

POWERHOUSE ULTIMO

DRAFT CONSERVATION MANAGEMENT PLAN



ACKNOWLEDGEMENT

The Powerhouse pays respect to the Gadigal people of the Eora Nation, the traditional custodians of the lands on which Powerhouse Ultimo stands. We recognise their continuous connection to this place.

We honour the clans, nations, families that have always been connected to this site, and respect the diverse Aboriginal and Torres Strait Islander peoples that now call this place home.

We recognise Aboriginal connections to this place as a cultural continuum – resilient, resistant, and responsive to emerging and receding industries. This has always been a place of story, ceremony and gathering, it is our responsibility that this continues to be a place for the broader community and reflects their stories.

CONTENTS

Acknowledgement	2
Executive Summary	4
How to Use this Plan	5

PART A6

1 INTRODUCTION	7
1.2 Previous Conservation Management Plan	8
1.3 Site Identification	8
1.4 Key Buildings and Elements	10
1.4.1 The Powerhouse Site	12
1.5 Summary of Heritage Listings	14
1.6 CMP Objectives, Methodology, and Key Resources	16
1.6.1 Previous Assessments	16
1.7 Project Limitations	16
1.8 Authorship and Acknowledgement	16
1.10 Terminology and Abbreviations	17
1.10.1 Site Levels	17
1.10.2 Terminology	18
1.10.3 Abbreviations	18
1.11 Endnotes	19

2 HISTORICAL CONTEXT	20
2.1 Powerhouse Ultimo Site: Timeline of Key Events	22
2.2 Aboriginal History	24
2.2.1 Environmental History	25
2.2.2 Ultimo Power House, Tram Shed and Post Office (1895–1940s)	29
2.2.3 Site Modifications, Closures, and Abandonment (1940s–1979)	32
2.2.4 The Powerhouse Museum (1981 to Present)	33
2.2.5 The Evolution of the Power House Site	38
2.3 Historical Thematic Framework	39
2.3.1 Historical Themes for the Powerhouse Site	40
2.3.2 Powerhouse Museum Design Principles Summary	43
2.4 Endnotes	44

3 PHYSICAL ANALYSIS	45
3.1 Site and Setting	46
3.2 Built Elements	47
3.2.1 Water Cooling System and Manifold	47
3.3 Surrounding Heritage Listings	49
3.4 Archaeology	50
3.4.1 Aboriginal Archaeology	50
3.4.2 Historical Archaeology	51
3.5 Endnotes	61

4 ASSESSMENT OF HERITAGE SIGNIFICANCE	62
4.1 Previous Assessments	63
4.1.1 Ultimo Power House (SHR 02045/LEP)	63
4.1.2 Ultimo Post Office (SHR 00502/LEP I2030)	63
4.1.3 Water Cooling System and Manifold	63
4.1.4 Goods Line (Darling Harbour Rail Corridor)	63
4.2 Assessment Methodology and Criteria	64
4.2.1 Criterion (a)—Historical Significance	64
4.2.2 Criterion (b)—Associative Significance	64
4.2.3 Criterion (c)—Aesthetic Significance	64
4.2.4 Criterion (d)—Social Significance	64
4.2.5 Criterion (e)—Scientific Significance	64
4.2.6 Criterion (f)—Rarity	64
4.2.7 Criterion (g)—Representativeness	64
4.3 Statement of Heritage Significance	65
4.4 Heritage Curtilage (SHR)	65
4.5 Significant Views	66
4.5.1 Views from Darling Harbour	66
4.5.2 Views from Harris and William Henry Streets	66
4.5.3 Views from William Henry Street Bridge	67
4.5.4 Views from The Goods Line	67
4.5.5 Views and Access from Darling Drive, Exhibition Light Rail Station, and Hay Street	68
4.6 Gradings of Significant Components	69
4.6.1 Overall Site Elements	69
4.7 Moveable Heritage	71
4.8 Comparative Analysis	72
4.8.1 QV MAG, Launceston, TAS	72
4.8.2 Casula Powerhouse, Casula NSW	72
4.8.3 Brisbane Powerhouse, Brisbane, QLD	73
4.8.4 Fremantle Arts Centre, Fremantle, WA	73
4.8.5 Carriageworks, Eveleigh, NSW	74
4.8.6 Tate Modern, London, UK	74
4.9 Endnotes	75

5 OPPORTUNITIES AND CONSTRAINTS	76
5.1 Heritage Legislation and Listings	78
5.1.1 Heritage Act (NSW) 1977	78
5.1.2 NSW National Parks and Wildlife Act 1974	80
5.1.3 Environment Protection & Biodiversity Conservation Act 1999	80
5.1.4 Environmental Planning & Assessment Act 1979	80
5.2 Community Consultation To Inform Draft CMP	81
5.2.1 Stakeholder and Community Consultation	81
5.2.2 Aboriginal Community Consultation	81
5.3 Cultural Heritage Significance	82
5.3.1 Opportunities	82
5.3.2 Constraints	83
5.4 Owner and User Requirements	84
5.4.1 Site Use, Management and Structure	84
5.4.2 Site Access	84
5.5 Physical Condition	84
5.5.1 Archaeology	84
5.5.2 Significant Views	84
5.6 Heritage Interpretation	85
5.7 Endnotes	87

PART B88

6 CONSERVATION POLICY	89
6.1 Conservation Policy Development	90
6.2 Conservation Policies	91
6.2.1 General Conservation Policies and Cultural Significance	92
6.2.2 Fabric and Place	93
6.2.3 Maintenance and Repair	95
6.2.4 Site Utilisation, New Work and Security	95
6.2.5 Application of this CMP	97
6.2.6 Site-Specific Exemptions	97
6.3 Approach to Implementation	98

PART C99

7 HARWOOD BUILDING	100
7.1 History of the Harwood Building	101
7.2 Physical Analysis of Harwood	107
7.2.1 Site and Setting	107
7.2.2 Built Elements	107
7.3 Heritage Significance	109
7.3.1 Criterion (a)—Historical Significance	109
7.3.2 Criterion (b)—Associative Significance	109
7.3.3 Criterion (c)—Aesthetic Significance	109
7.3.4 Criterion (d)—Social Significance	109
7.3.5 Criterion (e)—Scientific Significance [Research Potential]	109
7.3.6 Criterion (f)—Rarity	109
7.3.7 Criterion (g)—Representativeness	109
7.3.8 Statement of Significance	109
7.3.9 Views	109
7.3.10 Grading of Significant Components	109
7.4 Opportunities and Constraints	116
7.5 Item-Specific Conservation Policies	116
7.6 Photo Register for the Harwood Building	117
7.7 Endnotes	125

8 NORTH ANNEX	126
8.1 History of North Annex	127
8.2 Physical Analysis of the North Annex	130
8.2.1 Site and Setting	130
8.2.2 Built Elements	130
8.3 Heritage Significance	131
8.3.1 Summary of Significance—North Annex	131
8.3.2 Views	131
8.3.3 Grading of Significant Components for the North Annex	131
8.4 Opportunities and Constraints	140
8.5 Item-Specific Conservation Policies	140
8.6 Photo Register for the North Annex	141
8.7 Endnotes	151

9 THE PUMP HOUSE	152
9.1 History of The Pump House	153
9.2 Physical Analysis of the Pump House	156
9.2.1 Site and Setting	156
9.2.2 Built Elements	156
9.3 Heritage Significance	156
9.3.1 Summary of Significance	156
9.3.2 Summary of Significance	156
9.3.3 Grading of Significant Components for the Pump House	156
9.4 Opportunities and Constraints	160
9.5 Item-Specific Conservation Policies	160
9.6 Photo Register for the Pump House	161
9.7 Endnotes	164

10 THE ENGINE HOUSE	165
10.1 History of The Engine House	166
10.2 Physical Analysis of the Engine House	169
10.2.1 Site and Setting	169
10.2.2 Built Elements	169
10.3 Heritage Significance	169
10.3.1 Summary of Significance—Engine House	169
10.3.2 Views	169
10.3.3 Grading of Significant Components	169
10.4 Opportunities and Constraints	180
10.5 Item-Specific Conservation Policies	180
10.6 Photo Register for the Engine House	181
10.7 Endnotes	186

11 TURBINE HALL	187
11.1 History of the Turbine Hall	188
11.2 Physical Analysis of the Turbine Hall	192
11.2.1 Site and Setting	192
11.2.2 Built Elements	192
11.3 Heritage Significance	193
11.3.1 Summary of Significance—Turbine Hall	193
11.3.2 Views	193
11.3.3 Grading of Significant Components	193
11.4 Opportunities and Constraints	202
11.5 Item-Specific Conservation Policies	202
11.6 Photo Register for the Turbine Hall	203
11.7 Endnotes	209

12 BOILER HOUSE	210
12.1 History of the Boiler House	211
12.2 Physical Analysis of the Boiler House	214
12.2.1 Site and Setting	214
12.2.2 Built Elements	214
12.3 Heritage Significance	214
12.3.1 Summary of Significance—Boiler House	214
12.3.2 Views	214
12.3.3 Grading of Significant Components	214
12.4 Opportunities and Constraints	222
12.5 Item-Specific Conservation Policies	222
12.6 Photo Register for the Boiler House	223
12.7 Endnotes	232

13 SWITCH HOUSE	233
13.1 History of the Switch House	234
13.2 Physical Analysis of the Switch House	236
13.2.1 Site and Setting	236
13.2.2 Built Elements	236
13.3 Heritage Significance	237
13.3.1 Summary of Significance—Switch House	237
13.3.2 Views	237
13.3.3 Grading of Significant Components	237
13.4 Opportunities and Constraints	244
13.5 Item-Specific Conservation Policies	244
13.6 Photo Register for the Switch House	245
13.7 Endnotes	252

14 ULTIMO POST OFFICE	253
14.1 History of the Ultimo Post Office	254
14.2 Physical Analysis of the Ultimo Post Office	257
14.2.1 Site and Setting	257
14.2.2 Built Elements	257
14.3 Heritage Significance	258
14.3.1 Summary of Significance	258
14.3.2 Views	258
14.3.3 Grading of Significant Components of the Ultimo Post Office	258
14.4 Opportunities and Constraints	262
14.5 Item-Specific Conservation Policies	262
14.6 Photo Register for the Ultimo Post Office	263
14.7 Endnotes	268

15 WRAN BUILDING	269
15.1 History of the Wran Building	270
15.2 Physical Analysis of the Wran Building	273
15.2.1 Site and Setting	273
15.2.2 Built Elements	273
15.3 Heritage Significance – discussion	275
15.4 Opportunities and Constraints	276
15.5 Item-Specific Conservation Policies	276
15.5.1 Powerhouse Museum Design Principles and the approach to change	276
15.6 Photo Register for the Wran Building	277
15.7 Endnotes	287

16 WATER COOLING SYSTEM AND MANIFOLD	288
16.1 History of the Water Cooling System and Manifold	289
16.2 Physical Analysis of the Water Cooling System and Manifold	292
16.2.1 Site and Setting	292
16.2.2 Built Elements	292
16.3 Heritage Significance	293
16.3.1 Summary of Significance	293
16.3.2 Grading of Significant Components	293
16.4 Opportunities and Constraints	295
16.5 Item-Specific Conservation Policies	295
16.6 Photo Register for the Water Cooling System and Manifold	296
16.7 Endnotes	298

17 THE GOODS LINE	299
17.1 History of The Goods Line	300
17.2 Physical Analysis of The Goods Line	302
17.3 Heritage Significance	302
17.3.1 Statement of Significance	302
17.3.2 Grading of Significant Components	302
17.4 Opportunities and Constraints	304
17.5 Item-Specific Conservation Policies	304
17.6 Photo Register for The Goods Line	305
17.7 Endnotes	308

PART D309

18 REFERENCES	310
APPENDIX A Exterior Site Photos Register	313
APPENDIX B Aboriginal Heritage Due Diligence Assessment Report (Curio 2020)	323
APPENDIX C Historical Archaeological Assessment (AMBS 2018)	381
APPENDIX D Evolution of the Powerhouse Site (Maps by Design 5 Architects)	450
APPENDIX E Powerhouse Museum Design Principles (Draft), Design 5 Architects	476
APPENDIX F Powerhouse Museum Moveable Heritage List	543
APPENDIX G Aboriginal History Overview-Powerhouse Ultimo	548
APPENDIX H Draft Conservation Management Plan Community Consultation Report (March 2022)	565

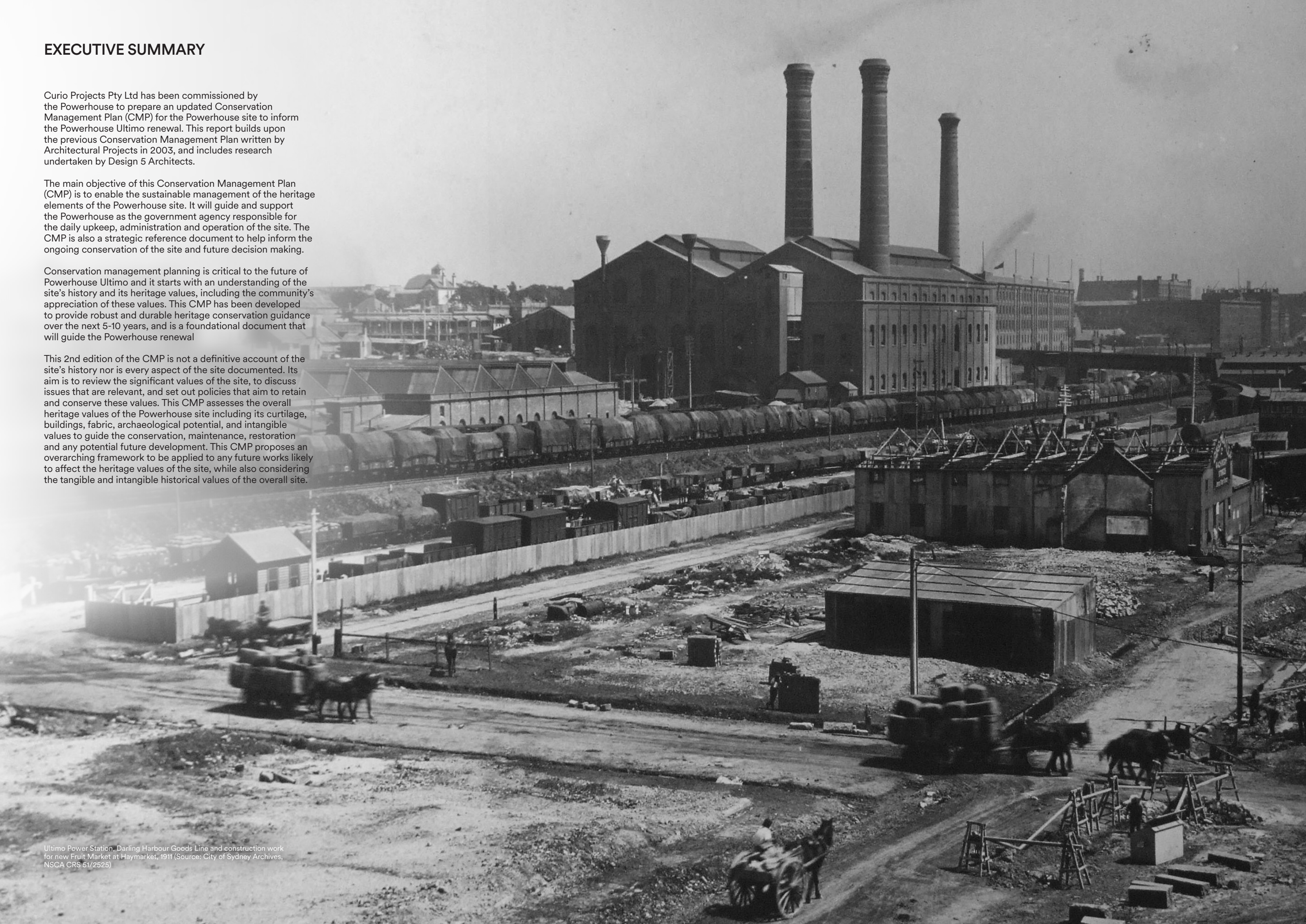
EXECUTIVE SUMMARY

Curio Projects Pty Ltd has been commissioned by the Powerhouse to prepare an updated Conservation Management Plan (CMP) for the Powerhouse site to inform the Powerhouse Ultimo renewal. This report builds upon the previous Conservation Management Plan written by Architectural Projects in 2003, and includes research undertaken by Design 5 Architects.

The main objective of this Conservation Management Plan (CMP) is to enable the sustainable management of the heritage elements of the Powerhouse site. It will guide and support the Powerhouse as the government agency responsible for the daily upkeep, administration and operation of the site. The CMP is also a strategic reference document to help inform the ongoing conservation of the site and future decision making.

Conservation management planning is critical to the future of Powerhouse Ultimo and it starts with an understanding of the site's history and its heritage values, including the community's appreciation of these values. This CMP has been developed to provide robust and durable heritage conservation guidance over the next 5-10 years, and is a foundational document that will guide the Powerhouse renewal

This 2nd edition of the CMP is not a definitive account of the site's history nor is every aspect of the site documented. Its aim is to review the significant values of the site, to discuss issues that are relevant, and set out policies that aim to retain and conserve these values. This CMP assesses the overall heritage values of the Powerhouse site including its curtilage, buildings, fabric, archaeological potential, and intangible values to guide the conservation, maintenance, restoration and any potential future development. This CMP proposes an overarching framework to be applied to any future works likely to affect the heritage values of the site, while also considering the tangible and intangible historical values of the overall site.



HOW TO USE THIS PLAN

This CMP has been written and structured in a module format for ease of use.

Each building has its own section which covers that building or element’s history, heritage, opportunities, and constraints. This allows for all information on a particular building or element to be accessed separately and easily read whilst also forming part of the whole plan.

Part A of the CMP provides an overview of the history and significance as it applies to the site as a whole, and the legislation. Part B covers conservation and implementation as it applies to the site as whole. Part C contains the individual sections for the key built structures and elements on the site. All references and appendices are provided as Part D. The structure of this CMP is as follows:

Part A: Introduction and Overview	Section 1	Introduction
	Section 2	Historical Overview and Timeline (Site)
	Section 3	Physical Analysis (Site)
	Section 4	Heritage Significance (Site)
	Section 5	Opportunities and Constraints (Site)
Part B: Conservation Policy	Section 6	Conservation Policy (Site)
Part C: Buildings and Elements Inventory	Section 7	The Harwood Building
	Section 8	The North Annex
	Section 9	The Pump House
	Section 10	The Engine House
	Section 11	The Turbine Hall
	Section 12	The Boiler House
	Section 13	The Switch House
	Section 14	The Ultimo Post Office
	Section 15	The Wran Building
	Section 16	The Water Cooling System and Manifold
	Section 17	The Goods Line
Part D: References and Appendices	Section 18	References
	Appendix A	Exterior Site Photos Register
	Appendix B	Aboriginal Due Diligence Report
	Appendix C	AMBS 2018 Historical Archaeological Assessment Report
	Appendix D	Evolution of the Powerhouse Site (Maps by Design 5 Architects)
	Appendix E	Powerhouse Museum Design Principles (Draft), Design 5 Architects
	Appendix F	Powerhouse Museum Movable Heritage List
	Appendix G	Aboriginal History Overview-Powerhouse Ultimo

POWERHOUSE
ULTIMO

CONSERVATION
MANAGEMENT PLAN

PART A

1 INTRODUCTION

1.1 PROJECT BACKGROUND

This draft CMP will support the Powerhouse in the daily and future management of the site. This CMP is also a strategic reference document for the Powerhouse, as the government agency responsible for the site, to help inform future decisions about the site and to support the Powerhouse renewal.

This draft CMP assesses the overall heritage values of the Powerhouse site including its curtilage, buildings, fabric, archaeological potential, and intangible values, to guide the conservation, maintenance and restoration of the site, as well as to appropriately guide any future development. This updated CMP does not aim to provide a definitive and complete account of the site's history in detail, nor is every individual built aspect of the site documented equally. Rather, the aim of this CMP is to review the significant heritage values of the Powerhouse site today, discussed in the context of any issues that are relevant in 2022 to the ongoing management of the site. The plan seeks to revise and further develop policies, building upon those from the 2003 CMP, that aim to retain and conserve these heritage values.

1.2 PREVIOUS CONSERVATION MANAGEMENT PLAN

In 2003, Architectural Projects prepared the CMP for the site, titled *Conservation Management Plan: The Powerhouse Museum*. This revised draft CMP provides an update to the 2003 document, particularly reflective of the changes that have occurred since 2003, to both the Powerhouse site and to NSW heritage and planning legislation, whilst ensuring that the principles for the management of the site's heritage values, built heritage assets, and overall heritage significance, remain applicable and practical for another 5-10 years.

1.3 SITE IDENTIFICATION

The Powerhouse site is located in Ultimo, within the City of Sydney Local Government Area. The site is bounded by William Henry Street on the north, Harris Street on the west, Mary Ann Street to the south and The Goods Line/Light Rail track to the east. The site varies in ground elevation, with almost nine metres difference AHD between Harris Street and The Goods Line (Figure 1.1).

The Powerhouse site as referred to through this CMP includes the former buildings of the Ultimo Power House (Boiler House, Engine House, Turbine Hall, Switch House, North Annex, remnants of the Pump House), the former Ultimo Post Office, the Harwood Building (former Ultimo Tram Depot), as well as the Wran Building (1988), Harris Street forecourt and 'Level 1' courtyard, sections of the Goods Line within the site, and the section of the Water Cooling System and Manifold which lies beneath the site, accessible via the Turbine Hall basement.

The only buildings on the site that are not currently included within any statutory heritage listing are the Wran Building (and other 1988 elements) and the Harwood Building.

The Powerhouse site consists of the following lots, as shown in Figure 1.2:

- Lot 1, DP631345—Former Ultimo Power House Buildings
- Lot 1, DP781732—Wran Building
- Lot 1, DP216854—Harwood Building
- Lot 3, DP631345—Forecourt (Harris St)
- Lot 1, DP77031—Ultimo Post Office






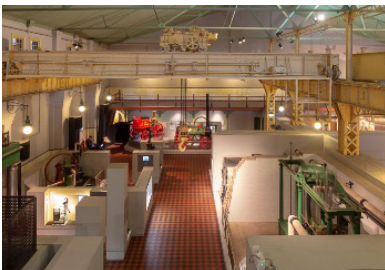
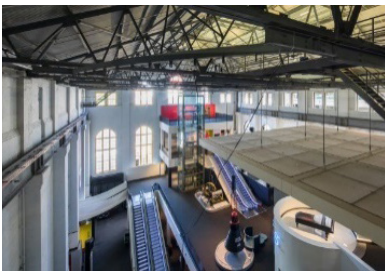
Figure 1.1 Aerial View indicating key built elements of the Powerhouse site. (Source: Nearmap with Curio overlay)





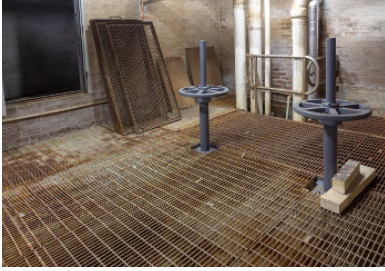



Figure 1.2 Lots and DPs across the Powerhouse site. (Source: Nearmap with Curio overlay)

1.4 KEY BUILDINGS AND ELEMENTS

The Powerhouse site consists of an amalgamation of several earlier sites, resulting in a number of different buildings constructed over time. Table 1.1 provides a summary of the key existing buildings and elements within the subject site, the year each building was constructed, and includes previous building names (where relevant).

Table 1.1 Building Names Past and Present				
CURRENT BUILDING NAME	PREVIOUS NAMES	CONSTRUCTED	IMAGE	REPORT SECTION
Harwood Building	Ultimo Tram Depot, Car Sheds, Ultimo Car House	1899		Part C: Section 7
North Annex	The Office Building, The Administrative Building, The Amenities Block, The North Annexe	1899		Part C: Section 8
Pump House	Old Boiler House, The Pump Room	1899		Part C: Section 9
Engine House	Engine Room, Generating Room, Engine Hall, Old Engine Room, Substation	1899		Part C: Section 10
Turbine Hall	The Engine Room Extension	1902		Part C: Section 11

CURRENT BUILDING NAME	PREVIOUS NAMES	CONSTRUCTED	IMAGE	REPORT SECTION
Boiler House	New Boiler House, Second Boiler House	1902-1905		Part C: Section 12
Switch House	Switch House	1927		Part C: Section 13
Ultimo Post Office	Darling Harbour Child Care Centre	1901		Part C: Section 14
Wran Building	Wran Building, 1988 Museum Building and Courtyards, Touring Exhibition Building, Touring Hall	1988		Part C: Section 15
Water Cooling System and Manifold	Water conduit	1898-1901		Part C: Section 16
The Goods Line	Darling Harbour Goods Yard, Darling Harbour Railway Corridor, Darling Harbour Branch Railway	1853-1911		Part C: Section 17

1.4.1 The Powerhouse Site

The following is a selection of the photographs of the Powerhouse site. The complete register of external photographs is attached as Appendix A.



Figure 1.3 Harwood Building and The Goods Line



Figure 1.4 Harwood Building interior



Figure 1.5 Harwood Building exterior



Figure 1.6 Switch House



Figure 1.7 Forecourt and Switch House



Figure 1.8 Level 1 Courtyard



Figure 1.9 Entry to Level 1 Courtyard

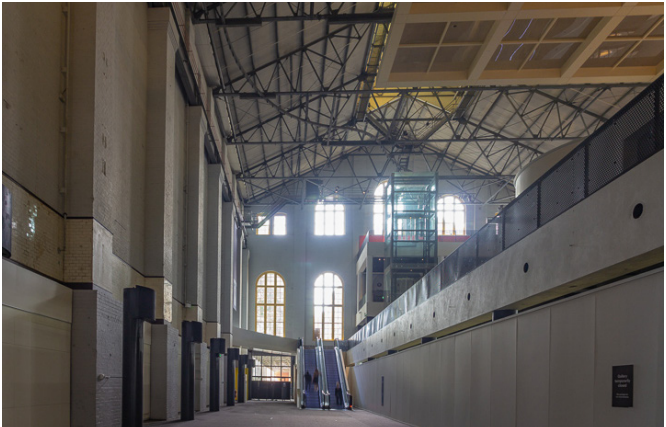


Figure 1.10 Turbine Hall



Figure 1.11 Engine House



Figure 1.12 Wran Building Interior



Figure 1.13 Wran Building, Forecourt, Switch House



Figure 1.14 Wran Building Exterior (Harris Street)



Figure 1.15 Post Office Rear



Figure 1.16 Post Office Front



Figure 1.17 Post Office, Wran Building



Figure 1.18 North Annex



Figure 1.19 North Annex



Figure 1.20 North Annex Interior



Figure 1.21 Pump House, Boiler House and North Annex



Figure 1.22 Pump House and Boiler House



Figure 1.23 Boiler House Interior



Figure 1.24 Boiler House and North Annex



Figure 1.25 Boiler House



Figure 1.26 Boiler House and Light Rail Line

1.5 SUMMARY OF HERITAGE LISTINGS

A summary of all relevant heritage listings (statutory and non-statutory registers) located within the Powerhouse site is presented in Table 1.2 for reference. Figure 1.27 and Figure 1.28 show the mapped locations of State and local heritage items. Further discussion of relevant heritage legislation and heritage listings and the implications, obligations and constraints with regards to the management of the site as a whole, is provided in Section 5.1 of this CMP.

Table 1.2 Summary Table of Heritage Listings within the Powerhouse site (statutory listings highlighted in grey)

REGISTER/LISTING	DETAILS	STATUS	LISTING NO.
State Heritage Register (See Figure 1.27)	Ultimo Power House ¹	Registered	02045
	Ultimo Post Office	Registered	00502
City of Sydney LEP (See Figure 1.28)	Powerhouse Museum Former Warehouse Buildings, including interiors	Registered	I2031
	Former Ultimo Post Office including interior	Registered	I2030
Section 170 Heritage Register (See Figure 1.28)	Water Cooling System and Manifold	Section 170 (Property NSW)	Section 170
	The Darling Harbour Rail Corridor	Section 170 (Property NSW)	Section 170
Register of the National Estate	Ultimo Post Office	Formerly registered	N/A
	The Powerhouse Museum (Stage One) (Harwood Building)	Formerly registered	N/A
	The Powerhouse Museum (Stage Two)	Formerly registered	N/A
Register of the National Trust (NSW)	Ultimo Power House	Registered	S11648
	Former Ultimo Depot Tram Shed (Powerhouse Museum)	Registered	S10611
	Ultimo Post Office	Registered	S9302



Figure 1.27 SHR Listings (Source: Curio 2021 over Nearmap base aerial)



Figure 1.28 LEP and s170 Listings [Water Cooling System and Manifold not shown] (Source: Curio 2021 over Nearmap base aerial)

1.6 CMP OBJECTIVES, METHODOLOGY, AND KEY RESOURCES

This CMP conforms to the assessment of heritage significance and terminology as set out by Heritage NSW guidelines and the Australia ICOMOS Burra Charter, 2013, and has been prepared in accordance with current best practice guidelines and methods for heritage management in NSW, including:

- ICOMOS, *The Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance*, 2013
- NSW Heritage Office, *Assessing Heritage Significance*, 2001.
- Kerr, J. S., *The Conservation Plan: A Guide to the Preparation of Conservation Plans for Places of European Cultural Significance*, (7th Ed), NSW, National Trust of Australia (NSW), 2013.
- NSW Heritage Office and Department of Urban Affairs & Planning, *Conservation Management Documents* [including Model Brief], 1996, revised 2002.

1.6.1 Previous Assessments

Preparation of this revised CMP has considered the following relevant previous assessments and reports prepared for the site:

- Architectural Projects, *Conservation Management Plan: The Powerhouse Museum*, prepared for the Powerhouse Museum, 2003.
- Brassil, T., *Ultimo Tram Depot (The Harwood Building), History and Significance*, National Trust of Australia (NSW), 2019.
- Godden, D., *Ultimo Tram Depot (Harwood Building) A Brief Discussion of Significance*, for The Powerhouse Museum, 2003.
- AMBS Ecology & Heritage, *Historical Archaeological Assessment*, prepared for Tanner Kibble Denton Architects, 2018.

1.7 PROJECT LIMITATIONS

This report has been prepared using the historical data and documentation available for the site, drawn predominantly from the 2003 CMP and the other relevant recent heritage reports and resources. Where required, additional primary historical research has been undertaken to supplement the history elements within the 2003 CMP, with a focus on primary sources such as photographic data, news articles and archival historical documentation.

The history, heritage significance assessment and policies of this CMP specifically focus on the Powerhouse site. Therefore the history of the Museum of Applied Arts and Sciences (MAAS) and of the Powerhouse Museum are only detailed in this CMP as far as it provides context for the Museum’s occupation of its current site. This CMP is not intended to provide a detailed history of Museum of Applied Arts and Sciences since formation in 1880.

Assessment of Aboriginal cultural heritage values and significance of any site or place is unable to be determined without consultation with Aboriginal community stakeholders. Led by Dr. Terri Janke, in March 2022, the Powerhouse and Create NSW undertook consultation with the Aboriginal Community, the results of which have been published in Aurecon’s Powerhouse Ultimo Conservation Management Plan Engagement Consultation Report, March 2022². Feedback from this engagement as presented in Aurecon’s report has been incorporated into the draft of the CMP. The CMP document has not been exhibited publicly for comment; this will occur as part of the State Significant Development Application process for the Powerhouse renewal.

The Powerhouse Museum Collection does not form part of this CMP. The Museum Collection is subject to its own independent Management Plan under the Museum of Applied Arts and Sciences Act 1945 No 31.

1.8 AUTHORSHIP AND ACKNOWLEDGEMENT

This draft CMP has been compiled by a team of staff from Curio Projects Pty Ltd, who was commissioned by the Department of Enterprise, Investment and Trade (Create NSW) and the Powerhouse to undertake an update of the 2003 CMP prepared by Architectural Projects.

The report was primarily authored by the Curio team of Alexandra Thorn, Archaeologist and Heritage Consultant, Sam Cooling, Cultural Heritage Manager, and Dennis Diaz, Built Heritage Specialist. Additional historical research was undertaken by Rebecca Agius, Graduate Archaeologist. Senior review of this CMP has been undertaken by Natalie Vinton, CEO, Sam Cooling, Cultural Heritage Manager and Dr Jody Steele, Director.

This draft CMP compiled by Curio also includes a synthesis of heritage conservation research that was commissioned by Create NSW to be undertaken by Design 5 Architects.

The following sections of this draft CMP incorporate heritage conservation research content that was prepared by Design 5 Architects under its commission:

- Section 2.2.5 The Evolution of the Powerhouse Site
- Section 2.3.2 Powerhouse Museum Design Principles Summary
- Section 3.2 Built Elements
- Section 15 Wran Building

That research content is referenced in the relevant sections accordingly. Curio acknowledges the heritage conservation research undertaken by Design 5 Architects.

Curio would also like to acknowledge the assistance of the Powerhouse and Department of Enterprise, Investment and Trade (Create NSW) for their assistance in providing site access, resources, and information.

1.10 TERMINOLOGY AND ABBREVIATIONS

1.10.1 Site Levels

Upon establishment of the Powerhouse Museum at the site in the 1980s, a terminology of standardised ‘Levels’ was adopted in order to reconcile the difference in floor levels and elevations (elevation of which slopes significantly to the east) and between different buildings. Where relevant, this naming terminology has been applied throughout this CMP, particularly where needed to reconcile between historical buildings and fabric. Of primary relevance to note, is that the main entrance to the museum in the west from Harris Street is referred to as Level 3, while the ground level elevation of the site in the east towards the Light Rail Corridor is referred to as Level 1. A brief summary of these different levels according to elevation across the site is provided below for reference, and depicted in Figure 1.29.

- Basement- Harwood, Engine House, Turbine Hall, Boiler House, Switch House
- Level 1- Goods Line/Light Rail Corridor, Harwood ground floor entrance, Café, Wran Building basement level.
- Level 2- Circulation space below Harris Street forecourt,
- Level 3- Main museum entrance from Harris Street, Harris Street Forecourt, Ultimo Post Office

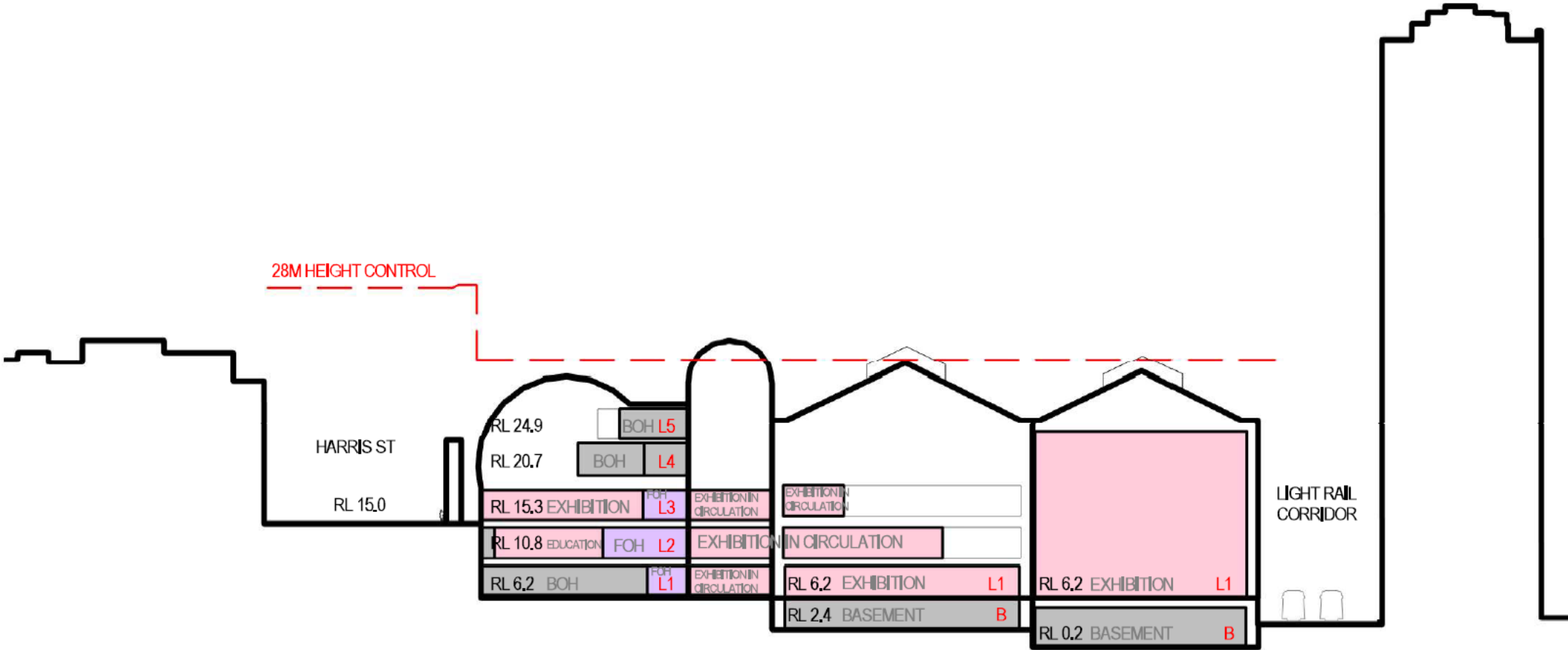


Figure 1.29 Summary of Level terminology applied across site (Source: John Wardle Architects 2020)

1.10.2 Terminology

Definitions of common terms and abbreviations used throughout this CMP are summarised below.

Adaption: Modifying a place to suit the existing use or proposed use.

Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance 2013

Compatible use: A use which respects the cultural significance of a place. Such use involves no, or minimal, impact on cultural significance.

Conservation: The processes of looking after a place to retain its cultural significance (Burra Charter Article 1.1). Conservation can include ‘maintenance’, ‘preservation’ and ‘restoration’ works.

Fabric: All the physical material of the place, including components, fixtures, contents and objects.

Maintenance: The continuous protective care of the fabric and setting of a place and is to be distinguished from ‘repair’.

Repair: Involves ‘restoration’ or ‘reconstruction’ (Burra Charter Article 1.5).

Heritage Act: Shorthand reference for the NSW Heritage Act 1977, NSW legislation that affords statutory protection to heritage items in NSW

Heritage NSW, Department of Premier and Cabinet (DPC): The NSW government department is responsible for the administration and protection of items listed under the Heritage Act, as guided by the Heritage Council of NSW. Formerly Office of Environment and Heritage OEH.

Restoration: Returning the existing fabric of a place to a known earlier state by removing accretions or by reassembling existing components without the introduction of new material (Burra Charter Article 1.7).

Reconstruction: Returning a place to a known earlier state and is distinguished from ‘restoration’ by the introduction of new material into the fabric (Burra Charter Article 1.8).

Preservation: Maintaining the fabric of a place in its existing state and retarding deterioration (Burra Charter Article 1.6).

State Heritage Register (SHR): A register of places that are considered to be of ‘state’ significance and protected under the NSW Heritage Act 1977.

S170 Register: Section 170 Heritage and Conservation Register, a heritage register of items owned and managed by a government agency, as required by the NSW Heritage Act 1977.

1.10.3 Abbreviations

<i>AHIMS</i>	Aboriginal Heritage Information Management System
<i>CC</i>	Conditions of Consent
<i>CMP</i>	Conservation Management Plan
<i>EP&A Act</i>	Environmental Planning and Assessment Act 1979
<i>EPBC Act</i>	Environment Protection & Biodiversity Conservation Act (Cmwth)1999
<i>IP</i>	Heritage Interpretation Plan
<i>LEP</i>	Local Environmental Plan
<i>MAAS</i>	Museum of Applied Arts and Sciences
<i>NPW Act</i>	National Parks and Wildlife Act (NSW) 1974
<i>OEH</i>	Office of Environment and Heritage
<i>REF</i>	Review of Environmental Factors
<i>S60</i>	Section 60 approval under the NSW Heritage Act 1977
<i>S170</i>	Property NSW S170 Heritage and Conservation Register
<i>SHFA</i>	Sydney Harbour Foreshore Authority
<i>SHR</i>	State Heritage Register

1.11 ENDNOTES

- 1 Including former Power House Buildings, as well as section of the Water Cooling System and Manifold within the Powerhouse Ultimo site.
- 2 Aurecon 2022, *Powerhouse Ultimo Conservation Management Plan Engagement 'What we heard' Consultation Report*, prepared for NSW Government, March 2022.

2 HISTORICAL CONTEXT

The historical context of the Powerhouse site, as presented in this section, has been derived predominantly from several key secondary sources (referenced throughout), and supplemented by some additional primary research undertaken by Curio for this revised CMP, including the use of historical maps, images and records.

Additional Aboriginal historical research conducted by Coast History & Heritage has been incorporated into the overall history, and is referenced accordingly. The full Coast report, Aboriginal History Overview – Powerhouse Ultimo is attached as Appendix G.

The history presented in this CMP is not intended to be read as a definitive and comprehensive history of the area. It focuses more on the provision of a general historical overview of the development of the Ultimo area and the Powerhouse site as a whole. This provides a historical context to frame and facilitate an understanding of the historical and cultural significance of the site, which is discussed in subsequent sections of this CMP. Further detail about the historical development of each of the key built elements of the site is provided in the corresponding sections in Part C of this CMP.

The Powerhouse has commenced the process of documenting social histories of the site through research and community engagement. As these are completed they will be added to the CMP as an appendix.

Key secondary sources referenced in the preparation of this section include:

- Architectural Projects, 2003 Conservation Management Plan: The Powerhouse Museum, prepared for the Powerhouse Museum.
- AMBS Ecology & Heritage 2018. Historical Archaeological Assessment, prepared for Tanner Kibble Denton Architects.
- Brassil, T., 2019. Ultimo Tram Depot (The Harwood Building), History and Significance, National Trust of Australia (NSW).
- Coast History & Heritage, 2022. Draft Aboriginal Overview – Powerhouse Ultimo, prepared for the Powerhouse Museum
- Fitzgerald, S. & Golder, H., 1994. Pyrmont & Ultimo Under Siege, Hale & Iremonger.
- Godden D, E Higginbotham, E Pinder, J Whittaker, R Young, 1984. The History and Technology of the Ultimo Power House Sydney. A report for the Government Architects Branch, NSW Public Works Department.
- Matthews, M. R., Pyrmont & Ultimo: A History, Southwood Press, 1982.

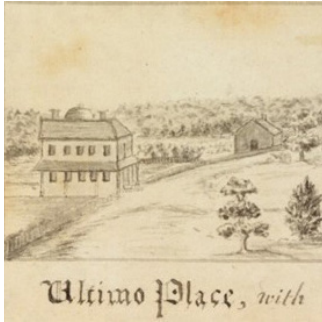
For the purposes of this historical overview, the history of the Ultimo area and the Powerhouse site has been summarised into five main phases of historical occupation and development as follows:

Phase 1	Prior to 1803	Pre-European environment and early Aboriginal occupation
Phase 2	1803-1894	Ultimo-Pyrmont Peninsula and 19th Century Occupation
Phase 3	1895-1940s	Ultimo Power House, Tram Shed and Post Office
Phase 4	1940s-1979	Minor Modifications, Closures, and Abandonment
Phase 5	1981-Present	The Powerhouse Museum

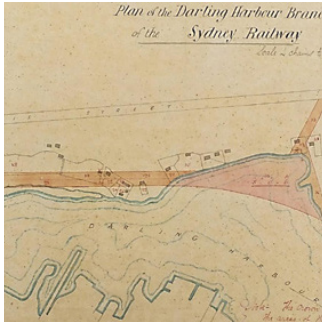
2.1 POWERHOUSE ULTIMO SITE:
TIMELINE OF KEY EVENTS

Pre 1788
The Ultimo area is home to the Gadigal and Wangal people of the Eora nation who have maintained their connection to country despite the seismic changes brought by colonisation.

1803
First land grant to John Harris in Ultimo.



1855
Darling Harbour Goods Line opened.



1859
Subdivision of Ultimo Estate. Powerhouse Ultimo Site located on Blocks 20 and 23.



1880
Technological, Industrial and Sanitary Museum (to later become Museum of Arts and Applied Sciences) established and later housed from 1881 in the Garden Palace, Sydney Botanic Gardens. On 22 September 1882 fire at the Garden Palace destroyed the first collection.



1897–99
Construction of Ultimo Power House and Ultimo Tram Shed.



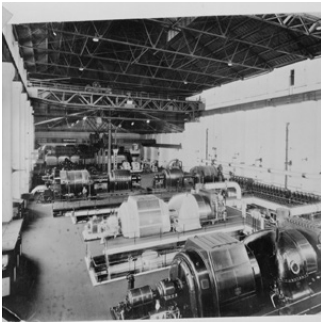
1899
Ultimo Power House officially completed 29 November 1899, including Engine House, North Annex, Old Boiler House, and Pump House. Harris and George Street tramline officially opened on 8 December 1899.



1901
Ultimo Post Office opened on the corner of William Henry and Harris Streets.



1902–05
Major extensions to Boiler House and Engine Room creating Turbine Hall.



1908
Extension to Ultimo Tram Shed.



1922–26
Switch House constructed.



1923–28
Construction of new underground water conduits connecting the Power House to Darling Harbour.



1929–1931
Major remodelling and modernisation of the Ultimo Power House.



1953
Ultimo tram depot closed on 27 June 1953.



1963
Ultimo Power House closed 11 October 1963.



1967–68
Demolition of large portion of former Pump House for widening of William Henry Street Bridge.



1977
Boiler House chimney stacks demolished to below roof line, with most of the Power House plant and equipment removed by 1976.



1979
The New South Wales Premier Neville Wran announced the Ultimo Power Station and Tram Depot were to become the new home of the Museum of Applied Arts and Sciences.



1981
Stage 1 of the Power House redevelopment project opened in the former Ultimo Tram Depot (Harwood Building).



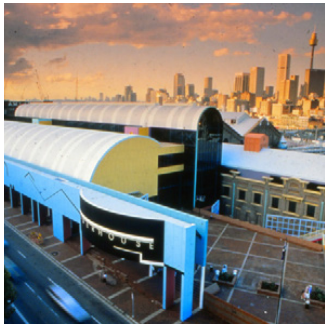
1982–87
Construction works for the adaptive reuse of the former Ultimo Power House buildings.



1984
The Darling Harbour Rail Corridor (the Goods Line) closed.



1988
Stage 2 of Powerhouse Ultimo redevelopment project opened in adapted Power House buildings and new Wran building.



2008
New Museum of Applied Arts and Sciences volunteer centre opened in the restored Ultimo Post Office.



2011–13
Powerhouse Museum Revitalisation Project.



2015
The Goods Line interpreted and developed as a public park and urban connector.



2020
Ultimo Power House listed on the NSW State Heritage Register.



2020
July 4, New South Wales Treasurer, Dominic Perrottet, and Arts Minister, Don Harwin, announced Powerhouse Ultimo will be retained and renewed.



2021
June 16, NSW Arts Minister, Don Harwin, announced a transformative \$480–\$50 million investment into the renewal of Powerhouse Ultimo.



2.2 ABORIGINAL HISTORY

The Powerhouse site is located at the southern end of the Ultimo-Pyrmont Peninsula, in the subregion of Pittwater within the Sydney Basin. It is underlain by Hawkesbury sandstone geology, and characterised by plateaux and ridges consisting of quartz sandstone, with thin layers of shale caps throughout.¹ The natural landscape in this area of Sydney consisted of a diverse range of environments including maritime/coastal, saltmarshes/estuaries and swamps, freshwater creeks, and woodland. It resulted in a range of natural faunal and floral resources that supported Aboriginal people in this area for thousands of years.

The shale capped regions were able to support rich grounds for large forested areas of Sydney blue gum and blackbutt or turpentine and grey ironbark, while the sandstone ridges and plateaux enabled the growth of Sydney peppermint, smooth-barked apple, scribbly gum, red and yellow bloodwoods, as well as shrubs and heath covering the ground.² The maritime and coastal regions provided access to a wide variety of shellfish and fish in the tidal mudflats, as well as allowing transport access to other locations via canoe along the Parramatta River. The saltmarshes, swamps and estuaries all provided rich grounds for both plant life and animals such as reptiles, amphibians, small mammals and birds. Bangalay, swamp mahogany, cabbage tree palm, swamp oak, common reed and cumbungi were common plants present in fresher swamp waters, providing resources for fishing nets and string bag making. While these swampy areas were rich in resources for the Aboriginal communities, they were ill-suited for frequent and repeated use over a long span of time due to regular flooding.

Woodland areas located on ridges further in from the coast provided a diverse range of large, sturdy vegetation for both food, pigments, poisons, and tool construction (spears digging sticks, boomerangs, canoes, shelters, rope etc.) as well as animals such as possums, gliders, bats, kangaroo and wallabies. The geological properties of the Hawkesbury Sandstone also provided plentiful raw materials ideal for the manufacture of stone tools, such as quartz and chert.³ Freshwater creeks were an important water source, with many originally flowing across the Pyrmont Peninsula. One of the more predominate natural creeks of this area of Sydney was Blackwattle Creek, which ran between the current Wattle and Mountain Streets in Ultimo.⁴

The Powerhouse site, and its surrounding inner-city suburbs, have an important and strong legacy of Aboriginal connections. More than a thousand generations of Aboriginal people have lived in the Sydney region through numerous climatic changes that have shaped Australia and its landscape to what it is today.⁵ The Pyrmont Peninsula appears to form part of the boundary between the Wangal and Gadigal clans. The Wangal boundary extended from Tumbalong (Darling Harbour), westward to Rose Hill to the area later named Parramatta, while the Gadigal occupied the land from the entrance of the harbour, extending along the southern shoreline towards Tumbalong. Despite these 'boundaries', Aboriginal people camped on both sides of Tumbalong and smaller, more diverse groups (sometimes referred to as 'bands') fished in its waters.⁶ Women married into other neighbouring clans and individuals had responsibilities in other clan lands to which they were linked through parents, grandparents or by marriage.⁷

So while it is probably correct to say that Ultimo, on the western shore of Tumbalong is Wanngal land, we should remember that this land also had meaning to the Aboriginal people living across the saltwater clans of coastal Sydney who linked back to the Wanngal. Based on this, we should avoid the temptation to assume (as many early Europeans did) that any Aboriginal person observed in a particular area was necessarily 'from' that clan. This is very important to bear in mind when we look at how Aboriginal people lived around and on the waters of Tumbalong.⁸

Rock shelters located in the sandstone outcrops around Sydney harbour provided ideal habitation areas for Aboriginal people and would have been used for campsites, with some likely to have contained charcoal and pigment artworks. However, any of these shelters that may have once been present across the Ultimo-Pyrmont Peninsula are likely to have been destroyed by early European quarrying and development.⁹ Despite massive changes to the shoreline, some traces of Aboriginal fishing camps have survived around Tumbalong. Shell middens have been found on both sides of the Harbour, showing that Aboriginal people fished cockles, rock oysters and mud whelks out of the mudflat. Stone artefacts have been found at camps to the southwest of the Powerhouse site.¹⁰

At the time of European invasion in 1788, the Aboriginal population of the Sydney Cove region has been estimated at around 1500-2000 people,¹¹ a population that was severely and disproportionately impacted in the subsequent years, disposed and relocated from their traditional lands by the swiftly expanding European incursion. The Aboriginal community around Tumbalong would have been devastatingly impacted by the smallpox epidemic which swept the harbour in 1789, resulting in a massive loss of life for the Aboriginal people of Sydney.¹²

Ethnohistorical accounts provide some early descriptions of the use of the Pyrmont Peninsula and wider Port Jackson area by Gadigal and Wangal people, as well as their experiences and interactions with European arrivals. Compared with other nearby areas of Sydney, the Ultimo-Pyrmont Peninsula remained largely undeveloped for many years following European arrival, affording retention of a stronger measure of Aboriginal presence in the earlier years of the NSW colony that was not equalled in adjacent areas such as Sydney and Farm Coves. Aboriginal people on the Ultimo-Pyrmont Peninsula continued to live traditionally for decades after the arrival of Europeans, as is demonstrated through both the historical and archaeological records. Archaeological evidence demonstrates how new materials were adopted into traditional practices, such as fashioning a tool from a piece of glass.¹³ Colonial descriptions and images depict Aboriginal people continuing to camp and fish around Tumbalong into the 1820s.¹⁴

It was not until the late 1830 and early 1840s that the colonists began to turn their attention to the Pyrmont Peninsula for more 'rural' uses, resulting in land clearance and further dislocation of Aboriginal people from their traditional land. However, the Ultimo area remained significantly under-developed in comparison to the nearby larger industrialised areas like Darling Harbour until the late 1880s, and historic records suggest that the area continued to be used by local Aboriginal people during the mid-19th century for gathering oysters and cockles from the shore.¹⁵

2.2.1 Environmental History

John Harris leased land in the Ultimo area from as early as 1796,¹⁶ before being granted 34 acres by Governor King in 1803 for land ‘between the Church land and the ground used as a brickfield without the town of Sydney,’¹⁷ with the rent agreement after five years set at two shillings and sixpence a year. Harris proceeded to clear and cultivate the land, establishing Ultimo House in 1804 (Figure 2.1 and Figure 2.2).¹⁸ The name Ultimo was reportedly a joke between Harris and the Governor; when court marshalled in 1803, Harris had avoided conviction on a technicality due to the incorrect use of the Latin term ultimo (last month) rather than instant (this month) in his charge.¹⁹ Harris received additional land grants at Ultimo in 1806 of 135 acres and 9 ¼ acres,²⁰ resulting in his ownership of the majority of the land of the Pyrmont peninsula, only really excluding the estate of John MacArthur in the north.²¹ The Powerhouse site appears to be within the boundaries of Harris’ 1806, 135-acre land grant. In the 1820s Harris employed around 30 convicts and free workers on his Ultimo property, while he himself moved in 1821 to his land at St Mary’s, leasing Ultimo House and only using it on occasion when he was in Sydney.²²

From the 1830s, other areas of Darling Harbour began to be reclaimed and developed, including construction at the northern Pyrmont end of Harris Street in c.1836 as part of Edward Macarthur’s (John Macarthur’s son) subdivision and development of Pyrmont.²³ This led to the Aboriginal people of Pyrmont being pushed further south down the peninsula towards Ultimo, where John Harris’ grandson, Matthew, recalled they could still harvest cockles from the bays near Ultimo House up until the mid 19th Century.²⁴ During this time, the Powerhouse site would have remained fairly marshy, while the nearby harbour became increasingly silted-over and polluted. The Ultimo Estate area was described in 1848 as:

A small third class district lies at between the head of Darling Harbour and Parramatta Street. It is formed by Victoria Street Ultimo Road, Valentines lane etc, and stands on rather uneven ground which slopes down into the flat shores of the Harbour. The irregular streets contain only a few scattered and chiefly slab cottages entirely of the third class. They are old wretched and probably very unwholesome, from the surrounding moist and foul flat land. They are entirely removed from all active traffic.²⁵

John Harris died in 1838 with no children, leaving his Harris Estate and surrounding properties to be divided equally between his brothers William and George Harris.²⁶ However, complications with the Will resulted in the brothers’ being able to receive rent from the properties, but unable to subdivide the land.²⁷ This in turn meant that while development occurred in surrounding areas into the mid-19th century, the Harris Estate land remained quite sparsely populated and underdeveloped during this time.²⁸ Following the deaths of William and George Harris, the land was inherited by their respective sons (both named John Harris), and in 1859 the Harris Estate was finally able to be subdivided.²⁹ In February 1860, as part of the subdivision among the Harris family that came to be known as “The Lottery”, the children of one side of the Harris family divided up their 35 allotted blocks to be shared between them by drawing numbered lots out of a box.³⁰



Figure 2.1 Plan of the town and suburbs of Sydney, August, 1822 (Source: National Library of Australia, 2674887 with Curio overlay). showing early context of Powerhouse site. Ultimo House was located south west of the present day site.



Figure 2.2 Edward Mason, Ultimo Place, with Cockle Bay, in Views of Sydney and Surrounding District, c.1821-23 (Source: State Library of NSW, PXC 459)

The Power House buildings and Ultimo Post Office are located on Block 23 of the 1859 subdivision (bordered by Harris Street, William (later William Henry) Street, Macarthur Street and Pyrmont Street and inherited by Margaret Harris),³¹ whilst the Harwood building (former Ultimo Tram Shed) is located on Block 20 (likely inherited by John Harris of Shane Park).³²

In the 1840s and 1850s, Harris Street ran along the western boundary of the Powerhouse site, while Pyrmont Street did not yet extend to the site, instead ending at Union Street in Pyrmont. Small parcels of land across the Ultimo area were rented out, and the 1845 Sydney rates assessment books record that several huts of mud, brick, wood or wattle with bark roofs had been constructed on the Harris Estate land³³ (Figure 2.8). The visual landscape of the area is evident in Elyard’s 1860s watercolours of the area (Figure 2.3 and Figure 2.4).

The relatively underdeveloped nature of the Harris Estate, with only a sparse scatter of cottages across the landscape, continued well into the later 19th century and even as late as the turn of the century when the land was resumed for the construction of the Ultimo Power House. By the late 1880s the only 19th century houses that remained within the original site boundaries were those at 137 William Henry Street and several along Pyrmont and Harris Streets (discussed in further detail in Section 3.4.2, with respect to historical archaeological potential).

Numerous sandstone quarries were established across the Pyrmont Peninsula in the 1840s and 1850s, extracting the high-quality Pyrmont ‘yellow block’ sandstone that was the preferential building material for many of Sydney’s major public buildings constructed in the late 19th century including Sydney Town Hall, Sydney University, QVB and the GPO.

While the majority of the larger and better known Pyrmont sandstone quarries were focused along the western side of the peninsula (such as the Saunders family quarries “Paradise”, “Purgatory” and “Hell Hole”), historical maps indicate that several quarries were also located within and adjacent to the subject site—on the site of the Harwood building, and one along Harris Street between William Henry and Macarthur Streets, possibly crossing into the site from the east (Figure 2.6). The 1883 Sands Directory also refers to a quarry located near William Henry Street, while a 1853 map and 1872 photograph both suggest the presence of a potential quarry line either through or immediately adjacent to the subject site (Figure 2.5 and Figure 2.8).

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



Figure 2.3 Samuel Elyard, Darling Harbour, 1864, in Views of Sydney, 1862-1873 (Source: State Library of NSW, DGD 5)



Figure 2.4 Samuel Elyard, Darling Harbour from Harris Street, 1867 (Source: State Library of NSW, DG V*/Sp Coll/Elyard/18)

The transport association of the subject site commenced in 1871, when the newly formed Sydney Omnibus Company constructed stables and a hay shed on Block 20 of the Ultimo Estate subdivision (Figure 2.5) (the block on which the Harwood Building is now situated). Later known as the Sydney Tramway and Omnibus Company (STOC),³⁴ this horse-drawn omnibus company was one of Sydney's main private companies providing transport services for most of Sydney's Eastern suburbs, as well as through the city centre and out to Glebe, Forest Lodge, Newtown, Stanmore, Marrickville, St Peters, and the Cooks River.

The subdivision of the Ultimo Estate and the areas subsequent development led to an increase in the population of Ultimo. In 1881 the Government Savings Bank opened a branch on Harris Street, Ultimo in rented premises. Further development including the construction of the Ultimo Power House saw a need for more commercial premises, with a purpose-built Post Office being constructed on the corner of Harris and William Henry Street in 1901 (see following section, and Part C: Section 14 for further detail on the Ultimo Post Office).

During the mid to late 19th century there are less records documenting Aboriginal people living around Ultimo, this may have been due to the subdivision of Harris' estate, the increased urbanisation of the area, or less records about Aboriginal people of the area being kept.³⁵ The industrial development of Tumbalong and Ultimo in the late 19th century saw the Aboriginal people of coastal Sydney gradually move from their camps around the harbour to the La Perouse Aboriginal fishing settlement.³⁶ The formation of the Aborigines Protection Board in the early 1880s drove this change. Missionaries and the police had applied pressure on the Government to intervene, and the board was initially established as a means of coordinating government assistance to Aboriginal people. Whilst the board initially had no legal powers, by making La Perouse the primary location for government assistance in coastal Sydney, they influenced where the Aboriginal people of coastal Sydney lived.³⁷ For the Aboriginal people who continued to visit the inner city, there was an increase in police surveillance and arrests. The Aboriginal people documented in the Ultimo Pymont area during this time were predominantly women from outside of Sydney who worked as domestic servants.³⁸

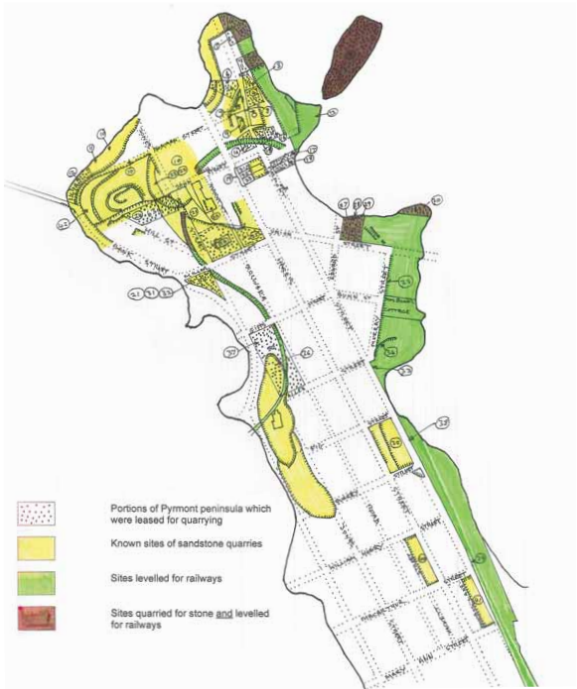


Figure 2.6 Sandstone disturbance through quarrying and railway/wharf construction (Source: Broadbent 2010 p. 423, Figure 5.5.8)



Figure 2.5 N J Caire, Anglo-Australasian Photo Company, Scene from the Sydney Town Hall Tower, 1878 showing subject site with sandstone quarrying evident along the eastern side of the peninsula. Sydney Omnibus Stables on Block 20 indicated. (Source: State Library of NSW, SPF/994)

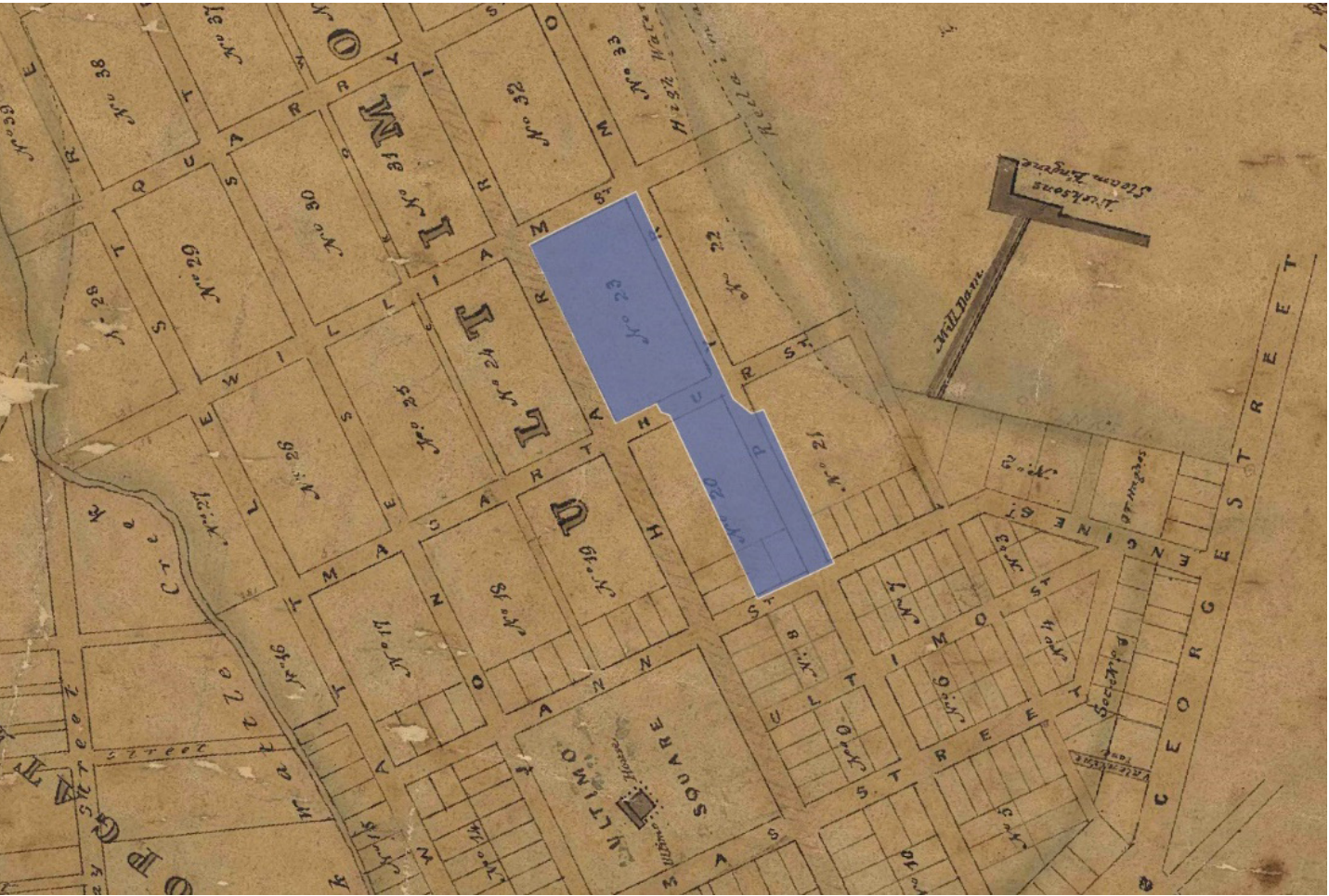


Figure 2.7 Map of Ultimo Estate, 1871 with Powerhouse site indicated. (Source: Office of the Registrar General, Doc: CP 00002-1543 P)

Darling Harbour Goods Line

Upon formation in 1849, the Sydney Railway Company approached the Harris family to request the purchase of seven acres of land for the construction of a railway connecting what is now Central Station with the new wharfing facilities proposed for Darling Harbour, including additional acreage for a goods terminus.³⁹ This land was eventually purchased from the Harris family in 1853, although management of the railway and the land was taken over by the NSW Government in 1854 after the failure of the Sydney Railway Company.⁴⁰ A plan of the land resumed for the proposed railway line is shown in Figure 2.8. A new embankment was constructed along the western edge of Darling Harbour to support the Goods Line, requiring importation of substantial volumes of soil.

At its opening in 1855, the Darling Harbour Goods Line extended along the eastern boundary of Ultimo and ended just south of the future location of the Pyrmont Bridge. The presence of the Goods Line in this location effectively severed the direct connection between Darling Harbour and Harris Street, with the Powerhouse site located in between. This isolation of the Harris land from Darling Harbour, in addition to the underutilisation of the rail line in its early years, created tension between the Harris family and the Government, with the land around the railway through the Harris estate described in 1863 as being ‘dilapidated, the railway merely an embankment with the rails set on and the terminus undeveloped’.⁴¹

Government reclamation of the southern end of Darling Harbour and construction of the Iron Wharf in 1874 eventually allowed the reactivation of the Goods Line in the 1870s, which went on to become vital in the transportation of wool, coal, shale, timber, and wheat in and out of Sydney. As a result of the industrial development boom following the construction of the Iron Wharf and corresponding relevance of the rail lines, the Darling Harbour Railway Goods Yard was constructed between 1874-88 at the head of the Goods Line (north of the site) and continued to grow and develop into the 1920s. The location of the Goods Line was also to become vital in the transportation of the large quantities of coal required by the Power House for its operation, after its opening in 1899.⁴²

The 1960s saw the port functions and wool stores moving away from Sydney which led to a decline in the functions of the railway. The Darling Harbour Goods Line was eventually closed in 1984, and the Goods Yards were redeveloped as part of the NSW government bicentenary project. For further details on the history of the Goods Line, see Part C: Section 17 of this CMP.



Figure 2.8 Plan of the Darling Harbour Branch of the Sydney Railway, 1853, in Surveyor General sketch book folio 28-71 (Source: State Archives and Records Authority of New South Wales, NRS-13886-1-[X764]-Volume 6 Part 2-14)



Figure 2.9 Goods loco 3381 steams across the Ultimo Road underbridge with the three chimneys of Ultimo Power Station in the background. (Source: The Goods Line – then and now – Inside the Collection (maas.museum) Accessed 23 May 2022)

2.2.2 Ultimo Power House, Tram Shed and Post Office (1895–1940s)

In 1895, the Minister for Public Works commenced investigations into construction of an electric tramway between Circular Quay and Pyrmont (George Street to Harris Street), a proposal that was accepted by majority in 1896. This was soon followed by a general policy to electrify all Sydney’s existing tram lines. An Act of Parliament that sanctioned the construction of the George Street and Harris Street Electric Tramway, along with a supporting Power House and Car House at Ultimo, was approved in September 1896.⁴³ The path of the authorised proposed tramway, Power Station and Car House are shown in Figure 2.10.

The Ultimo Power House was the original generation station for the supply of electricity to the Sydney electric tram network and general distribution of electrical power in the area. It was the first large-scale electric power plant constructed in Australia—a title which it retained for many years. The final location of the Power House was selected on the basis of a number of factors including: access to the Darling Harbour Rail Corridor (The Goods Line) for coal supply and the disposal of the ashes; access to Darling Harbour for adequate sea water supply for the condensers and the distribution of electrical current; and the low cost of the land and space for expansion.⁴⁴

The majority of contracts for the construction of the George and Harris Street tramway (and associated Tram Stabling Shed and Power House) were let between 1897 and 1898. J. Stewart & Co contracted to build the Ultimo Power House and Tram Shed,⁴⁵ and Justin McSweeney awarded Contract 18 to construct the water conduit connecting Darling Harbour to the Boiler House supplying seawater to the condensers (i.e. the Water Cooling System and Manifold).⁴⁶ Construction of the Ultimo Power House commenced in 1898 (Figure 2.12 and Figure 2.13).

The original building constructed for the Power House occupied the north of the block bounded by William Henry Street to the north. It consisted of the Engine House, Office, (Old) Boiler House, and Pump House, with the overall building measuring 200 feet (c.60m) x 100 feet (c.30m), with the original pump house chimney stack constructed with 890,000 bricks extending 300 feet (c.91m) above flue level.⁴⁷

The Ultimo Car House (Tram Shed), constructed at the same time as the Power House on the southern block bounded by Macarthur Street to the north, Mary Ann Street to the south, Omnibus Lane to the west, and the Darling Harbour Goods Line to the east, measured 275 feet (c.83m) x 130 feet (c.39m), and was the first of the electric tram depots opened for the early 20th century Sydney Tram network.⁴⁸ A Store and Repairing Shop, contracted to T. E. Spencer & Co, adjoined the Car House at the rear and featured the same sawtooth design of the Car House.⁴⁹

The first electricity was supplied to the tramway for an experimental tram ride on 22 November 1899. The Ultimo Power House was officially completed on 29 November 1899, powering the official opening of the Harris and George Street tramline on 8 December 1899.⁵⁰ The tramline was incredibly popular and carried 95,000 passengers in the first two days of operation.⁵¹ Originally supplying power for electric traction

for the George Street and Harris Street tramlines, the Ultimo Power House later extended its supply of electricity to the Eveleigh Railway Workshop (1900) and Central Station (1907).

In 1901, a purpose-built Post Office was constructed at 494 Harris Street on the corner of Harris and William Henry Streets (Figure 2.14), replacing the postal operation at 484 Harris Street. The Ultimo Post Office, designed in the Federation Queen Anne style by the Public Works Department’s Government Architect’s Branch under Walter Liberty Vernon, formally commenced operation in July 1901, and continued to function as a Post Office until the 1980s.⁵²

Sydney’s demand for electricity increased rapidly. Almost immediately following its completion in 1899, it became apparent that the Ultimo Power House required expansion to increase its output capacity. Therefore in 1902, just three years after opening, the first extension to the Ultimo Power House was undertaken. Developed by plans drawn by J. G. White & Co. of New York, the 1902 design consisted of a southern extension to the Engine House (later renamed the Turbine Hall) and the construction of a new and larger Boiler House, extending the space by a further 54m south than what the old Boiler House building had occupied (Figure 2.15). The 1902 extensions transformed the Ultimo Power House from a small electricity generation plant, to a substantially sized power station more in line with modern power plants elsewhere in the world, at the time it was said to resemble the New York Metropolitan Street Railway Company’s 96th Street Power House.⁵³

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

When the Power House was in operation, local residents who left their windows when they went out, would return home to find a fine dust coating their furniture⁵⁴ (Figure 2.16). In 1913 the City Health Office wrote to the Town Clerk regarding the heavy smoke emissions from the Power House. In the Town Clerks reply it was claimed this was to be struck by southern coal miners resulting in inferior coal being sourced from northern areas of the state.⁵⁵ The pollution in Ultimo would have been quite severe, with a 1924 news article reporting that the Power House used 700 tonnes of coal a day.⁵⁶

The Ultimo powerhouse, well that was the tramway powerhouse. Before any people around here would wash you’d always go out and see what smoke was coming out the chimney. If it was white smoke you’d wash, but if it was black smoke you wouldn’t...because all your sheets and your whites used to get dirty.⁵⁷

Two pneumatic ash ejector plants were constructed in the Power House between 1911 and 1915. These delivered the ash from the boilers to the railway trucks which removed them via the Goods Line, reducing the need for ash management by Power House staff.⁵⁸ This system was later replaced (around 1931) by an electrically propelled rail hopper truck which carried the ash from the boilers to a wet sump where it was them pumped into hopper barges on Darling Harbour through 2240 feet of pipe.⁵⁹



Figure 2.10 1896 location of proposed Power House and Car House (Source Legislative Assembly, New South Wales, Report of the Department of Public Works for the Year Ended 30th June 1896)

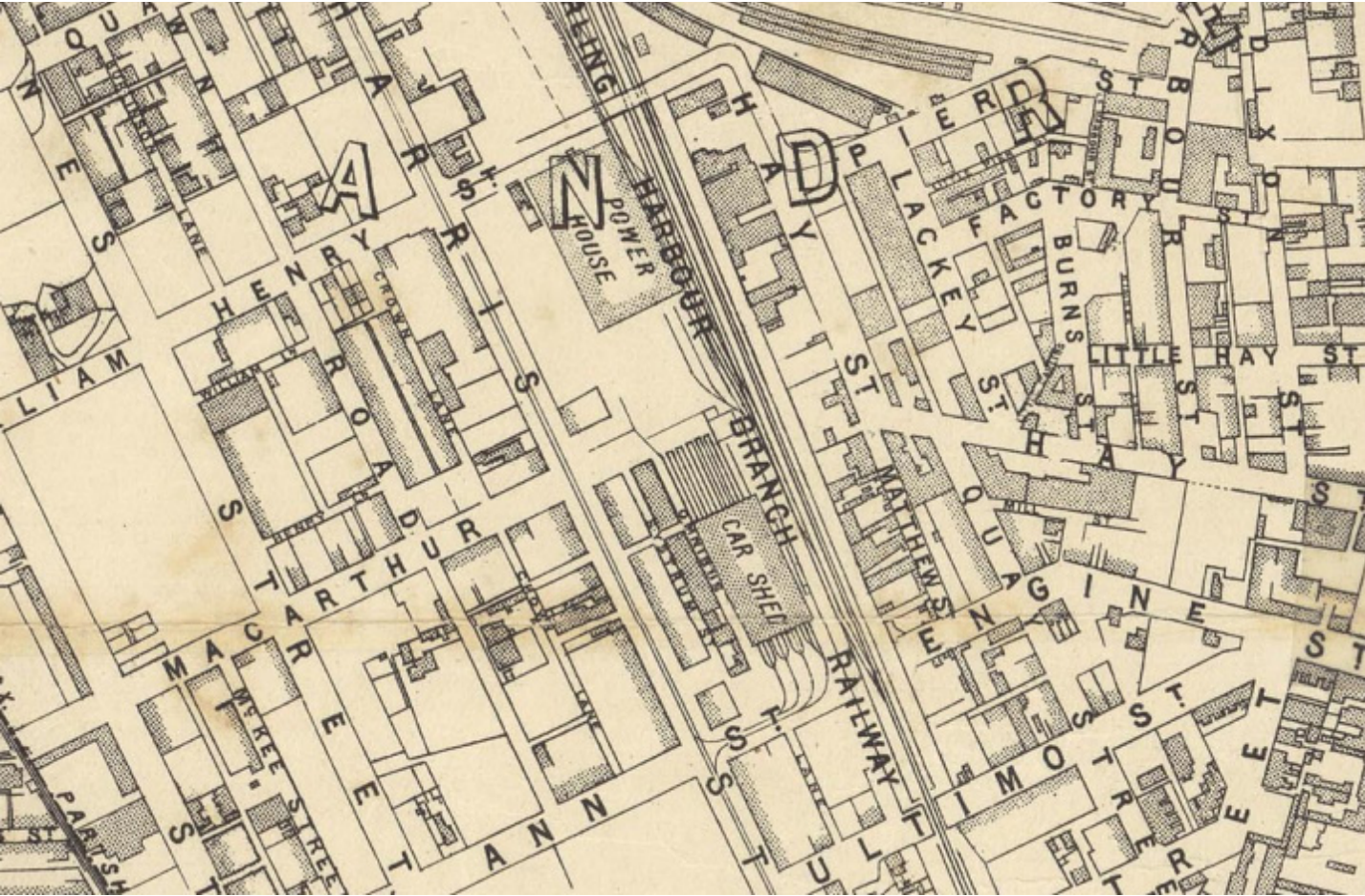


Figure 2.11 Detail from Map of the City of Sydney, 1903 (Source: City of Sydney Archives, Map 1) showing Ultimo Power House and Tram Car Shed

In 1913–14, the Ultimo Tram Instruction Room was constructed. It fronted William Henry Street between the Ultimo Post Office and the Power House Offices (North Annex), requiring the demolition of the former 1870s house at 137 William Street. The Tram Instruction building was 'a sizable single storey brick building with asbestos shingle roof',⁶⁰ that contained significant tram car equipment used in the training of electric tram drivers.

At the commencement of this operation in 1899, cooling water for the Power House's condensers was sourced via a water conduit which connected Darling Harbour to the Boiler House. This had been constructed at the same time as the main Power House buildings in 1898. Land reclamation works around Darling Harbour in the 1920s, as well as the larger water requirements of new turbines in the Turbine Hall, necessitated the installation of new, longer intake and outlet conduits for the Power House. Conduit installation works commenced in 1923–24, and were completed by 1928, proving to be one of the most expensive works undertaken during the modernisation of the Power House.⁶¹

Between 1927 and 1932, the Ultimo Power House underwent a major period of modernisation and remodelling to achieve greater efficiency of operation (Figure 2.18). This work included the replacement and upgrade of much of the industrial equipment and plant, installation of a new pneumatic coal handling plant, and construction to the south of the Boiler House of a new concrete coal store with a storage capacity of 10,000 tonnes. The new coal storage bin allows continued operation of the Power House in the case of strikes on the coalfields.⁶² Following completion of modernisation works in 1932, the Ultimo Power House was for a time the largest generating plant in the Southern Hemisphere⁶³ (Figure 2.17).

Predating but tangential to the 1927–1932 modernisation works, was the construction of the Switch House. This building, adjacent to the southern wall of the Turbine Hall, was built between 1922 and 1927 and measured 23m wide, 61m long and 17m in height. The Switch House was purpose built to house a new control room, high tension switch gear, and transformer banks. The works enabled a major upgrade to the switching gear of the Sydney tramway network, as the existing switchboard facilities in the Engine House or Turbine Hall had reached their capacity.⁶⁴



Figure 2.12 Construction of the Pump House at Ultimo Power House, 1898 (Source: State Archives and Records Authority of New South Wales, NRS-4481-2-[4/8645]-1225)



Figure 2.13 Construction of the Pump House at Ultimo Power House, 1898 (Source: State Archives and Records Authority of New South Wales, NRS-4481-2-[4/8645]-1219)



Figure 2.14 Ultimo Post Office, c. 1901 (Source: State Archives and Records Authority of New South Wales, NRS-4481-2-[4/8610]-559)

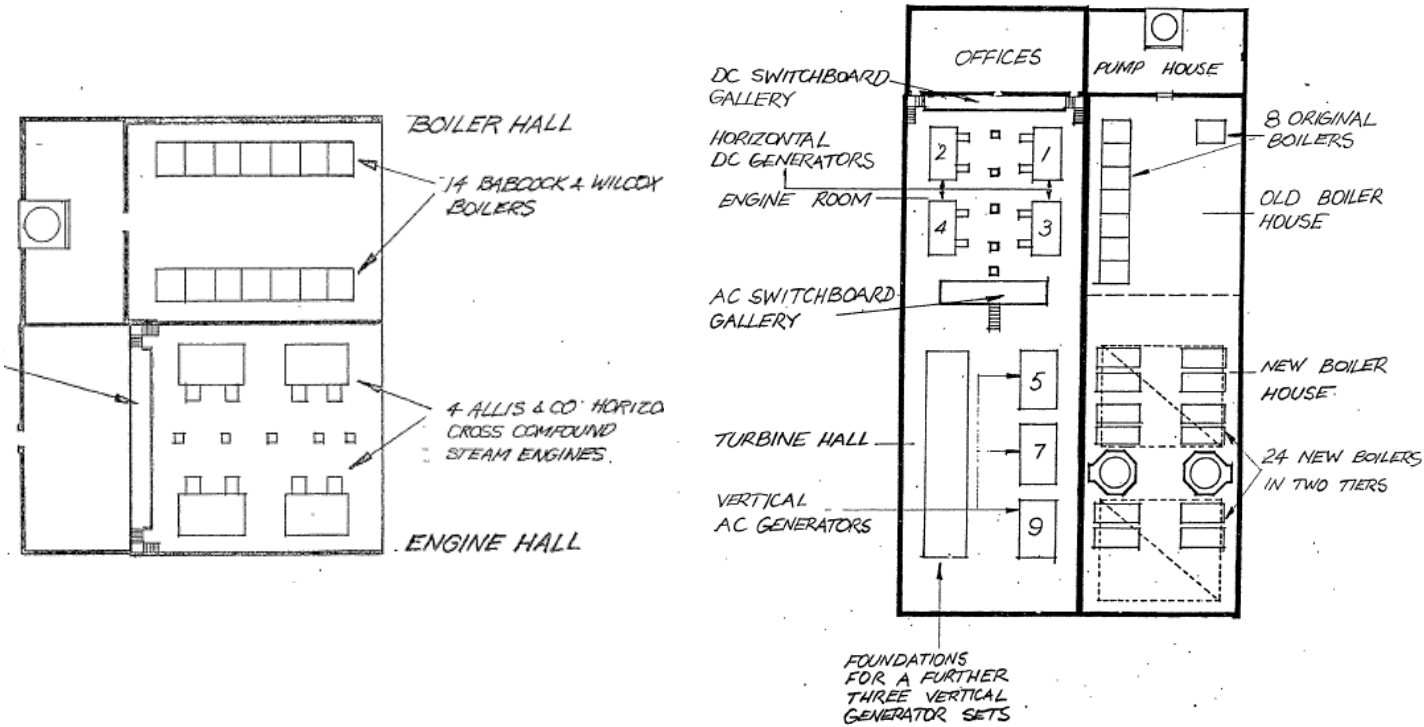


Figure 2.15 1899 Layout of the Power House layout (left) and 1902 (right). (Source: Godden et al. 1984 p. 98 and 104)



Figure 2.16 Ultimo streetscape 1909 with Power House and chimneys in background (Source: City of Sydney Archives NSCA CRS 51/1532)

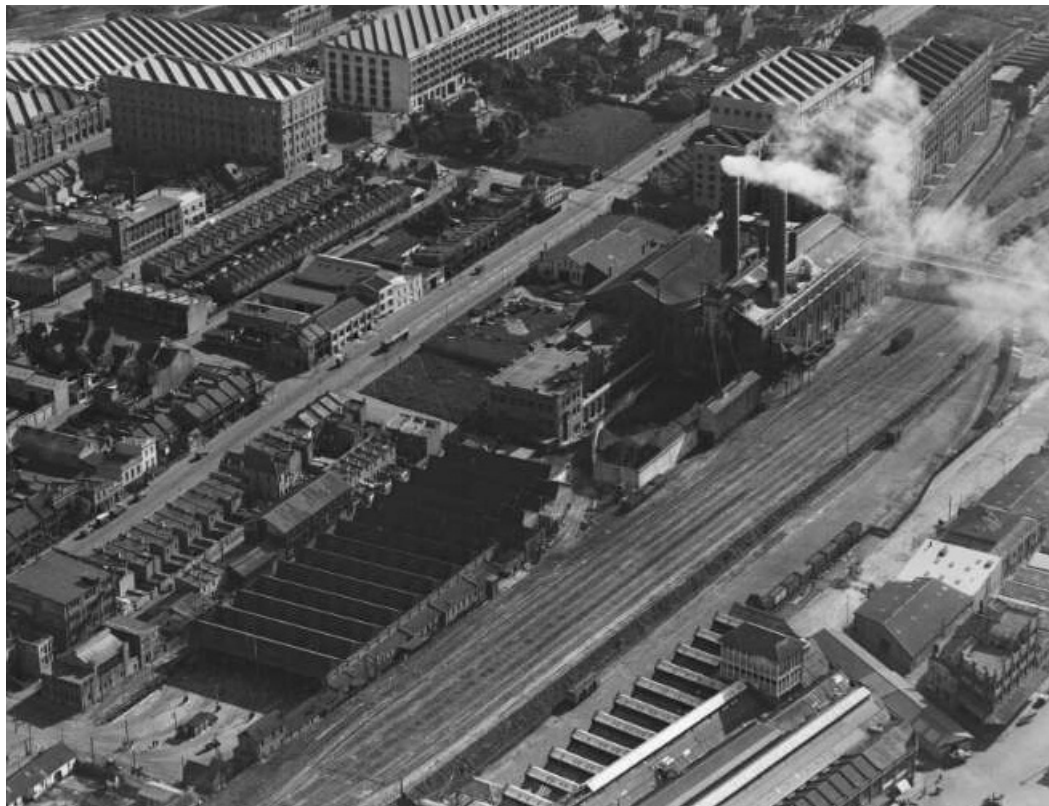


Figure 2.17 Baden H. Mullaney, Aerial view showing Power House with new concrete coal store south of Boiler House. Tram Shed to the south, Goods Line along the eastern boundary, 1932 (Source: NLA PIC Row 14/7/4 #PIC/15611/7980)

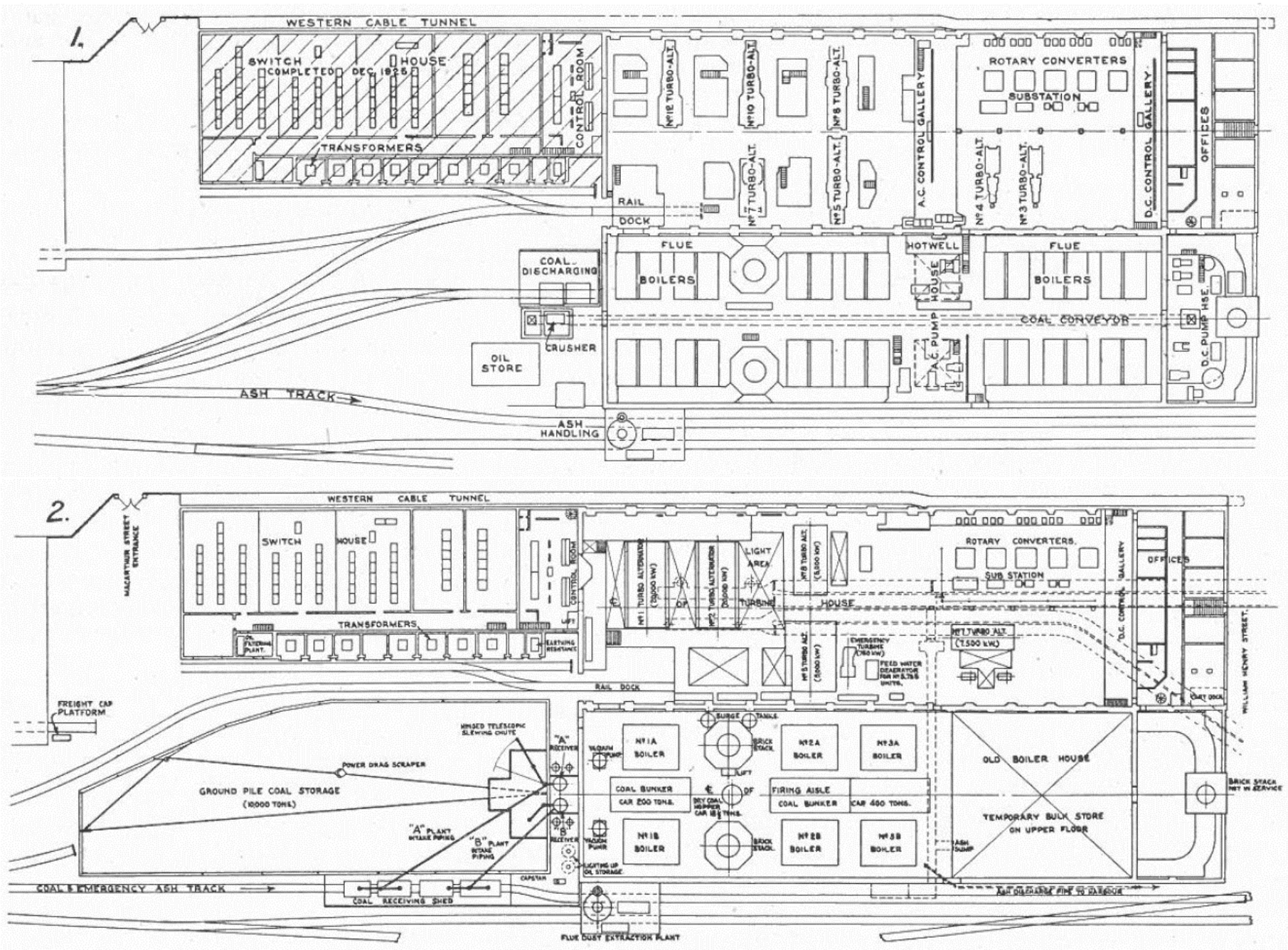


Figure 2.18 Pre 1933 (top) and Post 1933 (bottom) Configuration of Ultimo Power House (Source: Myers, 1933 p.254)

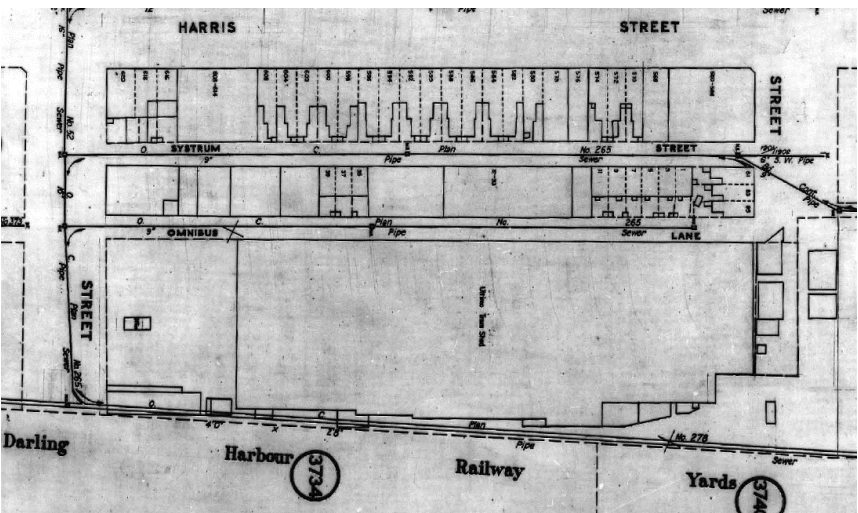


Figure 2.19 c. Drawing showing the Ultimo Tram Shed, c. 1963 (Source: Sydney Water, DS3723)

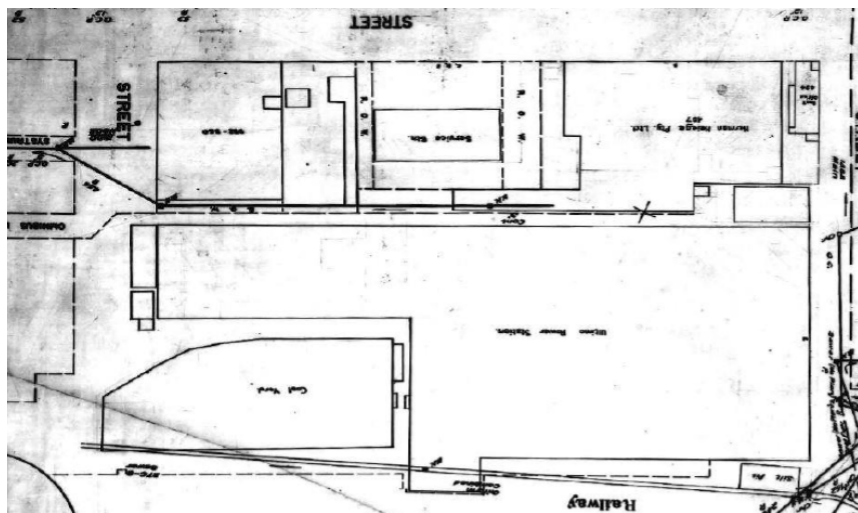


Figure 2.20 Drawing showing the Ultimo Power House, c. 1963 (Source: Sydney Water, DS3725 (2))

2.2.3 Site Modifications, Closures, and Abandonment (1940s–1979)

The Ultimo Power House was subject to numerous adaptations and modifications over time, as necessary to meet the ongoing requirements for the power station. During WWII, precautions were made at the Ultimo Power House in the case of an air raid, including the construction of air raid shelters and barricading the lower windows of buildings with sandbags (Figure 2.21). A severe impact to NSW coal supply in the 1940s as a result of industrial action at the coalfields, resulted in conversion of the boilers to operate on fuel oil in 1947.⁶⁵

The Commissioner of Railways purchased 550 Harris Street in April 1948 providing a frontage to the street.⁶⁶ The Tramway Instruction Room was vacated in 1953 when a new training school opened in Randwick, and by 1954 it was being used as a storeroom for the Electrical Commission of NSW.⁶⁷ The building appears on the 1963 Sydney Water Plan of the site and it appears to have remained until the development of Stage 2 of the Powerhouse Museum required its demolition as it was recorded when Godden et al reviewed in the site in 1984.⁶⁸ The State Railways operated the Power House until 1953 when the Ultimo Power House, along with all other Railway Department Power Houses, were transferred to the Electricity Commission of NSW.⁶⁹

In the 1950s, tramways began to be slowly phased out of use across NSW, replaced by buses. This decline of Sydney’s tramways resulted in the closure of the Ultimo Power House on 11 October 1963.⁷⁰ By this stage the Power House was only used as a minor component in the Electricity Commission’s grid (mostly for tram function only), having been superseded in its output capacity since 1923 by White Bay Power Station.⁷¹ Much of Ultimo’s plant and equipment was disassembled and removed between 1965-1966, following which the Power House buildings fell into disrepair and was subsequently damaged by decay, squatters, and vandals. In 1968 a large proportion of the former Pump House and chimney was demolished for the construction of the William Henry Street bridge, while the two brick chimneys at the southern end of the Boiler House were demolished to the roofline in 1976-77, resulting in severe damage to the Boiler House roof.⁷²

In the 20th Century there continued to be Aboriginal connections to Ultimo and the surrounding area. In 1933 workers from the Ultimo Power House, alongside a number of workers’ groups, contributed to the Eatock Defence Fund, to help fund the defence of Noel Eatock, an Aboriginal man who was arrested and charged when participating in a protest against the dole form in October 1932.⁷³ In the 1960s, Aboriginal people became increasingly active in the political sphere, particularly around issues that affected their lives such as citizenship and land rights.⁷⁴ The Foundation for Aboriginal Affairs was established in 1964 and from 1966 the foundation was located not far from the Powerhouse site at 810-812 George Street. The foundation was established to provided support for Aboriginal people who had migrated to Sydney from regional NSW, and was also a popular location for community functions, concerts and dances. The Foundation attracted prominent political campaigners including Harry Williams, Chicka Dixon and Charlie Perkins, who spoke about issues including the 1967 Referendum and Land Rights.⁷⁵



Figure 2.21 Air Raid Precautions at Ultimo Power House, 1943, with sand bags along North Annex (Offices) lower windows (Source: State Archives and Records Authority of New South Wales, NRS-17420-2-4-364/051)