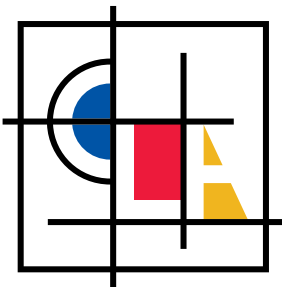


Assessment of Heritage Significance

**Ultimo Tramways
Power House Museum**

Independent Review



**CRACKNELL
&
LONERGAN**
ARCHITECTS PTY LTD

REV. D

Prepared on 21 May 2020
Prepared for Heritage NSW, Dept. of Premier & Cabinet

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Contents

1.0	Introduction	002
2.0	Historical Assessment	006
3.0	Review of Current Heritage Listing	012
4.0	Discussion of Heritage Significance	016
5.0	Assessment of Heritage Significance (NSW OEH Guidelines)	024
6.0	Assessment of Social Significance (Heritage Victoria Guidelines)	042
7.0	Recommendations and Management Policies	044
8.0	Conclusion	048
9.0	Appendix A: Curriculum Vitae of Peter Lonergan	050
10.0	Appendix B: Archival Drawings - 1988 Additions (MAAS Collection)	051
11.0	Appendix C: Original 1988 Award Citation - Powerhouse Museum	058
12.0	Appendix D: Andrew Metcalf, Architecture in Transition (Extract)	064
13.0	Appendix E: Conservation Management Plan 2003 (Extracts)	066
14.0	Appendix F: State Heritage Inventory Datasheet (Ultimo Powerhouse)	085

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Ultimo Tramways
Power House Museum

Prepared For:

Heritage NSW, Dept. of Premier & Cabinet

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Updated By: HC

1.1 Executive Summary

Cracknell & Lonergan Architects have been requested to provide an independent assessment of the proposed State Listing of the structures at the Ultimo Powerhouse Site encompassing the Powerhouse Museum components in an application submitted by the National Trust.

In our review of the proposed listing, this office has had regard to the scope of assessment supplied in a brief by Heritage NSW, Department of Premier and Cabinet, relevant desktop historical and archival materials from primary and secondary sources, a physical site investigation of key exterior and interior spaces as well as a review of the inclusion and exclusion guidelines in the assessment of heritage criterion for NSW and Victoria.

Having reviewed the extensive literature around the existing local listing of the Ultimo Powerhouse Station (which expressly excludes the powerhouse additions of 1988), as well as the 1980s additions to the site, it is the conclusion of this report that the subject site does not warrant a heritage listing at the NSW State level with regard to the 1988 Architectural Additions and the social significance of the site more broadly. This conclusion has been reached for the following reasons:

- The existing Ultimo Powerhouse buildings have been adversely impacted by substantial alterations and additions which have resulted in removal/non-restoration of original fabric (such as machinery and chimney stacks), thus reducing its overall integrity, and reducing the ability for interpretation as a powerhouse.
- The 1980s Additions, primarily confined to the Wran building, whilst providing some merit and architectural interest and clearly of a particular post-modernist architectural period, does not, in and of itself meet the criterion for listing at a state level for aesthetic or technical reasons.
- The social value between the collection of the Museum of Applied Arts and Sciences and the subject site can be dated only to 1988, with the opening of the museum. The history and growth of the collection is not directly and exclusively linked to the site and its connection to the site is not to a degree of significance which warrants a listing at the State Level.
- The social value between the community of the MAAS, including curators, exhibitors, artists, visitors, whilst important at a local community level, is arguably more directly linked to the social and cultural connection of the collection (as a form of intangible heritage) rather than to the subject site specifically.

In concluding that the subject site does not meet the threshold for listing at a State Level and does not meet the threshold for including the 1988 Wran Buildings to the listing, our report provides recommendations on the future management. In summary, our recommendations are:

- The site's heritage values are appropriately managed through the partial listing on the City of Sydney LEP.
- Any future management of the site should have regard to the original Conservation Management Plan prepared by Architectural Projects Pty Ltd in 2003, and indeed an updated Conservation Management Plan should be prepared by suitably qualified heritage experts prior to any substantial alterations and additions to the site.
- The Statement of Significance for the existing Local Listing should be updated to reflect the buildings listed, with additional historic details and information provided in reference to the original CMP and in the updated statement supplied in this report.
- Opportunities for further interpretation in accordance with the original CMP should be considered and in particular, re-emphasis of the 'powerhouse' history of the site should be considered and integrated into future developments of the site.
- Opportunities for future adaptive reuse should be considered for any proposed future development on the site and a publicly accessible socio-cultural presence should be maintained and enhanced on the site.



Peter Lonergan

Director
Cracknell Lonergan Architects Pty Limited
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1.2 Scope of Assessment

The proposed scope of this report is:

- To provide an assessment of the 1988 Architectural additions
- To provide an assessment of the social significance of the site as the location of the MAAS, and significance to the community generally

1.3 Research Methodology

The research methodology which informs the structure of this report is as follows:

Desktop Historical Study

A desktop historical study of the timeline of the site and its association with the MAAS is conducted using available archival information.

Review of Current Heritage Listing

A review and identification of the key criterion which informs the current listing of the site and identification of fabric which forms the current heritage listing.

Discussion of Heritage Significance

A preliminary discussion of the heritage significance which identifies the context and history of the MAAS, as well as a comparative study of its architectural merit and identification of potential reasons for listing the site at a State Heritage level.

Assessment of NSW Criteria - Inclusions & Exclusions

An assessment of social significance against the existing relevant Heritage NSW criteria for inclusion and exclusion is conducted

Assessment of Victorian Criteria

An additional assessment is carried out using the recently revised Social Significance Criteria developed by Heritage Victoria.

1.4 Research Methodology

In accordance with instruction from the Heritage NSW, the following report has had regard to the Social Significance Criteria developed by Heritage Victoria in its review of the assessment for the Ultimo Tramways Power House.

Step 1: Basic Test of Social Value

Attachment - A community group (or groups) has a demonstrable attachment to a place/ object.

Nature of the Community - Is the community group (or groups) big/small, united/ discordant, formal/informal, geographical-based/online etc?

Time-Depth - The attachment between the place and the community group (or groups) can be demonstrated to have existed for a period of time - typically a generation (c. 25 years), although there exists the potential for community attachment to be of more recent origin and provoked by a sense of loss or change, including change of use.

The place is likely to be of social value.

Step 2: Basic Test for Determining significance to New South Wales

Resonance - The social value of a place exerts an influence that resonates in the New South Wales context. For social significance to satisfy Criterion G it will be either associated with, or representative of, a story or theme that forms part of Victoria's identity. Places associated with emergent themes/ stories have the potential to satisfy this test.

Step 3: Exclusion guidelines

Association is of local significance only - The attachment to the place/object does not have the ability to resonate beyond a particular local community.

Attachment does not relate to the current generation - There is inadequate evidence to demonstrate that attachment for the place/object is felt by a present community or communities. In these circumstances, the place/object may be of significance under Criterion A.

1.5 Authorship

The following document has been authored and prepared by Peter Lonergan, Director of Cracknell & Lonergan Architects Pty Ltd. The Curriculum Vitae of Peter Lonergan is attached as an appendix to this report. Research assistance has been compiled by Ms. Julie Cracknell, Director and Mr. Hugo Chan, Architect & Associate, Practice Management.

2.1 Historical Overview of the Museum of Applied Arts & Sciences

The development of the Museum of Applied Arts and Sciences is intrinsically woven to the foundation of the Australian nation. Commenced as the remnants from the objects of the 1879 Garden Palace, its collection has expanded to include artefacts across science, transport, fashion, design, technology to marry the idea of art and technology. Through its broad brief, the collection has expanded as it has moved from site to site across Sydney, until it spread across different campuses, today occupying the Ultimo site, the Castle Hill discovery centre and the Sydney Observatory. Broadly, its history of development has been very quickly summarised as follows:

1879

The Garden Palace (Sydney International Exhibition)

1883

Former Agricultural Hall in The Domain known as the Technological, Industrial + Sanitary Museum

1893

Museum of Applied Arts and Sciences adjacent to Sydney Technical College (The Muse) and now Ultimo Tafe

1962

Collection arrives at the Tramsheds + Powerhouse Site for a Transport Museum

1986

Tram Shed 'Harwood Building' or Stage I Powerhouse Museum Development

1988

Adapted Powerhouse Museum from the Ultimo Powerhouse Site, Stage II of Powerhouse Museum Development Project

Whilst evidently not an exhaustive history, the short summary shows that the collection has moved as it has grown, suggesting an intangibility to specific sites, and rather, more linked to the socio-cultural history than a particular place.

2.2 Historical Overview of the Subject Site

Without wishing to re-state the established history of the site, the following summary of development of the subject site, obtained from the existing local listing is reproduced here. This report does not suggest alterations or amendments to the historical overview for the site.

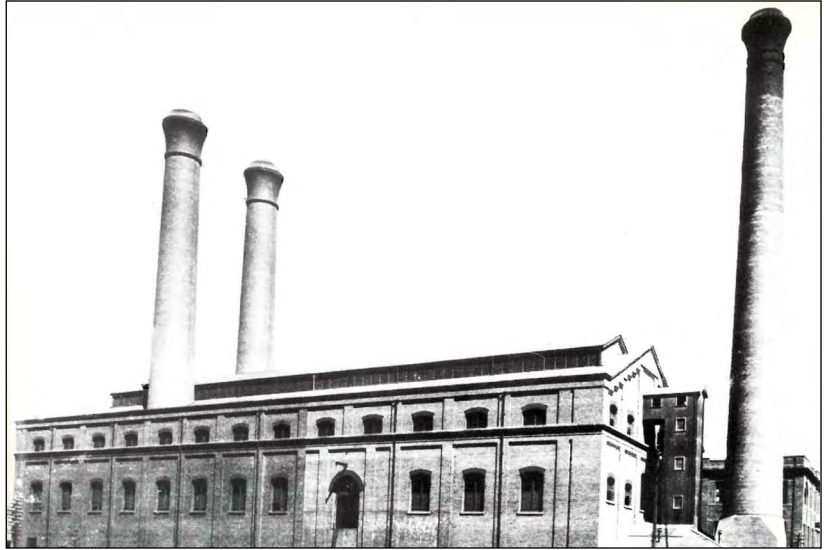
This site forms part of the land of the Gadigal people, the traditional custodians of land within the City of Sydney council boundaries. For information about the Aboriginal history of the local area see the City's Barani website: <http://www.sydneybarani.com.au/>

The first land grants were made in 1803 and 1806 to Surgeon John Harris who was granted 34 acres and then constructed and named Ultimo House in 1804. He named it Ultimo (meaning last month) as a result of a clerical error in his charge papers. There were further grants to Harris of 9 and 135 acres in 1806 and another 12 acres in 1818. He moved to his farm at Shanes Park (near St Marys) in 1821 but retained the estate and leased Ultimo House first to Edward Riley and then to Justice Stephen.

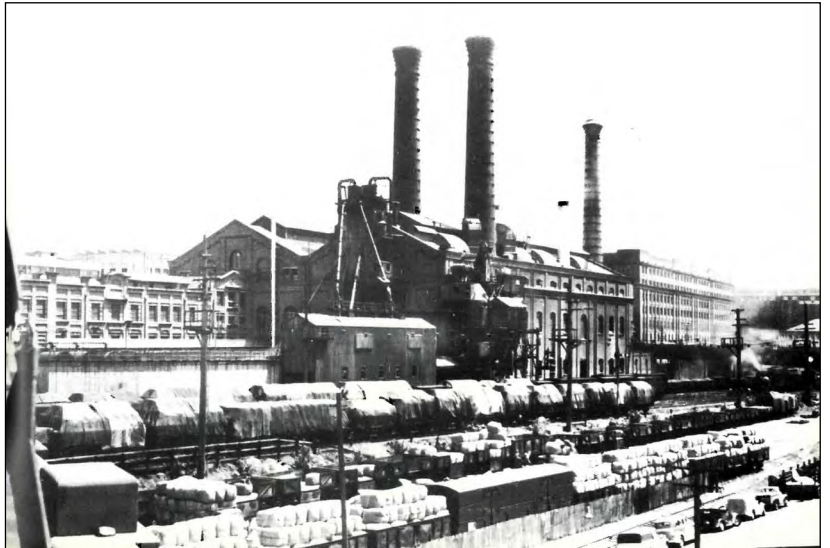
Proposed improvements along the first few miles of Parramatta Rd prompted subdivision by Harris along the Parramatta Rd and George Street frontages, and these were developed into houses, shops and public houses over the next 10 years. The remainder of the estate remained largely undeveloped and following Harris' death in 1838, legal complications prevented further subdivision until 1859. Ultimo was incorporated into the City of Sydney in 1844 and the early 1850's saw a number of major developments in Pyrmont and also in Ultimo to a lesser extent. Its close proximity to the city's expanding central business district, Brisbane Distillery port and transport facilities made it an attractive area for housing. In 1853, the Sydney Railway Company resumed 14½ acres of the Ultimo Estate for a railway line to and with a terminus at Darling Harbour. The area was further subdivided in 1860 which established major north/south streets including Pyrmont, Harris, Jones and Wattle Streets although the roads were not fully formed until 1870. The west side of the estate was dominated by quarrying activities and the remainder used for dairying paddocks. Services including water and sewer came to the area in the early 1860's and gas lighting between 1868 & 1872.

2.0 Historical Assessment

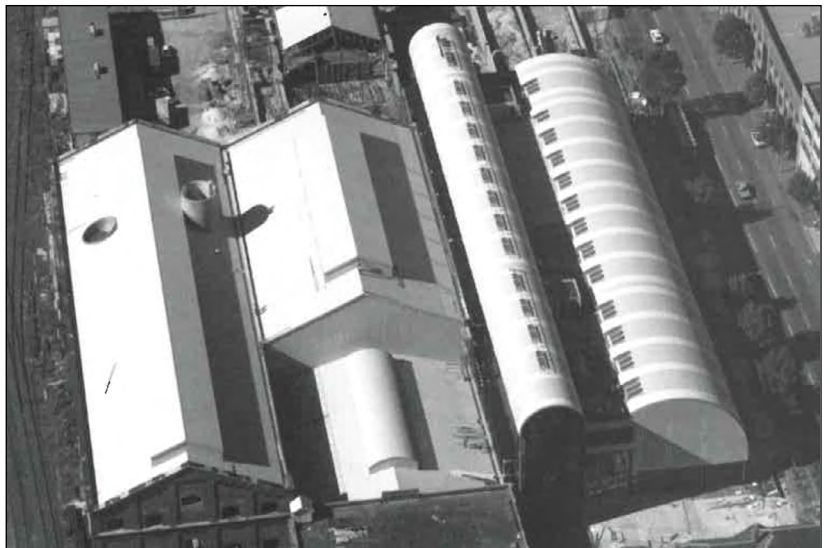
c. 1900s Exterior image of the powerhouse buildings, noting all three chimneys are intact and clear expression of the roof form which has been diminished by the 1988 adaptive reuse.



c.1900s Exterior context image, showing the powerhouse's relationship to its coal loading facilities (fabric lost), as well as its railway context, enabling clear reading of an industrial context. Significant exterior elements, including these coal facilities are no longer part of the historic fabric and there is no significant interpretation on site.



Aerial image of the 1988 adapted powerhouse structures, showing only two of three chimney openings conserved and the volume of spaces which do not bear immediate interrelationship across the site.



The population doubled during this time, and industry began to establish including Castlemaine Brewery in Quarry Street, Atlas Ironworks, and manufacturer and merchant Samuel Freeman in Harris Street. The early 1880's saw a boom in housing in the area followed by Goldsbrough Mort's woolstores in 1883 and other substantial warehouse buildings including a large grain and produce store in Allen St, Waite & Bull's woolstore in 1893, Winchcombe Carson No.1 in 1895 (in Wattle St) and Farmers and Graziers (between Wattle and Jones Sts). In 1892 the Ultimo Technical College opened in Mary Ann St. By the early 1880's Union Square was established as a commercial centre and by 1900 most residential development had ceased by which time the Pyrmont and Ultimo Power Houses had opened and the new Pyrmont Bridge had been constructed. Most development in the 20th century was commercial and industrial and included additional woolstores, Pyrmont Incinerator (1934), flour mills (1940), additional power stations (1955) and the Government Printing Office (1960's).

The building was constructed in 1899 and ceased being used as a powerhouse in 1963 with the phasing out of Sydney trams at that time. It was adaptively re-used to become part of the Powerhouse Museum from 1985. The Powerhouse Museum (formerly the Museum of Applied Arts & Sciences) opened to the public in 1988.

2.3 Recent Site Developments

Since the completion of the building in 1988, it has in fact continued to undergo multiple and systematic changes, owing perhaps in part to the significant and unanticipated changes in exhibition design and visitor access and circulation needs. Major commissions, most notably a concept design by eminent Japanese architect Shigeru Ban, sought to enclose the Harris Street plaza under a new tensile canopy, remains unrealised.

In reviewing the City of Sydney's Development Application tracking, a brief overview of the changes can be summarised as follows:

D/2011/242

Refurbishment of existing buildings including works to Harris Street forecourt, new stairs along the Harris and Arthur Street frontage, works to Switch House facade and south face of Wran building, relocation of main entry and internal modifications including relocation of cafe/retail shop to Switch House.

Est. \$4,356,000

D/2012/1863

Public domain works to the Ultimo Pedestrian Network Stage 2 known as the "The Goods Line" (TGL), to create a pedestrian and cycle link and space for recreational, social and cultural activities. Ultimo Pedestrian Network Stage 2 will run from the rail underbridge over Ultimo Road to Hay Street, parallel to Darling Drive.

Est. \$8,872,887

D/2014/1064

Demolition of an existing pedestrian bridge, removal of utility services, upgrades to surfaces and installation of a glass balustrade.

Est. \$63,000

D/2014/519

Alterations to The Goods Line (Ultimo Pedestrian Network).

Est. \$388,031

D/2014/628

Internal alterations to level 1 of the Wran Building (Powerhouse Museum) to demolish load bearing walls within the existing toilet block.

Est. \$120,000

2.0 Historical Assessment

c.1988 Original Powerhouse Museum entry facade, noting the 'follies' of structure which graced the Harris Street frontage and playful use of colours and materials reminiscent of the Post-Modernist architectural style. Many of these elements have been stripped back, suggesting that the ideas which brought the adaptation to fruition have not withstood the test of time.



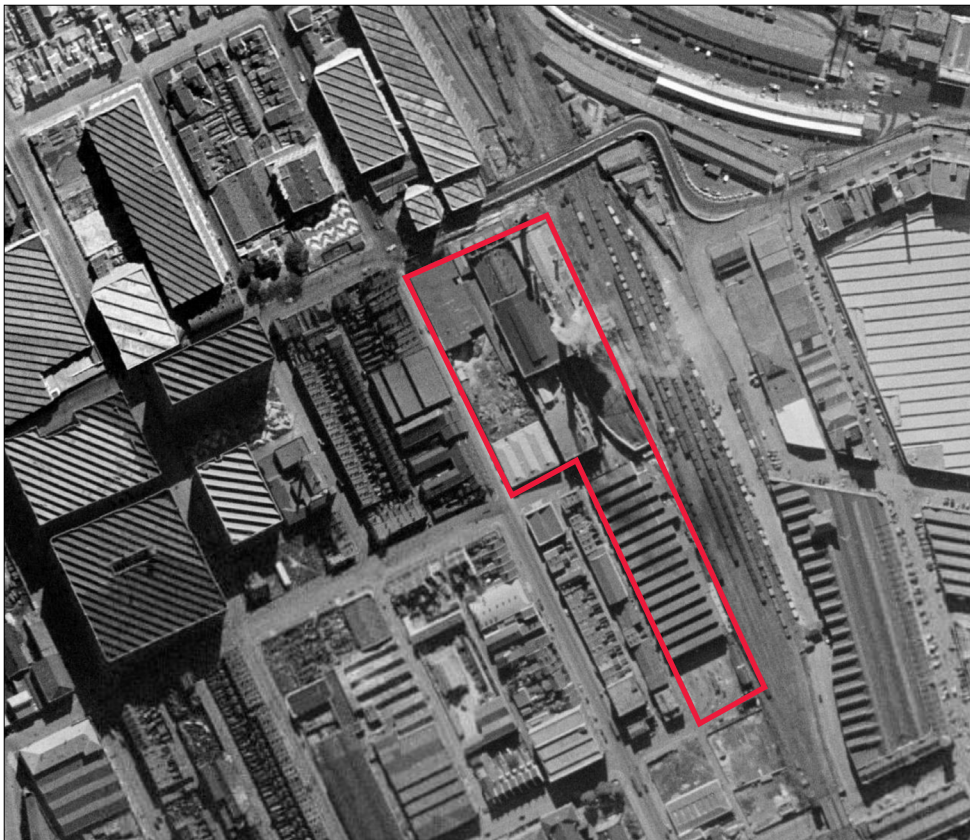
c.2018 Image of the paired back building facade, with the entry shifted to the side and the experience of the museum altered. The building does not visually appear to have 'aged well' and its revised entry sequence and experience differs greatly from the original architectural intent for the public space and the new galleries.



2.0 Historical Assessment



c.2018 Aerial Imagery
(Source: SIX Maps NSW)

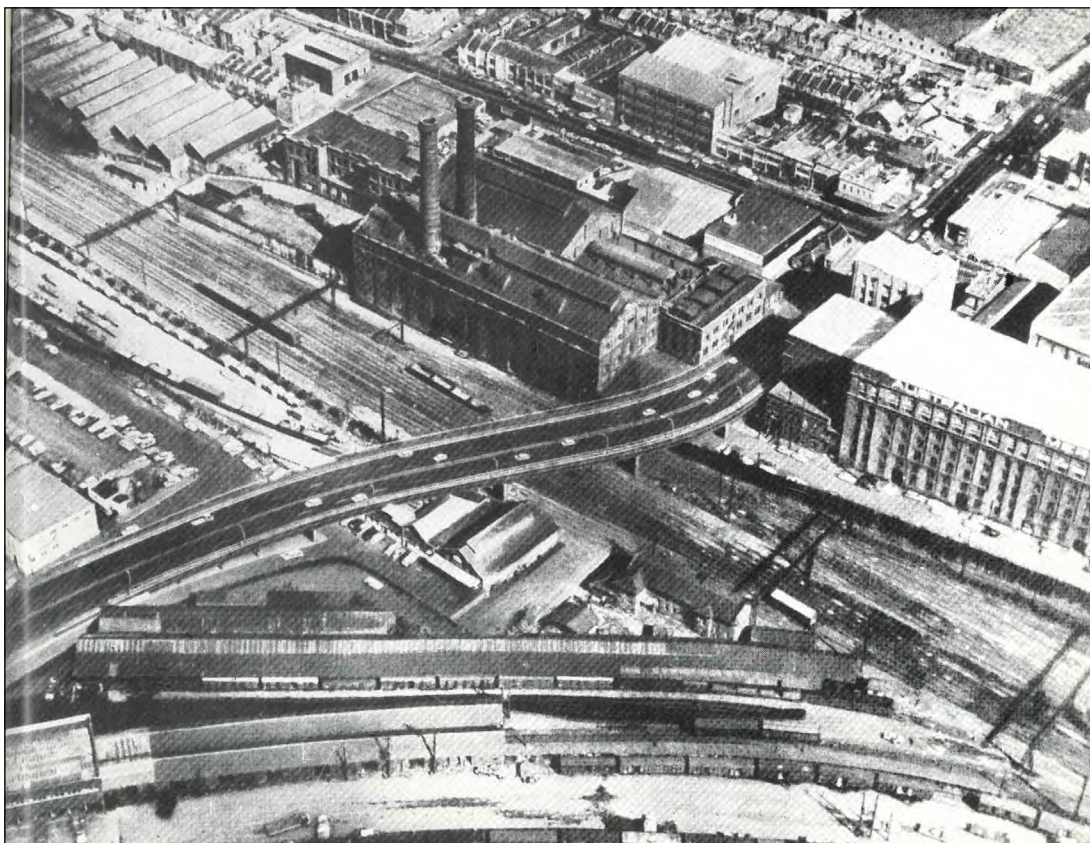


c1942 Aerial Imagery
(Source: SIX Maps NSW)

2.0 Historical Assessment



c.200s Aerial Imagery
(Source: SIX Maps NSW)



c.1900s Aerial Imagery
(Source: SIX Maps NSW)

3.0 Review of Current Heritage Listing

In recognising that there is a pre-existing local heritage listing on the subject site, it is necessary to provide commentary on the listing, identifying the reasons for which it passes the threshold for particular criteria and provide assessment as to the potential for pushing the threshold to the state level.

The subsequent section identifies the four criterion for which the site is currently listed, noting in particular that the 1988 additions have been expressly excluded from the LEP Heritage Map. Furthermore, it is also noted that the National Trust has not sought to use criterion (g), representational significance in its nomination, even though the site is currently listed under this particular criteria.

With reference to the LEP Map from City of Sydney located below, it is noted that the site is covered by listings I2031 and I2030, but the Wran Building (dotted in Blue outline) is not part of the listing for the site.



3.0 Review of Current Heritage Listing

Criterion (a) - Historic Significance
Description
<p>An item has strong or special association with the life or works of a person, or group of persons, of importance in NSW's cultural or natural history (State significance)</p> <p>OR</p> <p>An item has strong or special association with the life or works of a person, or groups of persons, of importance in the cultural or natural history of the local area. (Local significance)</p>
Existing Local Heritage Item Listing
<ul style="list-style-type: none"> • The building has historic significance as it dates from the key period of development of the Pyrmont/Ultimo power grid and the subdivision of grand estates into residential and commercial development. • The former Ultimo Power House, dating from 1899, is historically significant for being the original generating station for the supply of electricity to power the tramway network throughout Sydney. It was also one of the largest and most important generating stations in NSW for many years and has associations with the electrification of the suburban railway system and with the general reticulation of electrical power. It was the first place where turbine driven alternators were tried in Australia, in 1905. It was amongst the largest of any generating stations operating in Australia with Ultimo and the White Bay Power being purpose built for the Railway and Tramways Department generating stations. The abandoned status of the power station and tramway system provided a potential to reveal a past transport system which ceased in favour of motor buses, which was underway from the 1950s.
Cracknell Lonergan Architects Commentary
<ul style="list-style-type: none"> • It is agreed that the turn of the century buildings on the site, encompasses a diverse range of architectures which, as a collection, exhibits the historic significance from the key period of the Pyrmont/Ultimo industrial development of the 1890s onwards. • It is agreed that The Ultimo Powerhouse from 1899 is a significant structure which represents the development of electricity and tramway infrastructure • It is noted that the existing listing of the site DOES NOT encompass or identify the conversion of the site into the MAAS as being a matter of historical significance. • It is noted that the ability for interpretation of historic significance has been slightly compromised by the removal of original fabric, in particular, the chimneys and internal turbine and artefacts, affecting the ability to make a direct correlation between the site and its industrial past. • It is noted that substantial changes have taken place within the locality, including removal of rail and tramlines, as well as contemporary additions around the building, affecting the ability to interpret the location, route and how this powerhouse structure aided the electrification of the railway and tram system in Sydney. An exception perhaps is the recently opened Goods Line which may serve to provide some interpretation and wider locality linkage between the site and its history.

3.0 Review of Current Heritage Listing

Criterion (b) - Associative Significance

Description

An item has strong or special association with the life or works of a person, or group of persons, of importance in NSW's cultural or natural history (State significance)

OR

An item has strong or special association with the life or works of a person, or groups of persons, of importance in the cultural or natural history of the local area. (Local significance)

Existing Local Heritage Item Listing

- The building is associated with the adjacent former Ultimo Tram Depot, nearby former Pyrmont Power Stations and NSW Government Architect

Cracknell Lonergan Architects Commentary

- It is acknowledged that the site has associations with the adjacent Ultimo Tram Depot, the nearby Pyrmont Power Station.
- It is acknowledged that the site has association with the NSW Government Architect for its original construction
- It is questionable as to whether the associations are tangible enough and legible to a general public audience which would warrant a listing exclusively under this criteria.
- It is questionable as to whether listing under this criteria is substantial as there is limited opportunity for interpretation of the fabric and its relationship to the listed surroundings, particularly due to the demolition of key and significant fabric.

Criterion (c) - Aesthetic Significance

Description

An item is important in demonstrating aesthetic characteristics and/or technical achievement in NSW (State significance)

OR

An item is important in demonstrating aesthetic characteristics and/or technical achievement in the local area (Local significance)

Existing Local Heritage Item Listing

- It represents a good example of a Federation industrial building which makes a positive contribution to the streetscape. The subsequent alterations undertaken for the building's conversion to the Powerhouse Museum is significant both for its successful re-use of the buildings and as a modern design, awarded the Sulman medal.
- The building has technical significance as a major power source for the Sydney tram network and adjacent Ultimo former tram sheds.

Cracknell Lonergan Architects Commentary

- It is acknowledged that there is potential for the Federation industrial buildings to make a positive contribution to the Harris Street streetscape. The construction of the 1980s and later additions have disguised and eroded the ability for users to enjoy the frontage from Harris Street. Some interpretation of the original fabric is possible along the Goods Line and from the Powerhouse Museum Light Rail station.
- Demolition and substantial alterations to the original fabric to house the MAAS collection has diminished the ability for the aesthetics of the original powerhouse to be interpreted. In particular demolition and non-interpretation of the chimney structures diminishes its landmark status and reduces the ability to visualise the 'powerhouse' structure.
- The 1988 Wran Building and additions, whilst award winning have been subject to unsympathetic changes which have diminished the original architectural intent and reduced the ability to interpret the building as a key work of the post-modernist period. The follies facing the Harris Street entry, the original playful array of colours and other characteristics of the post-modernist architectural period have been demolished or lost.

Criterion (g) - Representational Significance
Description
<p>An item is important in demonstrating the principal characteristics of a class of NSW's Cultural or Natural Places/ Environments (State significance);</p> <p>OR</p> <p>An item is important in demonstrating the principal characteristics of a class of the area's Cultural or Natural Places/ Environments (Local Significance)</p>
Existing Local Heritage Item Listing
<ul style="list-style-type: none"> The building is a representative example of a Federation power station building and a contemporary museum adaptation
Cracknell Lonergan Architects Commentary
<ul style="list-style-type: none"> Locally the building is representative of the Federation industrial architectural period, diminished by unsympathetic alterations and additions made in order to house the MAAS collection. In particular, there is an evident lack of interpretation of the powerhouse through the inexcusable loss of the chimney structures. Whilst adaptation of disused buildings is an important aspect of heritage conservation, the 1988 Wran building in its articulation and expression, as well as its connection to original fabric does not present a successful museum adaptation. An argument for its post-modernist expression could have been forwarded but much of this original 1988 fabric has itself been demolished and removed as it was considered too decadent for the locality.

4.0 Discussion of Heritage Significance

4.1 Connection between Site & MAAS Collection

A substantial component of the National Trust's proposal for heritage listing at the State level hinges upon the direct social connection between the MAAS Collection and the Ultimo Powerhouse site. In light of this, a broad comparative discussion on the connection between the two is necessary and important.

Firstly, it is appropriate to identify that The Powerhouse Museum comprises two distinct entities:

- The Collection of the Museum of Applied Arts and Sciences (MAAS)
- The Buildings on the site at 500 Harris Street Ultimo encompassing:
 - The Ultimo Powerhouse
 - The 1988 Wran Building Additions

4.1.1 Buildings of 500 Harris Street, Ultimo

The buildings and structures which make up the 500 Harris Street, Ultimo site comprises a diverse range of structures across various periods of architectural development. In summary, the site essentially comprise of:

The Harwood Building	c. 1899
The Tramsheds	c. 1899
The Office Building	c. 1899
The Pumphouse	c. 1899
The Engine Room	c.1899
The Turbine Hall	c.1902
The Boiler House	c.1905
The Switch House	c.1926
The Post Office	c.1901
The Wran Building	c.1988
Contemporary Additions (Various)	c.2000s

4.1.2 Collection of the MAAS

The collection, from the MAAS and the government acquired some of the best exhibits from the 1879 Sydney International Exhibition held at the Garden Palace (now part of the Royal Botanical Gardens) "b) collected for the purposes of the new MAAS collection' c) the continued collection of objects within the collections policy of the MAAS. It is worth noting that the 140 year history of the collection has been clearly a moveable and growing collection, a living cultural organism with a time-line of development which was discussed in the previous section of this report. In essence, the collection has, throughout its history, undergone at least six moves to different sites, the two most significant being the move from The Domain to Sydney Technical College and the second being the move to its present day site in 1988. Today, the whole collection of the MAAS is dispersed across different sites, representing the museum's diverse outreach across all of Sydney. The collection encompasses the Discovery Centre at Castle Hill, the facilities at Sydney Observatory Hill as well as other storage and curatorial facilities.

A reasonable comparison could be drawn to the creation of the Victoria & Albert Museum, a collection whose history was also born out of a great exhibition. Brompton Park House, a stately residence was adapted in 1857 for the South Kensington Museum which eventually became the V&A known today. It has to be acknowledge that the majority of the V&A's facilities are specifically purpose built from the mid-19th Century and thus, the links between the museum's collection, its organisational and spatial strategy are far more significantly interwoven between collection and place, as compared to that of the MAAS.

4.4.3 Discussion

Of particular interest in this investigation are the elements of the collection obtained for the re-purposed site, during the 1980s and the Wran building, being the architectural addition to the presently conserved and reconstructed brick structures of the early 20th Century Federation Industrial Power House.

Simply put, the collection can be considered moveable and is not integral to the buildings in which it is housed. No part of the complex of buildings relates to the objects or items from the collection and there is evidence of a loose fit, allowing constant adaptation of spaces to form particular exhibition environments. These environments have changed over time to suit the nature of the exhibitions and not all of the exhibitions were from the collection or become part of the collection. In this respect, there is a phenomenological approach to design and installations philosophy post modern in its nature and detached from the buildings.

This assessment is of course not designed to deny the fact that the objects of the MAAS collection have their own stories about the history of the city and NSW, but rather, it is important to highlight that the collection does not necessarily relate to the context in which they sit. Indeed, the very history of the MAAS and its establishment, movement and subsequent settling and unsettling over its history is demonstrative of the collection's eclecticism and the fact that it is not necessarily tied to one specific place. These objects have been brought in from all over the state, and tell different stories about the history and development of New South Wales.

For a tangible listing to be forwarded on the basis that the Ultimo Powerhouse Site is inseparable from the story of the artefacts, a stronger link must be forged between the history of the site. Returning to the comparison of the V&A Museum, its collection was formed and housed for over 150 years on site, with alterations and additions designed specifically to cater for the growth of the collection, unlike the thirty years the MAAS has spent at the Ultimo site. Arguably, a more reasonable comparison may be drawn with the Design Museum, London, whose collection has been recently re-housed at the adaptively reused former Commonwealth Institute building. The collection of the Design Museum presents a more compelling argument for a museum collection to be intangibly linked to place as its Designer / Maker / User permanent exhibition was created specifically to be housed within the Design Museum's current South Kensington site, and was established as part of the proposed museum's move from East London to West London. Other site specific moves at the Design Museum, not seen at the MAAS includes the commissioning of site specific artworks to celebrate the museum's relocation and re-imagining of its permanent exhibits. In reviewing the construction of the gallery spaces and the organisation of artefacts within the museum, the MAAS Powerhouse does not present the same legibility of tangible connections between place and artefact.

Overall, it is acknowledged that there are social and cultural links between the collection of the MAAS and the Ultimo Powerhouse site. In terms of the adaptive reuse of the site as well as some customisation in locating permanent exhibition items on specifically designed positions within the galleries, the museum attempts to provide a degree of legibility and site specificity. The degree to which these connections are intrinsically interwoven and inseparable is however questionable. Both the origins and subsequent history of the MAAS Collection indicates that it has always been an evolving collection of artefacts demonstrative of the development of technology, science and the arts running parallel to the maturing of Australia as a nation. To that extent, its collection has grown to encompass several sites, and its diversity suggests that its collection of significant artefacts cannot be pinned down to one specific location in perpetuity. On this basis, it can be concluded that whilst there are socio-cultural links between the collection and its place, in and of itself, these connections do not merit the degree of social significance warranting a listing at the NSW State heritage level.

4.2 Discussion of Architectural Merit & Significance

Jennifer Saunders has written a compelling document for Powerhouse Museum Alliance which links the collection to the fabric arguing that for the understanding, memory and cultural significance of the Powerhouse Museum, these links must remain unbroken. In her report, these include significant artefacts such as the No. 1 Locomotive, the Strasbourg Clock and the Bolton and Watt Engine, amongst others and compares the adaptive reuse to the Muse d'Orsay and its technological significance to the Centre Pompidou. These experiential accounts relies upon the first hand role that Jennifer Saunders has had and her involvement with the MAAS since the establishment of the Powerhouse Museum site.

If we take up the Musee d'Orsay (1980-1986) as a 'gold standard' of adaptive architecture, we must acknowledge that its success lies in the analytical and articulated observations of the two existing bodies on which the project was based - the form and the typology of original architect Victor Laloux's approach to the station building and the museological program for the collections and their respective layouts. The comparison made to the Powerhouse Museum is useful given the similarities in the brief and desire for adaptive reuse. The Gare d'Orsay was evidently more intact and the collections more established and finite. The work in Paris conserved much more of the Beaux Arts Architecture and the spatial qualities and represented a clear and articulate fusion of the two discreet entities. Such international comparisons are arguable unfair maybe and locally, there are too few examples to draw useful comparisons with. I would contend however that better examples of extensions to historic buildings and adaptive architecture, some of which were equally recognised by the Sulman Prize and such structures include:

- The Restoration of the Queen Victoria Building (1987)
- Walsh Bay Pier 3 and Pier 4 Adaptation for the Sydney Theatre Company (1985)
- Extension to the Art Gallery of New South Wales (1989)
- Extension to the State Library of New South Wales (1983)

More recently, particularly with the increased protections afforded by Heritage legislation and sustainable consciousness within the industry surrounding reusing existing fabric, successful examples of adaptive architecture which in my opinion, are considered to have greater architectural merit and success than the Powerhouse Museum includes:

- Everleigh Railway Sheds (Carriageworks)
- Rozelle Tramsheds
- Paddington Reservoir Gardens

In comparing the imagery compiled here, we can immediately see that in both instances, there is an acknowledgement of original fabric having been removed, which perhaps, more skillful intervention may have sought to retain. At the Musee d'Orsay, this takes the form of the connecting platform bridge, whilst in the Powerhouse, this takes the form of chimney stacks, major trusses and other structural components. The strategy adopted in Paris however is a respectful and articulate acknowledgement of the room's volume, with long contemporary elements which reinforces the perspective of the station and railway track, an interpretive abstract form which references the historic presence of balconies, platforms and direction of travel through the space.

By comparison, the organisation of the MAAS's collection within the powerhouse's main hall, could have been better suited to referencing the horizontal alignments represented by the scale of machines within the original hall. The somewhat haphazard organisation of the collection within the spaces of the museum is disappointing and a more thoughtful organisation of the collection within the confines of the space (rather than a 'fit as much as we can' approach) would have demonstrated greater linkage between the collection and a site specific designed museum.

Fundamentally, the flaws in the design of the Powerhouse Museum is derived from a poor early decision making process and the lack of adherence to conservation practices of the era, including foundational documents such as *The Athens Charter on the Preservation of Historic Monuments* (1931) and Australia's own *Burra Charter* (1966). Furthermore, the collection imperative of the era appears somewhat haphazard and disorderly, paired with an architectural intervention which ultimately overwhelms and dominates the Harris Street frontage and restricts the

4.0 Discussion of Heritage Significance



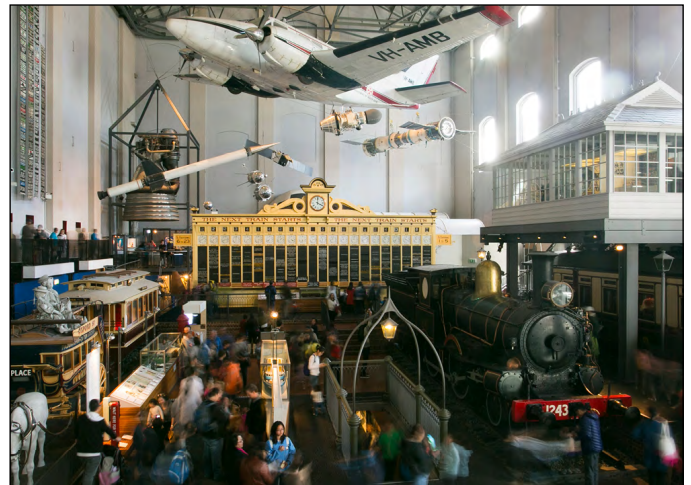
c.1900s Imagery of the Gare d'Orsay in its functional days as a working Railway Station. It is recognised that as part of the adaptation of the site after the closure of the railway station, rail lines, platforms and other railway infrastructure had been removed, leaving the hall as a void 'shell' for adaptation. This is in some ways similar to the powerhouse museum site.



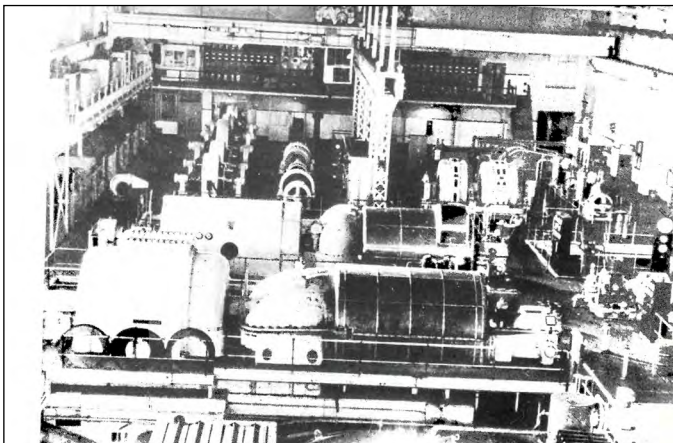
c.2010s Image of the same main hall, now part of the converted Musee d'Orsay. Note that interventions into the space clearly continues to respect the existing pattern of horizontals established by the historic rail-lines, and emphasises the grandeur and height of the internal volume.



c.1968 Image of the main powerhouse volume, noting the severe dilapidation and the state of the powerhouse as a disused space, demonstrating that the original working fabric was already not intact and only in a reasonable condition.

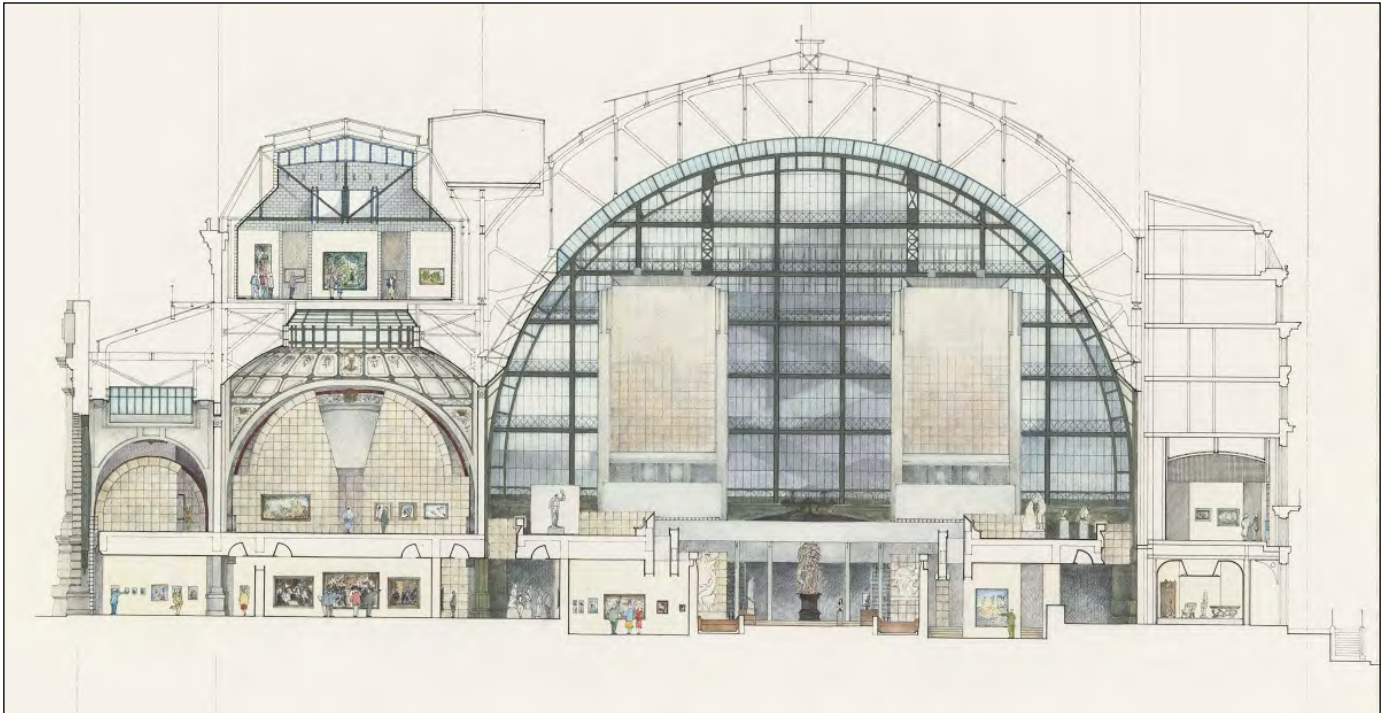


c.2010s Image of the main hall, now filled with exhibits of significant transport elements within the collection of the MAAS. The collection of exhibits appears somewhat cramped and does not immediately demonstrate a linkage to the historical organisation of the site's infrastructure with the same degree of abstract clarity as the Musee d'Orsay.



c. 1920s Image of the Interior powerstation, demonstrating a particular horizontal emphasis in the layout of key infrastructure. The space, though cluttered, nevertheless had a particularly unique heirarchy of scales in the arrangement of 'objects' - i.e. generators and equipment. There was an opportunity for the spatial organisation of the museum to reflect or interpret this pattern of movement through objects during its adaptation which was sadly not considered.

4.0 Discussion of Heritage Significance



Above: The Internal Section of the Musee d'Orsay, demonstrating integration of new architectural elements woven and integrated within the existing structure of the main and secondary railway halls.

Below: Elevation of the Powerhouse Museum, showing the distinction between new and old forms attached in a clearly independent and somewhat haphazard manner.

4.0 Discussion of Heritage Significance

appreciation of heritage fabric on the site. The cause of these issues from the era of the late 1970s to the 1980s appears to be due in part to the hurried rush to complete projects before the 1988 Bicentenary Celebrations and the Powerhouse Museum was part of the wider revitalisation of the Darling Harbour precinct, where a multitude of projects in the area have, in recent years, been demolished due to technological and functional obsolescence.

The Powerhouse Museum has been recognised as the Winner of the AIA National President's Award for Recycled Buildings, the NSW AIA Chapter Belle Interiors Award for Interior Design and a finalist for the National Sir Zelman Cowen Award. At the time, the jury praised the building as "...the reality is the building will remain a great project, even if all its displays were more mundane." Furthermore, adding that the project is "...exuberant, brash, exhibitionist and, above all, fun. Old and new blends well, but wisely the temptation to copy the old structure has properly been resisted." High praise though all of this was in 1988, more contemporaneous histories of Sydney architecture have been sobering, if not critical, of the work. Australian architectural critic and author Andrew Metcalf, in his influential book *Architecture in Transition* published by the Historic Houses Trust comprehensively reviews the Sulman Prize in Architecture between 1932-1996, describing the Powerhouse Museum as "an awkwardness here arising from the blunt way that these new buildings have been related to the old, neither boldly new nor effectively connected." Most telling however is his conclusion that "the exhibits overwhelm the interior architecture" implying as has been argued in this report, that the collection has held and continues to hold greater value and significance than the building which houses it.

The Wran building is regrettably unconvincing. The fair ground style of architecture bore reference to the exuberant darling harbour redevelopment of the 1980s with an accidental and clumsy reference to the garden palace with elements of the garden palace 'reconstructed' and placed around the curiously over-scaled interiors of the Wran building. The Wran building has never exhibited

the collection, and primarily contains a mezzanine gallery for temporary exhibitions, gift shop, entry cloaking and ticketing facilities and some way finding components. Essentially, it is a services component which serves the main bulk of exhibition spaces contained within the original Ultimo Powerhouse structures.

Ultimately, it is concluded that the existing buildings do not contribute to the display of the collection and in and of itself, cannot be reasonably described as an enduring architectural work. Its abutment to the Industrial buildings is inarticulate and adversely impacts the reading of these historic structures. It is also worth noting that the Wran Building is excluded from the local heritage listing in its current form, as demonstrated by the City of Sydney LEP heritage map.

The adaptive reuse of such a grand industrial structure, mirroring many adaptive reuse projects is heroic and was quite ahead of its time, but the execution is ultimately unable to withstand the test of time. Indeed, the extent to which the original buildings were altered to meet the design intent of the powerhouse museum resulted in the destruction and partial obscuring of some iconic and landmark fabric to the existing structures.

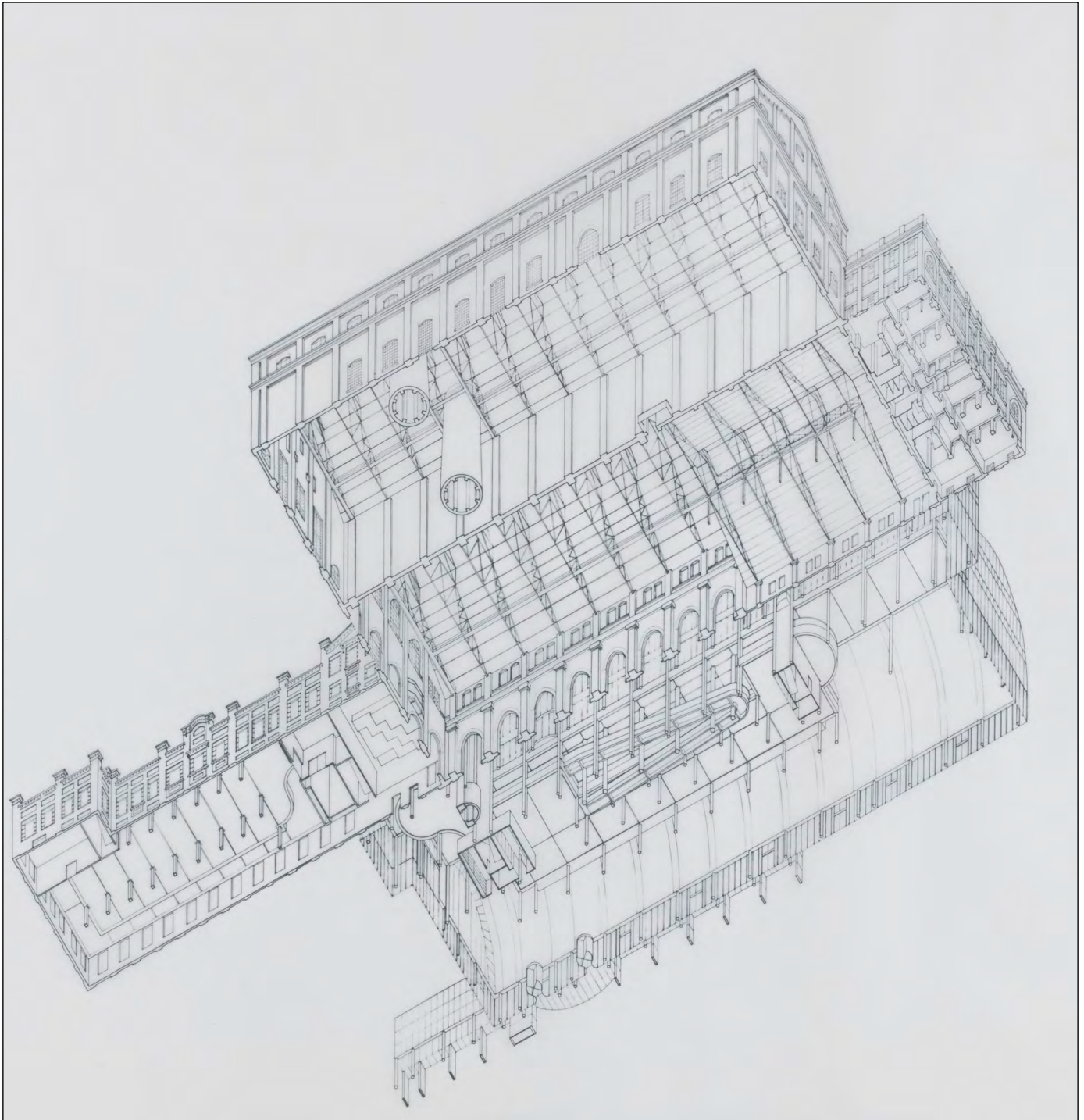
The removal of the chimneys, whether due to dilapidation or otherwise, and its less-than-existing and not-immediately-apparent interpretation as skylights reduces the original building's landmark qualities and fundamentally affects the ability for the general public to interpret the building forms as a former 'Powerhouse'. A comparison may be drawn to the integrity of White Bay Powerstation, where the form, bulk and massing of the buildings on site clearly identify it as a historically significant power generation and industrial site.

4.0 Discussion of Heritage Significance

There is a lack of a clear strategy and conservation policy which would have been useful in informing the work. It is my opinion that the adaptive reuse destroyed the potentially high level of significance of the distinctive collection of powerhouse museum buildings and the new buildings is not of such an aesthetic quality or merit that would warrant listing that part of the building alone at a State level. Nevertheless, the site maintains the potential for further adaptive reuse which should be encouraged but does not reach the threshold for a State Listing. Consideration could be given to maintaining the existing local heritage listing. This should be included with an updated CMP which builds on the discussion and policies first established in the 2003 Architectural Projects P/L Conservation Management Plan.

Overall, it is my view that this rarity of adaptive reuse in Sydney is not an automatic assertion of significance which would satisfy the criteria for a State Listing. Similarly, the awards and accolades showered upon a particular project must be taken with due consideration and should certainly not be an automatic reason for listing a building as being of 'heritage significance'. A clear distinction must also be drawn between the architecture of the Powerhouse Museum site, which obviously yields a lower level of significance than the MAAS Collection of artefacts and objects. Furthermore, whilst adaptive reuse as a philosophy of conservation and revitalisation is often positive and beneficial, its merits must be critically considered in terms of a holistic view of how successful a balance has been struck between old and new architectures. The MAAS, although brave in its era as a pioneer in adapting disused architecture, has failed to withstand the test of time, with substantial alterations to the 1988 buildings since its completion indicating that it was too inflexible to adapt to the growth and change in the collection of the MAAS.

4.0 Discussion of Heritage Significance



Above: Original sketch axonometric view of the adaptive reuse of the Ultimo Powerstation.

5.0 Assessment of Heritage Significance

NSW Heritage Guidelines (Inclusions and Exclusions)

Criterion (a) - Historical Significance			
Description			
An item is important in the course, or pattern, of NSW's cultural or natural history (State significance); OR An item is important in the course, or pattern, of the local area's cultural or natural history (Local Significance)			
National Trust Nomination Justification		Heritage NSW Commentary	
<ul style="list-style-type: none">• The nomination argues that the Ultimo Power House is potentially of State historic significance as the first large state-owned electricity generating station in NSW and the original generating station for the supply of electricity to power the tramway network in Sydney.• It was the site where most of the major technological advancements in electrical generation, including steam turbines and large scale alternating current generation were trialled by NSW electricity authorities.		<p>While the size and nature of the spaces demonstrate the historic use of the buildings to some extent, the historic electricity generating equipment is no longer in place. It was removed when the building was adapted as the Power House Museum in c1988. What remains are only the shells of the buildings with their architectural detailing. The site by its location and association provides the historical link to its former use.</p> <p>This Criterion is supported.</p>	
Cracknell Lonergan Architects Review Response			
<p>Our office broadly accepts the commentary of the National Trust and the additional comments of the Heritage NSW. It is accepted that there are many secondary and primary resources which identifies the Ultimo Power House and its history to the development of infrastructure and electricity development in Sydney. It is also noted that the site appears on the Engineers Australia Heritage Register for precisely these reasons. In our review of physical fabric, it is noted that the site has been substantially altered, including demolition of the smoke stacks, as well as the removal of much of the interior fabric (eg. electric generators) has made the connection to its historical past more tenuous.</p> <p>It is generally accepted that what remains of the original power house are primarily the shells of buildings, with substantial additions made in the 1980s to transform the site into the Powerhouse Museum of the MAAS. Whilst there is nothing inherently incorrect in the approach of adaptive reuse of historical structures, it is to be noted in our assessment that the extent to which the powerhouse structure has been changed does not make it immediately evident to the general public, the history and significance of the site. In particular, physical elements which may be associated with power stations, in particular, the smoke stacks and generators are obviously absent from the site. Furthermore, the lack of visual connections to the old tram network (much of which has also been lost) makes evidence of how the powerhouse is linked to the development of infrastructure of Sydney more a documentary record than a physically preserved mis-en-scene within this site and its context, limiting the ability for interpretation.</p> <p>Overall, whilst it is accepted that the site merits its existing listing at a local level under this criterion, further interpretation and improved exhibition of the historic significance of the site is advisable, and is discussed in the recommendations section of this report. The lack of more tangible and evident historical linkages to the wider context and the damage to major physical components of the original powerhouse indicates that the integrity of the site has been adversely affected and would not pass the threshold for a State Listing.</p> <p>It is noted that the existing Local listing recognises this criteria as part of the reason for its heritage significance.</p>			
Grading		Guidelines [Y/N]	Commentary
Inclusions		Cracknell Lonergan Recommendation	
i.	Shows evidence of a significant human activity	YES AT A LOCAL LEVEL ONLY	Demonstrates historic development of the site, including remnant architecture of the old tram power house (though the interiors are substantially altered). The 1980s additions represents key additions from the era of post-modernist Sydney architecture and the adaptation of the building to house the collection of the Museum of Applied Arts & Sciences (MAAS).

5.0 Assessment of Heritage Significance

NSW Heritage Guidelines (Inclusions and Exclusions)

Criterion (a) - Historical Significance			
Description			
An item is important in the course, or pattern, of NSW's cultural or natural history (State significance); OR An item is important in the course, or pattern, of the local area's cultural or natural history (Local Significance)			
ii.	Is associated with a significant activity or historical phase	YES AT A LOCAL LEVEL ONLY	The site is remnant of old infrastructure of tram networks which wandered through the city, though, due to substantial alteration and removal of significant interior fabric (eg. Old engine rooms etc) the connection with historical activities and development of the city is not immediately apparent from merely viewing or walking through the building. The 1980s additions represents an adaptation of remnant historical fabric for new uses.
iii.	Maintains or shows the continuity of a historical process or activity	YES AT A LOCAL LEVEL ONLY	Demonstrates the ongoing transformation of the city and the regeneration of buildings as times change and required functions for buildings change. The site represents the change from tram power house to museum over the course of approximately one hundred years.
Exclusions			
iv.	Has incidental or unsubstantiated connections with historically important activities or processes	YES	There were periods of disuse between the decommissioning of the station in the 1960s and its new museum use in the 1980s. The locality has changed substantially, affecting the ability to interpret the original fabric within a particular context. Extensive loss of fabric has also adversely affected the ability to relate and identify historical connections.
v.	Provides evidence of activities or processes that are of dubious historical importance	NO	As discussed previously, there are substantiated links to the historic development of the city.
vi.	Has been so altered that it can no longer provide evidence of a particular	YES	It can be reasonably contended that the visibility of the 'tram power house' has been substantially diminished, both by the 1980s conversions and by the removal of interior fabric. The poor interpretation of three chimney structures externally affects the reading of the site as a landmark and is a loss of the fundamental identifying feature of the building's shell as a 'power station'. The alterations and subsequent surrounding development, with the exception perhaps of the Goods Line, provides little immediate or apparent connection to the historical infrastructure development of the city and does not immediately cast light on why the site is known colloquially as the 'Powerhouse Museum'.
CRACKNELL LONERGAN ARCHITECTS DOES NOT SUPPORT LISTING AT A STATE LEVEL THE PROPOSED LISTING ON THE BASIS OF THIS CRITERIA			

5.0 Assessment of Heritage Significance

NSW Heritage Guidelines (Inclusions and Exclusions)

Criterion (b) - Associative Significance	
Description	
<p>An item has strong or special association with the life or works of a person, or group of persons, of importance in NSW's cultural or natural history (State significance)</p> <p>OR</p> <p>An item has strong or special association with the life or works of a person, or groups of persons, of importance in the cultural or natural history of the local area. (Local significance)</p>	
National Trust Nomination Justification	Heritage NSW Commentary
<ul style="list-style-type: none"> The nomination argues that the Ultimo Power House is potentially of State significance for its association with the Museum of Applied Arts and Technology, the principal museum of technology, manufacturing, science and craft in NSW and retains the aesthetic and cultural associations of this museum dating back to the International Exhibition in the late nineteenth century. 	<p>The nomination has not identified a person or group of people with which the building is associated although it may indicate that the association is made through the historic collection and the adaptive use of the site since 1988. The collection is undoubtedly of State heritage significance, making the group of curators, conservators and administrators who established and continued to enlarge the collection, the point of significant association. The nomination does not include the collection.</p> <p>This Criterion is not supported.</p>
Cracknell Lonergan Architects Review Response	
<p>In accordance with the criterion, the threshold for inclusion on the basis of association is 'strong or special'. In our review of this criteria, which will share many aspects with criteria (d) social significance (assessed subsequently), we have found that the threshold for inclusion on the basis of 'association' cannot be supported.</p> <p>Whilst there is no dispute in regards to the MAAS's collection as being of State heritage significance, if not national significance, a question necessarily arises as to whether its location at this Ultimo Power Station site (which dates only from 1988) merits 'strong or special' association between the MAAS (as a group - collection / curators) and the site (Ultimo Tramways Power House) merits listing at a State level. It is our assessment and considered view, based on the guidelines for inclusion and exclusion that the adaptive use of the site since 1988 does not, in and of itself, warrant listing at the state level for associative significance. Furthermore, it is an established fact that the collection of the MAAS has, over the course of its history, been moved from various sites and has undergone significant historical change and enrichment. From its origins in the Garden Palace (now Royal Botanical Gardens) in the late 19th Century, to its occupation as the The Technological Museum in 'The Muse' (now Ultimo TAFE College Building C), to its site at the Powerhouse today, along with its satellites at Castle Hill and Observatory Hill, these multiple changes in time, demonstrates that the museum's collection has had various associations to various sites throughout the city and therefore, is not specifically and uniquely tied to one particular place within Sydney.</p> <p>It is necessary to recognise and it is accepted that key objects within the MAAS collection were, as part of the 1988 transformation of the Ultimo Power House, specifically integrated into the 'journey' or spaces of the museum. Such items include (but are not limited to), the integration and demonstrations associated with the Burton & Watt Engine and the platform entry to the Locomotive No. 1 Train as two major exhibits within the Ultimo MAAS site. In spite of the specific integration of these important artefacts (with their own embodied historical and cultural significance) into the fabric of the 1988 adaptive reuse, they are, in and of themselves, not a sufficient direct association between the museum's collection and the Ultimo Powerhouse site to a level of association which would warrant listing at the state level.</p> <p>As an alternative consideration for associative significance, an argument may be better forwarded that the site possesses special or strong association with the historic tramways of Sydney, and thus the old industrial working class and transport community of Sydney. As discussed in criterion (a) however, the substantial alterations made to the original interiors, including removal of highly significant industrial artefacts (boilers, chimney stacks, machinery) has substantially altered and adversely impacted the ability to visualise and associate the site with its historical association to electricity generation in NSW. Finally, it should be noted that any argument which seeks a listing on the associative significance of the industrial working class and transport community of Sydney would not include the 1988 additions, as the associative significance pre-dates these additions.</p> <p>It is noted that the existing Local listing recognises this criteria as part of the reason for its heritage significance.</p>	

5.0 Assessment of Heritage Significance

NSW Heritage Guidelines (Inclusions and Exclusions)

Criterion (b) - Associative Significance			
Description			
<p>An item has strong or special association with the life or works of a person, or group of persons, of importance in NSW's cultural or natural history (State significance)</p> <p>OR</p> <p>An item has strong or special association with the life or works of a person, or groups of persons, of importance in the cultural or natural history of the local area. (Local significance)</p>			
Grading		Guidelines [Y/N]	Commentary
Inclusions		Cracknell Lonergan Recommendation	
i.	Shows evidence of a significant human occupation	YES AT A LOCAL LEVEL ONLY	The subject site's scale and form suggests historical association with the city's industrial past, but the association is not specific enough to warrant state listing on the grounds of criteria (b)
ii.	Is associated with a significant event, person, or group of persons	NO	Whilst an argument can be made that it is more recently associated with the MAAS and its collection, the history of the collection's movement across Sydney and the view of the MAAS as being a collection of museums spread across different fields of design and at different sites across the city makes a specific association as a group to this one specific site a difficult argument to support as 'strong or special'.
Exclusions			
iii.	Has incidental or unsubstantiated connections with historically important people or events	YES	In reviewing the history of the MAAS's collection and in the history presented previously, it is argued that the association of this particular 'group' to the subject site is incidental and not immediately part of the significant historical development of the Ultimo Museum site.
iv.	Provides evidence of people or events that are of dubious historical importance	NO	There is no dispute regarding the people (generally) who have lived and worked in the vicinity of the Ultimo Power House site. This association is however a more general one related to the overall development of infrastructure of NSW and not specific to this site alone. Similarly, the association of the MAAS collection with this site commences only in 1988, and is not, in and of itself, a substantial association which would warrant listing under this criteria.
v.	Has been so altered that it can no longer provide evidence of a particular association	YES	As previously identified, an additional argument for this criteria could be the association of working class men involved in the transport history of Sydney and the development of electricity generation. This has however been substantially and adversely impacted by the many alterations to the original Ultimo Power Station which makes this connection less immediately recognisable.
<p>CRACKNELL LONERGAN ARCHITECTS <u>DOES NOT SUPPORT LISTING AT A STATE LEVEL</u> THE PROPOSED LISTING ON THE BASIS OF THIS CRITERIA</p>			

5.0 Assessment of Heritage Significance

NSW Heritage Guidelines (Inclusions and Exclusions)

Criterion (c) - Aesthetic Significance

Description

An item is important in demonstrating aesthetic characteristics and/or technical achievement in NSW (State significance)
OR

An item is important in demonstrating aesthetic characteristics and/or technical achievement in the local area (Local significance)

National Trust Nomination Justification

- The nomination argues that the power station buildings are potentially of State heritage significance as a landmark group of buildings relating closely to the visual and architectural industrial context of the area. The Boiler House was historically one of the largest brickwork structures in the State.
- The nomination argues that the group is potentially of State heritage significance for its successful reuse as a Museum and for the successful integration of old and new buildings with the new building being awarded the Sulman Medal by the RAIA in 1988 in recognition of its architectural adaptive reuse.

Heritage NSW Commentary

A case may be able to be argued that the Boilerhouse specifically is of State significance as the largest brick built structure in the State and has local landmark qualities. Heritage NSW supports a view that the combined heritage building elements retain a landmark value that speak to the era of large scale industrial technology and development and that it is of a bulk, commensurate with the White Bay Power Station, that elevates its rating against this criterion.

The c1988 museum building is not part of the nomination in its current form, however its award-winning qualities are mentioned in the nomination. The Nominator has made no substantive argument on the aesthetic merits of the 1988 design to demonstrate a level of State significance. Heritage NSW has reviewed the comparative architectural responses and notes the retention of the expansive Australian National Maritime Museum (Philip Cox 1988-1991), and the Heritage Council's determination not to list the former Sydney Convention and Exhibition Centre (Philip Cox Richardson Taylor Partners, a much more extensive example of the architectural style which also won a 1989 Sulman Award by the architectural profession. The nomination has not attempted to demonstrate a State heritage value to the architectural expression of the 1988 Power House museum or any comparative assessment of the building within the corpus of the NSW Government Architect J. Thompson or design Architect Lionel Glendenning. Glendenning himself recently classified his work as 'tired' <https://www.abc.net.au/news/2019-01-20/lionel-glendenning-1/10730242>. A preliminary assessment of the work of Glendenning has not suggested a prolific or influential architectural presence emanating from his contractual work at the MAAS site, or it forming an important marker in postmodern design.

This Criterion is partly supported in relation to the landmark values of the heritage components only.

Cracknell Lonergan Architects Review Response

Having reviewed the fabric of the original powerhouse building, alongside the additions made in 1988, it is our assessment that a listing under this criterion is partially supported. Our view is that whilst the 1988 additions are an example of adaptive architecture and it is accepted that the project is a Sulman Award winning project, its aging, subsequent alterations and inflexible design makes potential for future re-adaptation problematic. Furthermore, as identified in Heritage NSW commentary, the original architect has himself classified the work as 'tired' which suggests there are accepted issues of the building which fundamentally does not make it a 'significant' or 'important' example of architecture from the 1980s. It is therefore concluded that the 1988 additions do not merit aesthetic significance at the State level.

It is noted that the existing Local listing recognises this criteria as part of the reason for its heritage significance.

5.0 Assessment of Heritage Significance

NSW Heritage Guidelines (Inclusions and Exclusions)

Criterion (c) - Aesthetic Significance			
Description			
<p>An item is important in demonstrating aesthetic characteristics and/or technical achievement in NSW (State significance)</p> <p>OR</p> <p>An item is important in demonstrating aesthetic characteristics and/or technical achievement in the local area (Local significance)</p>			
Grading		Guidelines [Y/N]	Commentary
Inclusions		Cracknell Lonergan Recommendation	
i.	Shows or is associated with, creative or technological innovation or achievement	YES AT A LOCAL LEVEL ONLY	Whilst the proposal shows clear innovation in the concept of adaptive architecture and demonstrates the re-purposing of a historic building (powerhouse building) with new additions to suit the needs of the MAAS at the time, it is not of an architectural aesthetic significance to warrant listing at the State Level.
ii.	Is the inspiration for a creative or technical innovation or achievement	NO	As per response above.
iii.	Is aesthetically distinctive	YES AT A LOCAL LEVEL ONLY	<p>The Federation boilerhouse and powerhouse fabric, which are subject to an existing local listing are identified as being aesthetically distinctive for its form and scale, as well as demonstrating the Federation Industrial architectural style.</p> <p>The 1988 additions in the post-modernist style, though possessing some distinctive features such as an oval extruded form, are not considered to be significant innovation of the style and does not warrant a listing on the State level.</p> <p>The substantial loss of exterior and interior fabric to the original powerhouse structures, in particular the loss of the chimney stacks, severely impacts the ability to differentiate the powerhouse from a generic industrial building, thus, diminishing its aesthetic significance. Comparison to the White Bay power station which is highly intact, for example, would suggest that very little original fabric at the Ultimo powerhouse remains, further compromising its aesthetic distinctiveness.</p> <p>It is my opinion that the significant loss of the powerhouse's key aesthetic distinctive characteristics adversely impacts the ability for it to be listed on these inclusion grounds at a State Level.</p>

5.0 Assessment of Heritage Significance

NSW Heritage Guidelines (Inclusions and Exclusions)

Criterion (c) - Aesthetic Significance			
Description			
<p>An item is important in demonstrating aesthetic characteristics and/or technical achievement in NSW (State significance)</p> <p>OR</p> <p>An item is important in demonstrating aesthetic characteristics and/or technical achievement in the local area (Local significance)</p>			
iv.	Has landmark qualities	NO	<p>The collection of buildings which form the powerhouse buildings from the Federation period is of a bulk and scale which illustrates industrial development both of the precinct and represents a significant development in the history and progress of Sydney. As the largest brick building in NSW, the boiler house provides a sense of scale and grandeur as a landmark.</p> <p>The landmark qualities of the site are obscured by contemporary development in the locality, which overshadows the site. The landmark qualities are also diminished by the demolition of smokestacks which once formed part of the building fabric. Critical components which would have clearly identified the site as a local landmark in terms of its height bulk and scale have been severely diminished by the demolition of original fabric, the loss of interior fabric and other adverse changes to the buildings to a level where it would not be immediately apparent that the site was once an industrial 'powerhouse' if not for the site's naming or specialist knowledge of architecture.</p>
v.	Exemplifies a particular taste, style or technology	NO	<p>The original structures on the site are representative of the Federation era of predominantly brickwork construction and is capable of demonstrating some characteristics of the style of the era. Substantial alterations to the fabric over the years has however diminished the building's ability to represent the significant characteristics of the style at an intact level, but nevertheless, the style is recognisable.</p> <p>The 1988 additions are indicative of a creative interpretation of ideas and approaches to adaptation and once upon a time, identifiable as part of the 1988 bicentenary projects littered across Darling Harbour. Many of these other structures have been demolished due to technological and functional obsolescence. The structures from 1988 indicate the post-modernist structuralist approach to architecture but it is not a leading example of architecture from this period.</p>
Exclusions		Cracknell Lonergan Recommendation	
vi.	Is not a major work by an important designer or artist	NO	<p>The work is noted to have been a Sulman Award winning work by the NSW Government Architect's Office. As discussed in other sections of this assessment however, it is not an exemplary work by the GAO in comparison to other listings of works by the office and as discussed for various reasons, the qualities of the adaptation has lost its integrity and does not warrant a listing at the State Level.</p>

5.0 Assessment of Heritage Significance

NSW Heritage Guidelines (Inclusions and Exclusions)

Criterion (c) - Aesthetic Significance			
Description			
<p>An item is important in demonstrating aesthetic characteristics and/or technical achievement in NSW (State significance)</p> <p>OR</p> <p>An item is important in demonstrating aesthetic characteristics and/or technical achievement in the local area (Local significance)</p>			
vii.	Has lost its design or technical integrity	YES	<p>Significant alterations as part of the 1980s additions have actually had an adverse impact upon the design and technical integrity of the original powerhouse buildings. Its aesthetic qualities are particularly impacted by the demolition and poor interpretation of the original chimneys, arguably one of the most distinguishing features of industrial powerhouse buildings from that era.</p> <p>The 1980s additions, though clearly of the period of post-modernism, does not demonstrate a degree of design or technical prowess which would, in comparison to other state listed buildings, warrant a listing at a State Level. The later additions to the original intention of the 1980s addition, including the filling in of significant high volume spaces has further eroded the original intent of the adaptive reuse and adversely impacted the overall reading and integrity of the building.</p>
viii.	Its positive visual or sensory appeal or landmark and scenic qualities have been more than temporarily degraded	YES	As per response supplied above.
ix.	Has only a loose association with a creative or technical achievement	YES	<p>Federation Structure</p> <p>The Federation structures have a strong association to the aesthetic development of an industrial architectural style from the period, presenting innovations in large scale brick and steel frame structures. It represents a good example of creative and technical achievement local to the Ultimo/Pyrmont Area.</p> <p>1980s Additions</p> <p>The Wran Building and subsequent additions, whilst presenting an example of adaptive architecture which is creative and technically of interest, is of a loose association and does not merit a listing at the State level per previous discussions on the architectural merit, its less than successful execution and more contemporary critical assessments of the building and its relationship to site.</p>
<p>CRACKNELL LONERGAN ARCHITECTS</p> <p>DOES NOT SUPPORT LISTING AT A STATE LEVEL</p> <p>FOR THE PROPOSED LISTING ON THE BASIS OF THIS CRITERIA</p>			

5.0 Assessment of Heritage Significance

NSW Heritage Guidelines (Inclusions and Exclusions)

Criterion (d) - Social Significance

Description

An item has strong or special association with a particular community or cultural group in NSW (State significance);
OR

An item has strong or special association with a particular community or cultural group in the area for social, cultural or spiritual (Local Significance)

National Trust Nomination Justification

- The nomination argues that the Ultimo Power House may be of potential social significance at a State level for its historic, cultural and aesthetic association with the Museum of Applied Arts and Technology dating back to the International Exhibition in the late nineteenth century. It also claims social significance for Sydneysiders for whom the Power House Museum represents an important educational and cultural institution.

Heritage NSW Commentary

A generic case may be able to be argued that the Museum has a special association with the heritage and educational community of Ultimo for whom the Museum is an important information and research repository. It is argued however that it is difficult to ascribe a State level value to this attachment, rather than a general awareness by the broader community of the museum and its remit. It is noted that the MAAS has a long and substantive connection to the buildings of its historic home in Harris Street now part of the University of Technology (UTS). The Museum's connection to the Powerhouse site only derives from 1988. Heritage NSW notes that the museum as an entity, nor the collection is nominated for SHR listing. The collection's imminent removal from the current building will break any nexus to the current site.

This Criterion is not supported at a State level.

Cracknell Lonergan Architects Review Response

In our review of available documentation on the history of the site, it is argued that the Ultimo Powerhouse cannot be supported at a state listing level for this criterion. The threshold for inclusion is 'strong or special association' and whilst it is accepted that a social attribution of the collection of the Museum of Applied Arts and Sciences is attributed to the powerhouse museum (eg. by common parlance, people call the museum the 'Powerhouse Museum' rather than the more cumbersome 'MAAS'), this alone does not pass the threshold for inclusion on a social basis.

It is accepted that the collection of the MAAS holds high social significance at an international, national and state level, but the collection's links to the specific site of the museum are less tangible. It is identified and accepted that the museum has undergone multiple moves throughout its history as the collection has diversified and as sites have become available throughout its history. As the historical overview demonstrates, the MAAS collection has moved from the site of the Garden Palace, to the now Ultimo TAFE College, to its current site as discussed in criteria (b). Thus, it can be seen that the history of the museum as tangibly linked to the powerhouse site as only existing after 1988, with the completion of the recent adaptive reuse of the site.

It must be emphasised that this alone is not an argument against the listing of the building, merely that there is insufficient tangible linkages to attribute social significance at the state level.

5.0 Assessment of Heritage Significance

NSW Heritage Guidelines (Inclusions and Exclusions)

Criterion (d) - Social Significance			
Description			
<p>An item has strong or special association with a particular community or cultural group in NSW (State significance); OR An item has strong or special association with a particular community or cultural group in the area for social, cultural or spiritual (Local Significance)</p>			
Grading		Guidelines [Y/N]	Commentary
Inclusions		Cracknell Lonergan Recommendation	
i.	Is important for its associations with an identifiable group	YES AT A LOCAL LEVEL ONLY	Only a generic case could be made for the MAAS's collection to be associated socially and specifically to the site of the Powerhouse Museum. Whilst it is accepted that some significant artefacts of the collection were specifically integrated and moved to the site with the expectation of permanent occupation of the Ultimo site, the MAAS's overall history suggests that it has had a varied and more dynamic past to different sites across Sydney, which has enriched and changed as the collection has grown and changed with the development of NSW.
ii.	Is important to a community's sense of place	YES AT A LOCAL LEVEL ONLY	As a museum space, a broad argument can be made to there being a sense of place and connection for different generations of children visiting this site. It would be argued in this circumstance however that a stronger social significance is related to the artefacts and the collection of the MAAS as a whole, rather than specific physical fabric of the buildings or its site in Ultimo.
Exclusions		Cracknell Lonergan Recommendation	
iii.	Is only important to the community for amenity reasons	NO	As a museum, part of its social significance is to supply cultural amenity to the wider community. To that end, the only a broad connection to the city can be made in terms of its social significance. It is once again emphasised that the social significance of the collection of the MAAS outweighs the specific links to this site, which is the object of this assessment.
iv.	Is retained only in preference to a proposed alternative	YES	In light of the current controversy surrounding the development of the MAAS and the proposed move of its Ultimo collection to Parramatta, an argument could be forwarded that the proposed assessment is only on the basis of a perceived adverse alternative, which is to move the focus of the collection to Parramatta.
<p align="center">CRACKNELL LONERGAN ARCHITECTS DOES NOT SUPPORT LISTING AT A STATE LEVEL THE PROPOSED LISTING ON THE BASIS OF THIS CRITERIA</p>			

5.0 Assessment of Heritage Significance

NSW Heritage Guidelines (Inclusions and Exclusions)

Criterion (e) - Research Significance			
Description			
An item has potential to yield information that will contribute to an understanding of NSW’s cultural or natural history (State significance); OR An item has potential to yield information that will contribute to an understanding of the area’s cultural or natural history (Local Significance)			
National Trust Nomination Justification		Heritage NSW Commentary	
• Not Applied		Not Applicable	
Cracknell Lonergan Architects Review Response			
Not at a State Level of significance. Some knowledge or merit derived from understanding adaptation of historic buildings for new purposes and integration between old and new fabric, but it is not of a benchmark or significance which merits a listing at the State Level.			
Grading		Guidelines [Y/N]	Commentary
Inclusions		Cracknell Lonergan Recommendation	
i.	Has the potential to yield new or further substantial scientific and/ or archaeological information	NO	<p>There is extensive historical archival material retained both within the MAAS Collection and in the NSW State Archives which provides details and documentation on the architectural and technological components of the original powerhouse.</p> <p>Given the substantial alterations made in the 1980s as part of the adaptation of the site, the majority of technological and scientific achievements associated with the historic fabric, such as power generators, engineering design etc...has essentially been lost.</p> <p>The substantial alterations undertaken in the 1980s, including integration of new services and structures as well as excavation works suggests that there is not likely to be archaeological potential, or that such archaeological potential would have already been unearthed or destroyed in previous works.</p>
ii.	Is an important benchmark or reference site or type	YES AT A LOCAL LEVEL ONLY	<p>The subject site presents an example of Federation Industrial architecture which is important in terms of its visual scale and use of brickwork and steel construction, indicating the history of technological advancement in building from the Federation period. There are however similar and better examples both within the area and within other listed sites such as the White Bay Power Station site.</p> <p>The adaptive reuse is a reference but does not constitute an important benchmark as a type. The reasons for this have been discussed in previous sections of this assessment.</p>

5.0 Assessment of Heritage Significance

NSW Heritage Guidelines (Inclusions and Exclusions)

Criterion (e) - Research Significance			
Description			
<p>An item has potential to yield information that will contribute to an understanding of NSW's cultural or natural history (State significance);</p> <p>OR</p> <p>An item has potential to yield information that will contribute to an understanding of the area's cultural or natural history (Local Significance)</p>			
iii.	Provides evidence of past human cultures that is unavailable elsewhere	NO	The subject site does not provide evidence of past human cultures which are unavailable elsewhere. There is considered to be very low or no archaeological potential on the site as substantial alterations and excavation works have been conducted on the site previously as part of the 1980s construction.
Exclusions		Cracknell Lonergan Recommendation	
iv.	The knowledge gained would be irrelevant to research on science, human history or culture.	YES	Substantial archival recording and documentary history on the construction, operation and subsequent adaptation of the site have been written, explored and examined. There is not considered to be substantive additional new information and technology which would yield sufficient potential for a listing at a State level.
v.	Has little archaeological or research potential	YES	There is considered to be very low or no archaeological potential on the site as substantial alterations and excavation works have been conducted on the site previously as part of the 1980s construction.
vi.	Only contains information that is readily available from other resources or archaeological sites	NO	There are architectural features and elements which are considered unique to this particular site. However, they are not at a level of merit to warrant listing at the NSW State level.
<p align="center">CRACKNELL LONERGAN ARCHITECTS <u>DOES NOT SUPPORT LISTING AT A STATE LEVEL</u> THE PROPOSED LISTING ON THE BASIS OF THIS CRITERIA</p>			

5.0 Assessment of Heritage Significance

NSW Heritage Guidelines (Inclusions and Exclusions)

Criterion (f) - Rarity Significance			
Description			
An item possesses uncommon, rare or endangered aspects of NSW’s cultural or natural history (State significance); OR An item possesses uncommon, rare or endangered aspects of the local area’s cultural or natural history (Local Significance)			
National Trust Nomination Justification		Heritage NSW Commentary	
• The nomination argues that the Ultimo Power House as one of only two of the major survivors of the city-based electrical generating stations of the early twentieth century are important physical evidence of the scale and importance of this industry.		Heritage NSW is of a view that the SHR-listed White Bay Power Station is a better example and substantially more intact, including moveable heritage elements that better tell the story of power generation in NSW. This Criterion is not supported at a State level.	
Cracknell Lonergan Architects Review Response			
In reviewing the building’s fabric, and in particular considering both the changes to the Federation buildings for the adaptive reuse of the site, as well as the subsequent alterations and additions made in the intervening years 1988-2019 for the Wran Building, it is the view of this report that the buildings are not intact enough to warrant significant listing under rarity. Whilst there are some elements which demonstrate historic elements and techniques of construction, particularly for the Federation structures, the ability for further interpretation is limited. This assessment agrees with the commentary of Heritage NSW that the White Bay Power Station is a more intact and more significant collection of structures which represents the NSW cultural history of development.			
Grading		Guidelines [Y/N]	Commentary
Inclusions		Cracknell Lonergan Recommendation	
i.	Provides evidence of a defunct custom, way of life or process	YES AT A LOCAL LEVEL ONLY	The power house is reminiscent of a period of Sydney’s development where industrial coal fired stations were appropriately located within inner city areas. It also represents the electrification of the city as part of the industrial development of the city. The 1980s additions do not present evidence of a ‘defunct custom, way of life or process’
ii.	Demonstrates a process, custom or other human activity that is in danger of being lost	NO	There are no specific customs or processes which are relevant directly to the site which would warrant a listing at a state level.
iii.	Shows unusually accurate evidence of a significant human activity	NO	There are no specific human activities related exclusively to the site which warrants a listing at a state level.
iv.	Is the only example of its type	NO	As identified above, the White Bay Power Station is a comparable example and is finer in quality and intactness. The 1988 additions are also part of a wider trend of adaptation of historic buildings and not in and of itself the only example of adaptation which warrants listing at a State level.

5.0 Assessment of Heritage Significance

NSW Heritage Guidelines (Inclusions and Exclusions)

Criterion (f) - Rarity Significance			
Description			
An item possesses uncommon, rare or endangered aspects of NSW's cultural or natural history (State significance); OR An item possesses uncommon, rare or endangered aspects of the local area's cultural or natural history (Local Significance)			
v.	Demonstrates designs or techniques of exceptional interest	YES AT A LOCAL LEVEL ONLY	There is a degree of design and technical knowledge in brick and steel construction of the Federation industrial buildings which is of interest. These techniques, whilst seen in other constructions of the era have been generally conserved appropriately at a local level and contributes to the significance of the locality and local history.
vi.	Shows rare evidence of a significant human activity important to a community	NO	There are no remnant fabrics which suggest the processes for power generation or workers of the Federation / Late-Victorian era which would warrant representation of community history and by extension a listing at a State level.
Exclusions		Cracknell Lonergan Recommendation	
vii.	Is not rare	NO	In terms of its size and scale, the site can be considered rare. It should be recognised that it is not intact and discussed in previous sections, there are unsympathetic additions and alterations which have adversely impacted the ability to interpret the history of the Ultimo Power Station. Its rarity, compromised by its low level of intactness does not warrant listing at a State level.
viii.	Is numerous but under threat	NO	As above, the site can be considered rare.
CRACKNELL LONERGAN ARCHITECTS DOES NOT SUPPORT LISTING AT A STATE LEVEL THE PROPOSED LISTING ON THE BASIS OF THIS CRITERIA			

5.0 Assessment of Heritage Significance

NSW Heritage Guidelines (Inclusions and Exclusions)

Criterion (g) - Representational Significance

Description

An item is important in demonstrating the principal characteristics of a class of NSW's Cultural or Natural Places/ Environments (State significance);

OR

An item is important in demonstrating the principal characteristics of a class of the area's Cultural or Natural Places/ Environments (Local Significance)

National Trust Nomination Justification

• Not Applied

Heritage NSW Commentary

Not Applicable

Cracknell Lonergan Architects Review Response

Whilst the National Trust nomination has not made an application under this particular criteria, it is worth noting that the existing local heritage item listing identifies this criteria as one of the reasons for its listing at a local level of significance. Therefore, it is appropriate for us to conduct a review of the merits of the site under this criteria to determine whether it should be included as part of the listing at the State Level.

Based on our assessment of the inclusions and exclusions as stated below, we would conclude that the proposed listing should be amended to include a partial listing at the State Level of Significance under Representational Significance. The existing heritage listed fabric (local), which represents the original Federation Era Power Station is of State Significance in terms of its ability to represent a fine example of Federation Industrial Architecture, is considered outstanding because of its architectural integrity and size and is held in high historical esteem in relation to the historic development of energy generation within Sydney.

Our assessment supports the listing under this criteria for the Federation portions of the site, but does not support a listing which would include the 1988 additions. As previously discussed in the review under Criterion (c) Aesthetics, the post-modern additions which formed part of the adaptive reuse of the site, whilst interesting and of some architectural merit, is not of a defining representational significance of the period or the architectural typology which warrants listing at a State Level.

It is noted that the existing Local listing recognises this criteria as part of the reason for its heritage significance.

5.0 Assessment of Heritage Significance

NSW Heritage Guidelines (Inclusions and Exclusions)

Criterion (g) - Representational Significance			
Description			
<p>An item is important in demonstrating the principal characteristics of a class of NSW's Cultural or Natural Places/ Environments (State significance);</p> <p>OR</p> <p>An item is important in demonstrating the principal characteristics of a class of the area's Cultural or Natural Places/ Environments (Local Significance)</p>			
Grading		Guidelines [Y/N]	Commentary
Inclusions		Cracknell Lonergan Recommendation	
i.	Is a fine example of its type	YES AT A LOCAL LEVEL ONLY	<p>Federation Structure</p> <p>Yes - The original powerhouse building and its fabric is a fine example of Federation era industrial architecture, exhibiting key characteristics of industrial development within the era and some exhibition of structural technologies of the era by virtue of significant building height and spans.</p> <p>1980s Additions</p> <p>No - The 1980s additions which form the adaptive reuse of the site, whilst interesting and award winning within its time, does not demonstrate to a state significant degree, the architecture or the cultural development of NSW from that period.</p>
ii.	Has the principal characteristics of an important class or group of items	YES AT A LOCAL LEVEL ONLY	<p>Federation Structure</p> <p>The structures presents some representation of working class industrial life in Sydney at the turn of the 20th Century. Its linkages are diminished by the lack of more fabric for interpretation.</p> <p>1980s Additions</p> <p>The additions do not contribute to an important class or group of items.</p>
iii.	Has attributes typical of a particular way of life, philosophy, custom, significant process, design, technique or activity	YES AT A LOCAL LEVEL ONLY	<p>Federation Structure</p> <p>As discussed in previous sections, the structures contribute at a local level to understanding the development of brick and steel construction in the 20th Century.</p> <p>1980s Additions</p> <p>The 1980s addition presents ideas for adaptive reuse but are not at a degree which warrants listing.</p>
iv.	Is a significant variation to a class of items	NO	Not applicable. There is no suggested variation to a class of items for this site.

5.0 Assessment of Heritage Significance

NSW Heritage Guidelines (Inclusions and Exclusions)

Criterion (g) - Representational Significance			
Description			
<p>An item is important in demonstrating the principal characteristics of a class of NSW's Cultural or Natural Places/ Environments (State significance);</p> <p>OR</p> <p>An item is important in demonstrating the principal characteristics of a class of the area's Cultural or Natural Places/ Environments (Local Significance)</p>			
v.	Is a part of a group which collectively illustrates a representative type	YES AT A LOCAL LEVEL ONLY	<p>Federation Structure</p> <p>The collection of buildings overall represents a particular era of development and reinforces the local history and character of Ultimo's industrial past.</p> <p>1980s Additions</p> <p>The 1988 addition, once upon a time, could have been said to embody the rush of development at the behest of bi-centenary celebrations. Regrettably, much of these buildings have now been replaced owing to technical obsolescence and the connections to this era has thus also been severely lost.</p>
vi.	Is outstanding because of its setting, condition or size	YES	<p>The scale of original buildings and the scale and challenge of the adaptation are both commendable factors which would warrant a listing at the local level. The aesthetic and quality of structures overall, as well as the degree of intactness of original Federation fabric makes listing at a State level for this inclusion criterion inappropriate. It is recognised that this is a key inclusion at the local level.</p>
vii.	Is outstanding because of its integrity or the esteem in which it is held	NO	<p>Although the original fabric and MAAS are held in a high esteem, the quality and condition of the fabric makes the threshold for 'outstanding' a difficult one to achieve. As discussed across this assessment, the additions and the original fabric have suffered changes which have affected the ability to interpret both the original history and the original intent. Thus, it would be unreasonable to list the building on the basis of this particular inclusion.</p>

5.0 Assessment of Heritage Significance

NSW Heritage Guidelines (Inclusions and Exclusions)

Criterion (g) - Representational Significance			
Description			
<p>An item is important in demonstrating the principal characteristics of a class of NSW's Cultural or Natural Places/ Environments (State significance);</p> <p>OR</p> <p>An item is important in demonstrating the principal characteristics of a class of the area's Cultural or Natural Places/ Environments (Local Significance)</p>			
Exclusions		Cracknell Lonergan Recommendation	
viii.	Is a poor example of its type	YES	<p>Federation Structure</p> <p>The Federation structures are broadly a good example for its type, representing a key period of industrial development in Sydney. Its integrity and aesthetic merits is however questionable, as more significant and intact buildings, namely the White Bay power station exists.</p> <p>1980s Additions</p> <p>The 1988 additions are not the best example of adaptive architecture. The multiple changes undertaken to renovate the Wran building between 1988 - 2018 demonstrates that the structure has not successfully withstood the test of time, and not been amenable to the changing requirements of the MAAS as it has grown. Whilst it may have been award winning in its day, more contemporary appraisals are sobering and as discussed previously, the architect himself has described the structure as 'tired'.</p>
ix.	Does not include or has lost the range of characteristics of a type	YES	<p>Unsympathetic additions made in the 1988 adaptation have restricted the ability to interpret original Federation fabric. This has adversely affected the reading of the building as a 'powerhouse' and in particular, the poor interpretation of the chimney structures has not enabled the site to be identifiable as a landmark.</p>
x.	Does not represent well the characteristics that make up a significant variation of a type	YES	<p>The 1988 additions do not make substantive meaningful interpretations of structures on site. Whilst it clearly attempts to reinterpret the original Garden Palace structure, it does not exhibit or represent these qualities clearly, such that they would not be widely understood by the general visiting public. As a form of adaptive architecture, it has resulted in some adverse intrusions upon original fabric and has not been overly successful in marrying old and new together.</p>
<p align="center">CRACKNELL LONERGAN ARCHITECTS</p> <p align="center">SUPPORTS IN PART THE EXISTING HERITAGE COMPONENTS OF THE SITE</p> <p align="center">FOR THE PROPOSED LISTING ON THE BASIS OF THIS CRITERIA</p>			

6.0 Assessment of Social Significance

Heritage Victoria Assessment Guidelines

Assessment of Social Significance			
Grading		Guidelines [Y/N]	Commentary
Basic Tests		Cracknell Lonergan Recommendation	
i.	Attachment A community group (or groups) has a demonstrable attachment to a place/object.	YES AT A LOCAL LEVEL ONLY	Only a generic case could be made for the MAAS's collection to be associated socially and specifically to the site of the Powerhouse Museum. Whilst it is accepted that some significant artefacts of the collection were specifically integrated and moved to the site with the expectation of permanent occupation of the Ultimo site, the MAAS's overall history suggests that it has had a varied and more dynamic past to different sites across Sydney, which has enriched and changed as the collection has grown and changed with the development of NSW.
ii.	Nature of the Community Is the community group (or groups) big/small, united/discordant, formal/informal, geographical-based/online etc?	-	<ul style="list-style-type: none"> A fixed community can be said to exist, identified namely as employees of the MAAS. This comprises of a diverse group of staff involving conservationists, historians, curators and other specialists. It is accepted that this is a large representative group of museum professionals within the context of NSW. It is accepted that the group is formalised as employees of an organisation - the MAAS. It is not accepted that this organisation is specifically and intrinsically linked to the Ultimo powerhouse site. Their work has involved both local and international exhibitions as well as curation of artefacts across all of the MAAS's facilities. It is therefore argued that the nature of the community, like the collection is mobile and not geographically linked.
iii.	Time-Depth The Attachment between the place and the community group (or groups) can be demonstrated to have existed for period of time	YES AT A LOCAL LEVEL ONLY	<p>The current Powerhouse Museum site was completed in 1988, representing a thirty year attachment between the MAAS and the powerhouse site, typically considered the minimum time threshold for heritage consideration.</p> <p>In reviewing the community and its social links to the site, it is believed that there is a strong local Sydney connection between the community - both specific staff and broader visitors / schools etc...to the site. There is however insufficient detail or history to suggest that the subject site specifically carries a larger social significance for the NSW state at large which would warrant a listing for social reasons, of the Powerhouse museum site.</p>

6.0 Assessment of Social Significance

Heritage Victoria Assessment Guidelines

Assessment of Social Significance			
Grading		Guidelines [Y/N]	Commentary
Determining Significance		Cracknell Lonergan Recommendation	
iv.	Resonance The social value of a place exerts an influence that resonates in the New South Wales context. For social significance to satisfy Criterion G, it will either be associated with, or representative of, a story or theme that forms part of NSW's identity. Places associated with emergent themes/stories have the potential to satisfy this test.	YES AT A LOCAL LEVEL ONLY	<p>Although the original fabric and MAAS are held in a high esteem, the quality and condition of the fabric makes the threshold for 'outstanding' a difficult one to achieve. As discussed across this assessment, the additions and the original fabric have suffered changes which have affected the ability to interpret both the original history and the original intent. Thus, it would be unreasonable to list the building on the basis of this particular inclusion.</p> <p>It is accepted that local to the Ultimo context, the structures are demonstrative of the industrial past, but the links to a larger theme which forms part of NSW's identity is a higher threshold which in this instance has not been met.</p> <p>There is no dispute that the collection of the MAAS possesses a great degree of resonance, but once again, it is important to differentiate between the entity of the MAAS and the buildings to which they are currently housed. The two are not inseparable, as demonstrated in the history of the MAAS's development and the significance of the former is not evidently reliant upon the latter.</p> <p>In consideration of these factors, it is concluded that the resonance of the site and its community links is a local level of significance.</p>
Exclusions		Cracknell Lonergan Recommendation	
v.	Association is of local significance only The attachment to the place/object does not have the ability to resonate beyond a particular local community.	YES - LOCAL SIGNIFICANCE	Both the history of the site and the powerhouse museum today are of local significance only. Whilst the collection of the museum is of NSW State if not national significance, the assessment against the NSW state criteria and in this section demonstrates that the links and degree of significance does not fundamentally past the threshold for a state listing.
vi.	Attachment does not relate to the current generation There is inadequate evidence to demonstrate that attachment for the place/object is felt by a present community or communities. In these circumstance, the place/object may be of significance under Criterion A.	YES - LOCAL SIGNIFICANCE	There is no question that the collection of the MAAS and its significance to the identity and history of NSW is intergenerational. The link between the powerhouse and the notion of intergenerational significance is arguably harder to justify at a State level. Thirty years since its opening is not, as yet, long enough to test the notion that the museum has contributed to intergenerational significance between NSW communities, even though it is argued that the site retains a significant local community significance.
CRACKNELL LONERGAN ARCHITECTS DOES NOT SUPPORT LISTING AT A STATE LEVEL THE PROPOSED LISTING ON THE BASIS OF THIS CRITERIA			

7.1 Statement of Significance

7.1.1 Existing Local Item Statement of Significance (OEH Database)

The following is the existing statement of significance which is listed for the subject site as part of the local heritage item listing for the site:

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

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

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

7.1.2 Proposed Statement of Significance (National Trust)

The following is the proposed Statement of Significance for the item, should it be listed by Heritage NSW as originally submitted by the National Trust:

The former Ultimo Power House is of State significance historically for being the first large stateowned electricity generating station in NSW and the original generating station for the supply of electricity to power the electric tramway network throughout Sydney. It was one of the largest and most important generating stations in NSW for many years and has associations with the electrification of the suburban tramway and railway systems and with the general reticulation of electrical power in Sydney. It was the site where most major technological advancements in electrical generation, including steam turbines and large-scale, alternating - current generation, were trialled by NSW electricity authorities.

The station also played a major part in the development of the Ultimo/Pymont area. The power station buildings are a landmark group of buildings, which relate closely to the visual and architectural industrial context of the area. The Boilerhouse building was, in its day, one of the largest brickwork structures in the state and the chimneys were significant Sydney landmarks for seventy years.

Furthermore, the adaptive work undertaken for the station's conversion to the Powerhouse Museum is significant both for its successful re-use of the buildings and successful integration of old and new buildings; the new building was awarded the Sulman Medal by the RAI in 1988.

The Ultimo Power House was adapted to house the Museum of Applied Arts and Technology (later, the Powerhouse Museum), the principal museum of technology, manufacturing, science and craft in NSW and retains the historical, aesthetic and cultural associations of this Museum dating back to the International Exhibition in the late nineteenth century. It is an ongoing repository for the exhibition of the finest examples of the skill and industry of the country and has an educational and research role in these areas as part of its operation.

In this context, it has social significance for many Sydneysiders for whom the Powerhouse Museum represents an important educational and cultural experience and a communal commitment to honouring the past and those who have been significant in the evolution of modern Australian society.

7.1.3 Proposed Statement of Significance (Cracknell Lonergan)

In our comparison of the existing Local Item Statement of Significance and the proposed Statement of Significance submitted by the National Trust, the following comments are made, with a recommendation that the Statement of Significance be reworded to take the following matters into consideration:

- The alterations of the site for the conservation of the disused powerhouse structure should not be described as 'significant', rather, it only represents the adaptive reuse of the buildings in a post-modernist design, awarded the 1988 Sulman Medal.
- A clear distinction must be established between the significance of the MAAS Collection and the Ultimo Powerhouse site. The significance of the two, for its aesthetic, cultural and historical merits cannot be conflated to be interwoven as implied in the National Trust listing. The subject site is not an 'ongoing repository' as it would fail to consider the MAAS collection held at all of its other sites, but the collection can be described as such.

7.2 Proposed Update to Existing Conservation Management Plan

As part of any future strategy for the conservation and adaptation of the site for future use, a detailed Conservation Management Plan should accompany any development application for the site. This CMP should provide a comprehensive guideline of management and interpretation policies and be in line with the standard guidelines of Heritage NSW. As a reference point, the original 2003 Conservation Management Plan by Architectural Projects P/L should be considered as the starting point and adapted to suit current requirements, building upon the fabric analysis and policies first established at the turn of the century.

Key updates to the CMP should attempt to address:

- Demolition of significant fabric to the Harris Street frontage of the Wran Building and other characteristics (colour scheme, follies etc...) of the Post-modernist architecture and whether this affects the 'heritage' significance of the Wran building.
- Opportunities for interpretation of the original Federations structures and better consideration of the original internal layout to reflect the original location of turbines and generators, forming a more coherent curatorial strategy for the site.
- Opportunities for interpretation of the chimneys which have been demolished and were not successfully interpreted (externally) to promote the sense of a 'landmark' structure.
- Opportunities for public space interpretation to promote the history of the site's link to tramways.
- Opportunities for better access and linkages to the Goods Line and public connections to Darling Harbour.
- Critical reappraisal of the site and its locality, in light of substantial changes and developments within the Darling Harbour precinct and ongoing developments in the area.

7.3 Proposed Future Adaptive Reuse of Site

In recognising the existing significance of the site and its local listing in particular, consideration should be given to the future adaptation of the historic structures on site, with an improved interpretation strategy which takes on board the original recommendations of the CMP as discussed previously in Section 7.2.

Since the initial development of the Powerhouse Museum in 1988, substantial developments in adaptive reuse have been implemented in various projects across the world, lifting the standard of heritage conservation and surgical intervention into such buildings. Reference should be drawn from such exemplar ideas and works in any future adaptive reuse of the site to maintain the integrity of the original fabric and in particular, to re-emphasise the public nature of the site and the possible future socio-cultural presence on the site.

Recent developments which may be useful in considering the future adaptation of the Ultimo Powerhouse site includes:

Tate Modern, formerly Bankside Power Station

London, United Kingdom

Considered the contemporary post-millennial benchmark for adaptive reuse, this project houses the Tate's contemporary art collection in site specific galleries, whilst the major turbine hall has been interpreted as a flexible entry and public art gallery. Of particular importance is the site's commitment to public access, with the main turbine hall and foyer spaces being free access, enabling opportunities for the general public to enjoy temporary installations and regard the historic fabric of the site.

Battersea Power Station Redevelopment

London, United Kingdom

An ongoing under-construction project for the conversion of the Battersea powerstation into a commercial and public art space, emphasis is once again placed on not cluttering up existing multi-storey volumes, with open galleries and corridors connecting offices lined across the exterior fabric and an internal atrium created. One particular 'quirk' occurs as part of the reconstruction of the chimneys, where a new observation glass elevator is constructed to offer a unique interpretation of heritage fabric.

Tai Kwun Centre for the Arts

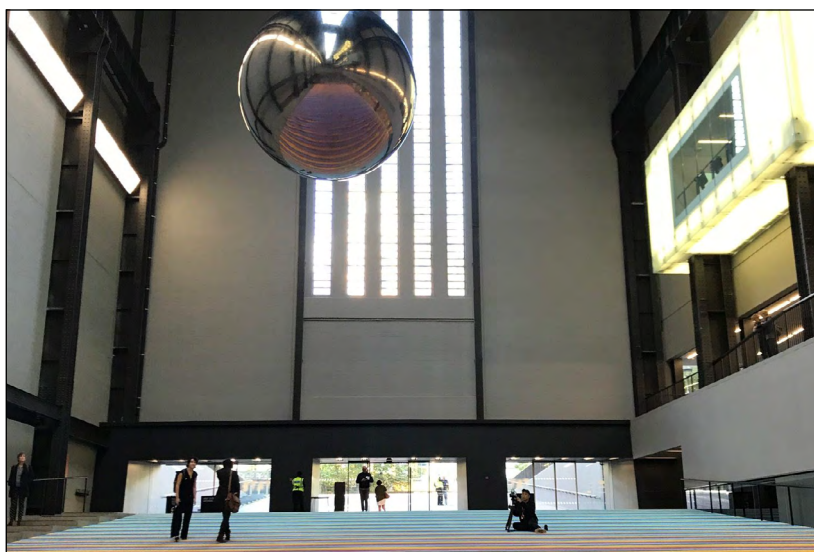
Hong Kong S.A.R.

Conversion of a gaol complex into a performing arts and artist-in-residence hub, the Twi Kwun centre provides clear demarcation between conserved (historic) and contemporary fabric, with a variety of spaces linked by outdoor courtyards and squares, freely accessible to the public, consisting of retail and dining opportunities.

7.0 Recommendations & Policies

Tate Modern, London, UK

The primary turbine hall space has been adapted into a fully open public art atrium, with clear identification of old and new fabric enabling interpretation and various temporary public art exhibitions to take place.



Battersea Power Station, London, UK

As part of the interpretation strategy, the chimneys of the power station have been transformed into glass observation elevators, providing visitors with a unique experience of the history and view of London West.



Tai Kwun Centre for the Arts, Hong Kong

Careful interpretation of traditional Chinese tiles into contemporary facade systems enables a juxtaposition of new performing arts spaces with the existing heritage buildings which form the precinct of retail and dining spaces.



8.1 Conclusion

This report has sought to undertake a detailed review of the National Trust's proposed listing and provided an individualised deconstruction of the reasons for the proposed listing, critically assessing against both the NSW Heritage Guidelines and having regard to other relevant heritage inclusions and exclusions. In compiling a review of literature around the existing local listing, as well as the history of both the site and the collection of the MAAS, it is ultimately the conclusion of this report that the subject site does not warrant a heritage listing at the NSW State level with regard to the proposal forwarded by the National Trust. This conclusion has been reached for the following reasons:

- The existing Ultimo Powerhouse buildings have been adversely impacted by substantial alterations and additions which have resulted in removal/non-restoration of original fabric (such as machinery and chimney stacks), thus reducing its overall integrity, and reducing the ability for interpretation as a powerhouse. In comparison to other State Listed buildings and significant powerhouses, particularly the White Bay power station, the intactness, integrity and potential of the site is not of the same quality or degree of significance to warrant a state listing.
- The 1980s Additions, primarily confined to the Wran building, whilst providing some merit and architectural interest and clearly of a particular post-modernist architectural period, does not, in and of itself meet the criterion for listing at a state level for aesthetic or technical reasons. The substantive alterations made to the original 1988 project indicates that the building does not 'withstand the test of time' and subsequent alterations have substantially diluted the original intent and quality of the 1988 additions.
- The social value between the collection of the Museum of Applied Arts and Sciences and the subject site can be dated only to 1988, with the opening of the museum. The history and growth of the collection is not directly and exclusively linked to the site and its connection to the site is not to a degree of significance which warrants a listing at the State Level.
- The social value between the community of the MAAS, including curators, exhibitors, artists, visitors, whilst important at a local community level, is arguably more directly linked to the social and cultural connection of the collection (as a form of intangible heritage) rather than to the subject site specifically.

In concluding that the subject site does not meet the threshold for listing at a State Level and does not meet the threshold for including the 1988 Wran Buildings to the listing, our report provided a series of recommendations on the future management. In summary, our recommendations are:

- The site's heritage values are appropriately managed through the partial listing on the City of Sydney LEP.
- Any future management of the site should have regard to the original Conservation Management Plan prepared by Architectural Projects Pty Ltd in 2003, and indeed an updated Conservation Management Plan should be prepared by suitably qualified heritage experts prior to any substantial alterations and additions to the site.
- The Statement of Significance for the existing Local Listing should be updated to reflect the buildings listed, with additional historic details and information provided in reference to the original CMP and in the updated statement supplied in this report.
- Opportunities for further interpretation in accordance with the original CMP should be considered and in particular, re-emphasis of the 'powerhouse' history of the site should be considered and integrated into future developments of the site.
- Opportunities for future adaptive reuse should be considered for any proposed future development on the site and a publicly accessible socio-cultural presence should be maintained and enhanced on the site.

Peter Lonergan

Director, Cracknell & Lonergan Architects Pty Ltd

Introduction

Peter J. Lonergan is the director of practice and nominated architect (NSW Registration No. 5983) of Cracknell & Lonergan Architects (CLA) Pty Ltd, a private practice established with Julie Cracknell in 1984. Together, Peter and Julie have accumulated over thirty years of experience in the fields of architecture, interior design, heritage conservation, exhibition design and expert consultancy in town planning. As director of practice, Peter has not only been involved in the design of multiple works, but also served as a heritage consultant and consultant in the fields of SEPP65, SEPPARH, Clause 4.6, and various other planning advisory bodies. Today, Peter continues to serve as director of architectural design at CLA, overseeing a diverse range of projects throughout the Sydney Metropolitan Area, with a combined contract value exceeding AUD\$50 Million.

Formal Qualifications

BArchitecture University of New South Wales (UNSW) BScArchitecture (Hons) UNSW

MBEnv (Building Conservation) UNSW

Certificate Sustainable Design University of Sydney (USYD)

Architecture – Key Examples

Miller Street, Cammeray, Residential Flat Building

Premier Street, Neutral bay, Residential Flat Building

Lavoni Street, Mosman, Residential Development

Restoration of Jarjum College, Redfern, Sydney, for the Jesuit Fathers, St. Aloysius College

The Pemulwuy Project. Redevelopment of “The Block”, Redfern, Sydney, for the Aboriginal Housing Corporation

Heritage Conservation – Key Examples

Heritage Consultant & Supervision, Mechanics School of Arts (The Arthouse Hotel), Pitt Street, Sydney

Heritage Consultant & Supervision, Masonic Temple, North Sydney

Heritage Supervision and Heritage Architect, St. Clements Church, Marrickville

Heritage Consultant & Conservation Management Plan, Redfern's Cottage, Minto

Heritage Consultant, Rosebank College, Five Dock

Public Art and Exhibition Design – Key Examples

Yininmadyemi - Thou didst let fall (by artist Tony Albert), Hyde Park, Sydney, Australia

Always was, Always will Be (by artist Reko Rennie), Oxford Street, Sydney, Australia

Murri Totem Poles (by artist Reko Rennie), La Trobe University, Melbourne, Australia

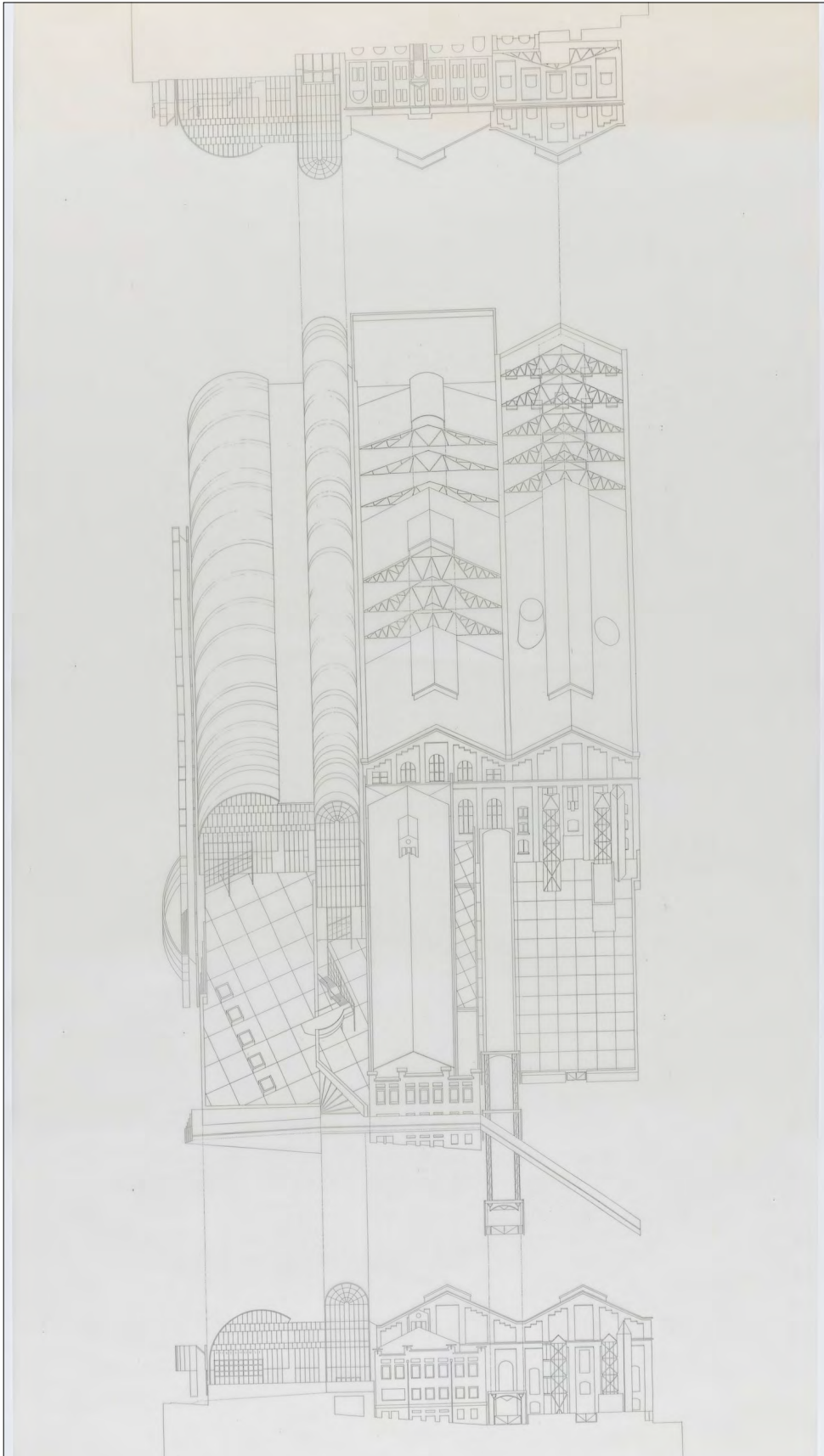
Papunya Tula, Central Termini, Rome, for the Art Gallery of NSW, Sydney, Australia

Gabriel Pizzi, Australian Embassy, Paris, France

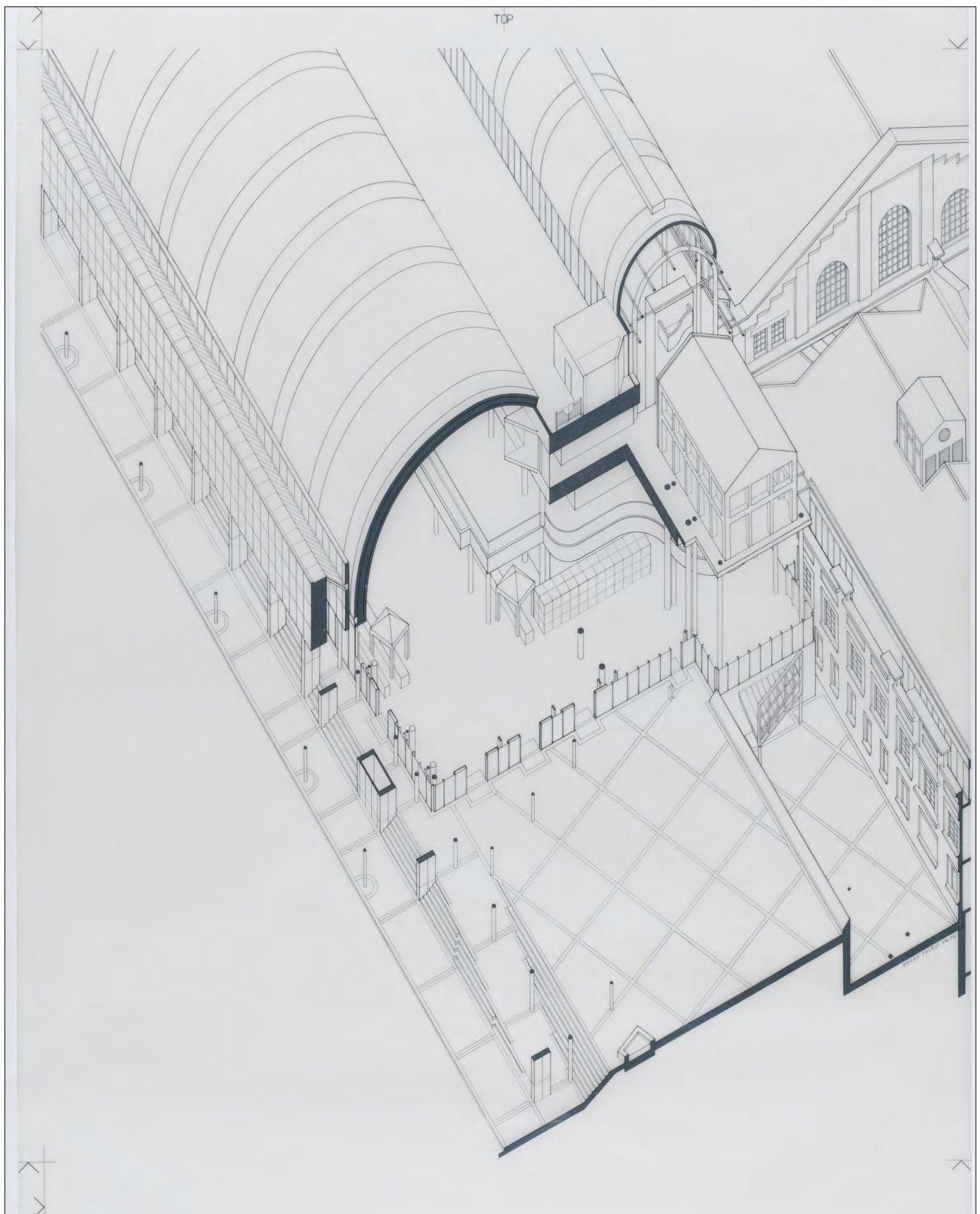
Musee du quai Branly at the Australian Embassy in Paris, for the Australia Council for the Arts, Paris, France

Design and project management of Indigenous Art Commission at Musee du quai Branly (2500m² of permanent public art in the current Presidential Project (with Ateliers Jean Nouvel), Paris, France

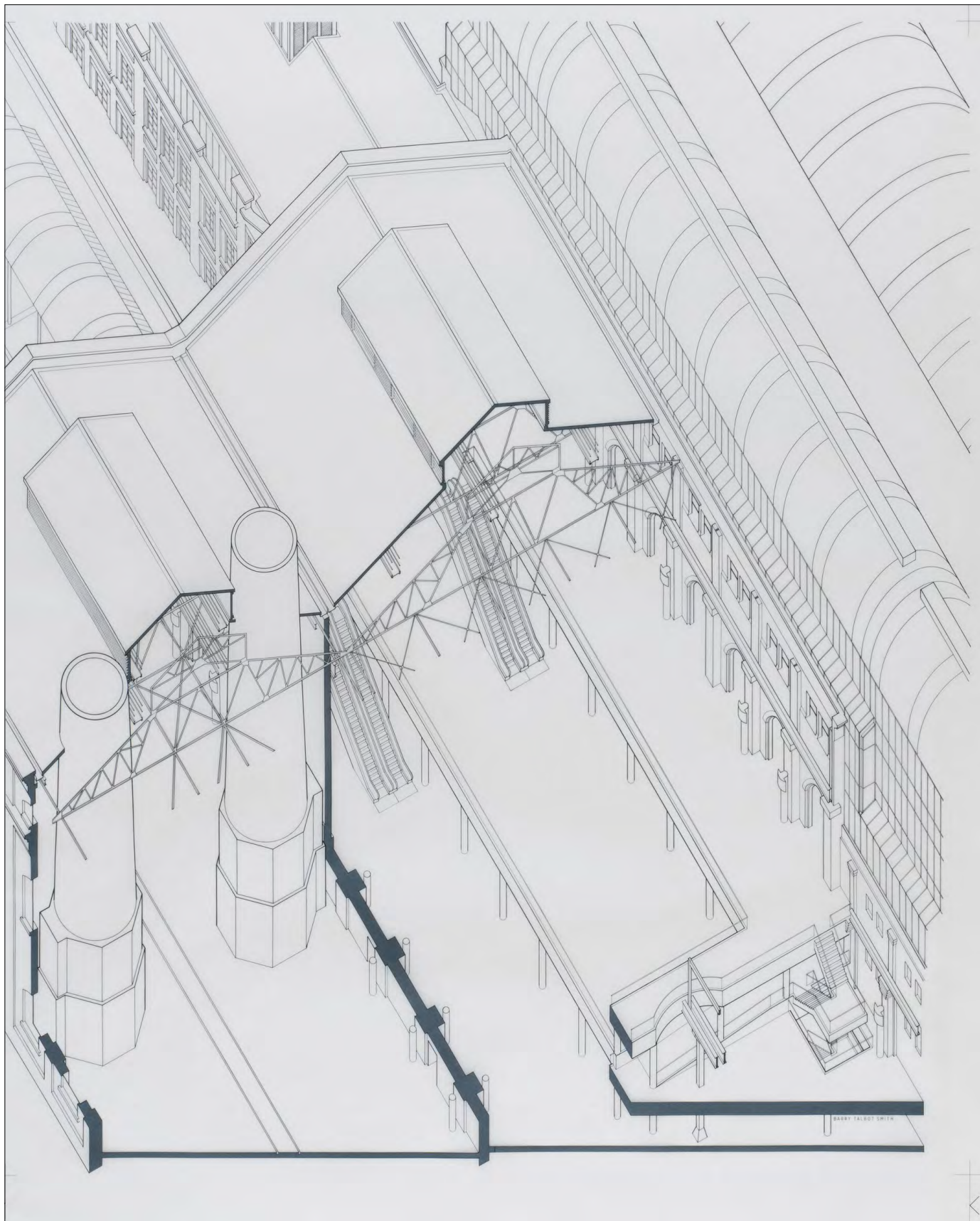
10.0 Appendix B: Archival Drawings - 1988 Additions (MAAS Collection)



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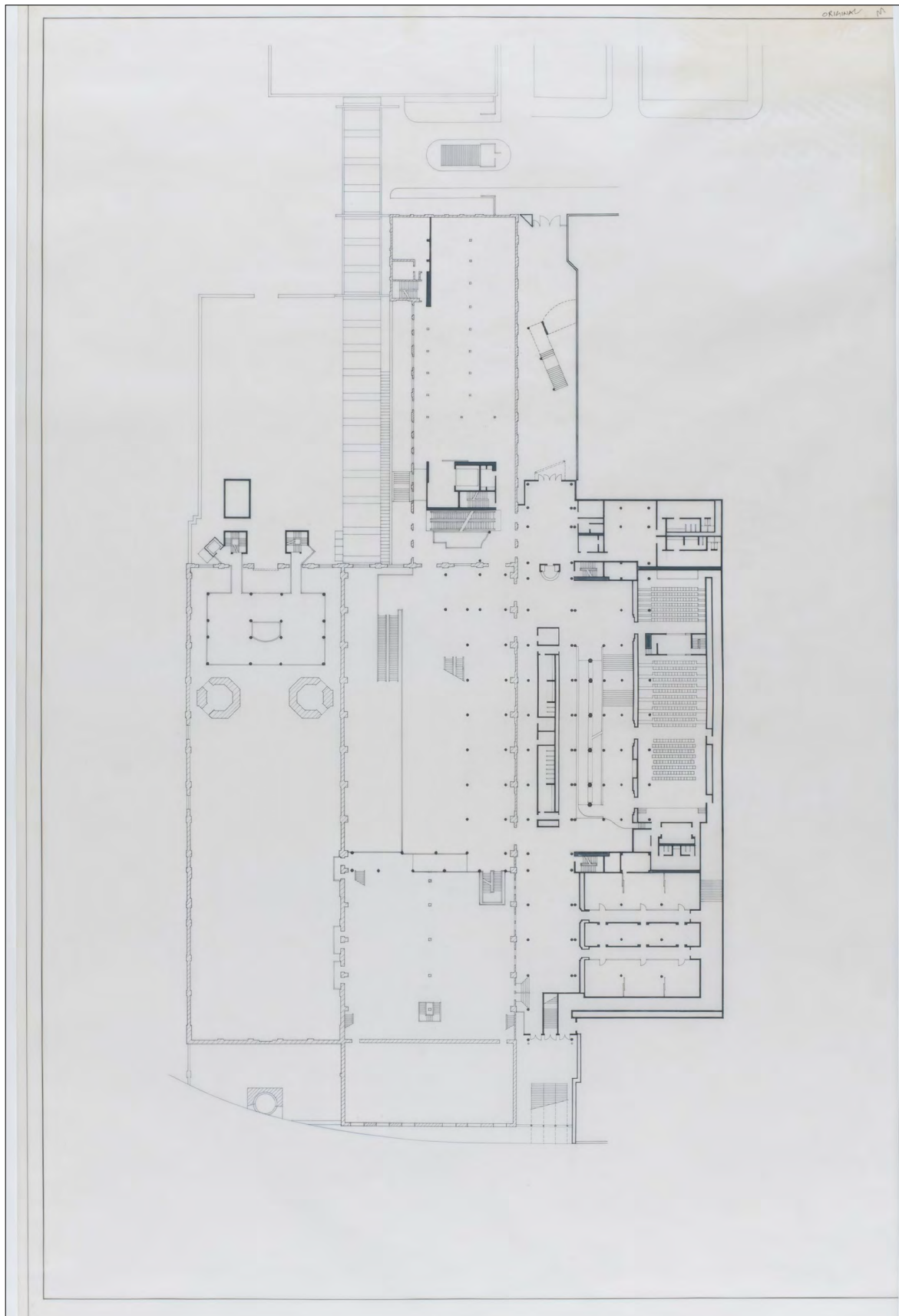
10.0 Appendix B: Archival Drawings - 1988 Additions (MAAS Collection)



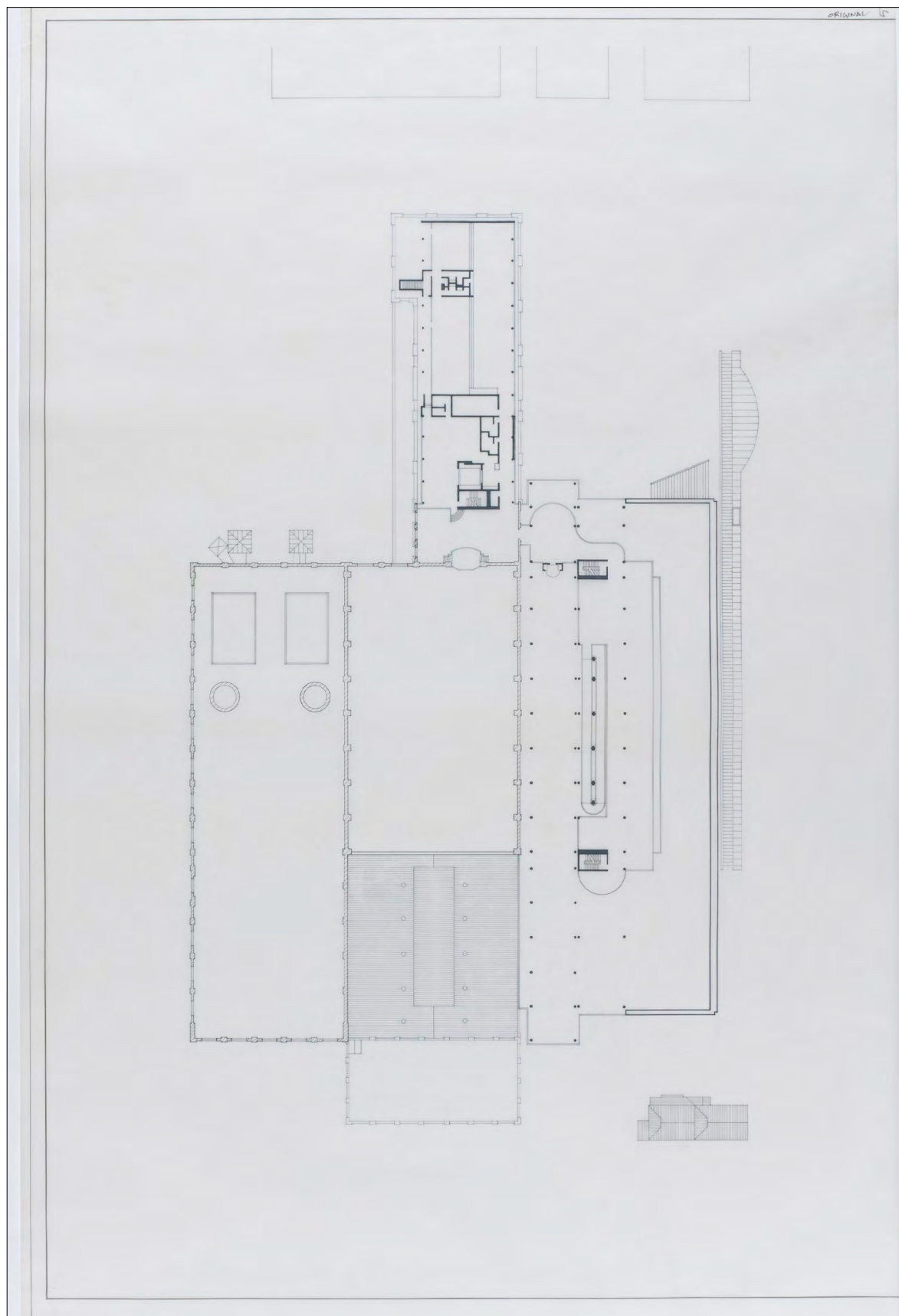
10.0 Appendix B: Archival Drawings - 1988 Additions (MAAS Collection)



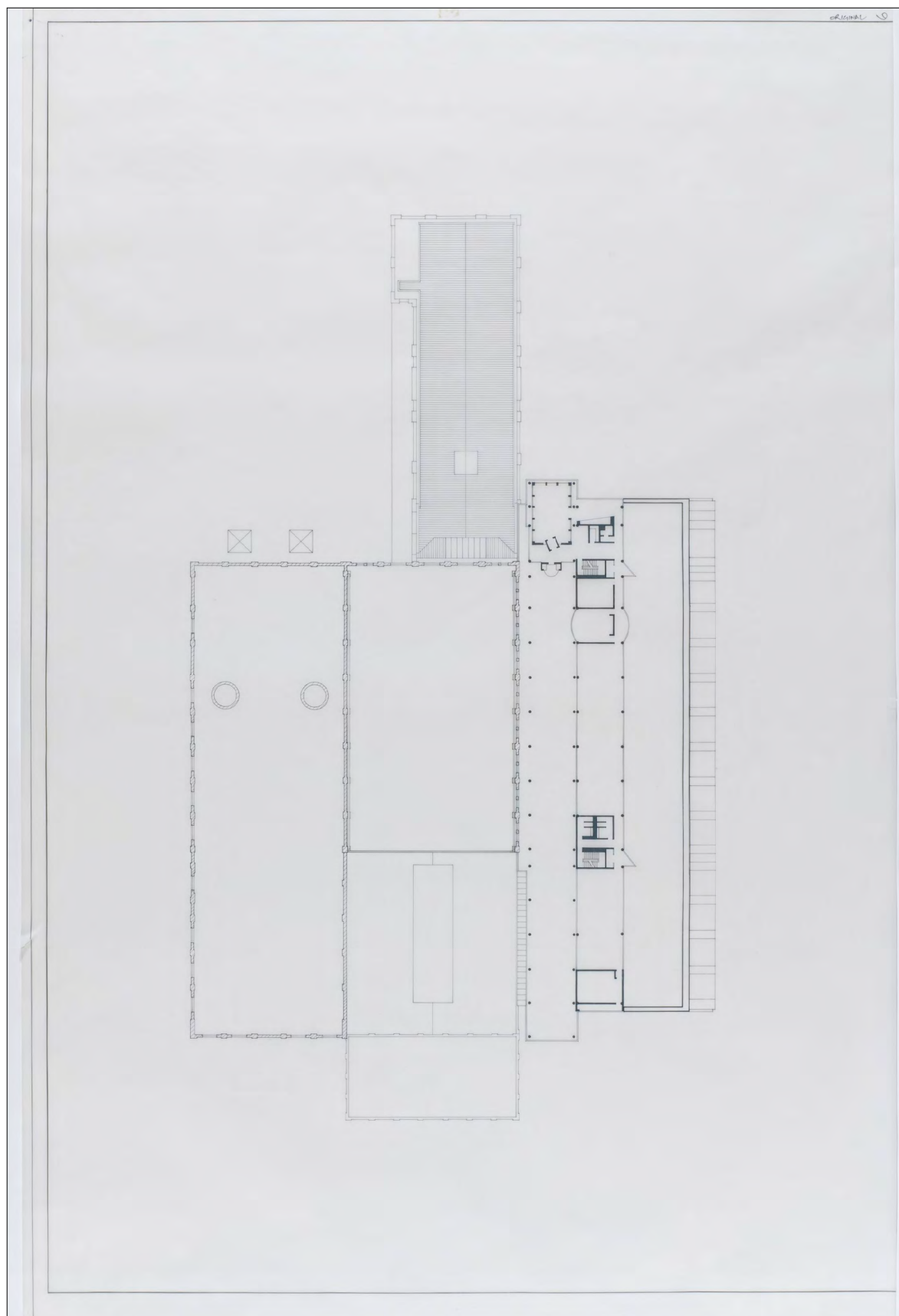
10.0 Appendix B: Archival Drawings - 1988 Additions (MAAS Collection)



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President's Award For Recycled Buildings The Interiors Award For Interior Design Zelman Cowen Award Finalist

Powerhouse Museum, Sydney
NSW Public Works
Design Consultants
Walker Marshall

first project ever to have
nominated for three categories
of the Architecture Awards,
it has a great deal about its
architectural significance.

It demonstrates clearly
that old buildings, even such
unusable ones as an old
tation, are not always write-
as this project shows, they
even more significant the
around.

house used to generate
for the city's tram system and
the space of the old building
recycled and a major new
building. The result a great place
to explore and be transported
and of memorabilia.

the Jury could have
been tempted by the exhibits too but
it would have been unfair. After all,
architects get to use such
props as space craft,
jet aeroplanes as interior design
the reality is the building will
at project, even if all its
are more mundane.

It is a pity that Darling Harbour has
lost its popularity but the project
has been a success without this
because actually it is interesting
to see the skill in converting the
building because of the fun created
by the building and because of the
high quality of its display spaces.
The most impressive aspect of
the building is the way it handles space.
It provides a sense of
order and expectation, giving a
private welcome to a building
and exciting interiors.
One of the interior exhibition
spaces is quite brilliant
in its design and enriching the
display spaces while providing
background for the myriad



The Sydney Powerhouse is exuberant,
brash, exhibitionist and, above all, fun.
Old and new blends well, but wisely the
temptation to copy the old structure has
properly been resisted.

Large numbers of people visit the
Powerhouse but the planning of interior
spaces is an important change from the
norm. We are used to museums forcing
visitors along rigid routes through an
exhibition. The Powerhouse is
refreshingly different, even confusing.

The visitor is left intentionally
wondering if they have seen everything
and thinking that a return visit would be
worthwhile. This is a charm seldom found
in contemporary work but well loved in
traditional museums.

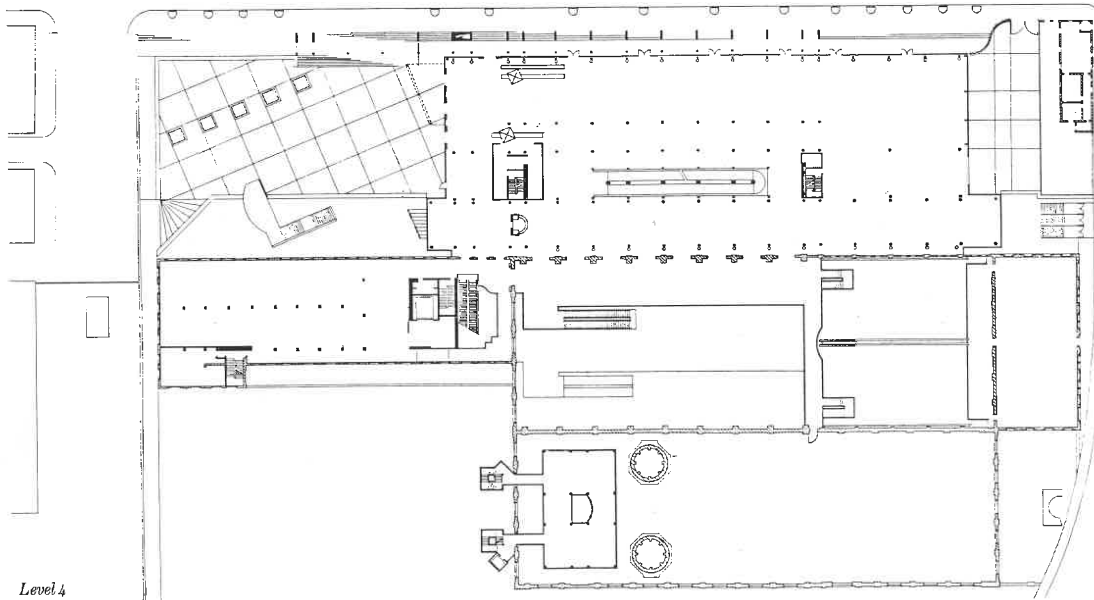
remains for change and growth, yet one is
never left with a sense of incompleteness.

In an era which demands the
separation of architecture, interiors
and exhibition design, this project
demonstrates that they are very much
part and parcel of the same family. The
result is stunning. Public acceptance
and enthusiasm is overwhelming.

The Sydney Powerhouse is a powerful
exhibit, an exhibition and a design centre.
It will make a significant contribution to
architecture in raising the general design
consciousness of all its visitors in an
entertaining and memorable way. (AA)

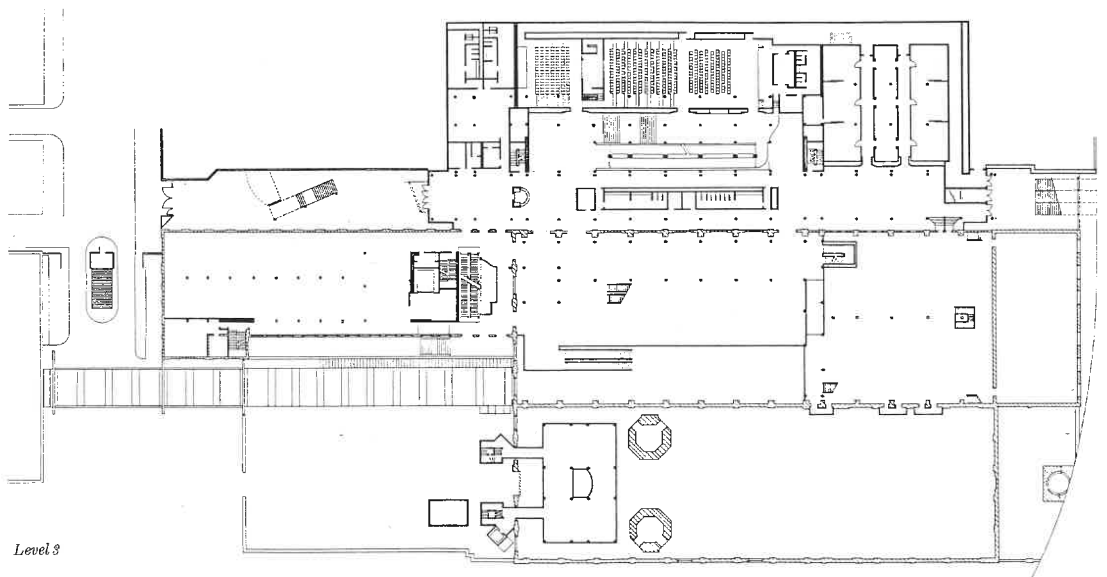
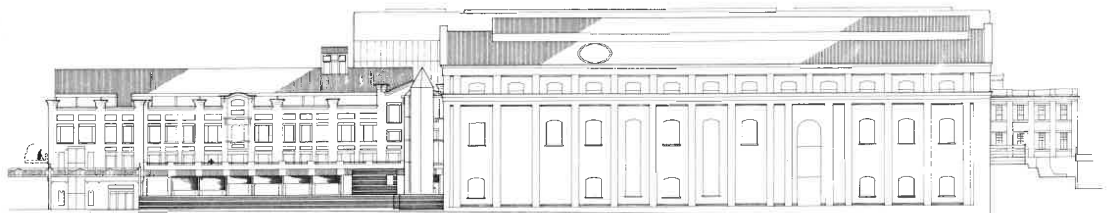


Powerhouse Museum, Sydney
The President's Award
The Belle Interiors Award
Finalist: The Sir Zelman Cowen
Award



48 Architecture Australia Awards 1988

11.0 Appendix C: 1988 AIA Awards - Jury Citation (Powerhouse Museum)



Architect

NSW Public Works Department,
Architectural Division
Government Architect: J W Thomson
Principal Architect: Lionel Glendenning
Project Architect: Sam Broudo
Architects: Bruce Palmer, Allan
Blackmore

Project Manager

Peter Rochaix

Construction Manager

Sam Manion

Project Engineer

Warwick Farley

Structural Engineer

Bond James Laron Murtagh

Mechanical Engineer

Public Works Dept: Dave Rowe

Electrical Engineer

NSW Public Works Dept

Quantity Surveyor

Northcroft Partnership

Acoustics

Wilkinson & Murray

Security Engineer

Firewood & Hartill

Hydraulic Engineer

Dave Creasey & Associates

Fire Services

D Rudd & Partners

Principal Design Consultants

Denton Corker Marshall

Museum Consultants

Smithsonian Institute, Washington

Interior Design Consultant

March Freedman

Exhibition Designers

NSW Public Works Dept

Denton Corker Marshall

Neil Burley & Associates

Campbells

Museum Design Department



Powerhouse Museum, Sydney
The President's Award
The Belle Interiors Award
Finalist: The Sir Zelman Cowen Award



South elevation

Architecture Australia Awards 1988 51

120 ARCHITECTURE IN TRANSITION

1988

THE POWERHOUSE MUSEUM HARRIS STREET, ULTIMO
 ARCHITECT: NSW GOVERNMENT ARCHITECT
 (GOVERNMENT ARCHITECT: J.W. THOMPSON, PROJECT ARCHITECT: LIONEL GLENDENNING)



With a virtually 50/50 ratio of new to existing buildings the Powerhouse Museum is significantly different to the Queen Victoria Building and the Wharf Theatre, two contemporary winners of the Sulman Medal which look one hundred per cent heritage. The Powerhouse's character comes out of its blend of new and old architectures.

The task for the Powerhouse team was to accept the cavernous interiors of a stripped-out, derelict power station and then to add masses of floor space and change its use from heavy industry to popular entertainment, keeping in mind that in fact not many of the museum's holdings are the size of a cargo aeroplane or a steam locomotive. Thus, large exhibits are housed in the old machinery halls and the extensive new buildings are set out parallel to the long dimension of the halls with the new west building occupying the space between the halls and Harris Street, used for entry, orientation and small exhibits.

The symbolic and aesthetic choices made for this large new building represent the architectural strategy at the Powerhouse. The NSW Government Architect's choice of the same vaulted roofs

as Parklea Prison is curious and probably more akin to an airy Darling Harbour aesthetic than to either the conventional idea of a museum, or a street of 19th and early 20th century buildings such as we find in Harris Street. There is an awkwardness here arising from the blunt way that these new buildings have been related to the old, neither boldly new nor effectively connected. No such quibble can be had with the real reason for visiting the Powerhouse, the interior spaces and the materials in them. Here, the old and new are almost seamlessly combined and appropriately, the exhibits overwhelm interior architecture, drawing us through a series of connected space which reveal the contents successively.

Architecture in Australia, Awards 1988, pp. 48-51.

1 Powerhouse Museum (1988), colour photograph, exterior detail, Andrew Frolows, 1989. Reproduced courtesy Powerhouse Museum 2 Powerhouse Museum (1988), colour photograph, exterior, photographer unknown. Department of Public Works & Services 3 Powerhouse Museum (1988), colour photograph, exterior landscape view with city, Andrew Frolows, 1989. Reproduced courtesy Powerhouse Museum 4 Powerhouse Museum (1988), b&w photograph, interior of turbine hall during construction, photographer unknown. DPWS

JURY

Architects

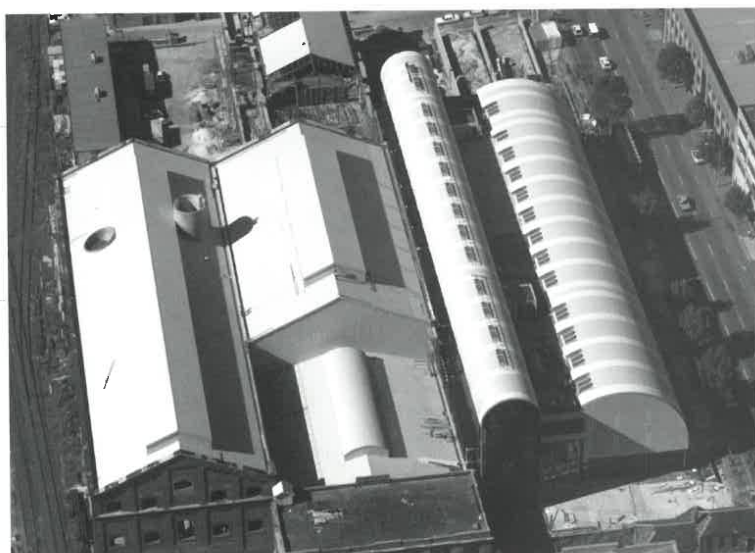
KEN WOOLLEY
 SUZANNE DANCE
 DAVID LOGAN
 PROF BARRY MAITLAND

Others

LEO SCHOFIELD
 Journalist



THE SULMAN AWARD 121



STAGE 1

HISTORY & BUILDING INSPECTION



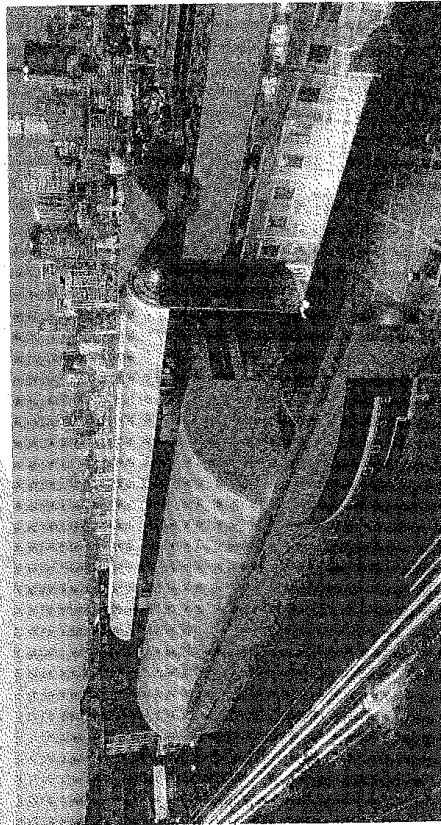
History Aesthetic Social Technical Significance



Integrity Rarity & Representativeness

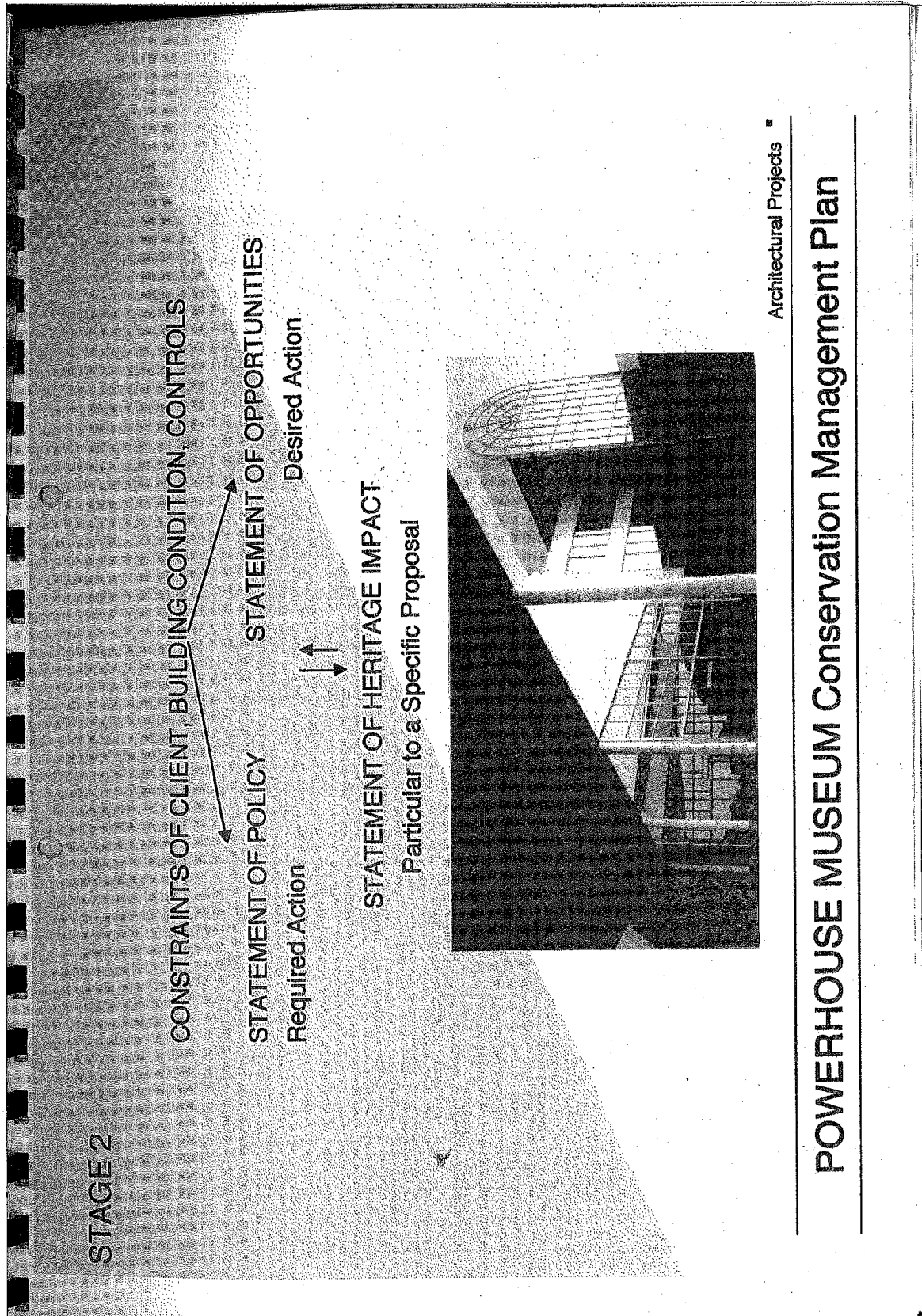


STATEMENT OF CULTURAL SIGNIFICANCE



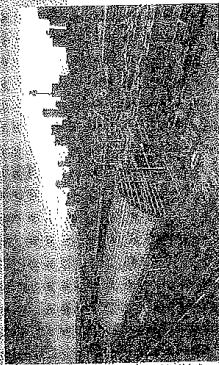
Architectural Projects

POWERHOUSE MUSEUM Conservation Management Plan

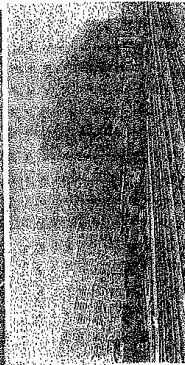


THE COMPLEX INCLUDES:

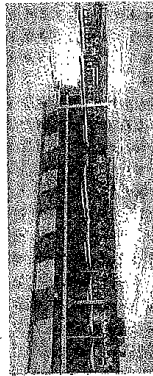
WRAN BUILDING



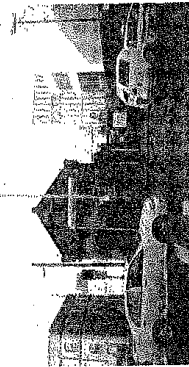
FORMER ULTIMO POWER HOUSE



FORMER ULTIMO TRAM DEPOT



FORMER ULTIMO POST OFFICE



Architectural Projects

POWERHOUSE MUSEUM Conservation Management Plan

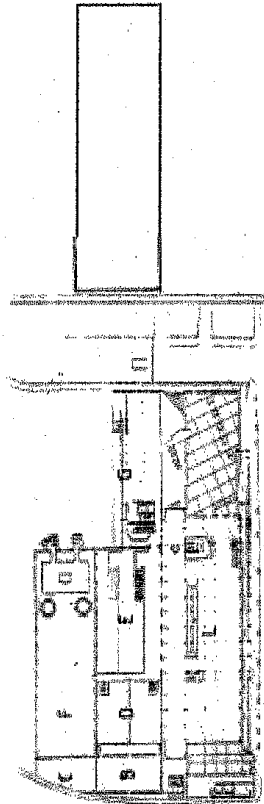
THE SITE IS BOUNDED BY:

North – Darling Harbour Light Track

East – Mary Ann Street

South – Harris Street

West – William Henry Street

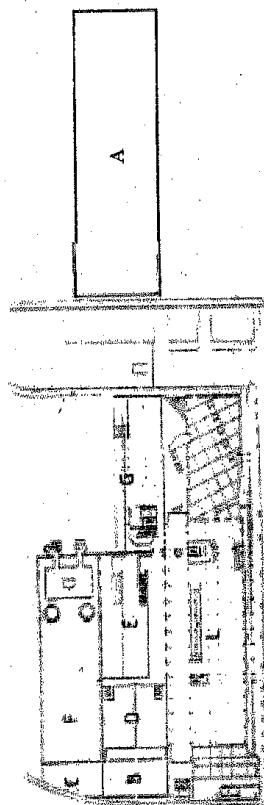


Architectural Projects

POWERHOUSE MUSEUM Conservation Management Plan

The Buildings that make up the Powerhouse Museum include:

- A. Harwood Building
- B. The Office Building
- C. The Pump House
- D. The Engine Room
- E. The Turbine Hall
- F. The New Boiler House
- G. The Switch House
- H. Ultimo Post Office
- I. The Wran Building



Architectural Projects ■

POWERHOUSE MUSEUM Conservation Management Plan

STATEMENT OF CULTURAL SIGNIFICANCE

Former Ultimo Post Office



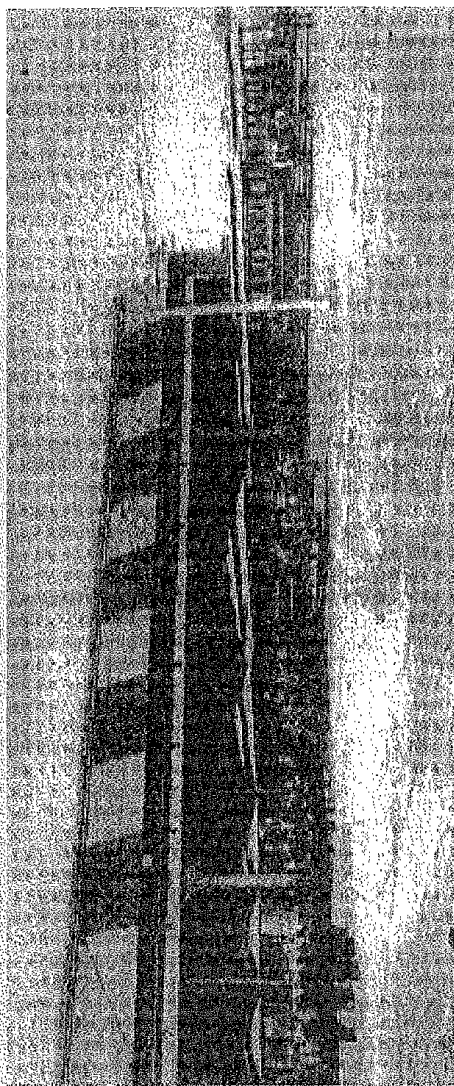
- ❖ One of 32 buildings built 1890 – 1910
- ❖ Designed by the Government Architect, Walter Liberty Vernon
- ❖ Clear visual link to Victorian residential Pymont

Architectural Projects ■

POWERHOUSE MUSEUM Conservation Management Plan

STATEMENT OF CULTURAL SIGNIFICANCE

Harwood Building (Former Ultimo Tram Depot).



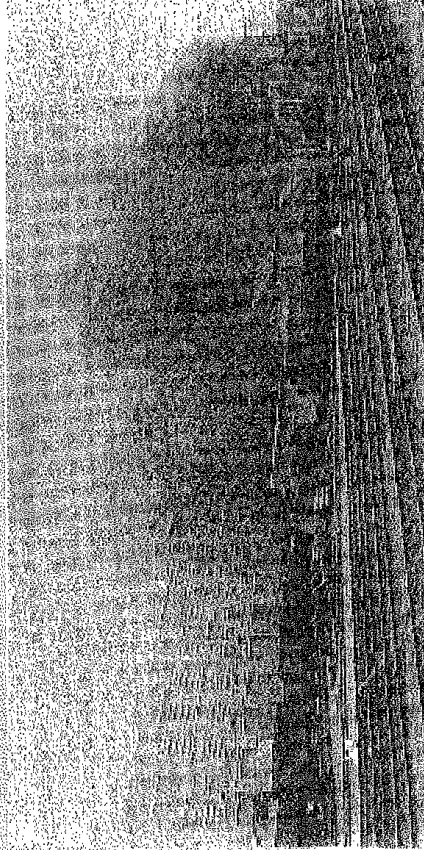
- First electric tramway depot in Sydney
- Transport development of Ultimo / Pymont
- Complementary element to Ultimo Power Station
- Remains as remnant fabric in the Harwood Building

Architectural Projects

POWERHOUSE MUSEUM Conservation Management Plan

STATEMENT OF CULTURAL SIGNIFICANCE

Former Ultimo Power Station



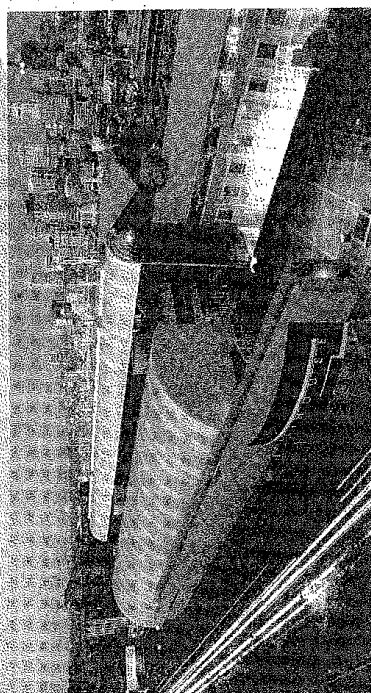
- Commenced 1899
- Original generating station for Sydney's tramway network
- Important generating station in NSW
- First use of turbine driven alternators in Australia (1905)
- Purpose built for the Railway and Tramways Department

Architectural Projects ■

POWERHOUSE MUSEUM Conservation Management Plan

STATEMENT OF CULTURAL SIGNIFICANCE

Powerhouse Museum

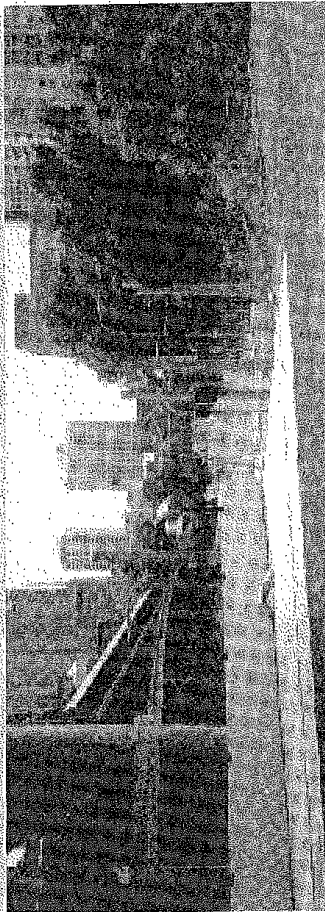


- Principal NSW museum of technology, industry, design and decorative arts
- Continuation of Technological Museum and 1989 International Exhibition
- Pioneering adaptive reuse of an industrial building
- Important government initiative / revitalisation of the Ultimo Pyrmont
- Highly innovative state of the art museum in 1988
- Recipient of the 1988 Sulman Award
- Important work by the Government Architects Branch

Architectural Projects

POWERHOUSE MUSEUM Conservation Management Plan

CLIENT CONSTRAINTS



Provide strong visual identity to Darling Harbour / Hay Market

Provide an entry accessible from Darling Harbour

Enhance interpretation of the former Ultimo Powerhouse and Tram Depot.

Provide new facilities

200 seat planetarium

amphitheatre

additional staff accommodation

a Collection Resource Centre

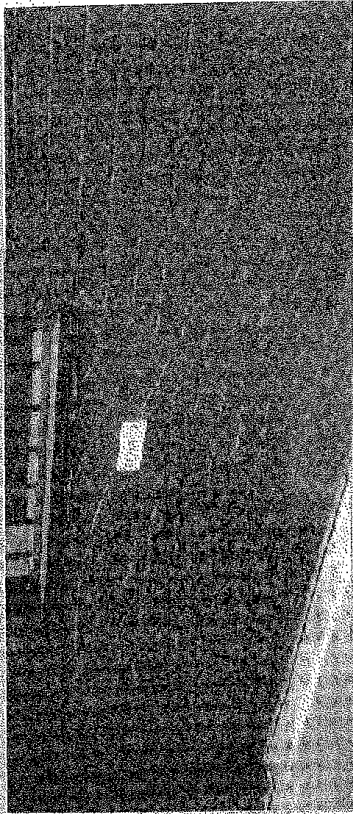
a separate Function Centre

Consider development opportunities that could fund the museum

Architectural Projects ■

POWERHOUSE MUSEUM Conservation Management Plan

CONSERVATION POLICY



General

- Reconstruction of original fabric is not required
- Protect the heritage significance of the building complex
- Adopt the Conservation Management Plan to guide future change
- Interpret two main phases:
 - Ultimo Power House and Tram Depot and Ultimo Post Office
 - Powerhouse Museum

Architectural Projects ■

POWERHOUSE MUSEUM Conservation Management Plan

CONSERVATION POLICY

Exterior

Retain overall form of the Ultimo Power House and Ultimo Post Office

Retain intact significant fabric of these external facades

Retain and reveal remnant original fabric of the Ultimo Tram Depot

Maintain original finishes

★ Maintain colours consistent with the original design intention of the Ultimo Power House and Tram Depot, Ultimo Post Office and Powerhouse Museum

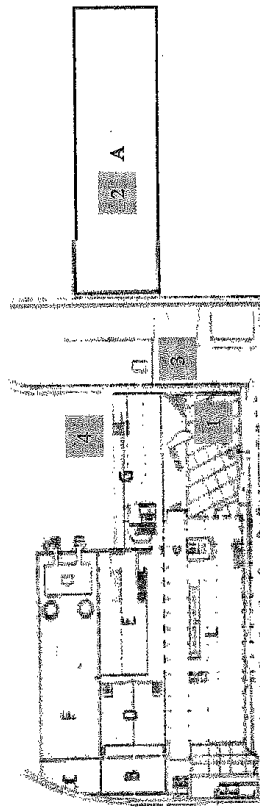
Architectural Projects ■

POWERHOUSE MUSEUM Conservation Management Plan

CONSERVATION POLICY

New Development

- Retain key views of the existing Power House and Powerhouse Museum
- Ideally locate development in areas of low significance:
 1. Harris Street Forecourt where a building was previously proposed
 2. Largely reconstructed Harwood Building
 3. The roadway between Stage 1 and Stage 2 where no building exists
 4. Rear Grace Bros Courtyard where existing service structures located



Architectural Projects

POWERHOUSE MUSEUM Conservation Management Plan

CONSERVATION POLICY

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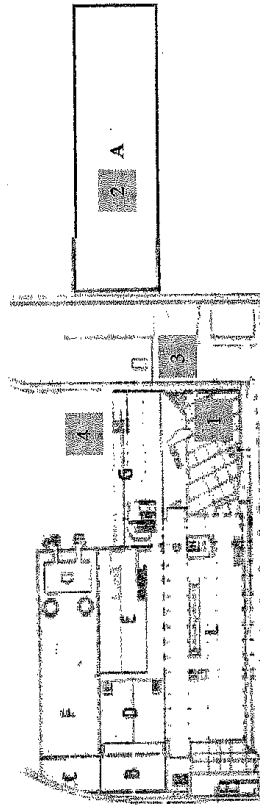
Architectural Projects

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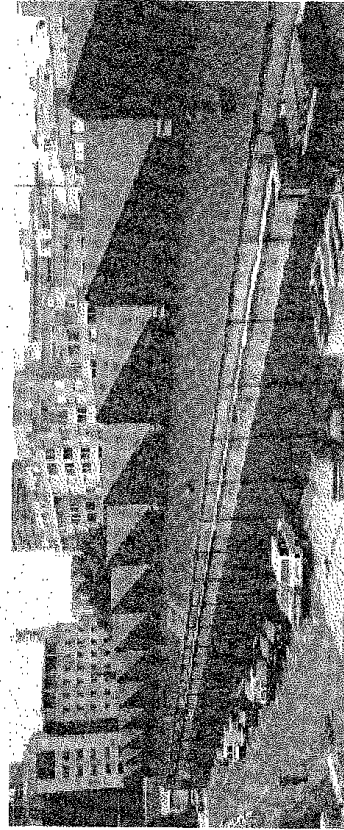
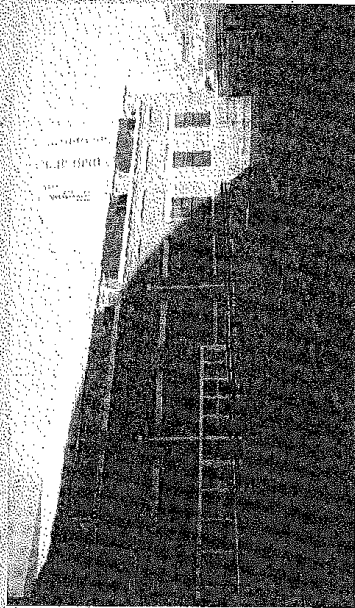
Architectural Projects

POWERHOUSE MUSEUM Conservation Management Plan

CONSERVATION POLICY

New Development

- Harris Street Forecourt where a building was previously proposed
- Largely reconstructed Harwood Building



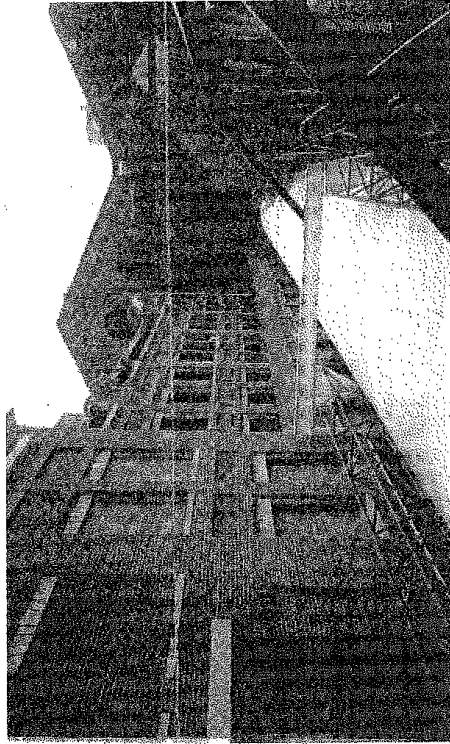
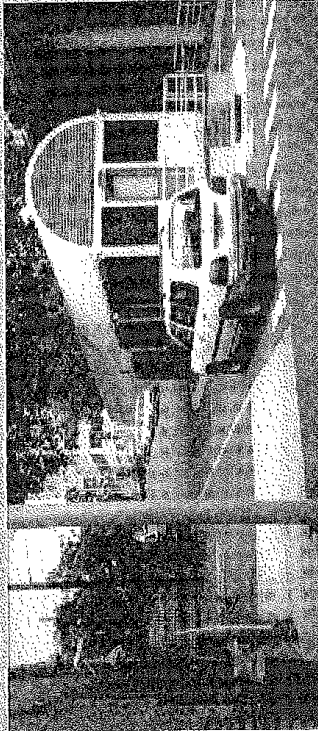
Architectural Projects

POWERHOUSE MUSEUM Conservation Management Plan

CONSERVATION POLICY

New Development

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- Rear Grace Bros Courtyard where existing service structures located

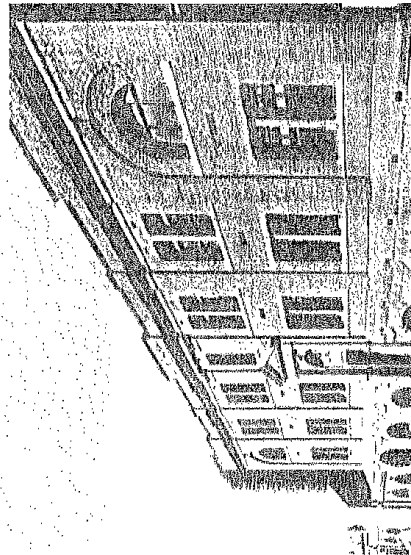
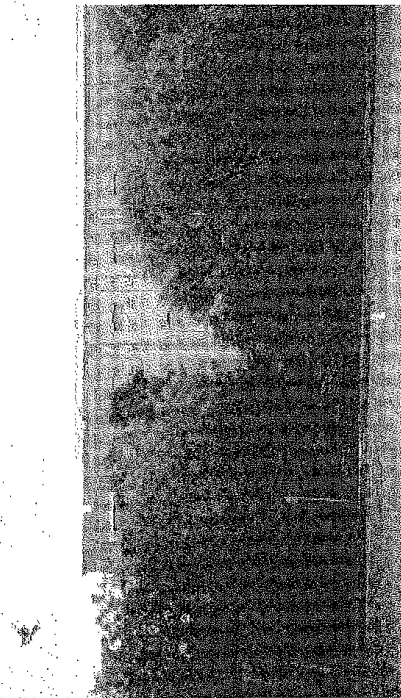


Architectural Projects

POWERHOUSE MUSEUM Conservation Management Plan

CONSERVATION POLICY

- Design additions to maximise visibility of areas of high significance
- No development should occur in the areas of high significance being:
- Highly visible and intact facades of the Ultimo Powerhouse
- New Boiler House facade fronting Darling Harbour
- Office Building North Annex fronting William Henry Street
- All facades of the Wran Building



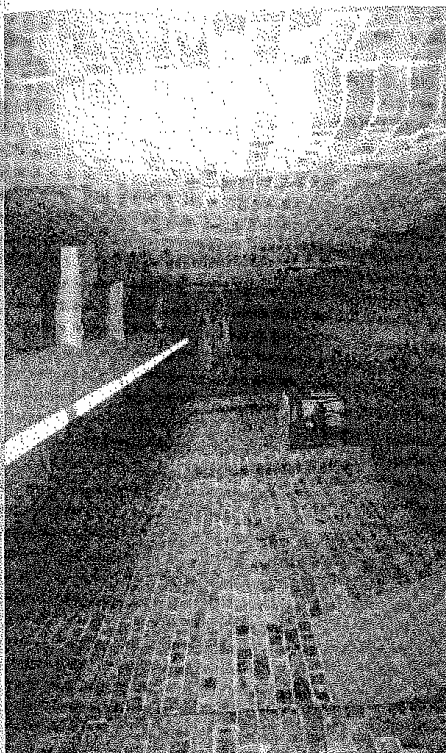
Architectural Projects

POWERHOUSE MUSEUM Conservation Management Plan

CONSERVATION POLICY

Interior

- Retain intact significant fabric being:
- Interiors of the Office building
- Retained machinery and finishes
- Finishes from the public spaces of the Powerhouse Museum
- Remove applied finishes to significant original fabric
- Internal work should not compromise design intent of the 1988 adaptive reuse
- Reinforce quality of existing soaring spaces



Architectural Projects ■

POWERHOUSE MUSEUM Conservation Management Plan

NSW Department of Planning, Industry and Environment

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Powerhouse Museum Former Warehouse Buildings, including interiors

Item details

Name of item:	Powerhouse Museum Former Warehouse Buildings, including interiors
Other name/s:	Ultimo Powerhouse (Former)
Type of item:	Built
Group/Collection:	Utilities - Electricity
Category:	Electricity Generator/Power Station - coal/gas/oil
Primary address:	500 Harris Street, Ultimo, NSW 2007
Local govt. area:	Sydney

All addresses

Street Address	Suburb/town	LGA	Parish	County	Type
500 Harris Street	Ultimo	Sydney			Primary Address
William Henry Street	Ultimo	Sydney			Alternate Address

Statement of significance:

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

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

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

Date significance updated: 31 Mar 16

Note: The State Heritage Inventory provides information about heritage items listed by local and State government agencies. The State Heritage Inventory is continually being updated by local and State agencies as new information becomes available. Read the [OEH copyright and disclaimer](#).

Description

Physical	A robust and substantial warehouse building typical of the Federation period. Of solid brick
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14.0 Appendix F: NSW OEH State Heritage Inventory Datasheet

description: construction with sparse rendered brick details to window sills and cornice. Decorative brick arched lintels over the windows. Built on the eastern side of the Ultimo/Pymont ridge line, this original warehouse is the southernmost, closest to Parramatta Road on this side of the ridge. See also Ref. Nos. 6559, 6556, 6555, 6632. Category: Individual Building. Style: Federation Warehouse. Storeys: 3. General Details: Refer to Archaeological Zoning Plan.

Physical condition and/or Archaeological potential: The building is in good condition.

Date condition updated: 12 Jul 05

Modifications and dates: The building closed as a power station in 1963 and was restored and adaptively converted to a technology museum in the late 1980's. It won the Sulman Award in 1988.

Further information: Heritage Inventory sheets are often not comprehensive, and should be regarded as a general guide only. Inventory sheets are based on information available, and often do not include the social history of sites and buildings. Inventory sheets are constantly updated by the City as further information becomes available. An inventory sheet with little information may simply indicate that there has been no building work done to the item recently: it does not mean that items are not significant. Further research is always recommended as part of preparation of development proposals for heritage items, and is necessary in preparation of Heritage Impact Assessments and Conservation Management Plans, so that the significance of heritage items can be fully assessed prior to submitting development applications.

Current use: Cultural

Former use: Warehouse

History

Historical notes: This site forms part of the land of the Gadigal people, the traditional custodians of land within the City of Sydney council boundaries. For information about the Aboriginal history of the local area see the City's Barani website: <http://www.sydneybarani.com.au/>

The first land grants were made in 1803 and 1806 to Surgeon John Harris who was granted 34 acres and then constructed and named Ultimo House in 1804. He named it Ultimo (meaning last month) as a result of a clerical error in his charge papers. There were further grants to Harris of 9 and 135 acres in 1806 and another 12 acres in 1818. He moved to his farm at Shanes Park (near St Marys) in 1821 but retained the estate and leased Ultimo House first to Edward Riley and then to Justice Stephen.

Proposed improvements along the first few miles of Parramatta Rd prompted subdivision by Harris along the Parramatta Rd and George Street frontages, and these were developed into houses, shops and public houses over the next 10 years. The remainder of the estate remained largely undeveloped and following Harris' death in 1838, legal complications prevented further subdivision until 1859. Ultimo was incorporated into the City of Sydney in 1844 and the early 1850's saw a number of major developments in Pymont and also in Ultimo to a lesser extent. Its close proximity to the city's expanding central business district, Brisbane Distillery port and transport facilities made it an attractive area for housing. In 1853, the Sydney Railway Company resumed 14½ acres of the Ultimo Estate for a railway line to and with a terminus at Darling Harbour. The area was further subdivided in 1860 which established major north/south streets including Pymont, Harris, Jones and Wattle Streets although the roads were not fully formed until 1870. The west side of the estate was dominated by quarrying activities and the remainder used for dairying paddocks. Services including water and sewer came to the area in the early 1860's and gas lighting between 1868 & 1872.

The population doubled during this time, and industry began to establish including Castlemaine Brewery in Quarry Street, Atlas Ironworks, and manufacturer and merchant Samuel Freeman in Harris Street. The early 1880's saw a boom in housing in the area followed by Goldsborough Mort's woolstores in 1883 and other substantial warehouse buildings including a large grain and produce store in Allen St, Waite & Bull's woolstore in 1893, Winchcombe Carson No.1 in 1895 (in Wattle St) and Farmers and Graziers (between Wattle and Jones Sts). In 1892 the Ultimo Technical College opened in Mary Ann St. By the early 1880's Union Square was established as a commercial centre and by 1900 most residential development had ceased by which time the Pymont and Ultimo Power Houses had opened and the new Pymont Bridge had been constructed. Most development in the 20th century was commercial and industrial and included additional woolstores, Pymont

Incinerator (1934) , flour mills (1940) , additional power stations (1955) and the Government Printing Office (1960's).

The building was constructed in 1899 and ceased being used as a powerhouse in 1963 with the phasing out of Sydney trams at that time. It was adaptively re-used to become part of the Powerhouse Museum from 1985. The Powerhouse Museum (formerly the Museum of Applied Arts & Sciences) opened to the public in 1988.

Historic themes

Australian theme (abbrev)	New South Wales theme	Local theme
3. Economy-Developing local, regional and national economies	Science-Activities associated with systematic observations, experiments and processes for the explanation of observable phenomena	(none)-
3. Economy-Developing local, regional and national economies	Technology-Activities and processes associated with the knowledge or use of mechanical arts and applied sciences	(none)-
6. Educating-Educating	Education-Activities associated with teaching and learning by children and adults, formally and informally.	(none)-

Assessment of significance

SHR Criteria a) [Historical significance]

The building has historic significance as it dates from the key period of development of the Pyrmont/Ultimo power grid and the subdivision of grand estates into residential and commercial development.

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

SHR Criteria b) [Associative significance]

The building is associated with the adjacent former Ultimo Tram Depot, nearby former Pyrmont Power Stations and NSW Government Architect

SHR Criteria c) [Aesthetic significance]

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

The building has technical significance as a major power source for the Sydney tram network and adjacent Ultimo former tram sheds.

SHR Criteria g) [Representativeness]

The building is a representative example of a Federation power station building and a contemporary museum adaptation

Integrity/Intactness:

Reasonably intact externally and extensively altered internally in a number of significant phases related to its use as a power house and museum

Assessment criteria:

Items are assessed against the  **State Heritage Register (SHR) Criteria** to determine the level of significance. Refer to the Listings below for the level of statutory protection.

Recommended management:

The building should be retained and conserved. A Heritage Assessment and Heritage Impact Statement, or a Conservation Management Plan, should be prepared for the building prior to any major works being undertaken. There shall be no vertical additions to the building and no alterations to the façade of the building other than to reinstate original features. Any additions and alterations should be confined to the rear in areas of less significance, should not be visibly prominent and shall be in accordance with the relevant planning controls.

Listings

Heritage Listing	Listing Title	Listing Number	Gazette Date	Gazette Number	Gazette Page
Local Environmental Plan	Sydney LEP 2012	I2031	14 Dec 12		
Heritage study					

Study details

Title	Year	Number	Author	Inspected by	Guidelines used
Pyrmont/Ultimo Heritage Study	1990		Anglin Associates		N o

References, internet links & images

Type	Author	Year	Title	Internet Links
Management Plan	Architectural Projects	2003	Conservation Management Plan	
Written	Fitzgerald and Golder	1994	Pyrmont and Ultimo Under Siege	

Note: internet links may be to web pages, documents or images.



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Data source

The information for this entry comes from the following source:

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