with Country Design Narrative as set out in the Amended Design Report at **Appendix F** and the Connecting with Country Report at **Appendix U**. Refer to the Amended Aboriginal and Cultural Heritage Assessment Report at **Appendix K** to see the recommendations by Curio.

As detailed in **Appendix Q**, the Ultimo Post Office courtyard paver design is fractured to allow the emergence of soft landscaping elements to allow the emergence of Country throughout the hardscaped areas at the Harris Street ridge. The Level 1 Courtyard has an increased ratio of planting to hardscape at a ratio of 60:40. The Courtyard has an open shape to reflect the forms that have been shaped and eroded by water. This design has taken inspiration from the Yarrangobilly Caves sunken rock platform. The Terrace pavers are rounded and organically shaped to reflect the alluvial drift and the form of oysters once gathered there. The Terrace planting is the dominant form in this area and reflects the natural elements of Country.

As identified in the Connecting with Country Report at **Appendix U**, the sandstone foundations in the northwest corner of the site have natural significance. This stone represents the permanence of Country and represents themes of story telling, and knowledge sharing between First Nations peoples', including communications through the use of stone, which is also shared through its position next to the Post Office.

The SHR Listing 2024 of the Powerhouse Museum Complex expressly recognises First Nations Connection to Country in respect of the site. As set out above in **Section 6.2.3**, the proposed development provides an opportunity for inclusiveness of First Nations people in the design and evolution of the museum having regard to the layered history of the site.

The Powerhouse is dedicated to implementing an Indigenous-led approach across all its sites and practices, encompassing collections, curation, educational and public programs, design, administration, operations, strategy, and government relations, and will continue to work closely with First Nations peoples and communities during the detailed design, construction, programming and operation of the revitalised Powerhouse Ultimo.

6.3.6 Landscape design

The Amended Public Domain and Landscape Statement is included at **Appendix Q** and has provided further details on the revised Public Domain and Landscape Design. Concerns were raised regarding the Terrace Design, Central Courtyard, tree and soil management, the Post Office courtyard and loading impacts on the Terrace.

Central Courtyard

The design of the Central Courtyard has been enhanced to include a greater density of planting, improving the overall amenity of the space. The updated design features a 60:40 ratio of soft landscaping to hard landscaping, building on the Connecting with Country Design principles outlined in **Appendix U**.

The stairs between Macarthur Street and the Central Courtyard have been narrowed and reshaped to serve as a secondary, informal entrance to the Powerhouse. This modification increases the landscaping along the street edge, softening the building's presence on Macarthur Street.

Ample soil volume is provided through a 1m set-down slab and planted berms up to 400mm above the paved level. Paving will utilise appropriate physical design features where necessary to support root growth, with root balls anchored to the slab. Each tree is allocated 45 sqm of soil with an average depth of 1m.

As set out in **Section 6.6.1** regarding the updated VIA, views to the Central Courtyard, the Wran Building and the Switch House from Macarthur Street, and from the surrounding Ultimo conservation area, are significantly improved compared to the existing view of the street wall along Macarthur Street and the non-significant stair case in front of the western elevation of the Switch House.

The Terrace

The Terrace (i.e. the eastern courtyard) has been re-designed to offer a clear path of travel from the Goods Line to the new entrance to the Powerhouse. The updated design also provides several large hardscaped areas for flexible event use, adequate soil volumes for landscaping and access through the Courtyard for loading vehicles when required.

The Terrace is designed as a single-level surface, providing capacity to host outdoor events within this space. Protective panels can be securely locked together across the surface to accommodate these events and protect landscaping, and is also suitable for occasional loading of very large objects to the Boiler House. Such protective overlays are commonly used in other programmed landscape spaces, such as within the nearby Tumbalong Park.

Timing events with the natural cycles of the native grassland is essential to the design concept, fostering the integration of Aboriginal cultural practices with museum curation and is being managed by the Powerhouse's First Nations Program. This managed grassland model is more conducive to activation than the traditional turf setting of Tumbalong Park, which requires turf replacement after each event and extended closure periods throughout the year. This ensures flexibility of the Terrace. It meets the day-to-day needs of visitors and can host occasional large events while maintaining the health of the grassland.

Terrace Loading Requirements

The design of the Terrace accommodates all vehicle-swept paths required for day-to-day vehicular access to the Powerhouse, including access to the Hardwood building.

The new loading dock accessed from Macarthur Street facilitates most of the loading requirements for exhibitions. For the occasional loading for substantial objects into the Boiler house, the Terrace has been designed to accommodate access for articulated vehicles and cranes.

The process for loading across the Terrace will be planned in detail as part of the major event of moving large objects in and out of the museum. The path system of the Terrace has been designed to accommodate the loads required so there will be no damage. This process will be managed by the Powerhouse and will only occur 1-2 times per year. The loading process will occur outside of open hours and will be managed to ensure ongoing pedestrian access.

Conflicts with Tree 17 were raised and how this will impact swept paths.

Tree 17 is a mature Plane Tree in the centre of Macarthur Street. Access to the loading dock adjacent to Tree 17 is resolved through the inclusion of a slip-resistant road plate and kerb that bridges the existing root zone of the tree to allow for access to the loading dock, developed with input from structural engineering and a qualified arborist. Refer to the Amended Public Domain and Landscape Statement at **Appendix Q** for further detail.

Appendix Q also includes details of the layout of protective panels for articulated vehicle access to the Boiler House for the occasional loading of very large objects.

Post Office Courtyard

Further clarification was sought in relation to the pavement surrounding the proposed 15 *Eucalyptus racemosa* trees, soil volume, and tree management within the Post Office Courtyard. The design of the Post Office Courtyard has been revised to include 5 *Angophora costata* trees in lieu of the 15 *Eucalyptus racemosa* trees which are endemic species to the area. The proposed trees will be planted at a 4m spacing and ensure a healthy stand of sculptural trees. There are no tree grilles in the Post Office Courtyard, as the proposed *Angophora costata* trees will be planted in planter beds.

As demonstrated in the Amended Public Domain and Landscape Statement at **Appendix Q**, the deep soil plans have been updated. Detailed tree management has also been detailed in **Appendix Q**.

Refer to DPHI13 in **Appendix D** for clarification of how security and access will be managed for the central and Post Office Courtyards.

6.3.7 Summary of Built Form Approach

Table 5 provides an updated assessment of how each of the built form considerations identified in the SEARs have been addressed through the built form of the proposal.

Table 5 Assessment of built form against proposed amended design

| Element | Assessment against amended design |
|------------|---|
| Layout | Consistent with the exhibited proposal, the design maintains clarity in circulation through clear north-south and east-west circulation corridors. The proposed amendments seek to further improve the layout of the internal and external circulation by establishing clear, easily navigable paths from the arrival point at the concierge in the Boiler House to each exhibition and program space of the museum. This reconfiguration will enhance functionality, accessibility, and overall connectivity throughout the Powerhouse. This is further detailed in the Amended Design Report at Appendix F . |
| Height | The New Building's height is consistent with the applicable planning controls and aligns with that of the Switch House as detailed in the Amended Design Report in Appendix F . The height of this New Building in relation to the Switch House is appropriately mitigated by setbacks and the establishment of building height in a manner that sits comfortable within varied building heights across the wider Powerhouse Museum Complex. As set out above, the height of the New Building is subservient to the significant heights of the Boiler House and Turbine Hall, as also mirrored in Vault 1 of the Wran Building. |
| Bulk | As detailed in Section 6.1.1 of the EIS, the New Building has been designed to align with the Harris Street building alignment to ensure overall built form presentation to Harris Street does not increase the perceived bulk from the street. The bulk of the retained and proposed buildings are appropriate within this street alignment, which includes a number of taller buildings along Harris Street outside of the site boundary. The proposed New Building has been designed to be consistent with the Harris Street alignment. |
| Scale | As detailed in the EIS, the New Building is designed to align with the established Harris Street building line, ensuring that the scale of Harris Street remains consistent and does not appear more imposing. The scale of retained and New Buildings is appropriate within a CBD-fringe location with a number of more significant structures located in close proximity to the site providing direct context, whilst the scale is also historically appropriate noting the significant and prominent scale of the former Ultimo Power House within the landscape over an extended period of time. The proposed extension of the Wran Building to the west of the site maintains the general scale of the building by incorporating the previous area of the heavily modified street wall along Harris Street into the Wran Building. Similarly, the removal of the south east portion of the Wran Building still retains the general scale of the Wran Building but also reveals a greater extent of significant fabric along the western elevation of the Switch House. |
| Separation | Separation distances have been considered as part of Sections 6.2 and 6.1.3 of the EIS and have been carried through to the design amendments in the revised design. As set out in Section 6.3.3 , the New Building is demarcated from the Wran Building and the proposed change in fabric of the Wran Building is mirrored in the New Building in a manner that the Amended HIS identifies as sympathetic to the predominantly brick Heritage Core buildings without mimicking that significant fabric. The New Building is clearly defined as a separate structure from the heritage fabric of the Heritage Core buildings and emphasises the retention of the original Powerhouse fabric through materiality, the subservient scale of the building and the generous separation distances. |

| Element | Assessment against amended design |
|---------------------|---|
| Setbacks | <p>As detailed in Section 6.1.3 of the EIS, it is recognised that there are no or minimal setbacks from the heritage-listed items. Furthermore, under the Statement of Significance 2024 the western courtyard (i.e. the Harris Street Courtyard) and eastern courtyard (i.e. Level 1 Courtyard) were expressly recognised as having no heritage significance. The built form has been designed in response to key site interfaces including Harris Street, The Goods Line and Macarthur Street and is considered suitable. The proposed location of the New Building along Harris Street is the best location for new built form on the site because it maintains the existing spatial relationships on the site and is in a location that historically had built form. Furthermore, as identified in the Amended HIS even at the time of the c1988 adaptive reuse the western courtyard was considered as a suitable location for new built form and is supported on heritage grounds. The proposal maintains the setback and street walls as existing on Harris Street and establishes the new entrance from The Goods Line. Further, the setbacks result in public domain areas that have high amenity and are connected to other key spaces.</p> |
| Interface | <p>As detailed in the submitted EIS, the proposal will achieve high-quality interfaces at the ground-level locations to enhance the existing new public domain areas. The amended design maintains the museum entrance at the Goods Line and enhanced entrances at Harris Street and MacArthur Street, as per the proposed design outlined in the EIS.</p> <p>The development enhances connections between the museum, Harris Street, and Pyrmont Street, supporting a clear and efficient internal wayfinding network. Reactivating Harris Street with new creative industry spaces that face the street, will significantly improve the interface.</p> |
| Articulation | <p>Further detailed design has been undertaken regarding articulation to the proposed New Building. As detailed in the Amended Design Report at Appendix F, feedback was received regarding the proposed use of masonry throughout the Harris Street buildings. It was contended that the use of masonry would diminish the visual identity of the Wran Building.</p> <p>The brick façade concept has been further developed in response to the proposals Connecting with Country narrative. The further design development enhances the transitions in bands from a horizontal to a vertical pattern in the façade design of both the New Building and the Wran Building. Brick has been chosen as it is an enduring material associated with civic gravitas.</p> |

6.4 Museum Operations and Functionality

6.4.1 Exhibition Spaces

A number of submissions raised concerns regarding reduction in exhibition floor space, the optimal use of existing exhibition spaces and the potential limitations to the revitalised Powerhouse's capacity to support exhibitions. The Amended Design Report provided at **Appendix Q** demonstrates the strategic improvements for the Powerhouse Museum's capacity to showcase its vast collection and ability to facilitate world-class exhibitions. **Figure 1** illustrates the location of the proposed four major column-free presentation spaces and program spaces. Additional smaller-scaled spaces are located within the Switch House. Over 80% of the exhibition spaces are located on the ground floor adjacent to the primary entry at the Goods Line Terrace.

Rather than focusing solely on quantitative metrics, such as net floor space, the proposal represents qualitative improvements in clarity, circulation, and the ability of redesigned spaces to effectively showcase exhibits. Key areas including the Boiler Hall, Turbine Hall, Wran Building, and Switch House are highlighted for their potential to provide increased capacity and flexibility, accommodating a diverse range of exhibitions and programming.

The Amended HIS supports the removal of the non-significant exhibition structures such as internal mezzanines and stairs within the Heritage Core buildings and Wran Building respectively. Whilst those structures had a design intent, their purpose and the materiality chosen, was more utilitarian and in the case of the Heritage Core buildings, such structures had a heritage impact on the significant industrial heritage fabric within those buildings. The Amended HIS assesses the impact of removal of these structures as positive from a heritage perspective by enabling future exhibitions to be carried out using exhibition infrastructure that is lightweight and does not intervene with the original fabric of the Heritage Core buildings. The Amended HIS also highlights the opportunity for new exhibition and associated spaces within the New Building, and to a similar extent under the proposed alterations to Wran Building, which is not encumbered by the same fabric constraints of the Heritage Core buildings.

The Powerhouse Ultimo Revitalisation will significantly enhance the capacity of the site to present dynamic, engaging, and relevant exhibitions that cater to a diverse array of community members. The proposal seeks to provide spaces that are suitable to accommodate the diverse range of exhibits presented by the Powerhouse

including in a manner that does not obscure view lines to significant internal fabric of the Heritage Core buildings.

Furthermore, the Powerhouse Ultimo Revitalisation is occurring within the context of the wider Powerhouse Program that includes the Museums Discovery Centre at Castle Hill (now completed) and the new Powerhouse Parramatta (under construction). Together, these facilities represent a significant expansion of the Powerhouse's facilities and overall capacity to deliver programming with increased diversity, reach, and relevance to the community.

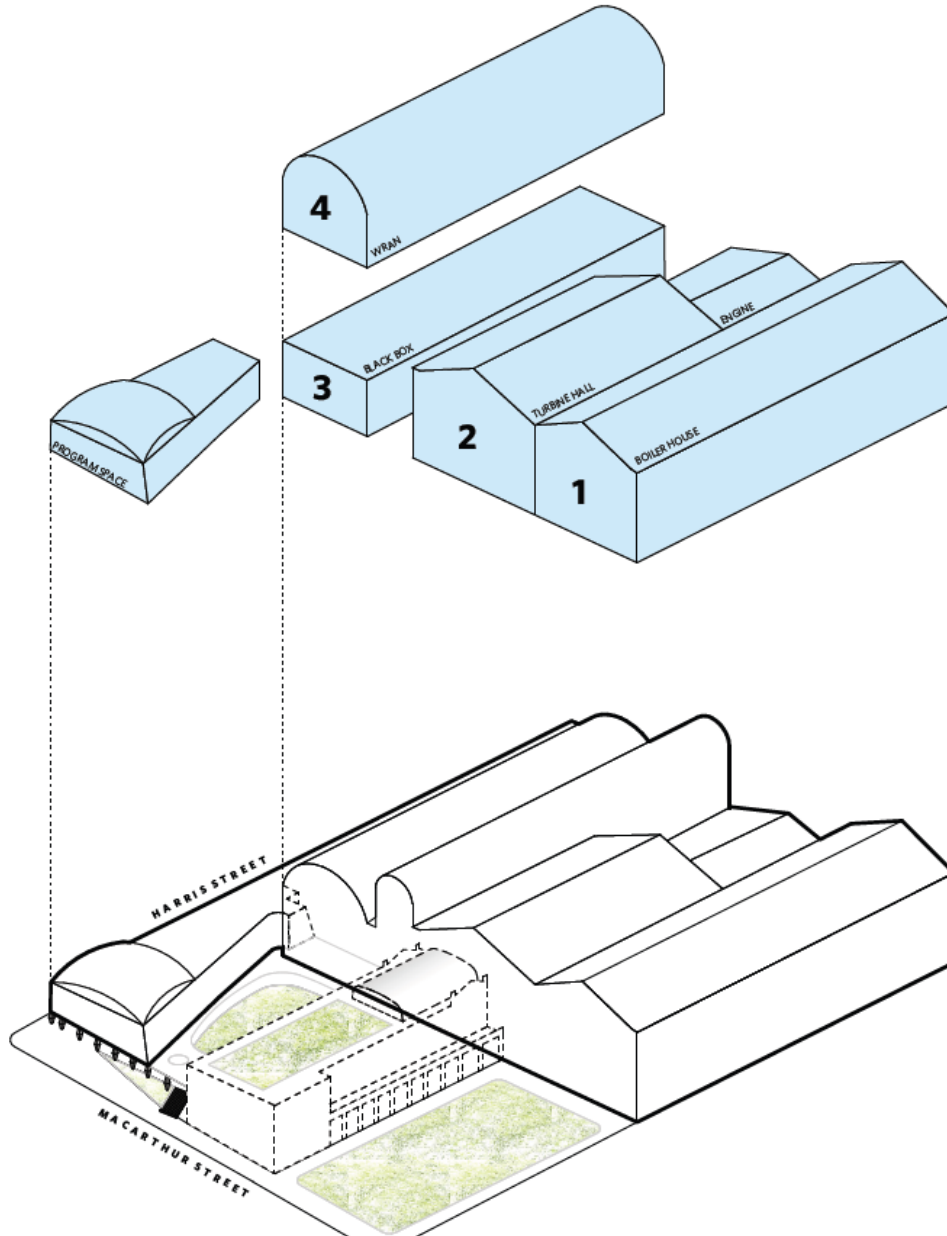


Figure 1 Exhibition Spaces

Source: DJB

6.4.2 Hall of Steam

The key issues raised in the public submissions regarding the Hall of Steam included concerns around the removal of the Engine Houses Steam exhibition, the belief that the Engine House exhibition is the most important to the Powerhouses' collection and the belief that its relocation is destructive.

The museum's collection is not strictly a planning matter and does not form part of the development the subject of this SSDA. The Powerhouse will continue to manage the collection in accordance with the MAAS Act. The NSW government has committed to retaining iconic collection items at the Powerhouse Ultimo as part of the revitalisation. The Boulton, Watt Steam Engine, Catalina, and Locomotive No.1. will remain at the Powerhouse Ultimo site following the completion of the project and be physically accessible to visitors upon the reopening of

Powerhouse Ultimo. The NSW Government has also made a significant investment in the enhancement and modernisation of its storage facility at Powerhouse Castle Hill. The Castle Hill site facilitates the safe and appropriate storage of collection items temporarily throughout the revitalisation of Powerhouse Ultimo.

The remaining collection items of the Engine House's Steam exhibition are being moved to the Powerhouse Castle Hill site and will not be permanently displayed at Powerhouse Ultimo following the revitalisation. The collection will remain accessible to visitors at the Castle Hill site. This is consistent with the overarching approach to Powerhouse Collection management that will provide for improved programming and display of the entire Powerhouse Collection across all of the venues managed by the Powerhouse.

6.4.3 Creative industry spaces

A number of submissions raised concerns that the project will result in a shift away from the use of the site as a museum, which is not correct. The Powerhouse remains committed to continuing its applied arts and sciences program, as required by the MAAS Act. This includes retaining and exhibiting the esteemed Powerhouse collection, hosting various exhibitions as well as offering programs that inherently support creative industries and the Ultimo Creative Industries Precinct in accordance with the PPPS.

As outlined in **Section 6.4.1**, the project will facilitate the significant enhancement of the quality of functionality of exhibition spaces. The introduction of creative industry spaces strategically located along the William Henry Street and Harris Street frontages will activate the Powerhouse Ultimo site, fostering collaboration with creative professionals and operating as retail spaces. Importantly, these initiatives are designed without compromising any floor space that could otherwise be used for exhibitions. The introduction of creative industry spaces aims to enrich the Powerhouse Ultimo experience while maintaining its core mission as a museum dedicated to applied arts, science, and cultural heritage.

The creative industry studio at the corner of Harris Street and the Post Office Courtyard has been expanded at the northern corner to provide more usable community use space. Additionally, two studios have been updated to include mezzanine levels, increasing the variety of creative businesses that can utilise these spaces.

6.4.4 Naming of the Powerhouse

Concerns were raised regarding the removal of the term "museum" from the facility's name. Whilst this is not a relevant planning consideration, the Museum of Applied Arts and Sciences (MAAS) oversees a variety of museum facilities, applying a consistent naming typology across sites in Parramatta, Castle Hill, and Ultimo. It is important to note that the naming convention does not signify a removal of the internal use of Powerhouse Ultimo as a museum. The proposed development provides for the continuation of the museum use within the site and seeks consent for the use of the New Building for the purposes of the museum.

6.4.5 Operational details

The proposed operational details remain as set out in Section 3.7.1 of the exhibited EIS, being as follows. The Powerhouse currently facilitates up to 800,000 visitors per annum. The revitalisation will result in an approximate increase of 1,200,00 visitors totalling to an estimated 2,000,000 visitors per annum.

The proposed hours of operation continue to be as proposed in the exhibited EIS, being from 7 am to 12 pm (midnight), daily.

This SSDA does not seek consent for events within any outdoor areas of the Powerhouse, which would require separate future approval.

As required by the SEARs, and as previously detailed in the submitted EIS, the amended design maintains the same lighting strategy as submitted with the EIS. Adequate lighting is proposed throughout the public domain and will provide sufficient lighting in all outdoor areas of the proposal. Lighting will be developed in accordance with AS4282-1997 'Control of the obtrusive effects of outdoor lighting'.

6.4.6 Educational uses

A number of submissions raised the need to maintain and enhance accessibility of museum facilities for school children. The revitalised Powerhouse precinct will incorporate various educational spaces tailored for schools and other visitors, including dedicated learning spaces in the Switch House, and the project will significantly enhance the overall educational experience for students. It is emphasised that the overall Powerhouse portfolio encompassing Parramatta and Castle Hill also offers a greatly expanded and diverse array of educational and

exhibition spaces, including more diverse and varied programming, that together with the revitalised Powerhouse Ultimo represent a very significant improvement in educational functions of the Powerhouse.

It is noted that no student accommodation is proposed to be located on the site or as part of this development.

6.4.7 First Nations Programming

A number of submissions raised matters in respect of programming of First Nations culture and science at Powerhouse Ultimo. Whilst the programming of the museum is not a relevant planning matter, Powerhouse is committed to implementing Indigenous ways of working across all Powerhouse sites and areas of practice, including collections, curatorial, learning, public programs, design and delivery, communication, administration, operations, strategy and governance. It is anticipated that Powerhouse Ultimo will continue to curate a range of exhibitions and events in partnership with First Nations stakeholders.

6.5 Construction Management

6.5.1 Sequencing of Works to the Wran Building

The key issues relating to the construction of the Wran Building include the supporting structure, facades, and roof of the Wran Building. The sequencing of the works to the Wran Building is detailed within the structural sequencing diagrams prepared by Arup at **Appendix H**. In summary, the staging is as follows:

1. External demolition.
2. Temporary propping to vault roof and atrium roof and bridging beams to support western vault columns.
3. Demolition and excavation under western vault columns and the construction of new foundations and columns.
4. New foundations and ground floor structure at the Harris Street extension.
5. Removal of concrete roof slab elements from the upper level of the Wran Building for the reuse in the Harris Street extension.
6. Construction of new roof extension at Harris Street and the demolition of the Wran Building structures between the vault and the atrium.
7. Erection of new structures between the vault and the atrium.
8. Removal of temporary propping.
9. Partial demolition of exhibition floor and the supporting structure under the vault, and construction of a new basement slab on ground.
10. Construction of new exhibition floor comprising a new beam and slab.
11. Partial demolition of floors in the atrium and construction of new floors and strengthening of columns as required.

The detailed demolition works involve some elements within the vault and atrium, and excavation in some areas as per the diagrams in **Appendix H**. This includes:

- Demolition of existing structural columns within the Wran Building, to be replaced by a new diaphragm that will transfer the lateral load required.
- Removal of external roof cladding (Stage 1).
- Demolition of existing Harris Street colonnade (Stage 1).
- The demolition and excavation under the western vault columns to accommodate the construction of new foundations and columns (Stage 3).
- Demolition of the concrete structures that currently connect the vault and atrium, to accommodate new structure between vault and atrium (Stage 6 and Stage 7).
- Partial demolition of the exhibition floor and supporting structure under the vault, and the construction of a new basement slab on the ground (Stage 9).

- Partial demolition of floors in atrium to accommodate construction of new floors and column strengthening as required (Stage 11).

Further detail is provided at **Appendix H**. This sequencing has been developed to demonstrate one possible solution to the construction of the proposed development, however, approval for **Appendix H** is not sought and is provided to inform assessment only. Other sequences or methodologies may be employed by the appointed contractor to achieve the design intent.

6.6 Economic, environmental and social impacts

6.6.1 Views and Visual Impact

An Amended Visual Impact Assessment (VIA) has been provided by Ethos Urban and is provided at **Appendix P**, which considers the visual effects of the proposal as amended, whilst reaching conclusions in respect of views and visual impact that are generally consistent with those set out in the exhibited EIS, namely that these impacts are limited and acceptable within the context of the site. Observations in the submissions have been made regarding the potential reduction of views to the Wran Building resulting from the proposed built form at the corner of Macarthur and Harris Street. It is recognised that the proposed building will change the views along Harris Street. However, it is noted that views to the Wran Building along Macarthur Street are currently obscured by the large street wall such that the proposed works represent an improvement at this location. In addition, the New Building also provides a series of glazed permeable openings which create view lines between Harris Street, the internal courtyard and the Switch House.

The updated visual analysis includes the proposed materiality for the alterations and additions to the Wran Building and the introduction of the New Building. It shows the existing development and the proposed development. In terms of likely future development this is assessed as consistent with the 'proposed' development, because there are no known significant redevelopments in close proximity to the site which would change the views shown in the proposed, noting the south of the site is a heritage conservation area and the north of the site is the Ian Thorpe public pool.

The Amended Design Report provides extensive justification for the view impacts proposed. They are summarised below:

- The predominant use of concrete and brick on externally visible elevations is sympathetic to that of the Engine House, Boiler House and Switch House. The use of extensive areas of transparent glass facilitates visual engagement with Harris Street and breaks up visual bulk. This reduces the visual impact of the New Building and the external changes to the Wran Building by creating a consistent design language between the buildings, limiting any jarring visual impacts resulting from different, and potentially conflicting, design or building styles.
- The existing Harris Street forecourt lacks amenity and is impacted by noise and fumes from Harris Street.
- There is no soil available for trees and this area struggles to function as a pleasant outdoor space. The revitalisation seeks to create the main public outdoor space at the Goods Line Terrace.
- The existing views of the Wran Building are not as apparent in reality. The existing trees, brick walls and elevated forecourt obscure views to the Wran Building as shown in the photographs below. Refer to **Figure 2** and **Figure 3**.
- The view of the Wran Building gable ends will form a key elevation of the new Central Courtyard which is highly visible from Macarthur Street. The height of the New Building aligns with the Switch House which creates cohesive edges to the Courtyard as well as foregrounding the profile of the Wran Building.
- The New Building on the corner of Harris and Macarthur Street create a new protected courtyard which is separated from the Switch House revealing its full heritage elevation for the first time.
- As set out in the Amended HIS, the removal of non-significant external structures from the north western, western and eastern courtyards reveal views of the significant fabric of the Heritage Core buildings.



Figure 2 Existing view – Harris Street

Source: Virtual Ideas



Figure 3 Proposed view – Harris Street

Source: Virtual Ideas

6.6.2 Biodiversity impacts

The proposed development is within the Sydney Harbour Catchment under the mapping for the purposes of Chapter 6 of the *State Environmental Planning Policy (Biodiversity and Conservation) 2021* (BC SEPP).

The proposed development addresses the controls for development within the Sydney Harbour Catchment as follows:

- **Water quality and quantity:** As set out in the EIS, the site is not located within a close distance of the foreshore, and therefore is not anticipated that the development will have any impact on water quality and quantity of waterways, waterbodies or the quality of the water table. As set out in the EIS, the proposed works will have no impact on stormwater flows or any downstream impacts, given there is no effective change in impermeable areas from the existing scheme. The proposed stormwater minor system will be designed to convey the 5% annual exceedance probability (AEP) (1 in 20 years) flows, and the major system will be designed to convey the 1% AEP (1 in 100 years) flows in accordance with the City of Sydney Stormwater design requirements. Further, Sydney Water has confirmed that there is no on-site stormwater detention (OSD) required or any restriction on stormwater discharge required for the development site. A

The cumulative environmental impact of the development on the Sydney Harbour Catchment is therefore limited, given there are no downstream impacts resulting from the stormwater works, or overall works on the site. The proposed development will not have any significant impact on the groundwater condition on the site, given the stormwater management controls proposed will largely retain the existing arrangement and amount of impervious area.

For the above reasons, the proposed development ensures that:

- the effect on the quality of water entering the Sydney Harbour Catchment will be as close as possible to neutral or beneficial; and
 - the impact on water flow in the Sydney Harbour Catchment will be minimised.
- **Aquatic ecology:** The considerations in respect of aquatic ecology are as follows:
 - The proposed development will not have a direct, indirect or cumulative adverse impact on terrestrial, aquatic or migratory animals or vegetation which is reinforced by the current lack of natural features on the site;
 - There are no aquatic reserves within site and hence no direct, indirect or cumulative adverse impacts on aquatic reserves;
 - The development does not involve the clearing of riparian vegetation;
 - As set out above, there are no natural waterbodies in proximity of the site; and
 - There are no applicable wetlands or rainforests areas within the site.
 - **Flooding:** As set out in the Stormwater and Flooding Report at Appendix O of the EIS, the proposed development will not have an adverse impact on the natural recession of floodwaters into wetlands and other riverine ecosystems, there being no such natural elements in proximity of the site. Similarly, the proposed development, in the event of a flood, will not result in a release of pollutants that may have an adverse impact on the water quality of a natural waterbody.
 - **Recreation and public access:** As set out above, the proposed development is not located near natural waterbodies for recreational purposes and therefore maintenance of public access to and from such waterbodies is maintained given there is no change proposed.
 - **Total catchment management:** The proposed development will not have an adverse environmental impact on any adjacent or downstream local government areas.

6.6.3 Climate Change

As set out in the EIS and the ESD Report in Appendix BB of the EIS, a series of measures are being implemented to minimise the use of on-site fossil fuels including through the design of the proposed works; the incorporation

of materials with higher thermal properties such as brick; energy efficient lighting choices; use of an energy metering and monitoring system and a commitment to a 5 star Greenstar Rating for the entirety of the site.

The old steam engine within the museum's collection, has a boiler producing steam which is powered by gas. The exhibit is operated intermittently rather than constantly. The balance of the museum's electricity generation is 100% renewable energy procured from the grid, with offsets for the gas powered exhibit and refrigerant leakage.

Specifically in relation to the gas powered boiler, there is sufficient space for the infrastructure to enable the museum to not use on-site fossil fuels after 1 January 2035.

The proposed development has been designed to enable the installation of roof top PV on new built form where it will not have an unacceptable heritage impact, and also to enable provision for battery connection to be installed to allow future connection of electrical storage. The proposed works have been amended to not include the installation of solar panels on the roof of the Wran Building and the New Building.

6.6.4 Flooding

Further to **Section 6.6.2**, an Amended Flood Study prepared in response to the submissions is at **Appendix X**

The Amended Flood Study the TURFLOW model utilised for the Darling Harbor Catchment Flood Study has been utilised to undertake further flood modelling for the proposal. Further, a MUSIC model for the site has been updated to address the agency comments made. Refer to **Appendix X** for detailed modelling.

For the reasons set out previously in the EIS (including Appendix O to the EIS), the proposed development is compatible with the flood function and behaviour of the land. It will not adversely affect flood behaviour in a way that results in detrimental increases in the potential flood affection of other development or properties.

As set out in the Flood Emergency Response under Appendix O of the EIS, the proposed development will not adversely affect the safe occupation and efficient evacuation of people, or exceed the capacity of existing evacuation routes for the surrounding area in the event of a flood. The proposed development includes mitigation to limit flows from the site to existing levels so that the potential for adverse flood impacts is low. The measures set out in Appendix O of the EIS have been incorporated into the proposal to appropriately manage risk to life in the event of a flood.

For the reasons set out in **Section 6.6.2**, and in particular given the location of the site, the proposed development will not affect the environment or cause avoidable erosion, siltation, destruction of riparian vegetation or a reduction in the stability of river banks or watercourses.

Appendix O of the EIS also sets out the impact of the development on projected changes to flood behaviour as a result of climate change. It concludes that there is no material increase in the flow draining from the site under a climate change scenario, compared with the present-day scenario.

6.6.5 Traffic, transport and accessibility

Further to **Section 6.3.3** above, the proposed development provides for accessibility and minimises potential impacts in respect of traffic safety, road congestion and parking as follows:

- The site has strong public transport links and accessibility and as a result, public transport is the encouraged mode of transport to access the Powerhouse Museum, as outlined in the Green Travel Plan (EIS Appendix H). By reducing the amount of parking onsite, the proposed design maximises the amount of public open space and reduces car generate traffic to the Ultimo precinct and its surrounds.
- No new on-site parking is proposed, and as a result, all visitors will be required to find alternative parking, or utilise alternate modes of transport to access the site.
- Loading to and from the site is contained via a new loading dock accessed from Macarthur Street. This will remove the need for vehicles to drive through the public domain and park adjacent to the Harwood Building, as is currently undertaken. Loading of oversized items that cannot be accommodated in the loading dock will be undertaken outside of hours and is estimated to only occur approximately 1-2 times a year.
- The original Traffic Impact Assessment (EIS Appendix H) undertook an assessment of any potential impacts to the road network associated with increased visitation to the site. The assessment concluded that the proposal will not have adverse impacts on the Ultimo precinct or its surrounding road network. Additional vehicle movements during the weekday morning peak of 8am-9am (+16 vehicles) and weekday evening peak of

5pm-6pm (+61 vehicles) are minimal within the context of existing road network capacity and vehicle movements and will not result in any change to the level of service within the existing road network.

- The original Traffic Impact Assessment (EIS Appendix H) notes that the expected change to traffic generation as a result of the proposed works is minimal, given the works will not significantly alter the operation of the museum. As a result, it is not anticipated that the existing performance of the surrounding intersections will be impacted. It is noted that TfNSW, as the roads authority of the surrounding intersections, did not have any comments on their existing or future performance.

It is noted that further responses to the submissions raised relating to traffic and transport are addressed in the Detailed Response to Submissions Table at **Appendix D**.

6.7 Other

6.7.1 Acid Sulfate Soils

A Remedial Action Plan (RAP) has been prepared by JBS&G and is provided at **Appendix R** to provide clarification of the site's identification as Class 5 on the Acid Sulfate Soils Map. As detailed in Section 2.8 of the RAP, a review of the 1:25 000 scale Botany River Acid Sulfate Soil (ASS) Risk Map (DLWC 199711) indicated that the site is located within an area of 'no known occurrence' of ASS materials. Further, the RAP provided further detailed topographic information in Section 2.4 of the EIS.

6.7.2 Contamination

The RAP reinforces that in the context of the proposed development, the site will be suitable for the development after remediation works in accordance with the RAP. Refer to the Remediation Action Plan at **Appendix R**.

6.7.3 Infrastructure delivery and staging plan

Further to **Section 4.0** the site is suitable for the development given the existing utility infrastructure within the site for the operation of the museum including the air conditioning system which relies upon the water system and manifold of the former power station, existing electricity service and potable water supply.

For any required augmentation of existing utility infrastructure within the site to service the New Building or other works within the Powerhouse Museum Complex, the infrastructure staging and delivery plan involves sequencing delivery of services during other construction works on the site. All delivery of infrastructure and services will be coordinated with other approval bodies where applicable. Any augmentation of existing services within the site will be funded as part of the project works. No augmentation of existing infrastructure or services outside of the site is envisaged other than road works along Macarthur Street to facilitate the loading dock.

7.0 Updated Project Justification

This section provides an updated justification for and evaluation of the project as a whole, incorporating any relevant issues raised in submissions and the applicant's response to these issues.

Any design changes or assessments undertaken are in response to issues raised in submissions, the SHR Listing 2024 of the Powerhouse Museum Complex or further design development and have not increased the impact of development. The design changes have adequately responded to the issues raised and remain generally consistent with that of the exhibited EIS. As such, the justification for the project as previously outlined in the EIS is reiterated and strengthened through the presented responses which comprise meaningful amendments to the proposal.

Furthermore, the proposal as set out in this Submissions and Amendment Report reinforces the findings of the considerations of alternatives set out in the EIS. In particular, the options of 'Do Nothing' (Option 1) and 'Refurbish Existing' (Option 3) are not feasible when consideration is given to the objectives of the development as set out in Section 1.4 of the EIS and the further assessment provided in this report.

This is further reinforced by the Amended HIS which sets out that from a heritage perspective the 'Do Nothing' alternative would forgo the opportunity to undertake works to the Heritage Core buildings which will have a positive heritage impact on the heritage significance of those buildings in the form of removal of unsympathetic, non-significant fabric that obstructs current views to and from significant heritage fabric both internally and externally as set out in the Amended HIS.

Furthermore, the Amended HIS sets out in detail why the deteriorated fabric of the Wran Building, which is described in the Architectural Statement as 'not having stood the test of time', would not be replaced with like for like fabric. The Amended HIS reasons include that such refurbishment would forgo the opportunity to address:

- the heritage impact of non-significant fabric of the Wran Building on the Heritage Core buildings. In particular, upon the Ultimo Post Office and northwestern elevation of the Switch House;
- the lack of inclusiveness of First Nations people as part of the c1988 works and the issue of celebrating Bicentennial buildings in the absence of recognising the impact of colonialisation on First Nations people;
- the lack of longevity and sustainability attributes in the external fabric of the Wran Building compared with the lifespan of the predominantly brick fabric of the Heritage Core buildings;
- the lack of views to the internal and external elements of heritage significance within the Powerhouse Museum Complex; and
- the lack of access to the Powerhouse Museum Complex, and activation along Harris Street, Macarthur Street and the Goods Line. Option 3 (and Option1) would also forgo the opportunity to celebrate and interpret all the layer's of the site's heritage including the historic, associative, technical and aesthetic, social, cultural and spiritual significance of the Powerhouse Museum Complex as proposed under the Powerhouse Museum Revitalisation.

7.1 Ecologically Sustainable Development

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

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

An analysis of these principles follows.

7.1.1 Precautionary Principle

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

This Submissions and Amendment Report has not identified any serious threat of irreversible damage to the environment and therefore the precautionary principle is not relevant to the project. The proposal (as amended) will deliver a high standard of ESD outcomes and initiatives at the site, as described above (and in the EIS), and will minimise environmental impacts in areas of energy, water, and materials efficiency.

Proactive measures to prevent environmental degradation have been included within the design, construction and operation phases of the proposed Powerhouse revitalisation.

The contractor will implement environmental management plans during the construction phase and operational procedures of the Powerhouse will actively pursue the relevant targets to meet the relevant mitigation measures and mitigate or minimise potential environmental risks.

7.1.2 Intergenerational Equity

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

- Delivering a highly operational precinct that contributes to the delivery of strategic State and Local Government directives for activation of visitor and night-time economies, while creating publicly accessible and open spaces to encourage the local community to engage with the precinct.
- Providing for new local employment opportunities close to public transport including approximately 200 new jobs, increasing the total number of people employed flexibly across the suite of four Powerhouse sites to 400.
- Enhancing opportunities for cultural and social interaction for residents, workers, and visitors in the local area through renewed, programmed internal museum space, and enhanced open space and pedestrian infrastructure within the site. This will positively improve daily living routines due to increased amenity and walkability.
- Delivering new/revitalised creative and learning spaces for creative, research and learning programs, providing enhanced opportunities to collaborate with schools, universities, and industry. This has the potential to improve lifelong education outcomes for students thereby supporting long-term social and economic wellbeing.
- Supporting sustainability and the transformation of Ultimo alongside Tech Central and Darling Harbour as an internationally renowned innovation precinct and cultural destination. The proposal has the potential to enhance the cultural significance and characteristics of the south-eastern CBD.
- Incorporating sustainability in the design of new built form using materials with longevity and thermal efficiency, such as the proposed brick materiality to the Wran Building and the New Building respectively.
- Recognising and appropriately considering the site's rich heritage and architectural fabric which was appropriately adapted and contributes to Powerhouse Ultimo as a vital component of the ongoing cultural life of Sydney.
- As set out in the Amended HIS, the history of the Powerhouse Museum Complex is multifaceted and the proposed development recognises the enduring Connection with Country, including through First Nations co-design; the industrial heritage of the Heritage Core buildings; the role of the Wran Building in the c1988 adaptive reuse of the site for the purposes of the museum; and the evolving needs of the museum to continue to be a museum for the applied arts, sciences and technology for current and future generations.

The proposal has integrated short and long-term social, financial, and environmental considerations so that any foreseeable impacts are not left to be addressed by future generations. Issues with potential long-term implications such as waste disposal are avoided and/or minimised through construction planning and the application of safeguards and management measures described in this Submissions and Amendment Report and the exhibited EIS and the appended technical reports, including through reuse of recycled brick on site. Works to the heritage significant spaces within the site are to be conducted in accordance with the recommendations in the Amended HIS in light of the SHR Listing 2024.

7.1.3 Conservation of Biological Diversity and Ecological Integrity

The principle of biological diversity upholds that the conservation of biological diversity and ecological integrity should be a fundamental consideration.

The project (as amended) will not have any significant effect on the biological diversity and ecological integrity of the study area. A detailed Construction Management Plan will also be in place to ensure works do not adversely affect the retained vegetation and trees on the site, including measures to protect the trees that are to be retained.

The proposed landscaping works enhance the biodiversity of the site through the choice of endemic species throughout the sites landscaped areas. The species have been chosen in collaboration with First Nations peoples' as detailed in the Landscape and Public Domain Report at **Appendix Q** and the Connecting with Country Report at **Appendix U**.

7.1.4 Improved Valuation, Pricing and Incentive Mechanisms

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

As outlined in the ESD Report submitted with the EIS, the project (as amended) will conduct life cycle cost analysis to evaluate cost effective measures to reduce on site operational carbon emissions. The proposed development has set a series of environmental goals, including in respect of the energy performance of the buildings within the Powerhouse Museum Complex, and is seeking to invest in addressing those goals now rather than maintaining the status quo in respect of the operation of the site.

7.2 Likely Impacts of Development

7.2.1 Natural and Built Environment

The proposed development (as amended) has demonstrated that the proposal adopts appropriate management strategies and will generate limited environmental impacts, due to the proposed mitigation measures and the considerate design of the development.

All potential environmental impacts are thoroughly addressed in the EIS and **Section 5.0** in response to the public submissions and the SHR Listing 2024.

7.2.2 Social and Economic

The social and economic impacts and benefits associated with the proposed development (as amended) include:

An assessment of the likely social and economic impacts of the project has been undertaken in the Social Impact Assessment (SIA) at Appendix W of the EIS, prepared in accordance with DPE's Social Impact Assessment Guideline 2021. The assessment confirms that the proposal has the potential to result in both positive and negative impacts. The identified negative impacts are primarily short-term and related to completing construction activities on the site and have informed mitigation measures discussed in Appendix D of the submitted EIS. Further mitigation measures have been prepared and are amended to this EIS at Appendix C.

The identified positive impacts range from short-term to long-term and will impact both the local area and the wider vitality and vibrancy of Sydney and NSW. In addition, the ongoing phase of the project will support an estimated 200 direct and 140 indirect FTE jobs, generating approximately \$34.4 million in value- adding to the local and regional economy annually. The estimated 400 FTE direct ongoing workers across Powerhouse sites will cause an immediate value-add to the economy of \$37.1 million annually. When considering the multiplier effect, total continued employment is estimated at 670 FTE jobs (direct and indirect), including a total value added to the economy of \$68.8 million annually.

Overall, the revitalisation of Powerhouse Ultimo will ensure positive social outcomes for the broader community subject to the implementation of the identified mitigation measures. Investment in the revitalisation of this significant national-scale public cultural facility will generate broader benefits for the associated public programming and community infrastructure, which will be widespread, significant, and long-term. A detailed assessment of the social and economic impacts was assessed in this EIS at Section 6.7.

7.2.3 Suitability of the Site

The proposed development is specific to its site. Having regard to the characteristics of the site and its location in Ultimo the proposed development (as amended) is considered suitable in that:

- Will not change the use of the site, as the project seeks to renew and enhance the existing museum (information and education facility) that has occupied this site for several decades to ensure that it remains functional and relevant to future users.

- Directly supports and aligns with the broader strategic opportunity to transform the Pyrmont Peninsula as identified in the PPPS and supports a coordinated series of investments in cultural infrastructure throughout NSW as envisaged in the Cultural Infrastructure Plan 2025+.
- Will celebrate and enhance the heritage significance of the site, as demonstrated in **Section 6.4**.
- Has been designed to be developed in a manner that minimises impacts on its surroundings and has been designed to in some respects improve the natural, historical, and environmental qualities of the site.
- Will result in only minor environmental impacts that can be appropriately managed and mitigated.

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

- It is zoned MU1 Mixed Use under the Sydney LEP 2012, which permits the development of 'information and education facilities', and the project will meet the objectives for this land use zone for the reasons set out in the EIS and **Appendix V** to this report.
- It is well serviced by existing and future transport arrangements comprising walking and cycling routes including The Goods Line, light rail, heavy rail, and buses, and future Metro Station at Pyrmont as part of Sydney Metro West.
- It is of sufficient size to accommodate new built form and public domain areas.
- It has existing utility infrastructure connections that have capacity, or which can be readily augmented to provide capacity for, the servicing requirements of the Powerhouse Ultimo Revitalisation project.
- The site is located on the CBD fringe and therefore is ideally positioned to host a 'destination' development that contributes to the visitor economy and day-to-night character of the Sydney CBD

7.3 Public Interest

The proposed development (as amended) provides additional direct benefits that the existing development does not accommodate and realises the project objective to renew Powerhouse Ultimo and provide a world-class contemporary museum and is considered to be in the public interest as it:

- Has the potential to deliver significant social, cultural and economic benefits to the local and greater Sydney and NSW community by providing new and enhanced cultural infrastructure that will support creative, research and learning programs, providing enhanced opportunities to collaborate with schools, universities, and industry. This has the potential to improve lifelong education outcomes for students, thereby supporting long-term social and economic well-being.
- Represents the economic and orderly development of land that will retain the existing core use of the site and renew and enhance the existing facilities, providing an additional approximate 200 jobs.
- Contributes to the visitor and night-time economies and activates the site and surrounds, providing new cultural and entertainment opportunities during both day and night and diversifying the local night-time economy.
- Demonstrates design excellence, ensuring a high-quality built form and landscape design that achieves design excellence and contributes to the architecture of Sydney.
- Provides for the conservation and enhancement of the Heritage Core buildings within the Powerhouse Museum Complex; the retention of the arched roof form over Vault 1 of the Wran Building, and interpretation of the arched roof form over Vault 2, as well as retention of the general scale of the Wran Building and the introduction of the New Building in a manner that is sympathetic to the heritage significance of the Powerhouse Museum Complex.
- Provides opportunities to better integrate with its surrounds including enhanced connections to The Goods Line and surrounding light rail stops to support the activation and uses of these spaces and destinations and reactivating the Harris Street along the western elevation of the site.
- Demonstrates the desire to achieve a high level of environmental performance including achieving a minimum 5 Star Green Star Rating with opportunities for 6 Star Green Star Rating elements, as well as measures that promote and support the uptake of sustainable transport options, and design considerations for addressing environmental risks and climate change.
- Continues to prioritise increased visitation by public transport, cycling and walking through providing bicycle parking, improved coordination infrastructure outside of the site, and the development of a Green Travel Plan as part of the future operation of the site.
- Will not result in any significant environmental impact that cannot be appropriately mitigated or managed through the adherence of Mitigation Measures detailed in Appendix D in the EIS and **Appendix C** of this Submissions and Amendment Report, standards of development consent and any further mitigation measures during the construction and operational phases of the development.

8.0 Conclusion

As set out in this Submissions and Amendment Report, the Applicant has reviewed each of the submissions made by members of the general public and State and local Government agencies. In response to issues raised in these submissions, as well as matters identified by the Department, the Applicant has undertaken further environmental assessment and provided clarification regarding the scope of the proposed development that is the subject of this planning application. A number of changes to the proposed development have been made in the course of responding to matters raised in the submissions, as well as a result of further project design development. This Submissions and Amendment Report has set out these matters as required under section 59(2) of the EP&A Regulation and in accordance with the DPHI's *State Significant Development Guidelines*, including *Appendix C – Preparing a Submissions Report* and *Appendix D- Preparing and Amendment Report*.

The proposal will facilitate revitalisation of Powerhouse Ultimo and provide world class museum and exhibition space, which will deliver important community wellbeing and economic benefits to a district, regional and national scale, as well as a local scale. The proposal represents a significant investment in the cultural, arts and creative industries, and the revitalisation of this significant national public cultural facility, the associated public programming and community infrastructure will be widespread, significant and long term.

The proposed amendments to the Powerhouse Ultimo Revitalisation allow for the improvement of the public domain on and around the site, allowing for improved connection to The Goods Line and surrounding precincts including Darling Square and Darling Harbour. This will redefine the entrance to the museum, improving the experience for visitors.

The Amended HIS assesses the effect of the proposed development on the heritage significance of the Powerhouse Museum Complex, and surrounding heritage items and conservation area, and concludes that the proposed development warrants approval on heritage grounds.

The environmental assessment concludes that, subject to the implementation of final mitigation measures outlined in **Appendix C**, the proposed development would not result in any unacceptable impacts and will generate a number of significant social and economic benefits for the Pyrmont Peninsula, the City of Sydney LGA as well as to the broader Powerhouse Museum visitors. Accordingly, the Department is requested to complete its assessment of the project and recommend the project be approved by the Minister for Planning and Public Spaces.