WHITE BAY POWER STATION

Robert Street Rozelle NSW 2039

CONSERVATION MANAGEMENT PLAN 2026

VOLUME 1 : THE CONSERVATION MANAGEMENT PLAN

Prepared for

Placemaking NSW

Prepared by

Design 5 – Architects Pty Ltd

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WHITE BAY POWER STATION CONSERVATION MANAGEMENT PLAN 3RD EDITION

Client

Placemaking NSW

Prepared by

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In collaboration with

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Wadjiid Pty Ltd

Placemaking NSW

Photography

Evolving Picture

Toby Peet

ACKNOWLEDGEMENT OF COUNTRY

As the custodians of this White Bay precinct, Placemaking NSW recognises that it stands on Aboriginal land, the area we know as Rozelle.

We acknowledge Gadigal and Wanngal Country, her lands, sea and sky, we acknowledge the custodians and their kin, the Bidjigal, Cabrogal and Cammeraygal who often visited this Country to connect and share.

We advise this resource may contain images, or names of deceased persons in photographs or historical content.

It should be noted that the precinct names selected and applied for this document are known as from The Sydney Language, named so for the purposes of Placemaking NSW's Reconciliation Action Plan. We acknowledge that there are numerous Aboriginal language place names, including Gadigal, Wanngal, Cammeraygal and Dharawal, connected with the place.

REPORT REGISTER

This register documents the progress of this document and its issue to Placemaking NSW for discussions over the period of engagement of Design 5 – Architects:

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Documents, reports and other sources utilised for the preparation of this work have been acknowledged within this report and are mentioned within each section, and referenced within the endnotes.

Cover Photo: *North Elevation of the White Bay Power Station, 2024 (courtesy of Toby Peet).*

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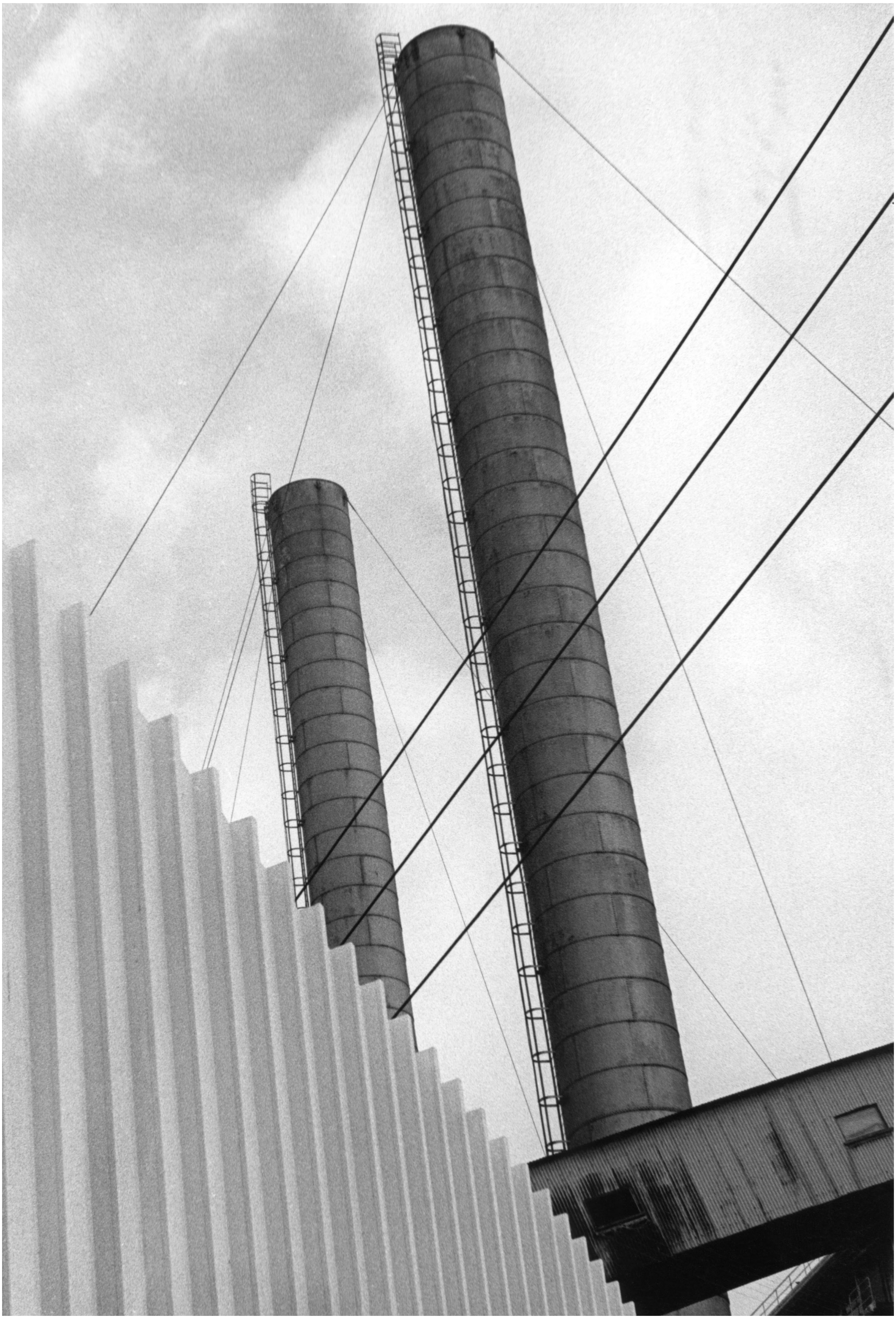

Figure 0.1: White Bay Power Station from Robert Street, 1987 (courtesy of the City of Sydney Archives, Alan Dunstan Photograph Collection, A-01194956).

EXECUTIVE SUMMARY

INTRODUCTION

The White Bay Power Station is situated at the head of White Bay in Rozelle, on the traditional Country of the Wanngal clan.[1] It was Sydney's longest serving coal-fired power station (1917–1984) that remains standing today. The complex comprises a Coal Handling Shed and External Conveyor, two landmark Chimney Stacks and Ash Handling Tower, a Boiler House, a Pump House, a Turbine Hall, Administration and Staff Accommodation, a Transformer Alley, a Switch House, a Control Room Building, as well as smaller structures for amenity and storage. The power station has primary street frontages to Victoria Road to the west and south and Robert Street to the north. The place shares its east boundary with land under development as part of the Bays West Precinct and the site of the future Sydney Metro West.

The White Bay Power Station is listed on the State Heritage Register (SHR) and is thus subject to the Heritage Act 1977 (NSW). Parts of the White Bay Power Station are located outside the Study Area and the SHR boundary, including the inlet canal, the outlet canal and the south penstock. These items are regarded in this report as effectively integral to the operation of the Power Station and future understanding and interpretation of it.

Design 5 – Architects have been engaged by Placemaking NSW (PMNSW – owners and managers of the place), to prepare this third edition of the Conservation Management Plan (CMP) for the White Bay Power Station. A CMP is a special study report that identifies and describes why a place is important (cultural significance) and provides a framework for the conservation and management of the place into the future, including development and future use.

This third edition builds on the detailed information, analysis, assessment, and conservation policy of the First and Second Editions published in 2004 and 2013. Once adopted, this revised third edition will be used as a management tool and as part of a design brief for any future works and development of the place. It should be further revised if new information changes the understanding of the significance of the place or if there is an unforeseen change in how the place is managed.

Since the publication of the second edition, the place has undergone extensive staged remediation works worth millions between 2022 and 2024 to make it safe and accessible to the general public. The scale and significance of these changes are immense, and have transformed the place from a dormant, near-ruin power station into a nationally significnat cultural precinct. The Third Edition maintains the policy approach of the previous editions with an additional refocus on its significance:

- To reflect greater detail and understanding of Aboriginal cultural heritage and history, with work contributed by Coast History and Wadjiid Pty Ltd.
- To assess the increasingly rare asset and the comparative significance of the White Bay Power Station.
- To reflect and update the analysis, assessment and policies following the extensive, large-scale remediation and activation of the place in 2024.
- To incorporate findings from the 2022 Master Plan and Rezoning of the Bays West precinct, which includes the White Bay Power Station. The policies of this CMP align with overarching strategies for The Bays more broadly to manage the ongoing public reuse of the place.

While the study area includes the White Bay Power Station only, it is located within the area known as Bays West. This area encompasses the former and current industrial sites in Rozelle Bay, Glebe Island and White Bay. Together with the White Bay Power Station, the area has played a substantial and crucial role in the development of Sydney's industrial and maritime past. It retains strong historic and social values that are of exceptional significance in the growth of the City and of New South Wales.

The conservation policies must address all issues to retain the significant features and qualities while allowing change to ensure their survival.

Figure 0.2: The White Bay Power Station, July 2024 (courtesy of Chris Bennett, Evolving Picture).

DESCRIPTION OF THE PLACE

The White Bay Power Station is an exemplar of the early and mid-twentieth-century municipal coal-fired power station. It comprises the following principal structures:

- **Coal Handling Shed (and External Conveyor):** the Coal Handling Shed is a steel structure cladded with corrugated galvanised steel and has a large underground basement. It was used for receiving and processing coal, which was then transported via the External Conveyor to the Boiler House.
- **Ash Handling Tower:** the Ash Handling Tower is a steel structure located under the External Conveyor. It was used to collect waste ash and transfer it out of the site for disposal.
- **Chimney Stacks:** the pair of riveted steel chimney stacks tower over the White Bay Power Station at just under 80 metres in height. They processed waste emissions from the coal-fired power generation process. These stacks are exceedingly rare for their make and size and are a defining feature of the power station's landmark qualities.
- **Boiler House:** the Boiler House is a large brick, concrete and steel-framed structure with large, glazed windows and a curtain wall. It retains the No. 1 Boiler and associated steam-raising equipment and machinery at its north end.
- **Pump House:** the Pump House is a narrow, long structure which is connected to the Turbine Hall and is housed under the same roof. Most of its equipment and machinery, which relates to the Feedwater System, is located in the north half of the building.
- **Turbine Hall:** the Turbine Hall is the largest structure of the White Bay Power Station, forming the bulk of its form as an industrial landmark of the precinct. It houses the "heart" of power generation, the extant No. 1 Turbo-Alternator located at the north end.
- **Administration and Staff Accommodation:** this building is connected to the south end of the Pump House and the Turbine Hall. It was used used for staff accommodation, amenities and executive offices. It also contains the "front of house" entry to the power station on level 3 with the main lobby via the Victoria Road Access Bridge.
- **Switch House:** the Switch House is a brick and reinforced concrete building parallel to the Turbine Hall — between the two structures is the narrow Transformer Alley. The Switch House primarily facilitated power supply and reticulation. It also includes the Entertainment Hall, which was integral to the recreational and social lives of the workers.
- **Control Room Building:** this brick annexe is located at the west end of the complex. It is connected to the Switch House and contains the 1948 Control Room and the Cable Room for power reticulation.

Throughout these structures, the power station retains one complete set of machinery representative of the eight operational systems. These include:

- Coal Handling System
- Steam Raising System
- Power Generation System
- Feedwater System
- Cooling Water System
- Power Reticulation System
- House Electrical & Auxiliary Supply System
- Ash Handling System

Figure 0.3: The White Bay Power Station, with the Sydney Harbour Bridge, Sydney CBD, and ANZAC Bridge in the background, March 2024 (courtesy of Toby Peet).

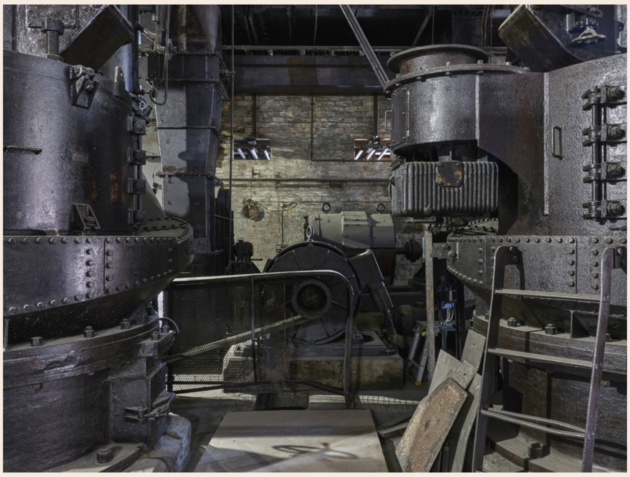

Figure 0.4: The Coal Pulverising Mills at the north end of the Boiler House, January 2024 (courtesy of Toby Peet).

SUMMARY HISTORY OF THE PLACE

Background to Country[2]

White Bay is within the lands of the Wanngal clan, and was used by the Wanngal and the other coastal Sydney clans (their saltwater — *gadhungal* kin), who often visited this Country to connect and share. Aboriginal people once knew White Bay and its surrounds as freshwater Country and witnessed its transformation into saltwater Country over many thousands of years as the harbour formed at the end of the last ice age. The Wanngal and their kin became intimately familiar and connected to the fishing utopia that was created. White Bay and its surrounding bays had mangrove flanked mudflats where creeks met the tidal limits of the harbour. These tidal areas were fish nurseries, rich in marine and bird life, while the mudflats and nearby rocky shores also contained abundant shellfish. The dry land above these bays had belts of different kinds of forest and woodland, which were home to a wide range of animals and plants, which were used by the Wanngal for food, medicine and for making the wide range of equipment that they used to thrive.

The richness of Aboriginal culture and spirituality were sadly not apparent to the first Europeans when they arrived in 1788 and set up camp near White Bay in Sydney Cove. They quickly explored the harbour and its bays, and soon conflicts arose over the theft of Aboriginal possessions and resources. In 1789 a devastating smallpox epidemic swept around the harbour and claimed many Aboriginal lives, followed by the continuing "granting" and carving up of Aboriginal lands in the expanding colony in the decades that followed. Often this is where histories of Aboriginal people in Sydney end, but there were survivors who continued to live around the harbour bays, where they were seen by, and interacted with Europeans. This includes around Blackwattle Bay where Aboriginal people continued to "come and gather oysters and cockles round the shores of the bay" and camp on the Harris family's Ultimo estate for many decades after the land was granted.[3] Many other camps like this existed and are not yet well documented. It is important to bear this in mind when considered the European use of any area to avoid seeing this as a convenient endpoint to Aboriginal history. Instead, it is a period of interaction, adaptation and often employment in the very industries that are often thought to have erased an Aboriginal presence around the harbour.

This period in the late nineteenth and early twentieth centuries was a time of great change for Aboriginal people too. The formation of the Aborigines Protection Board in the 1880s began to end a century of adaptation by coastal Sydney people to the colony. Increasing surveillance and economic pressure were exerted on their camps around the harbour, resulting in a slow and steady move of most coastal people to La Perouse by the turn of the century. The Protection Board gained legal powers in the early twentieth century, allowing them to control where Aboriginal people lived and travelled, take their children, and enforce a policy of segregation. This draconian measures prompted some Aboriginal people in rural areas to leave for the perceived greater freedoms and employment opportunities of the city. After the Second World War, migration greatly increased, and inner urban Aboriginal communities were formed. Both Aboriginal migrants, and coastal Sydney descendants worked in local industry and were supported in their struggles for civil and land rights by unions in many of those industries.

Colonial History

In the early decades following European occupation in 1788, land grants were given to the free settlers and emancipists, though Aboriginal people continued to use the area also: the full account of this history of transfers of land holdings may be found in Section 2.7.2 of the CMP.

From the 1830s, noxious industries began moving from Sydney to the Bays West and would form the defining character of the area well into the twentieth century. The area was not known as Rozelle until 1875 and was instead varyingly referred to as Balmain West and Balmain South during this period. Early industries to the area included tanneries, copper smelting, pig yards, and tobacco works, and subdivision around the head of White Bay for workers' housing was well-established by 1855.

Despite the booming production and trade however, the output of dust, sulphurous and acidic fumes, and other industrial byproducts led to severe pollution in the bay area. The original White Bay Hotel was constructed during this period in the 1860s, located at the north intersection of Abattoir Road and Weston Street.

The sandy shore area that would eventually become the White Bay Power Station was built up into cottages and ancillary services. Around 1890, a dyke was built from Balmain across the mud flat to Glebe Island to reclaim the land at the head of the bay for a public reserve. The mangrove swamps around Glebe Island had become home to disease and foul stenches as a result of the noxious industries and were also reclaimed not long after in 1895. Land reclamation created deeper water berths replacing the early jetties in White Bay and Rozelle Bay.

This period also saw a steady electrification of the Sydney region with the introduction of commercial electricity reticulation. In 1896, after nearly two decades of tramways powered by horse, steam, or cable the NSW Railway Commissioners (RC) obtained parliamentary authorisation to construct an electric tramway along George Street to Harris Street, Ultimo. The Rozelle Rail Yards also underwent an extension during this period, becoming the catalyst for further industrial development in wheat exports and power generation. Consequently, the future White Bay Power Station site was progressively resumed to make way for its construction, and a plan shows the dates of these resumptions – most of them being gazetted 12 July, 1911. The RC ultimately selected a site at White Bay based on its size, proximity to the city, rail links, dock facilities, and water, low-lying location, and low cost.

Construction of the power station began in 1912.

White Bay Power Station History

The White Bay Power Station was commissioned by the Railway Commission to serve the rapid expansion of the electric tramway system, with construction commencing in 1912. Following the completion of the first stage of works — including the first half of the Turbine Hall and Switch House, and one Boiler House — the White Bay Power Station came online in late 1917. Alongside the Ultimo, Pyrmont, and Balmain power stations, it formed the backbone of the Sydney electricity supply system during the early twentieth century.

The second stage of works commenced in 1923, with the construction of the No. 2 Boiler House and the expansion of the Pump House, Turbine Hall, and Switch House. Until 1928, the power station continued to increase and upgrade its power generating machinery and equipment as technology developed to meet higher demands.

After 1945, the third phase of development commenced to expand the operations of the power station and replace the original 25 Hz plant with a new 50 Hz plant. More boilers and turbo-alternators were ordered from overseas, and the No. 1 Boiler House was demolished to make way for the new No. 3 Boiler House (which remains standing today). Alongside this, the construction of a new 25 Hz Switch House and Control Room commenced in 1948, and construction of the iconic landmark Chimney Stacks began the year after in 1949 (though the second chimney was not complete until 1958).

Despite delays due to post-war shortages and labour strikes, the machinery of the third phase was eventually placed in service in 1951, with the new boilers placed in the new High Pressure (HP) No. 3 Boiler House. In 1952, an additional floor was built onto the roof of the original Switch House building to accommodate a new battery room and the Entertainment Hall. By 1953, the coal and ash handling structures to the east side of the place had also undergone changes, with the demolition of the Dry Coal Store and the completion of the Coal Handling Shed, External Conveyor, and Ash Handling Tower. Notably in 1958, the No. 2 Generator failed in a sizeable explosion in the north half of the Turbine Hall.

Following the third phase of development, White Bay Power Station gradually began to limit its operations to the nighttime due to pollution concerns and an increase in power supply from larger scale, newer generation power stations built at the coal fields. During the 1960s–70s, a series of major transformer failures and shortages at these newer power stations saw the White Bay Power Station briefly called back into daytime services at a reduced capacity, with 100 workers. The power station then continued to fall into decline, with its last use occurring in 1982 during a major plant shortage period. The White Bay Power Station was eventually decommissioned in 1984 after 70 years of service. It continued to operate as a substation in the following decade with a growing redundancy, and ultimately closed in 1994.

In the years after its closure, the White Bay Power Station was used for various minor events, including parties, film and fashion shoots, and functions, as well as a series of open days. It was closed most of the 2010s due to hazardous material and other safety concerns. Following its incorporation in the *Bays West Stage 1 Master Plan and Urban Design Framework: White Bay Power Station (and Metro) Sub-precinct*, the place underwent extensive remediation work, between 2022 and 2024. The work aimed to halt further deterioration, conserve the building's fabric, and protect machinery. It included repairs and remediation to the building envelope and façades, roofing and rainwater goods. Structural repairs involved strengthening steel, concrete and stabilising the chimneys. Safety upgrades comprised fire services, balustrades, flooring, security, and other services. Decontamination involved the removal of pigeons, asbestos, and lead dust, as well as paint encapsulation. Parts of the place were open to the public for the 24th Biennale of Sydney in 2024, which has since been followed by other functions and events.

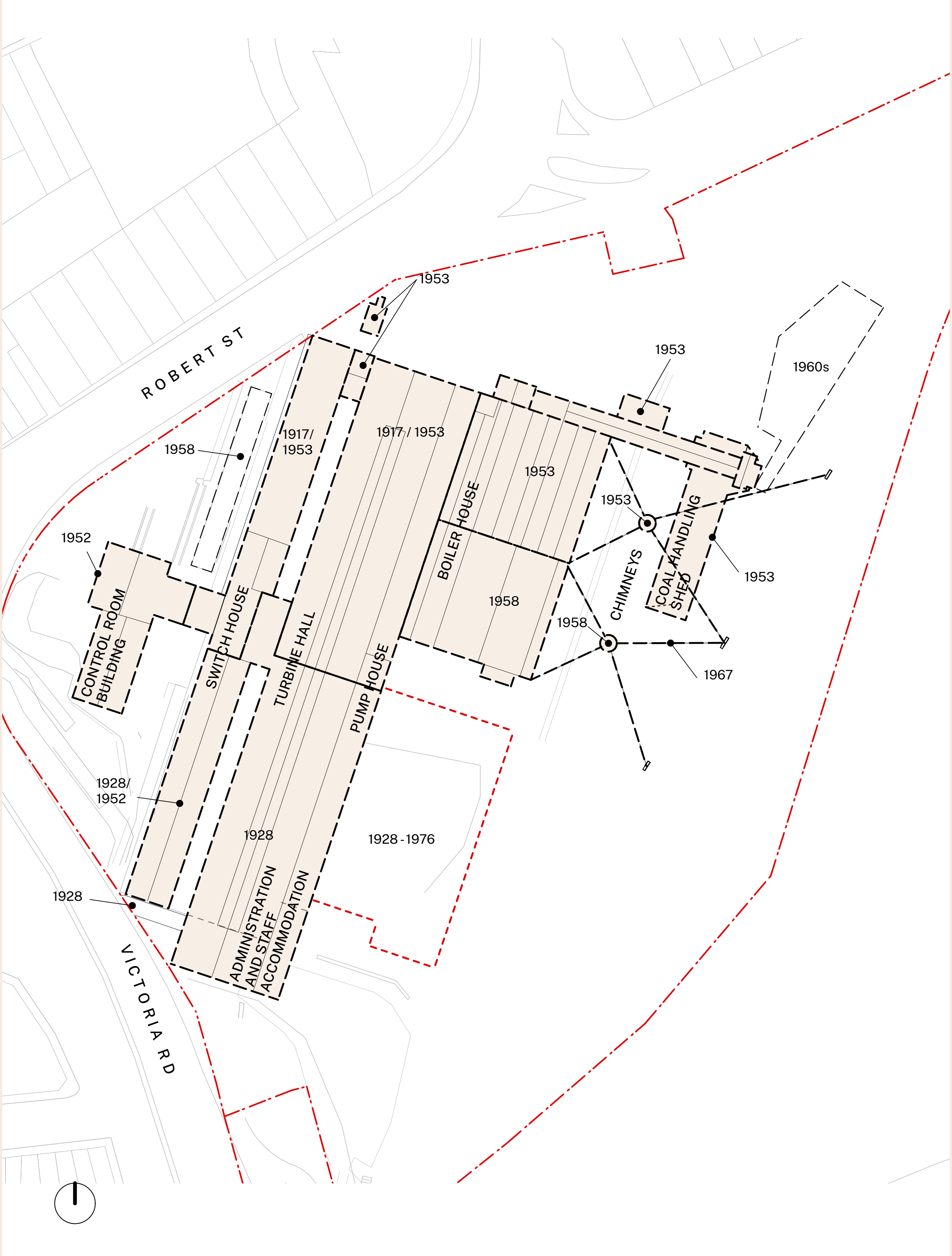

Figure 0.5: Plan of White Bay Power Station with construction dates (Design 5 – Architects).

CULTURAL SIGNIFICANCE

The White Bay Power Station is of exceptional cultural significance to the state of New South Wales for the following reasons:

- The place is historically significant as Sydney's longest-serving and still largely intact power station in NSW (from 1917–1984 and until 1994 as a substation).
- Its impact as an immense contributor to the economic and social development of Sydney by powering the tram and rail network and later becoming a key power source for households in the surrounding suburbs.
- The visual prominence of the White Bay Power Station as a massive industrial landmark forming the focal point of several key axial views. The sheer bulk of the building complex and the two iconic Chimney Stacks constitute a significant focus from Anzac Bridge, Glebe Point Road, Johnston Street (Annandale), Victoria Road, Robert Street, and Mullens Street, as well as more generally from further locations across the harbour and the surrounding area.
- The building is representative of Balmain / Rozelle's industrial identity before rapid gentrification at the end of the twentieth century.
- The twentieth-century industrial architecture of the power station and the interdependence between its built form and function.

Figure 0.6: Ministry of Sound event inside the Boiler House of the White Bay Power Station, 2024 (Design 5 – Architects).

- The representative set of machinery retained in situ. These elements collectively embody the eight operational systems associated with early to mid-twentieth-century coal-fired power generation. The power station also represents the changes and developments in power generation technology during this period.
- The unique and rare components of the White Bay Power Station include extant machinery and elements of the building fabric, particularly the riveted steel chimney stacks (nationally, one of a kind) and the curtain walls of the Boiler House.
- The social significance of the White Bay Power Station for locals and former workers as a workplace and valued industrial landmark.

BAYS WEST MASTER PLAN

The White Bay Power Station is a significant place in the Bays West area. Its remediation and reactivation is an integral part of the Bays West Stage 1 Master Plan and Urban Design Framework: White Bay Power Station (and Metro) Sub-precinct. The Master Plan seeks to embrace the natural and cultural heritage of the area to incorporate and adaptively re-use heritage structures. Works to the Power Station, alongside the construction of the Metro West (slated for completion in 2032) form Stage 1 of the Urban Design Framework and Public Domain Master Plan. The significance of the power station, as identified in the CMP, should inform any works undertaken as part of the Master Plan or any approved development subsequent to the Master Plan.

Figure 0.7: The White Bay Power Station, with the Sydney Harbour Bridge, Sydney CBD, and ANZAC Bridge in the background, March 2024 (courtesy of Toby Peet).

KEY POLICIES

The Conservation Management Plan presents conservation policies to guide decision making for its management, use, future works and development of the White Bay Power Station and precinct as defined within this CMP. These policies must be considered as part of any planned works, projects or development. The following section briefly outlines some of the key policies for the White Bay Power Station.

Policy 2.2 (Use, long-term planning and viability) highlights the future potential of the place:

> *The White Bay Power Station has considerable potential for interpretation and adaptive reuse. The structures, elements and values that form the cultural significance of the building and place must be maintained into the future.*
>
> *To ensure the long-term viability of the White Bay Power Station, opportunities for activation and future use should continue to be explored, and some areas of the place may need to be altered or developed to support this goal. Such changes should only be considered within a framework that accords with this CMP.*

All aforementioned significant values of the power station are to be retained as per **Policy 3.1** (Retain significant values). Further, as per **Policy 4.1**, any work to the White Bay Power Station should be carried out in accordance with the principles and processes set out in *The Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance.*

The importance of the power station's presence in and connection to its context and setting is outlined in policies **5.1** and **5.2** respectively and is followed by a series of detailed policies regarding landmark presence, views, and curtilage.

Section 6.6 provides policies relating to the principal buildings and structures of the power station, with the key overarching policies as outlined below.

Policy 6.1 (Integrity of spaces) applies to all representative spaces within the power station:

> *The integrity of spaces and machinery that comprise the representative "slice" of the power generation process must be retained and respected. Any form of reuse should be inspired by and respond to the character and quality of the spaces and their significant elements.*

Policy 6.8 (Character of internal spaces) furthers the importance of the quality and character of spaces within the White Bay Power Station:

> *The quality and character of spaces within White Bay Power Station vary and are often a consequence of the operational role of electricity generation. New uses and fit-outs to internal spaces must respect each space's character, quality, and role and accord with Policy 3.1. Generally speaking, and with some exceptions, the spaces east of the Pump House should retain a raw, industrial character. Spaces west of the Pump House can have a more refined and finished character.*

Policy 6.9 (Extant operational systems) applies to all extant components of the eight operational systems:

> *White Bay Power Station retains extant components of eight operational systems, which are representative samples of the original machinery at White Bay Power Station (as described in Section 3.4 of this volume of the report). In most instances, there is a single extant item where once there were multiple examples. These now rare items are integral to the significance of White Bay Power Station. No item may be removed without depleting the integrity of the power station. They must be retained in situ and conserved per the guidelines set out in the inventories in Volume 2. They cannot be adapted for a new function.*

The White Bay Power Station has been rezoned to SP1–Special Activities as part of the Bays West masterplanning and has potential for further activation and adaptive reuse. Sections 6.10–6.13 provide policies for activation, new structures, signage, and services.

Policy 10.1 (Activation generally) presents the role activation should play on the place:

> *Activation should respect the building fabric, quality of space, and extant machinery and elements. It should aim to enhance interpretation and understanding of the place and not detract from the significance of the place.*

Likewise, **Policy 10.2** (Adaptation generally) emphasises the nature of any new work to the place:

> *New work should be honest in its design, materials, and details. While it can create its own identity, it must respect the character and cultural significance of the place. For internal changes, new work should inhabit the space in a way that keeps the power station as the central focus. Works should demonstrate awareness of surroundings and the role the space plays in the power station and power production.*

Sections 6.12–6.22 comprise policies for operations and management of the power station. These relate to statutory guidelines and compliance as well as general condition and care of the fabric, documents and records, climate change, interpretation, management, adaptation, implementation and review, and further research.

STRUCTURE OF THE CMP

The third edition of the CMP consists of three volumes. **Volume 1** (this volume) is the primary Conservation Management Plan Report and contains six sections that disseminate the cultural significance of the White Bay Power Station and the resultant policies.

Section 1 of the report comprises an overall introduction to both the report and the place.

Section 2 is an Investigation of Cultural Significance and includes descriptions of the place and its structures, a photographic survey, and a collection of documentary, oral, and historical evidence. This section also contains a comparative analysis of the White Bay Power Station with similar industrial sites to understand its rarity and significance.

Section 3 comprises an Assessment of Cultural Significance that assesses the White Bay Power Station's significant values under the categories of aesthetic, historic, scientific/technical, and social/spiritual significance, as well as consideration of its State Heritage Register listing criteria.

The investigation and assessment of cultural significance culminate in **Section 4**, which contains the Statement of Cultural Significance, Gradings of Cultural Significance, and character statements for each principal structure.

Section 5 of the report outlines the statutory and strategic context of factors that influence the management and use of the power station, including the management framework, statutory and non-statutory requirements, and building code and compliance requirements.

Section 6 comprises the Conservation Policies arising from the assessment of cultural significance. The policies are grouped and presented in the order of Overarching Policies, The Place & Its Fabric, Future Use & Development, and Operations & Management. Under the section for The Place & Its Fabric, Tolerance for Change (TfC) and Opportunities for Change (OfC) tables have been provided for each principal structure, to guide changes and development.

Volume 2 is a Heritage Inventory. It contains inventory sheets of each space within each building, including any equipment and machinery contained within. This volume also includes the individual gradings of significance for each of these spaces and the machinery and equipment that form the eight operational systems of the power station.

Volume 3 comprises a compilation of the appendices, and provides additional reference information, including The Burra Charter (2013), heritage listings, and the Godden Mackay Logan report on extant machinery (2004).

Figure 0.8: White Bay Power Station Chimney Stacks and Boiler House, 2023 (courtesy of Toby Peet).

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SECTION 1
INTRODUCTION

Figure 1.1.1 Coal Handling Shed and External Conveyor, 2024 (courtesy of Chris Bennett: Evolving Picture).

1.1 WHAT IS A CONSERVATION MANAGEMENT PLAN?

A Conservation Management Plan is a special study report that clearly identifies and describes why a place is important (cultural significance) and then proposes an action plan, policy or strategy to keep that importance (conservation policy) and manage it into the future.

The assessment of cultural significance: Finding out if and why a place is important

To assess cultural significance, we need to understand the place thoroughly. Research is carried out in three major areas: historical research, oral history research, and the building's fabric and its physical context.

Historical research involves a thorough investigation of written records, newspapers, journals, maps, photographs and illustrations.

Oral history research involves interviews with present or past users, and any person or group who hold an interest in the place.

Fabric research requires a thorough examination of the place for evidence of changes and earlier structures, previous uses, intactness, etc., as well as context, landscape, view and siting.

This research is compiled into an **historical summary** to give a full understanding of the place.

The place is then compared to similar places to determine its level of significance i.e. local, state, national or international. There are a number of standard criteria for the assessment of significance. Broadly, these criteria address historical, aesthetic / creative, technical / research, and social / spiritual aspects.

From this assessment, concise statements of **cultural significance** are then drafted. These statements provide a sound basis on which to proceed in formulating a **policy** or strategy as to the most appropriate way to retain the cultural significance or heritage value.

Conservation policy: Keeping the cultural significance and still make the place useful

Once the cultural significance of the place is determined, all the other factors bearing on the future of the place must be assessed. For example:

- What does the owner want to do with the place and what resources, financial and other, do they have available?
- What are the current Building Code of Australia requirements, local and state government regulations, and planning instruments etc. that affect the place?
- What is the condition of the place? Is it about to collapse? Is there water entry? Is there any evidence of subsidence or movement? Are there termite infestations? Can the existing structure be altered or added to? What are the existing services (electrical, gas, fire sprinklers, air conditioning etc.) and what is their potential for upgrading?
- What are the user and community needs? Is there an identified need that this place can fulfil and still retain its significance?
- What feasible re-use options are there in the location?

When all these issues and opportunities have been identified, assessed and resolved, specific policies and strategies are then formulated which will guide future works, management and maintenance of the place. It is during this process that the need for change to accommodate new uses is balanced against the significance of the place and its elements. The policies must address all of the issues to retain the significant features and qualities while allowing change to ensure the survival of these features. In order to retain the significance of the place and ensure its ongoing maintenance and viable use, the conservation policies must be implemented or acted upon.

This revised Conservation Management Plan, once adopted, will be used as a management tool and as part of a design brief for future works and development of the place. It should be further revised if new information changes the understanding of the significance of the place or if there is an unforeseen change in the way the place is managed.

1.2 THE STUDY AREA

White Bay Power Station is situated at the head of White Bay in Rozelle, NSW 2039 (Figures 1.2.1–1.2.3). While the White Bay Power Station is integrated with a larger area known as the Bays West Precinct, the Study Area for this report adopts existing boundary of the State Heritage Register (SHR) as detailed in Figure 1.2.4.

A detailed physical description of the place and structures is detailed in **Sections 2.1 and 2.2** of this report.

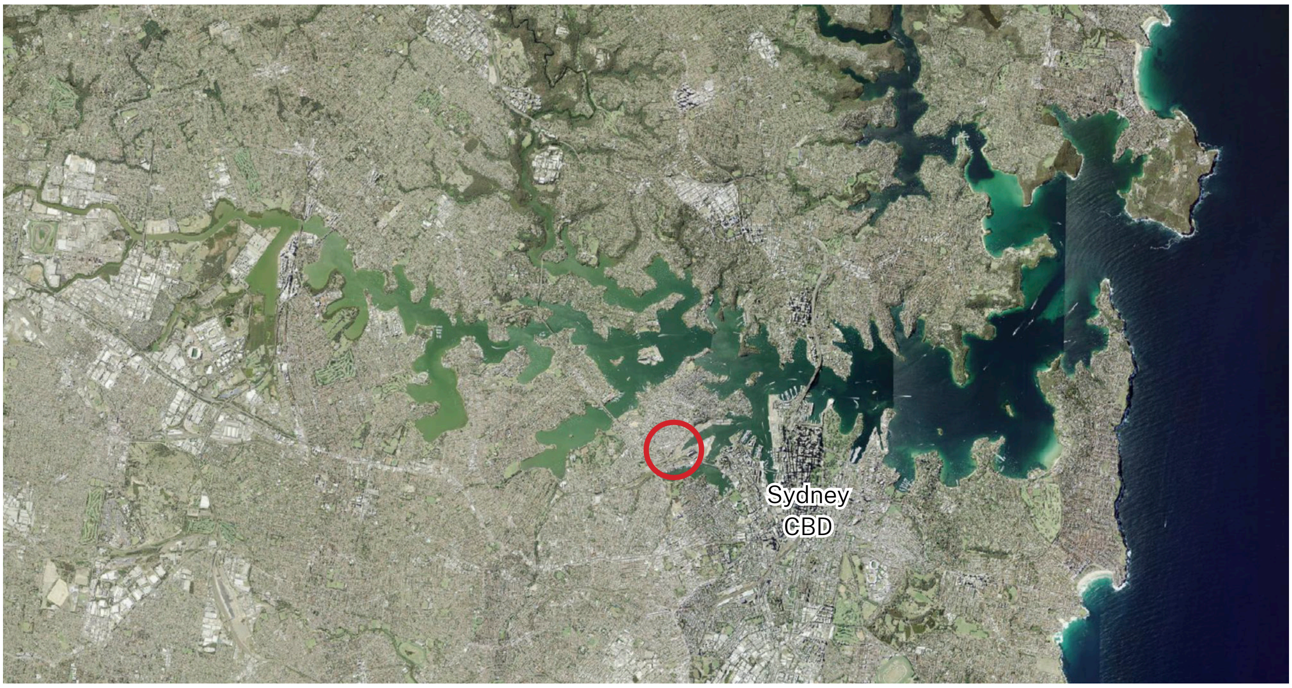


Figure 1.2.1 Location of the place (encircled in red) in relation to the Greater Sydney region (source: NSW SEED Portal 2023 with Design 5 – Architects overlay).

Figure 1.2.2 Location of the place (encircled in red) in relation to Sydney (source: NSW SEED Portal 2023 with Design 5 – Architects overlay).

Figure 1.2.3 Location of the place (encircled in red) in relation to the Bays West area (source: NSW SEED Portal 2023 with Design 5 – Architects overlay).

Figure 1.2.4 State Heritage Register curtilage of White Bay Power Station (outlined in red) (source: Apple Map 2025 with Design 5 – Architects overlay).

1.3 HERITAGE LISTINGS

The White Bay Power Station is listed as a heritage item on a number of statutory and non-statutory instruments that are listed below. The State Heritage Register (SHR) listing for the White Bay Power Station includes the main complex of buildings and open space immediately surrounding it (refer to Figure 1.3.1). At the time of preparing this report, the White Bay Power Station is listed on the following Statutory and Non-statutory registers:

Listing	Significance	Description	Reference
NSW State Heritage Register	Statutory – State	White Bay Power Station, 165 Victoria Rd, Leichhardt	Item No. 01015
State Environmental Planning Policy (Precincts – Eastern Harbour City) 2021	Statutory – State	White Bay Power Station	Schedule 9 Heritage Items
Heritage Act – Section 170 NSW State agency heritage register - Pacific Power	Statutory – State	White Bay Power Station Complex	Listing No. 74
National Trust of Australia Register	Non-statutory	White Bay Power Station	Item No. 10807
Register of National Estate	Defunct, previously statutory	White Bay Power Station	Listing No. 019512
Australian Institute of Architects Register of Significant Architecture in NSW	Non-statutory	White Bay Power Station	Listing No. 4703689

Figure 1.3.1 State Heritage Register curtilage of White Bay Power Station (outlined in red) (source: State Heritage Register, Item No. 01015).

1.3.1 Associated items located outside the Study Area

Parts of the White Bay Power Station are located outside the Study Area and SHR boundary. These are regarded in this report as integral to the operation of the Power Station and understanding and interpretation of it. These include:

- The inlet and outlet canals including their underground features (separate heritage listings).
- The south penstock.
- The various underground cable tunnels that branch from the Power Station to neighbouring sites.

At the time of preparing this report, the inlet and outlet canals are listed separately as heritage items on the S.170 heritage register (refer to Appendix B.2). The south penstock and various underground cable tunnels are not listed on any heritage registers:

Listing Name	Address	Significance	Listing	Reference
White Bay Power Station (Outlet) Canal	Victoria Road, Rozelle	Statutory – State	Heritage Act – Section 170 NSW State Agency Heritage Register – Port Authority of NSW	Item No. 4560026
White Bay Power Station (Inlet) Canal	Robert Street, Rozelle	Statutory – State	Heritage Act – Section 170 NSW State Agency Heritage Register – Port Authority of NSW	Item No. 4560062

The Section 170 heritage listings for the “outlet” canal and “inlet” canal are incorrectly swapped. That is, the listing for the “outlet” canal noted as Blackwattle Bay is actually at White Bay while the listing for the “inlet” canal noted as White Bay is actually at Blackwattle Bay. Both canals are two parts of the same channel that passes underneath the Turbine Hall and were an integral part of the cooling system.

1.3.2 Other Heritage listings in the vicinity

The place is also located adjacent to other notable heritage items associated with the early industry including maritime industrial operations on the area. Some notable heritage items in the vicinity include:

<table>
<tr><th>Listing Name</th><th>Address</th><th>Significance</th><th>Listing</th><th>Reference</th><th>Relationship to the Place</th></tr>
<tr><td>Beattie Street Stormwater Channel No. 15</td><td>Robert Street to Beattie Street, Rozelle / Balmain, NSW</td><td>Statutory – State</td><td>Heritage Act – Section 170 NSW State Agency Heritage Register – Sydney Water</td><td>Item No. 4570329</td><td>The Beattie Street Stormwater Channel is an underground active stormwater channel located along Robert Street</td></tr>
<tr><td rowspan="2">Sewage Pumping Station No. 7 (SP0007)</td><td rowspan="2">Robert Street, Rozelle, NSW</td><td rowspan="2">Statutory – State</td><td>Heritage Act – Section 170 NSW State Agency Heritage Register – Sydney Water</td><td>Item No. 4571705</td><td rowspan="2">Active sewer pumping station located abutting the north boundary fronting Robert Street</td></tr>
<tr><td>State Environmental Planning Policy (Precincts – Eastern Harbour City) 2021</td><td>Schedule 9 Heritage Items</td></tr>
</table>

1.3.3 Aboriginal heritage items within and near the Study Area

Although Aboriginal people lived around White Bay, Johnstons Bay and surrounding suburbs for thousands of years, the intensive historical impacts to these areas through quarrying, land reclamation and industrial and residential development, has destroyed many of the physical traces of their use. Despite these impacts, the Heritage NSW Aboriginal Heritage Information Management System (AHIMS) contains records of several campsites (middens) in rockshelters and in the open across the bay at Pyrmont and around the Balmain Peninsula. They suggest that many more Aboriginal sites would once have been present across this area, and some may also survive and have yet to be recorded — such as rockshelters on private land or obscured by vegetation, or former land that has been covered by fill.

A site, located adjacent to the southern boundary of the SHA curtilage, measuring approximately 80mx40m, was registered on the NSW Government's Aboriginal Heritage Information Management System (AHIMS) as #45-6-3826. Archaeological test excavation of this area was recommended to determine whether the original soils of this foreshore are actually present and if so, whether they contain any Aboriginal archaeological remains.[4]

1.4 BACKGROUND

The White Bay Power Station has been the subject of several reports and assessments since the mid-1990s. A number of these reports addressed various heritage issues and aspects of significance.

The White Bay Power Station was commissioned by the New South Wales Government Railways (NSWGR) in 1912, which was succeeded by the Department of Railways New South Wales in 1932. Management and ownership was acquired by the Electricity Commission of NSW (ECNSW) in 1953. In 1992, the ECNSW adopted the trading name of Pacific Power, and the White Bay Power Station was transferred to Pacific Power shortly after in 1995. The Sydney Harbour Foreshore Authority (SHFA) then purchased the site from Pacific Power in June 2000. In 2002, SHFA engaged a team of consultants lead by Design 5 – Architects to prepare a Conservation Management Plan (CMP) to establish the cultural significance of the place and to put in place policies to safeguard that significance and guide future development and changes to the place. The final CMP was adopted by SHFA and endorsed by the NSW Heritage Council on 28 January 2004.

In 2010, SHFA acquired the site of the former White Bay Hotel (destroyed by fire on 5 September 2008) and commissioned Design 5 to review and revise the CMP, to include the former White Bay Hotel site. The final CMP was endorsed by the NSW Heritage Council on 3 September 2013.

For close to a decade, the Second Edition of the Conservation Management Plan has been a key document for informing the heritage constraints and opportunities for White Bay Power Station and surrounding areas within the Bay West Precinct. This has included guidance for the 2022 White Bay Power Station (and Metro) Precinct Masterplan.

At the time of preparing this Third Edition, the CMP was used to guide the scope of work and implementation of the 2022–24 remediation. This work is essential part of the long-term strategy to preserve and protect the power station and was an important focus for the Second Edition of the CMP. The remediation scope included all areas within the power station and involved:

- Building envelope: façade repairs and re-cladding, renew and upgrade stormwater services, re-roofing, and weatherproofing.
- Structural repair and stabilisation: repairs, replacement and strengthening of structural steel, treatment of corrosion, protective paint coatings and concrete repairs.
- Safety, security and fire detection: includes new lighting, repair and replacement of balustrades, hatch covers, walkways and reducing potential for trips, slips and falls. This also includes fire detection and improving security.
- Pest control: includes removing pests (mainly pigeons) and associated hazardous materials and preventing their re-entry.
- Decontamination: includes removing friable asbestos, lead dust and lead paint encapsulation.
- Preservation of retained equipment and machinery.

Following remediation works, areas of White Bay Power Station have also undergone activation works for public use and access. This included construction of ramps and stairs, balustrades, a lift, floor remediation, landscape work and amenities. The current Third Edition update reflects recent changes to the White Bay Power Station and planning context of the Bays West Precinct and guide the conservation and management of the power station during the next phase of transition for reactivation and adaptive reuse.

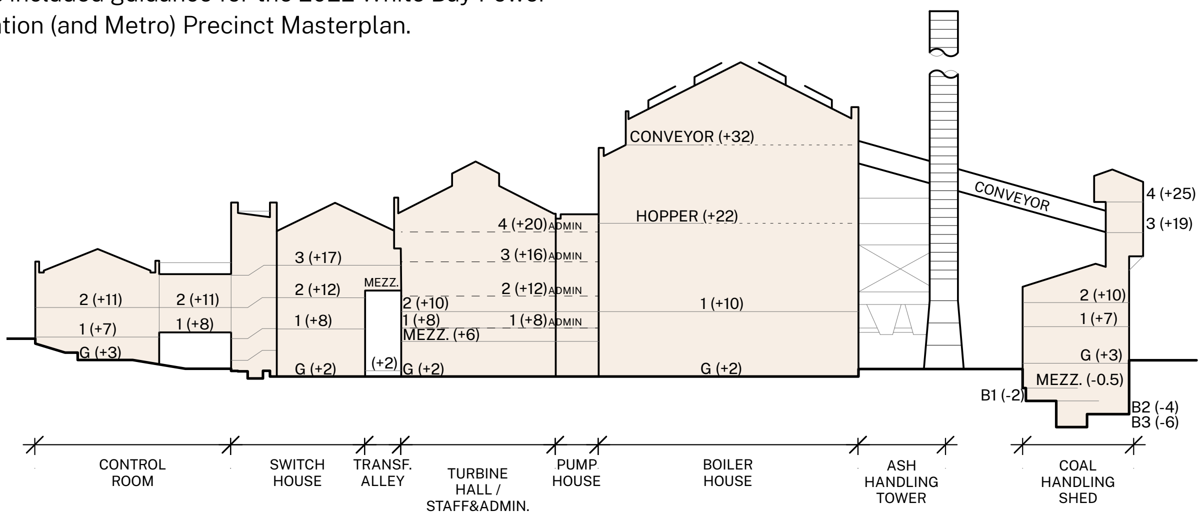
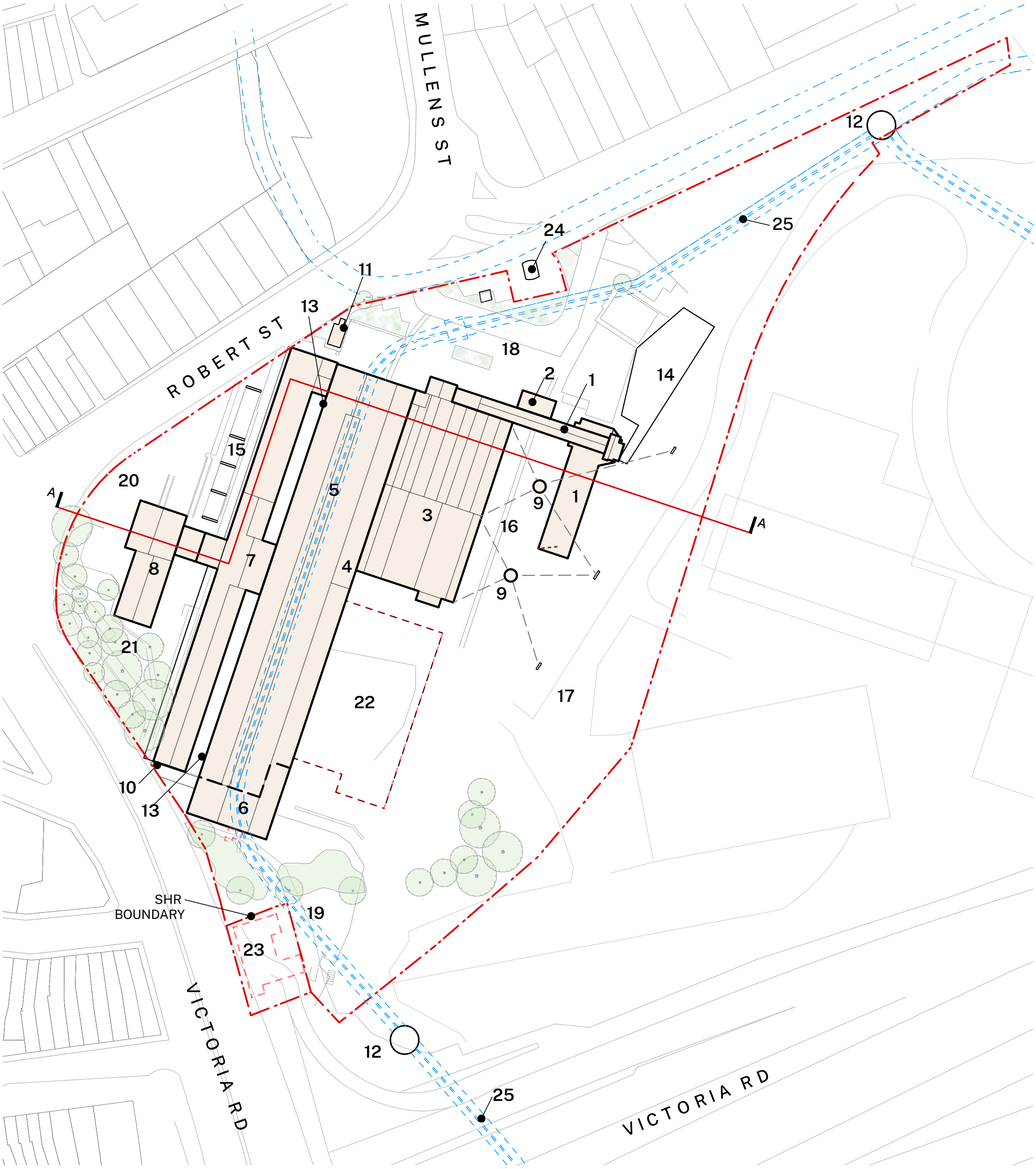


Figure 1.4.1 White Bay Power Station Sectional Diagram, showing Relative Levels (R.Ls)



KEY

- REPORT BOUNDARY
- STRUCTURES ON SITE
- FORMER STRUCTURES
- UNDERGROUND CANAL

1. COAL HANDLING SHED AND EXTERNAL CONVEYOR
2. ASH HANDLING TOWER
3. BOILER HOUSE
4. PUMP HOUSE
5. TURBINE HALL
6. ADMINISTRATION AND STAFF ACCOMMODATION
7. SWITCH HOUSE
8. CONTROL ROOM BUILDING
9. CHIMNEY STACKS
10. VICTORIA RD ACCESS BRIDGE
11. AMENITIES BLOCK
12. NORTH AND SOUTH PENSTOCKS
13. TRANSFORMER ALLEY
14. COAL WASH PIT
15. TRANSFORMER YARD
16. ASH HANDLING YARD
17. SOUTH AND EAST YARDS
18. NORTH FORECOURT
19. MID AND UPPER SOUTH YARDS
20. WEST YARD
21. SOUTH WEST YARD
22. FORMER BOILER HOUSE NO. 2
23. FORMER WHITE BAY HOTEL
24. SEWAGE PUMPING STATION NO.7 (OUTSIDE)
25. UNDERGROUND WATER COOLING CHANNEL

Figure 1.4.2 White Bay Power Station Site Map

1.5 PURPOSE

The Third Edition of the Conservation Management Plan is a comprehensive update that builds on the analysis and assessment of the previous editions. The principal objectives of the report are:

- Identification and assessment of buildings, structure, machinery, and spaces, and how they contribute to the overall heritage significance of the place; and
- Develop conservation policies to guide the retention of significance and the future use of the place.

The Third Edition update also has the following objectives:

- To reflect greater detail and understanding of Aboriginal cultural heritage and history.
- To assess the increasingly rare asset and the comparative significance of the White Bay Power Station at a State and National level.
- To reflect the changed condition of the White Bay Power Station following remediation works and how this may impact on significance as well as issues, opportunities and policies arising.
- To update with context to the 2022 Masterplan and Rezoning of the Bays West Precinct including the White Bay Power Station. This includes updated policies to reflect public, government and private sector interest for the reuse and activation of the White Bay Power Station.

Figure 1.5.1 Transformer Alley, 2024 (courtesy of Chris Bennett: Evolving Picture)

Figure 1.5.2 Aerial view of White Bay Power Station, 2024 (courtesy of Chris Bennett: Evolving Picture)

1.6 BAYS WEST DEVELOPMENT & MASTER PLAN

The Bays West area encompasses the White Bay Power Station and has been the subject of multiple plans and strategies. Over the years, planning has been conducted to revitalise, activate and connect the Precinct. In 2021, the NSW Department of Planning, Industry and Environment released the Place Strategy for the Bays West Precinct and, in November 2022, finalised the Bays West Master Plan. These documents build upon previous urban renewal work and public consultation to shape a long-term vision for the Bays West precinct.

1.6.1 Bays West Place Strategy

A Place Strategy for the Bays West Precinct was endorsed by the Minister and released on 15 November 2021. The Place Strategy contains the vision, key directions, big moves, a strategic place framework and an urban design framework. The Draft Bays West Place Strategy included the *Connecting with Country Framework*[5], a *Strategic Place Framework*, an *Urban Design Framework*, and a *Sustainability Framework*. It identified the White Bay Power Station and proposed Metro as one of 10 distinct sub-precincts. The precincts reflect changes in topography, roadways, key public domain zones and uses, but they also set the desired future character zones (refer to Figure 1.6.2).

Figure 1.6.1 Bays West Place Strategy (2021) and Bays West Stage 1 Master Plan and Urban Design Framework (2022).

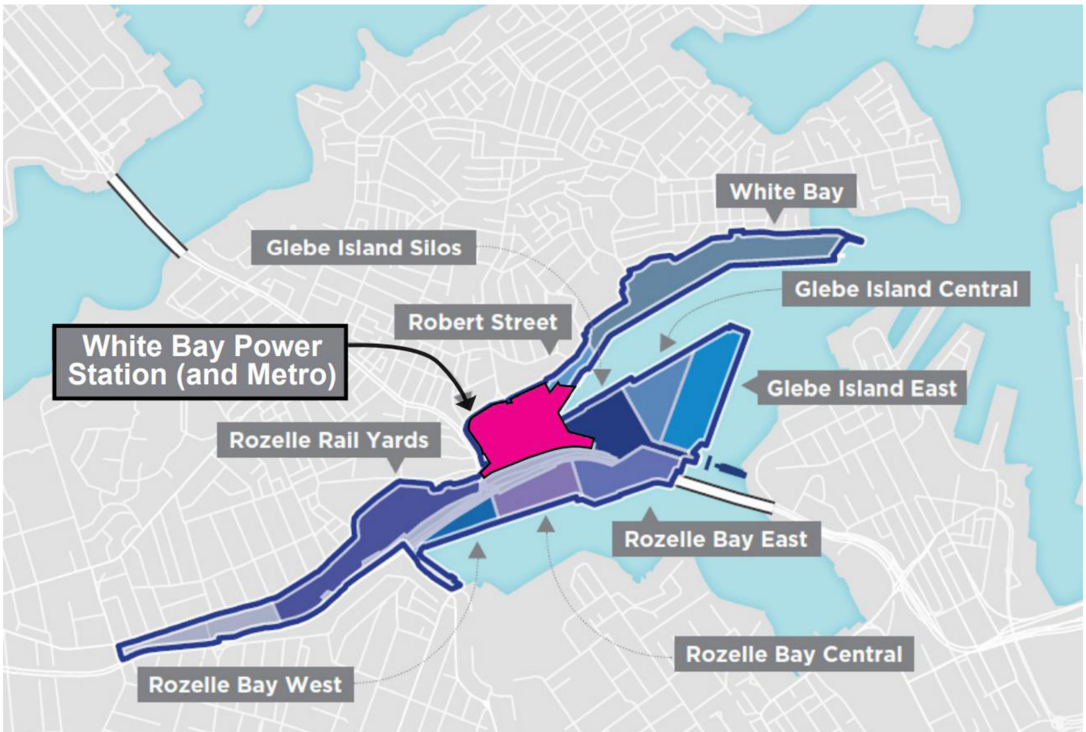


Figure 1.6.2 The 10 sub-precincts of the Bays West Place Strategy, with the White Bay Power Station (and Metro) precinct highlighted in pink (Bays West Stage 1 Rezoning Finalisation Report, December 2022).

The Strategy is aligned with the Regional Plan and Eastern Harbour City District Plan, providing a framework for infrastructure, liveability, productivity and sustainability for Bays West. The Strategy outlines a vision for the Precinct that will be realised through 14 directions and six big moves to realise the full potential of the Precinct. The Place Strategy has formed the basis for master planning and influenced the rezoning of the White Bay Power Station (and Metro) sub-precinct.

1.6.2 Bays West Master Plan

The Bays West Stage 1 draft Master Plan and rezoning proposal was approved by the Minister for Planning in December 2022. This Plan covers the White Bay Power Station and Metro precinct and informs future development to align with the opening of the Bays Metro Station in 2032.

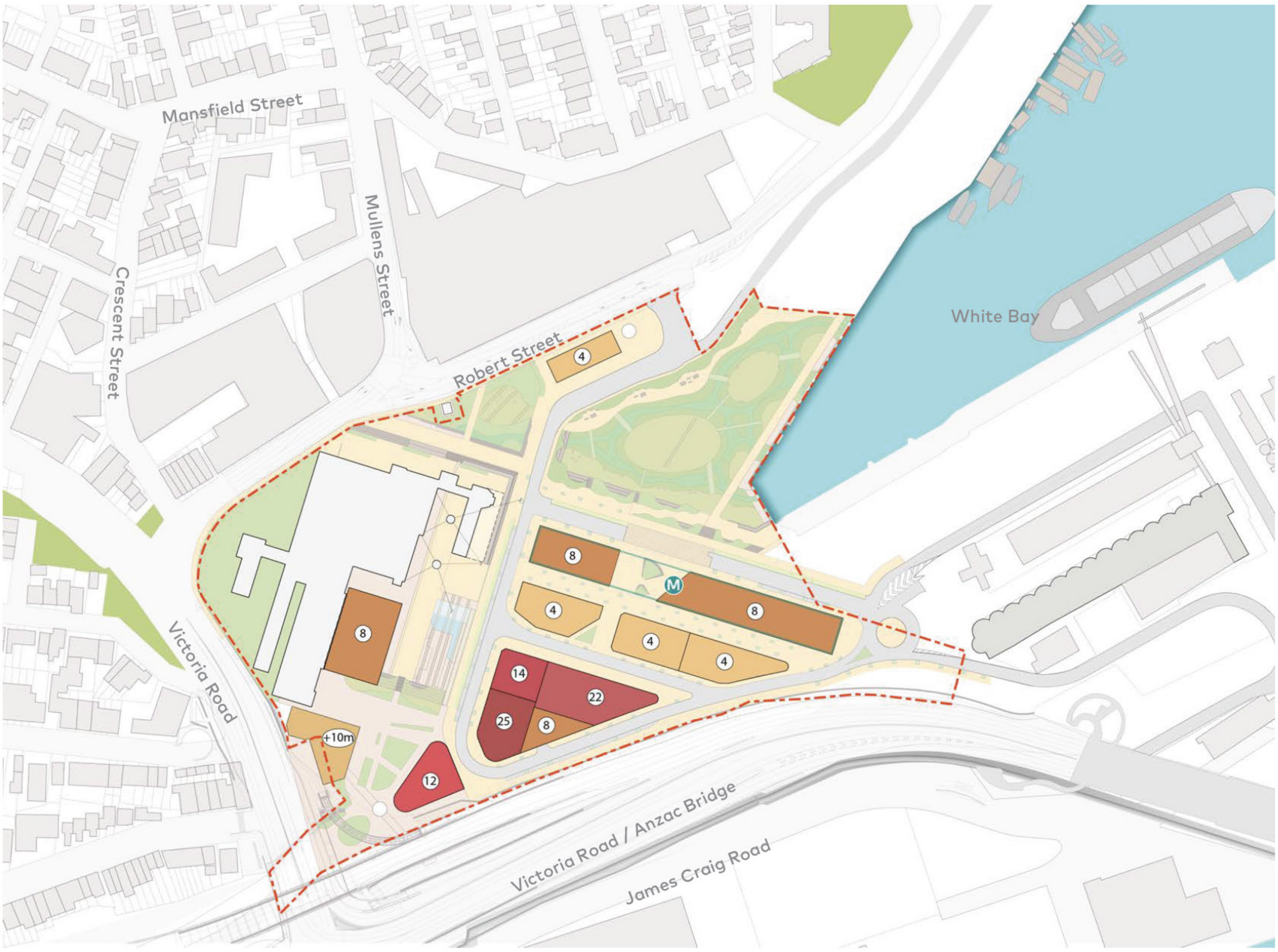


Figure 1.6.3 Bays West Stage 1 Master Plan Building Heights Diagram, August 2022 Exhibition Version (courtesy of Bays West Stage 1 Rezoning Finalisation Report, December 2022).

1.7 AUTHORSHIP & ACKNOWLEDGEMENTS

This Conservation Management Plan has been prepared by Alan Croker, Robert Gasparini, Calista Novia, and Anna Li of Design 5 – Architects.

The report authors acknowledge the substantial contributions by Coast History and Wadjiid Pty. Ltd. with regard to Aboriginal culture and history.[6]

The photographs referenced in this report were captured by Design 5 – Architects, Chris Bennett from Evolving Picture, and Toby Peet as indicated.

All diagrams and drawings in the report are prepared by Design 5 – Architects, unless otherwise noted.

Acknowledgments

Design 5 – Architects would like to acknowledge the following contributors over three editions of this Conservation Management Plan:

For the First Edition CMP (2004), the staff of:

- Sydney Harbour Foreshore Authority (SHFA)
- Godden Mackay Logan (GML) (Industrial and machinery heritage)
- Hughes Trueman (Structural Engineering)
- Anne Warr Heritage Consultant (Conservation analysis and conservation policy)
- Context Pty Ltd (Social Significance)
- Meredith Walker Heritage Futures (Social Significance and History)
- Pacific Power
- JBA Planning (Planning and Statutory Considerations)
- Powerhouse Museum
- State Records
- Lands Department
- Mitchell Library
- Volunteers for the Open Day
- Former Employees
- Local Residents
- Visitors
- Others who of their kindness and interest took the trouble to fill out questionnaires and provide views, opinions and information in many other ways.

For the Second Edition CMP (2013):

- SHFA

For the Third Edition (2026) CMP:

- Placemaking NSW
- Coast History
- Wadjiid Pty. Ltd.
- Evolving Picture
- Toby Peet

1.8 SCOPE & LIMITATIONS

The scope of this report considers all aspects of the assessment of the cultural significance of the White Bay Power Station.

The pre-European contact history of the place has been addressed with reference to the 2025 “Bays West Connecting with Country Strategy.”[7] The Aboriginal cultural heritage values of the power station are currently being investigated through a Bays West Aboriginal Cultural Heritage Assessment Report (ACHAR).[8] While draft reporting currently (January 2026) suggests that there is low potential for any surviving physical remains of past Aboriginal use within the White Bay Power Station area, confirmation of the results of recent Aboriginal archaeological test excavations, and final review and comments from Registered Aboriginal Parties are both pending and would need to be reviewed once received and updated as appropriate into this or future editions of the CMP.[9]

1.9 DEFINITIONS

1.9.1 The Burra Charter Definitions

The terminology surrounding heritage conservation and cultural significance in this report follows definitions detailed in *The Burra Charter*.[10] It should be noted that, as a consequence of this, the meanings of these terms in this report may differ from their popular meanings.

- **Place** means site, area, land, landscape, building or other work, group of buildings or other works, and may include components, contents, spaces and views.
- **Cultural significance** means aesthetic, historic, scientific, social or spiritual value for past, present or future generations.
  Cultural significance is embodied in the *place* itself, its *fabric, setting, use, associations, meanings,* records, *related places* and *related objects*. Places may have a range of **values** for different individuals or groups.
  Note: *The Burra Charter* applies to "all types of places of cultural significance including natural, Indigenous and historic places with cultural values." From this, it can be understood that cultural values are inherently diverse, and not restricted to one particular typology.
- **Fabric** means all the physical material of the place including components, fixtures, contents, and objects.
- **Conservation** means all the processes of looking after a place so as to retain its cultural significance.
- **Maintenance** means the continuous protective care of the fabric and setting of a place and is to be distinguished from repair. Repair involves restoration or reconstruction.
- **Preservation** means maintaining the fabric of a place in its existing state and retarding deterioration.
- **Restoration** means 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.
- **Reconstruction** means returning the place to a known earlier state and is distinguished from restoration by the introduction of new material into the fabric.
- **Adaptation** means modifying a place to suit the existing use or a proposed use. Use means the functions of a place, as well as the activities and practices that may occur at the place.
- **Compatible use** means a use that respects the cultural significance of a place. Such a use involves no, or minimal, impact on cultural significance.
- **Setting** means the area around a place, which may include the visual catchment.
- **Related place** means a place that contributes to the cultural significance of another place.

1.9.2 Technical Definitions

This report makes reference to technical terms related to electricity generation. Definitions from the Macquarie Dictionary have been provided below in italicised form. SI refers to the International System of Units.

- **Hertz:** *the derived SI unit of frequency, defined as the frequency of a periodic phenomenon of which the periodic time is one second; one cycle per second.*
  White Bay Power Station was initially 25Hz system, which was required by the tramways.
- **Volt:** *the derived SI unit of electric potential or electromotive force, defined as the difference of electric potential between two points of a conducting wire carrying a constant current of one ampere, when the power dissipated between these points is one watt.*
  By extension, a **kilovolt** is one thousand volts, and a **megavolt** is one million volts.
- **Volt-ampere:** *an electrical unit equal to the product of one volt and one ampere, which with direct current circuits is equivalent to one watt, used in rating transformers.*
  By extension, a **kilovolt-ampere** is one thousand volt-amperes.
- **Watt:** *the derived SI unit of power, defined as one joule per second.*
  By extension, a **kilowatt** is one thousand watts, and a **megawatt** is one million watts.
- **Watt-hour:** *a non-standard unit of energy equivalent to one watt of power expended for one hour of time.*
  By extension, a **kilowatt-hour** is a measure of one thousand watts over one hour, a **megawatt-hour** is a measure of one million watts over one hour, and a **gigawatt-hour** is a measure of one billion watts over one hour.

Abbreviations

This CMP uses a number of abbreviations specific to electricity production and related industry. The following abbreviations are used throughout this report:

- **AC**: Alternating Current, the flow of electric current (or electrons) in an alternating direction.
- **AHIMS:** the Heritage NSW Aboriginal Heritage Information Management System
- **AHIP**: Aboriginal Heritage Impact Permit
- **BCA**: Building Code of Australia
- **Burra Charter**: The Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance 2013
- **CMP**: Conservation Management Plan
- **DC**: Direct Current, the flow of electric current (or electrons) in a single direction.
- **DDA**: Disability Discrimination Act 1992
- **DtS**: Deemed to Satisfy (related to the prescriptive provisions of the National Construction Code)
- **EAC**: Electricity Advisory Committee
- **ECNSW**: Electricity Commission of New South Wales
- **ELPSC**: Electric Light and Power Supply Corporation. "*Privately owned electricity supply company which was nationalised in 1956.*"[11]
- **EP&A Act**: Environmental Planning and Assessment Act 1979
- **FRL**: Fire Resistance Level
- **GWh:** Gigawatt-hour
- **HP**: High Pressure
- **Hz**: Hertz
- **ICOMOS**: International Council on Monuments and Sites
- **IDA**: Integrated Development Application
- **kV**: Kilovolt
- **kVa**: Kilovolt-ampere
- **kW**: Kilowatt
- **LGA**: Local Government Area
- **LP**: Low Pressure
- **MW**: Megawatt
- **MWh**: Megawatt-hour
- **NCC**: National Construction Code
- **OfC**: Opportunities for Change
- **PMNSW**: Placemaking New South Wales
- **RC**: The Railway Commissioners of NSW. This commission structure of New South Wales Government Railways (NSWGR) was appointed near the end of the nineteenth century to manage the development of railways in New South Wales. This commission was later replaced in 1907 by a Chief Commissioner of Railways assisted by other appointed positions. Departments and commission structures in this report are referred to as their name at the time.
- **REF**: Review of Environmental Factors
- **SCC**: Sydney County Council. "*Body formed to assume control of the Electricity Department, previously part of the Municipal Council of Sydney, supplying electricity to the city and other municipalities. In the 1950s its generating stations were transferred to the Electricity Commission but it continued distributing power until it was dissolved with the Sydney Electricity Act 1990.*"[12]
- **SEPP**: State Environmental Planning Policy
- **SES**: Southern Electricity Supply
- **SHFA**: Sydney Harbour Foreshore Authority
- **SHR**: State Heritage Register
- **SMC**: Sydney Municipal Council (also known as Municipal Council of Sydney)
- **TAM**: Transport Asset Manager
- **TfC**: Tolerance for Change
- **UDF**: Urban Design Framework
- **WBPS**: White Bay Power Station
- **W**: Watt

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SECTION 2
INVESTIGATION OF CULTURAL SIGNIFICANCE

Figure 2.1.1 External Coal Conveyor and Transfer House, March 2024 (courtesy of Toby Peet).

PHYSICAL EVIDENCE & ANALYSIS

2.1 DESCRIPTION OF THE PLACE

White Bay Power Station is located at the head of White Bay in the suburb of Rozelle and lies approximately 3.5km from Central Station and 2.5km from the Sydney CBD (refer to Figures 1.2.1–1.2.4 for location). The place is irregular in shape and has an area of approximately 39,000 square metres. The place is bordered to the north by Robert Street and the intersection of Mullens Street, Victoria Road to the west, and the Bays West Precinct (former Ports land) to the south and east. In the southwest corner on elevated land is the former White Bay Hotel site, which the Sydney Harbour Foreshore Authority (now Placemaking NSW) later acquired.

The place falls within the Local Government Area of the Inner West Council. The place is located centrally to several inner-city suburb areas, including Rozelle, Balmain, Lilyfield, Annandale, Glebe and Pyrmont.

The place's topography is flat, with sandstone cutting along the southern edge adjacent to Victoria Road. Some of the study area, including where the Power Station is built, is on reclaimed land created by filling in the head of White Bay and the former isthmus connecting with Glebe Island. As a result, the Power Station and its surrounding land have minimal elevation above the water line of White Bay. The place is subject to local overland flooding from the Beattie Street stormwater channel.

The place comprises several structures and elements. These include the Coal Handling Shed serviced by a rail spur and connected to the Boiler House via the External Conveyor; two landmark riveted steel chimney stacks (these were originally joined to the Boiler House via ash precipitators removed in 1996); the Ash Handling Tower under the External Conveyor; the Turbine Hall and Pump House building incorporating Administration and Staff Accommodation; the early Switch House (1912–1927), the later Control Room Building (1948), and small additional amenity and storage blocks.

Figure 2.2.1 North elevation of White Bay Power Station, March 2024 (courtesy of Toby Peet).

Figure 2.2.2 White Bay Power Station with city skyline at background, March 2024 (courtesy of Toby Peet).

The place is recognised as an integral part of the Bays West precinct, comprising a large area including the former and current industrial sites in Rozelle Bay, Glebe Island and White Bay. The remediation and repair works to the place in 2022 / 24 are being undertaken as part of the vision and commitment in the Stage 1 Master Plan (2022) to purpose the White Bay Power Station to become a focal point of the precinct. The tunnelling work for Sydney Metro West Station, east of the place is underway, the station is slated to be delivered by 2032.

2.2 PRINCIPAL STRUCTURES, SPACES & MACHINERY

2.2.1 Coal Handling Shed (and External Conveyor)

The Coal Handling Shed is located at the eastern edge of the White Bay Power Station complex. The building is an industrial shed approximately 45m long and 10m wide, steel-framed and clad with corrugated galvanised steel and a concrete wall along its east elevation.
The Coal Handling Shed primarily facilitated the operations of the Coal Handling System, and contains the associated equipment and machinery. The Coal Handling Shed comprises the following levels:

- **Basement Level**: also know as the Coal Bunker, the basement is of a similar area footprint as the Ground Level space. Its walls are made of off-form concrete, and it is a relatively crowded space with walkways weaving around machinery. It houses the Coal Hoppers, Coal Conveyors and the Coal Elevators, which were used to process coal and prepare it for crushing and transfer to the Boiler House.
- **Ground Level**: the ground level has a shed-like quality and during the power station's active years, it received coal via the railway tracks running on a north-south axis through the building. This level also houses other key components of the Coal Handling System, including the Screens, the Coal Crushers, the Short Elevators, and the 90-Foot Elevators.
- **Transfer House**: the Transfer House is a tower protruding from the Coal Handling Shed. It contains two intermediate platforms as well as a top floor with the motors and gears for the 90-Foot Elevator.
- **External Conveyor**: the External Conveyor connects the Coal Handling Shed Transfer House to the north side of the Boiler House and its Transfer House. It comprises two long conveyor belts with walkways on either side and between.

Evidence of the now demolished Dry Coal Store – an open-sided shelter that provided covered storage for a reserve of dry coal – still exists on the east elevation of the Coal Handling Shed.

For detailed descriptions and catalogues of the individual spaces, machinery, and moveable heritage, refer to Volume 2 – Heritage Inventory of this CMP.

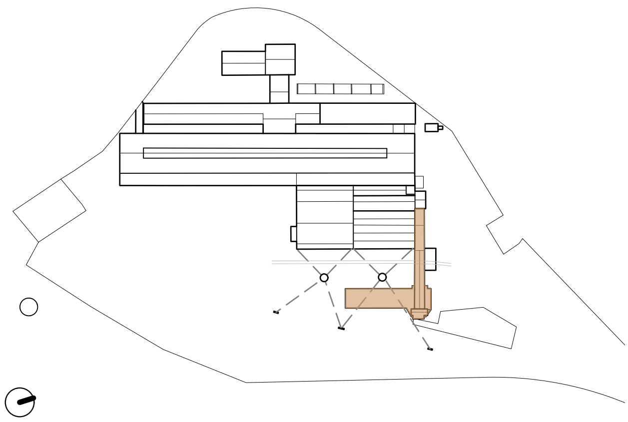


Figure 2.2.3 Location of the Coal Handling Shed, Transfer House, and External Conveyor.

Figure 2.2.4 Coal Handling Shed, Transfer House, and External Conveyor, 2023 (courtesy of Chris Bennett: Evolving Picture).

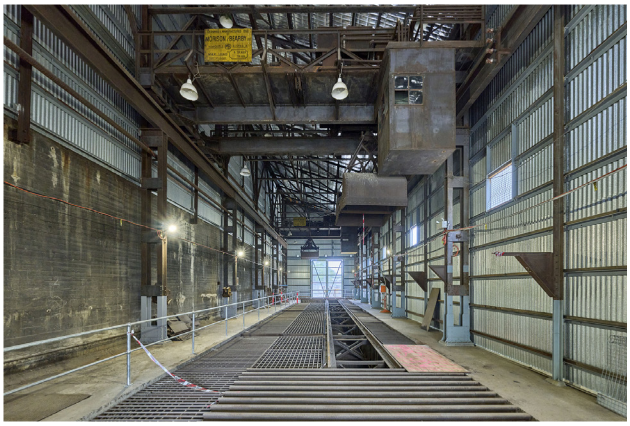


Figure 2.2.5 Ground Level of Coal Handling Shed, 2023 (courtesy of Chris Bennett: Evolving Picture).

2.2.2 Ash Handling Tower and Chimney Stacks

The Ash Handling Tower is located in the northeast section of the White Bay Power Station complex, beneath the External Conveyor. It is a steel-framed four-storey tower approximately 10 metres long and 5 metres wide with a skillion roof and is partially clad on the third and fourth levels with corrugated galvanised steel. The Ash Handling Tower is open at ground level, where the rail tracks pass through along a north-south axis. Levels 1 and 2 of the Ash Handling Tower comprise catwalks and walkways, a kibble crane and operating cabin, as well as an enclosed concrete space that once hosted an Oil Tank Chamber. Level 3 and the north half of Level 4 are internal spaces enclosed by corrugated galvanised steel cladding, while the south half of Level 4 comprises a steel grate platform with the tops of the two Ash Storage Tanks. The Ash Handling Tower collected the waste ash and turned it into a slurry that was then transferred to lorries and taken off site for disposal.

South of the Ash Handling Tower and located between the Coal Handling Shed and the Boiler House are the Chimney Stacks. The Chimney Stacks are each approximately 3.8m in diameter and 76.5m tall. They are made of riveted steel and each have a steel ladder and four supporting guy wires.

The Ash Handling Tower and the two Chimney Stacks are the key extant components of the Ash Handling System. As well as these retained elements, four precipitators and associated induced draft fans that connected to the Chimney Stacks were once located on the east side of the Boiler House but were removed in 1996.

For detailed descriptions and catalogues of the individual spaces, machinery, and moveable heritage, refer to Volume 2 – Heritage Inventory of this CMP.

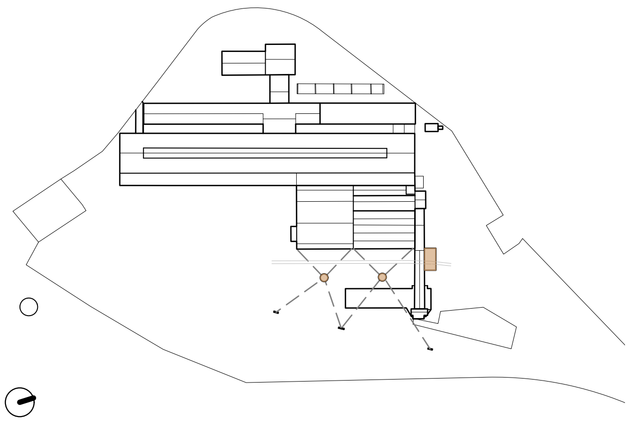


Figure 2.2.6 Location of the Ash Handling Tower and the Chimney Stacks.

Figure 2.2.7 Chimney Stacks, 2024 (courtesy of Toby Peet).

Figure 2.2.8 Ash Handling Tower north elevation, 2024 (courtesy of Chris Bennett: Evolving Picture).

2.2.3 Boiler House

The Boiler House is located in the east half of the White Bay Power Station complex between the Chimney Stacks and the Pump House. The building is a massive steel-framed structure with brick outer walls and large glazed windows, including a curtain wall on the east facade. It is approximately 57m long and 30m wide and was built in two stages in 1953 (north half) and 1958 (south half). It is the third boiler house built in the history of the station and stands on the site of the first. The second one, formerly located to its south, has been demolished. The Boiler House primarily facilitated the operations of the Coal Handling and Steam Raising Systems, and contains the associated equipment and machinery. The Boiler House comprises the following levels:

- **Ground Level:** the Ground Level of the Boiler House is primarily a vast open space with various extant machinery located at the northern end, including the extant No. 1 Boiler.
- **Level 1:** the Level 1 of the Boiler House houses the upper section of the extant No. 1 Boiler and other machinery and equipment associated with the Steam Raising System. It also comprises the Boiler House Control Room, as well as a set of three large voids that indicate the location of the removed Boilers No. 2, 3 and 4. Aside from where the mezzanine level is located on the western side, the space above Level 1 is unobstructed until the underside of the Boiler House roof.
- **Mezzanine Level:** this level is located along the west wall of the Boiler House and comprises a series of balustraded steel grate walkways that run along both sides of the Coal Hoppers.
- **Conveyor Level:** the Conveyor Level houses two conveyor belts that carried coal received via the External Conveyor from the Boiler House Transfer House to the Coal Hoppers.
- **Roof:** the roof of the Boiler House is a series of levels accessed via ladders. The gabled form of the roof is distinctly pronounced in the northern half, and more subtly sloped in the southern half.

For detailed descriptions and catalogues of the individual spaces, machinery, and moveable heritage, refer to Volume 2 – Heritage Inventory of this CMP.

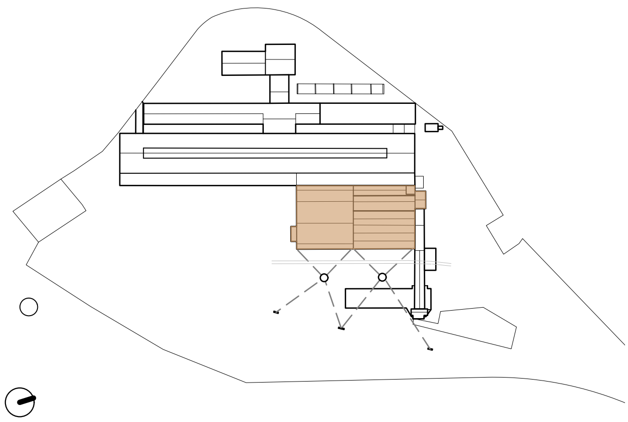


Figure 2.2.9 Location of the Boiler House.

Figure 2.2.10 Boiler House east facade with Chimney Stacks in the foreground, 2024 (courtesy of Chris Bennett: Evolving Picture).

Figure 2.2.11 Ground Level of Coal Handling Shed, 2023 (courtesy of Toby Peet).

2.2.4 Pump House

The Pump House is located near the middle of the White Bay Power Station complex, west adjacent of the Boiler House. It is under the same roof as the Turbine Hall and is approximately 130m long and 6m wide. The Pump House is a narrow, longitudinal brick and reinforced concrete building that was constructed in two stages. Notably, when the second Boiler House was demolished in 1976, a marred, grey wall was left on the southern half of the Pump House's east elevation. The Pump House primarily facilitated the Feedwater System, and the extant corresponding equipment and machinery is mostly located in the north half of the building. The Pump House comprises the following levels:

- **Ground Level:** the ground level of the Pump House comprises a series of corridors and brick rooms, one of which houses the Oil Circuit Breakers.
- **Mezzanine Level:** the mezzanine level is located in the north half of the Pump House and comprises three spaces connected by walkways with a series of extant pipes and tanks used for regulating and monitoring water.
- **Level 1:** this level is located in the southern half of the Pump House, and is primarily a longitudinal, open space with workbenches and lathes, thus last used as a workshop space. It has a connection to the Administration and Staff Accommodation at its south end.
- **Level 2:** this level is located in the northern half of the Pump House and houses most of the extant machinery and equipment, including the Electric and Steam High Pressure Feedwater Pumps, the Monitor and Metering Cabinets, as well as the Feedwater and Condensate Tanks supported above the level amidst a series of catwalks.

For detailed descriptions and catalogues of the individual spaces, machinery, and moveable heritage, refer to Volume 2 – Heritage Inventory of this CMP.

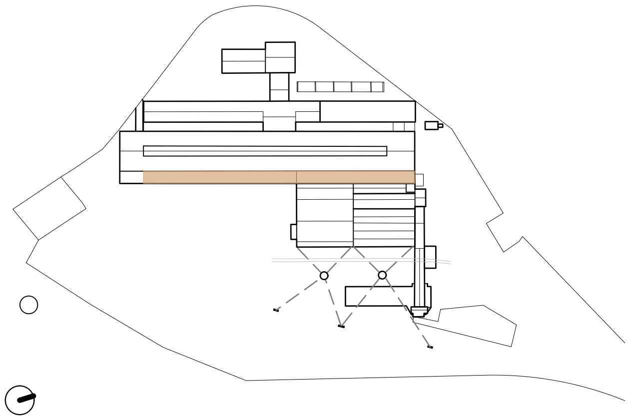


Figure 2.2.12 Location of the Pump House.

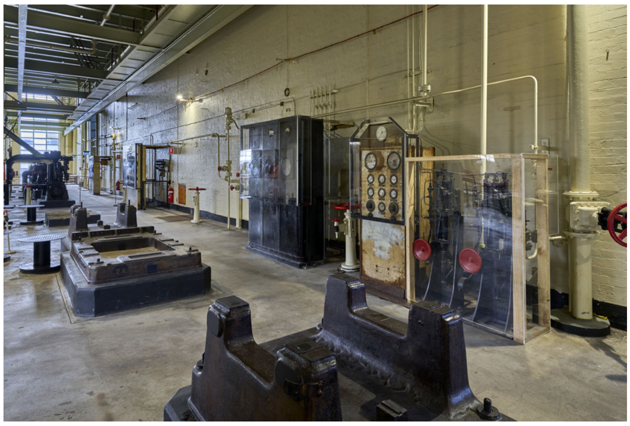


Figure 2.2.13 Northern half of the Pump House, Level 2, with the extant equipment and machinery of the Feedwater System, 2024 (courtesy of Toby Peet).

Figure 2.2.14 Southern half of the Pump House, Level 1, with evidence of the workshop spaces, 2024 (courtesy of Chris Bennett: Evolving Picture).

2.2.5 Turbine Hall

The Turbine Hall is located in the west half of the White Bay Power Station complex, adjacent to and west of the Pump House. It is the largest building at 130m long and 18m wide, built in two stages with the north half dating from 1917 and built of brick, and the south half built of reinforced concrete structure in 1923. A corrugated galvanised steel roof covers the entire building. The Turbine Hall primarily facilitated the operations of the Power Generating, Feedwater, and Circulating Water Systems. In particular, it houses the "heart" of power generation in the form of the extant No. 1 Turbo-Alternator. The Turbine Hall comprises the following levels:

- **Ground Level:** the Ground Level of the Turbine Hall contains several plinths evidencing the machinery that once populated the space. It also houses the Condensate Pumps, the De-aerators, the Sluice Gates and Motors, the Circulating Water Pumps, and the Condensers.
- **Mezzanine Level:** the Mezzanine Level comprises three separate spaces located in the northern half of the Turbine Hall. The northmost one is the largest and is connected to a series of walkways interwoven around the De-aerators and Condensers with extensive pipes and valves.
- **Level 1:** this level is located in the southern half of the Turbine Hall and contains a series of large voids indicating the former location of the turbo-alternators. It is open to the underside of the roof.
- **Level 2:** this level is located in the northern half of the Turbine Hall and houses the extant Parsons No. 1 Turbo-Alternator Set, the Steam Control Valves. Like Level 1, it is open up to the underside of the roof, and forms a massive space with large windows allowing in light on the north and west elevations. A small Control Room is also located on this level.

In addition, the Turbine Hall houses three overhead gantry cranes. One at the north end, dating from 1953, and two at the south end, and original to the 1917 phase.

For detailed descriptions and catalogues of the individual spaces, machinery, and moveable heritage, refer to Volume 2 – Heritage Inventory of this CMP.

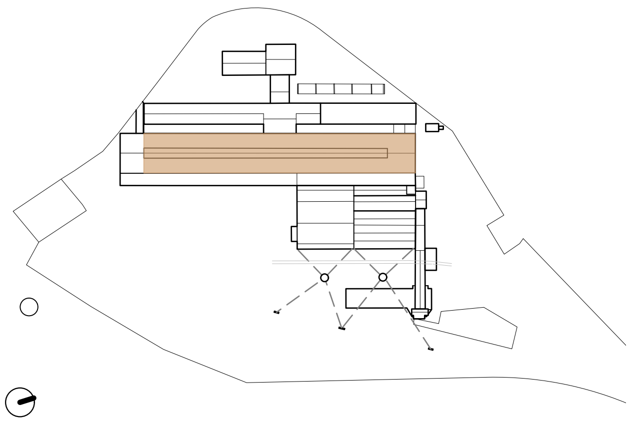


Figure 2.2.15 Location of the Turbine Hall.

Figure 2.2.16 Turbine Hall south end at ground level, looking west, 2024 (courtesy of Chris Bennett: Evolving Picture).

Figure 2.2.17 Turbine Hall South end at Level 2, looking north, 2024 (courtesy of Chris Bennett: Evolving Picture).

2.2.6 Administration & Staff Accommodation

The Administration and Staff Accommodation is located at the south end of the Pump House and Turbine Hall as part of the same building. It is a four-storey building, approximately 27m wide and 13m long, and houses various staff spaces and amenities including storage spaces, administrative offices, and a laboratory. Level 3 of the building also acted as the front of house, formal entry of the Power Station via an entrance at Victoria Road. Some spaces in the building now have modern office fitouts, installed in 2023. The Administration and Staff Accommodation comprises the following levels:

- **Level 1:** most of Level 1 is large storage space, though it also once hosted a first aid room.
- **Level 2:** this level comprises a series of rooms that provided staff amenities during the active years of the power station, including a former dining room, cloakroom, locker rooms and other amenities.
- **Level 3:** this level formerly provided staff amenities (lockers and change rooms), as well as offices. Some of these spaces have been converted into modern offices. The main lobby connecting to the Victoria Road Access Bridge is also located on this level, and served as the formal entry for the power station.
- **Level 4:** this level comprises a series of former offices and administrative spaces for executive level employees including the head manager. Level 4 also contains the Laboratory spaces, which retain their fitout of cabinets, shelves, and benches.

For detailed descriptions and catalogues of the individual spaces, machinery, and moveable heritage, refer to Volume 2 – Heritage Inventory of this CMP.

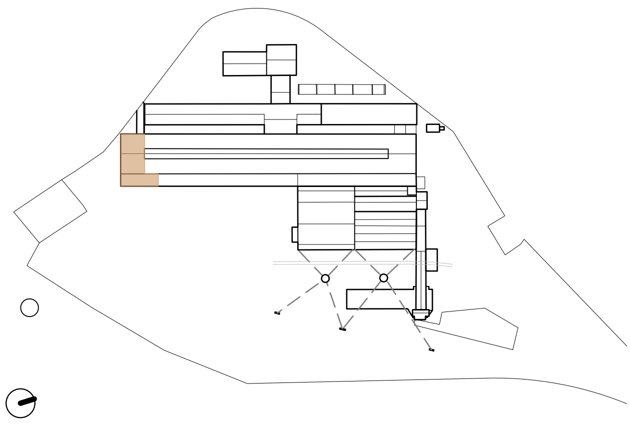


Figure 2.2.18 Location of the Administration and Staff Accommodation.

Figure 2.2.19 Main Lobby and front of house entry, Level 3, 2024 (courtesy of Chris Bennett: Evolving Picture).

Figure 2.2.20 Laboratory spaces, looking south, 2024 (courtesy of Chris Bennett: Evolving Picture).

2.2.7 Switch House

The Switch House lies to the west of, and parallel to, the Turbine Hall (between which is the narrow and longitudinal Transformer Alley). It comprises brick and reinforced concrete walls with steel-framed windows and is approximately 130m long and 16m wide. The Switch House was built in two stages (1912–1917 and 1917–1927) and primarily facilitated the operations of the Power Reticulation System and the House Electrical and Auxiliary Supply System. The Switch House also includes the Entertainment Hall, which was integral to the recreational and social lives of the workers. The Switch House comprises the following levels:

- **Ground Level:** the Ground Level of the Switch House includes a workshop space and series of repeated, identical spaces in the north half, while the southern half of the level includes open spaces with cable trays and partitioned bays.
- **Level 1:** this level of the Switch House includes a series of repeated, identical Reactor Tie Spaces in the northern half, and a series of open spaces with concrete cable runs in the southern half. Level 1 also includes a small amenities block overlooking the Transformer Alley along the middle of the east side of the Switch House.
- **Level 2:** at the northern half of Level 2 is the No. 1 Tie Bank Room and a series of four similar rooms. The south half is a series of large open spaces with the housing for a once extensive set of cycle switches, only a few of which remain. Separate from the rest of the level is an enclosed mezzanine space over the Transformer Alley.
- **Level 3:** this level comprises an open rooftop space in the northern area, and a series of workshops, amenities, and storage spaces near the middle. At the middle, east side of the level is the former 1917 Control Room, which overlooks the neighbouring Turbine Hall through three bay windows. In the southern half is a Motor-Generator Room – with extensive extant machinery and equipment – and the Battery Workshop. At the far south is the Entertainment Hall, a space that was added between 1952 and 1954 and accessed separately via the Victoria Road Access Bridge.

For detailed descriptions and catalogues of the individual spaces, machinery, and moveable heritage, refer to Volume 2 – Heritage Inventory of this CMP.

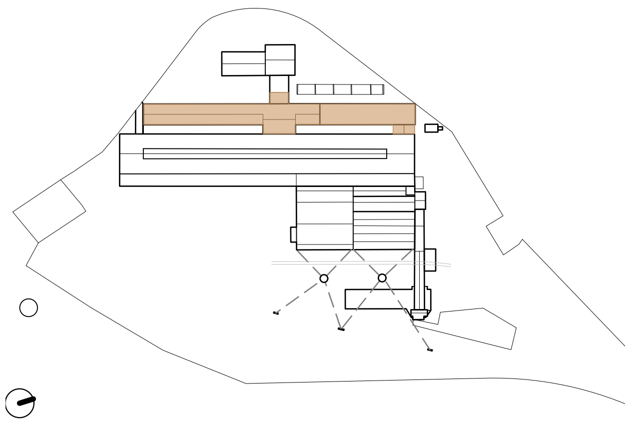


Figure 2.2.21 Location of the Switch House.

Figure 2.2.22 Motor-Generator Room with extant equipment and machinery, 2024 (courtesy of Chris Bennett: Evolving Picture).

Figure 2.2.23 Entertainment Hall, February 2026 (courtesy of Dunn Hillam).

2.2.8 Control Room Building

The Control Room Building is a brick annexe located in the west corner of the White Bay Power Station complex. It is connected to the Switch House by a link building and is approximately 38m long and 16m wide. The Control Room Building was built in 1948 and primarily facilitated the operations of the Power Reticulation System and the House Electrical and Auxiliary Supply System. The Control Room comprises the following levels:

- **Ground Level:** the Ground Level of the Control Room Building contains a sub-floor area in the north separate to the remaining spaces. To the south is a cable chamber, a reactor floor, and a small room.
- **Level 1:** in the north half of this level is the Cable Room, with two cable chambers to its east and the Rheostat Room. The southern half of Level 1 comprises a Bus Floor divided into east and west sections.
- **Level 2:** the north half of this level contains the 1948 Control Room with the semi-circular Control Panel as well as amenities of the link building. The southern half of Level 2 comprises the 25 Cycle Switch Floor, with the extant housing for the switches.

For detailed descriptions and catalogues of the individual spaces, machinery, and moveable heritage, refer to Volume 2 – Heritage Inventory of this CMP.

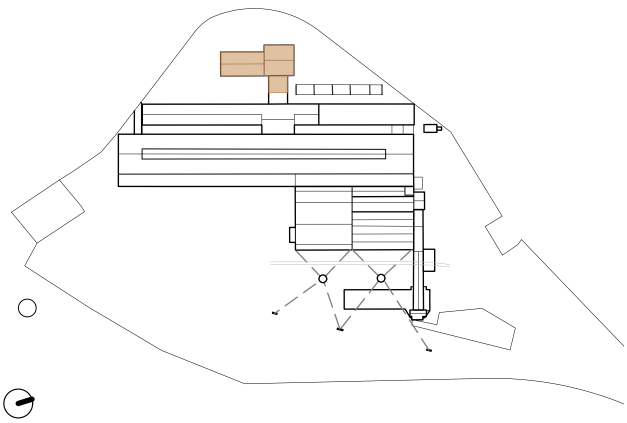


Figure 2.2.24 Location of the Control Room Building.

Figure 2.2.25 25 Cycle Switch Floor, 2023 (courtesy of Chris Bennett: Evolving Picture).

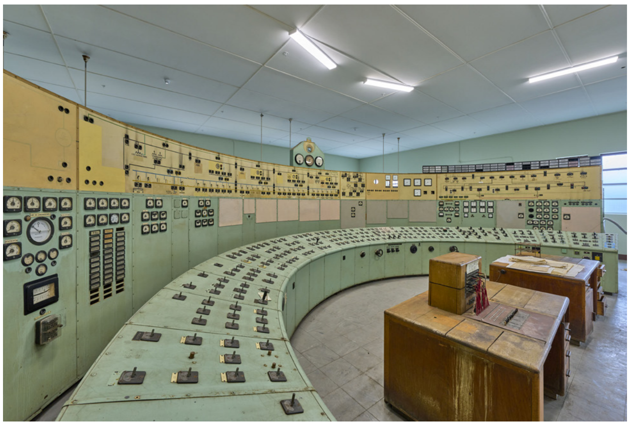


Figure 2.2.26 Control Room, 2023 (courtesy of Chris Bennett: Evolving Picture).

2.2.9 External Spaces

The mass of the building complex of the White Bay Power Station is located towards the western half of the place and is surrounded by numerous external spaces of differing size and spatial qualities. These include:

- **Coal Wash Pit:** the Coal Wash Pit is located to the north east of the Coal Handling Shed. As the name suggests, it was used to wash coal before it was sent to the Coal Handling Shed.
- **Transformer Yard:** the Transformer Yard is located on the western side of the White Bay Power Station complex, west of the Switch House and north of the Control Room Building. No extant machinery and equipment remains, only masonry blast walls and concrete plinths remnants provide evidence of the cells where the Transformers used to be.
- **North Forecourt:** the North Forecourt is located to the north of the main complex of buildings and is a hard landscaped area. It retains evidence of the former rail tracks that were used to transport coal onto the site. A small brick Amenities Block is located to the west of the yard.
- **Ash Handling Yard:** the Ash Handling Yard is located to the south of the Ash Handling Tower and External Conveyor, between the Coal Handling Shed and the Boiler House. The Chimney Stacks are located in this yard and the yard also retains evidence of the rail tracks used to transport carts from the Ash Handling Tower.
- **South and East Yards:** the South and East Yards are located to the east of the building complex and occupies a large portion of the eastern side of the site. Historically, the place was used to store vast amounts of coal before it was sent to the Coal Handling Shed. The majority of the South and East Yards comprises hard landscaping.
- **Mid & Upper South Yards:** the Mid and Upper South Yards are located to the the south of the place at a high elevation in line with Victoria Road. They contain some vegetation and the former White Bay Hotel site to the southwest. Historically, the place had several smaller staff amenity buildings and possibly workshops, and some extant concrete foundations remain as evidence of this.
- **West Yard:** the West Yard is located at the western edge of the place adjacent to Robert Street and comprises the areas to the north, west, and south of the Control Room Building. It is partially overgrown with trees and vegetation at its south end along the edge adjacent to Victoria Road.
- **South West Yard:** the South West Yard is located to the south of the Control Room Building and the west of the Switch House. Most of this yard comprises hard landscaping, though the south end of the yard adjacent to Victoria Road is overgrown with trees and vegetation.

Figure 2.2.27 North Forecourt (middle) and Coal Wash Pit (left), 2024 (courtesy of Chris Bennett: Evolving Picture).

Figure 2.2.28 West Yard (top) and South West Yard (bottom), 2024 (courtesy of Chris Bennett: Evolving Picture).

2.2.10 Principal Operational Systems & Machinery

Following the White Bay Power Station's decommissioning in 1983, the majority of the place was stripped of its equipment and machinery. One complete set of extant equipment and machinery was retained, as well as miscellaneous elements of moveable heritage. This extant machinery embodies the eight interconnected operational systems that produced electricity through the coal-firing steam raising power generation process. Much of this equipment and machinery is located towards the north end of the buildings and structures of the White Bay Power Station. The operational systems and their associated pieces of machinery are listed below.

For a detailed description of each of the pieces of equipment and machinery as well as the corresponding spaces they are located in, refer to Volume 2 – Heritage Inventory of this CMP.

SYSTEM 1 Coal Handling System

- Hoppers and Pneumatic Feed Gates
- The Capstan
- Two Cranes and Grabs
- The Screens
- Conveyors
- Short Elevators and Motors
- Coal Crushers
- The 90-Foot Elevators
- Transfer Houses and Equipment
- External Conveyor
- Coal Handling Control Room
- Coal Weigher
- Coal Hoppers

SYSTEM 2 Steam Raising System

- Pulverising Mill
  - a) Drive Motor
  - b) Fan Motor
- Chutes from Hopper to Mill
- The Pulverised Fuel Feed Pipes
- The Boiler
  - a) The Furnace
  - b) Superheaters
  - c) Attemperators
  - d) Economisers
  - e) Air Heaters
  - f) Air Ducts
- Forced Draft Fans
- The Headers
- Oil Heater Pumps and Valves
- Soot Blower Cabinet
- The Boiler House Control Room

SYSTEM 3 Power Generating System

- Steam Control Valves
- The Turbo Alternator Set
- Cooling Fans
- Overhead Cranes

SYSTEM 4 Feedwater System

- Electric High Pressure Feedwater Pumps
- Steam High Pressure Feedwater Pumps
- Monitor and Metering Cabinets
- Feedwater and Condensate Tanks
- The Condensate Pumps
- The De-aerators

Figure 2.2.29 Coal Handling Shed with view of the Capstan, the Two Cranes and Grabs, the Screens, and the Hoppers and Pneumatic Feed Gates underneath, 2023 (courtesy of Chris Bennett: Evolving Picture).

Figure 2.2.30 View of the Chutes from Hopper to Mill, the Pulverised Fuel Feed Pipes, and the No. 1 Boiler in the background, 2023 (courtesy of Chris Bennett: Evolving Picture).

SYSTEM 5 Cooling Water System

- Sluice Gates and Motors
- Circulating Water Pumps
- Condensers
- Circulating Water Penstocks, north and south (south penstock is outside the site boundary)

SYSTEM 6 Power Reticulation System

- Main Control Room (a,b,c)
- Rheostats
- Cables and Chasers
- Oil Circuit Breakers
- Motor-Driven Oil-bath Switches

SYSTEM 7 House Electrical & Auxiliary Supply System

- Disused No. 1 Battery Booster
- Motor-Generator Set 2
- No. 2 Motor-Generator Switchboard
- Motor-Generator No. 3
- Motor-Generator No. 4
- Battery Charger Unit (Mercury Arc Rectifier)
- No. 1 Battery Booster
- Rectifier Sets 1 and 2
- Switchboard (marble) in the Motor-Generator Room
- Batteries (no. 51–56)
- Pedestal Drill
- Switch House Lighting Board
- Switchboard in Motor-Generator Room
- Battery Charging Switchboard
- Air Compressor
- 50 Cycle Switches
- Selenium Rectifier for charging Ash Carts

SYSTEM 8 The Ash Handling System

- Ash Tower
- Ash Storage Tanks
- Ash Kibble Crane
- Ash Kibble Sets
- Ash Trucks
- Chimney Stacks

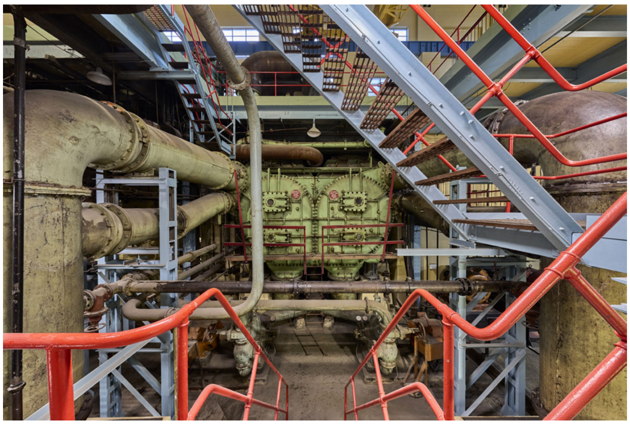


Figure 2.2.31 Turbine Hall Condensers, 2024 (courtesy of Chris Bennett: Evolving Picture).

Figure 2.2.32 Pump House High Pressure Feedwater Pumps, 2024 (courtesy of Chris Bennett: Evolving Picture).

Figure 2.2.33 Turbine Hall No. 1 Turbo-Alternator with Overhead Crane above, 2024 (courtesy of Chris Bennett: Evolving Picture).

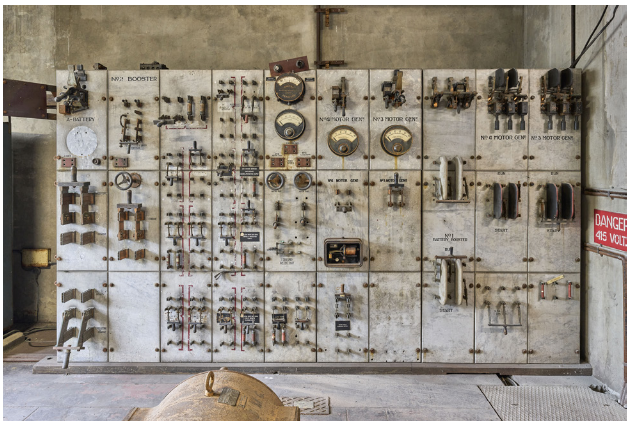


Figure 2.2.34 Switch House Switchboard (marble) in the Motor-Generator Room, 2024 (courtesy of Chris Bennett: Evolving Picture).

2.2.11 Subterranean and Archaeological Elements

The built fabric of the White Bay Power Station has undergone many changes throughout its years of operation, and also comprises multiple subterranean spaces. As the size and capacity of the station expanded to increase power generation output, evidence of older structures and buildings have acquired archaeological potential. This section describes the known subterranean elements at White Bay Power Station. Areas where there may be other archaeological components are also noted, but would require further investigation to confirm their existence, particularly in relation to buried services and other conduits. Refer to Section 6.9 for policies related to archaeology and subterranean elements.

Dr Wayne Johnson's "Baseline Archaeological Assessment of White Bay Power Station: Identification of Map, Plan, and Image Resources"[13] assesses the archaeology potential of the site. Parts of the report are referred to in this section, and the report itself contains additional detailed information on the archaeological history and potential evidence on the site. The report is included as Appendix C of this report.

2.2.11.1 Archaeological Evidence

The original landscape of White Bay Power Station was sloping ground with outcropping sandstone above the mudflats at the head of White Bay, fed by a creek flowing into the bay from the Balmain peninsula to the north. The Wanngal clan and their saltwater (*gadhungal*) kin fished these waters and camped around its shores in the open and in rockshelters, engraved figures on sandstone, and left many physical traces of their use over thousands of years. Following colonisation, the place became farm and grazing land, before being subdivided into individual lots for worker's housing and heavy industries. Throughout this time, Aboriginal people continued to camp around the surrounding bays and later worked in local industries.

Given how much excavation and construction work has been undertaken on the place, it is unlikely that any archaeological elements or subterranean components remain from the period prior to the construction of White Bay Power Station.[14]

Several smaller structures have also been constructed at White Bay Power Station during its active years, including various storage buildings, workshops, and amenity blocks. Many of these structures have

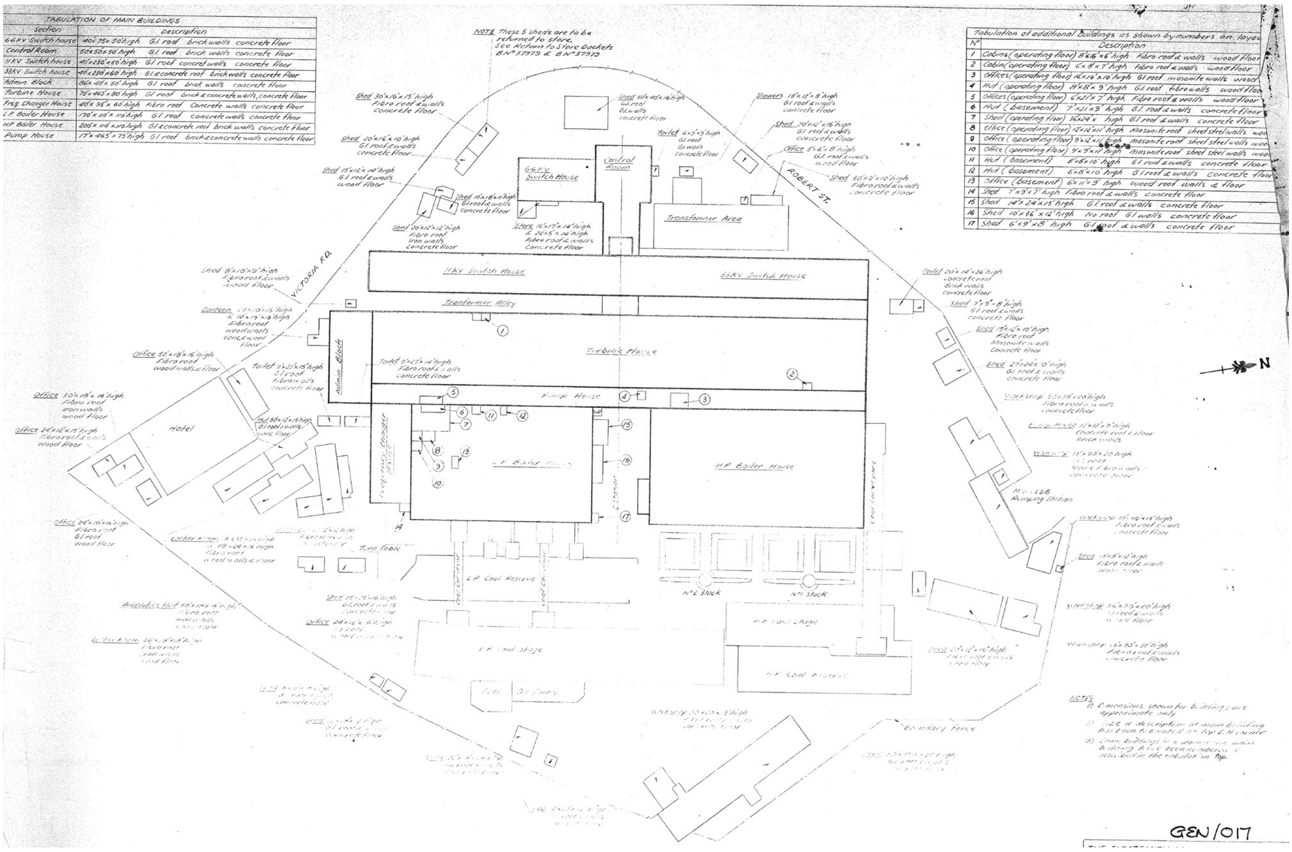


Figure 2.2.35 Plan indicating full extent of White Bay Power Station, 1959 (courtesy of the former Electricity Commission Archives, GEN 017).

since been demolished, and there is a possibility that archaeological evidence of these buildings may be uncovered if further excavation of the place is conducted in the future. Other notable subterranean elements include concrete slabs and footings (notably, that of the former No. 2 Boiler House), other rail lines, buried storage tanks, and culverts.

2.2.11.2 No. 2 Boiler House

The No. 2 Boiler House was originally built as part of a second stage of construction at the White Bay Power Station in 1923, and was demolished in 1976. It stood at the southeast corner of the existing complex of buildings alongside the Pump House at a comparable scale to that of the extant Boiler House. Archival drawings show that the No. 2 Boiler House utilised an underground conveyor system to receive coal from coal handling equipment and structures to its east that have also since been demolished.

Assessments indicate that the site of the No. 2 Boiler House still contains substantial concrete floor slab remains, in some places up to 1000mm thick. Two substantial underground conveyor rooms are expected to survive underground, but their condition is not known.[15]

2.2.11.3 Cooling Water Channel

The White Bay Power Station has a channel system running to the place from Rozelle Bay, under and through the Turbine Hall, and out to White Bay. With the Rozelle Bay portion constructed in 1912 and the White Bay portion constructed in 1913, this channel has been a long-standing integral element of the Circulating Water System, as it provided a constant flow of seawater to the Condensers. This seawater would then cool the steam used to generate electricity in the Turbo-Alternators back into feedwater. The channel is brick-lined, with concrete and steel water canals with sluice gates, and connected to the penstocks. A set of buildings associated with the Cooling Water Channels were located at the northern end of the site, but most were demolished by 1926.[16]

The output side of the channel has double outlet channels feeding into White Bay, with one running in a northeasterly direction and the other in a more southeasterly direction. The former is the original channel which was filled in approximately 50 metres from the current edge of the bay in 1965, while the latter was a new deviation constructed by 1951.[17]

Both the inlet and outlet channels are listed as heritage items on the Port Authority of NSW Section 170 heritage register.

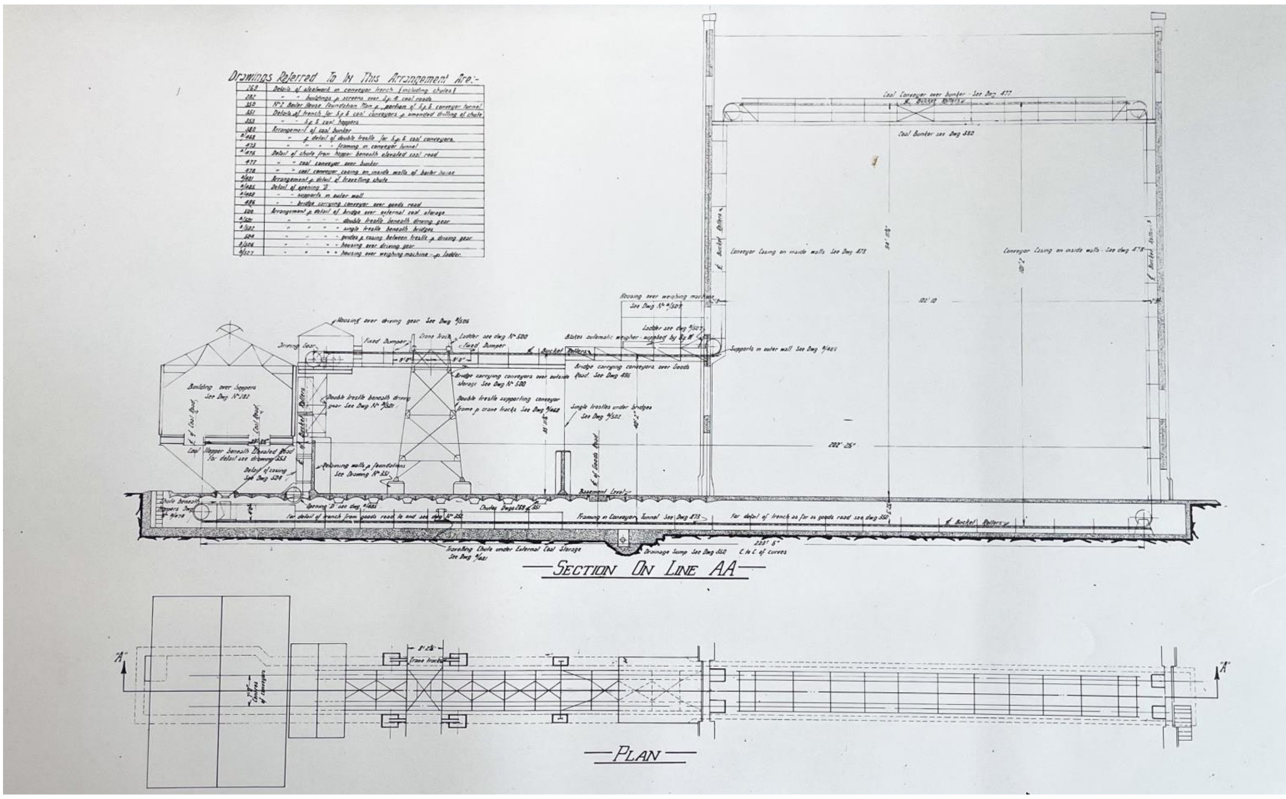


Figure 2.2.36 Excerpt of archival drawings showing the underground conveyors for the No. 2 Boiler House from coal handling (courtesy of Placemaking NSW collection, WB91310B).

2.2.11.4 Penstocks

The penstocks were an integral part of the cooling water channel and were used to settle sediment in the seawater to allow for more refined cooling seawater to enter the condenser, thereby increasing the efficiency of the power station's Circulating Water System.

2.2.11.5 The Coal Handling Shed

The Coal Handling Shed Basement is one of the major subterranean elements of the power station that remains strongly connected to the buildings and operational systems above ground. Accessed via stairs at the north end of the Coal Handling Shed, this space contains a pair of long conveyors, pneumatic feed gates, and the base of the 27 foot and 90 foot coal elevators.

2.2.11.6 Cable Tunnel

An underground cable tunnel, approximately 3 metres wide and 3 metres high, connects from the Rozelle Rail Yards (also known as the Rozelle Marshalling Yard) on a straight axis to the West Yard, near the Control Room. The north section of the tunnel is within the State Heritage Register boundary of the White Bay Power Station. Past the boundary of the power station, the tunnel contains a disconnected high-voltage outlet.[18]

This area of the place has not been part of the 2022 / 24 remediation works, and the condition of the tunnel is not known.

2.2.11.7 Railway Lines, Site Roads, Drains, and Conduits

The White Bay Power Station was connected to the Rozelle Rail Yards and surrounding industrial areas of Rozelle via an extensive network of railway lines. Evidence of these railway lines exists on the east side of the place where most of the coal handling took place. Though parts have been removed, traces of the rail lines in the North Forecourt running underneath the extant Ash Handling Tower remain. These railway lines represent the interconnectivity of the operations at the power station both internally and in conjunction with surrounding industrial activities.

The site remains rich in potential for both active and inactive underground drains and conduits, the extent of which would require further assessment.

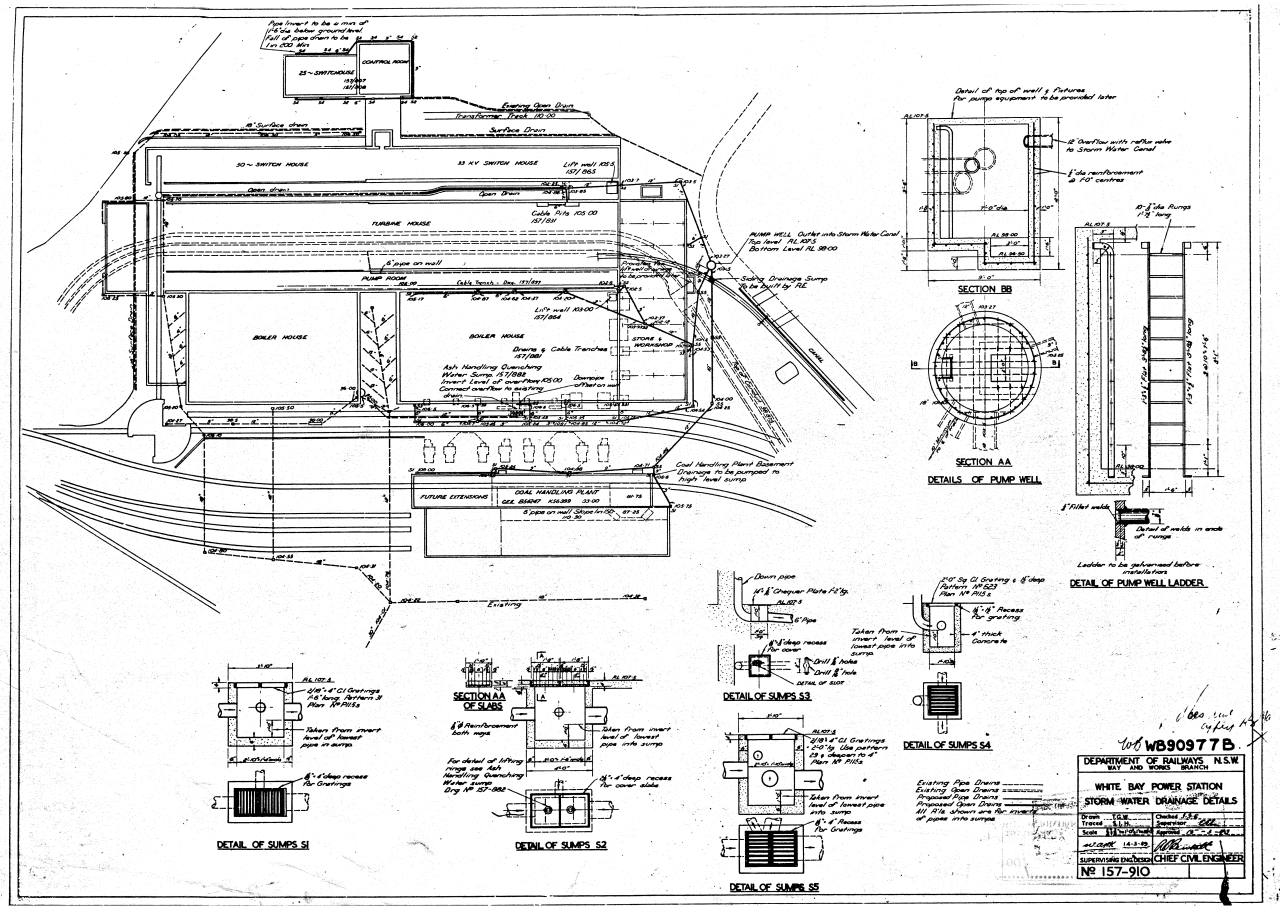


Figure 2.2.37 Excerpt of archival drawings showing location of sumps, conduits, drainage lines and wells (courtesy of Placemaking NSW collection, WB12071).

2.3 PHYSICAL EVIDENCE

Volume 2 of this report contains the results of the surveys of the fabric of the place.

The place was the subject of a measured survey in June and July 2002. The evidence contained in the architectural and machinery surveys are recorded on those plans and, for the machinery items, on inventory sheets (Volume 2). The Heritage Inventory was fully revised for the 2026 CMP report.

2.4 PHOTOGRAPHIC SURVEY

Volume 2 of this report includes a comprehensive set of photographs of the White Bay Power Station's structures, spaces, and elements. Section 2.2 above also contains some photographs of principal structures and outside areas. The Machinery Inventory (Volume 3, Appendix D) was prepared in 2004 and contains photographs from that time.

DOCUMENTARY EVIDENCE & ANALYSIS

2.5 DOCUMENTARY EVIDENCE

Documentary evidence for the 2004 report was collected from a wide variety of sources. These include:

- The Sydney Harbour Foreshore Authority (SHFA)
- State Records of New South Wales
- State Library of New South Wales
- Pacific Power
- Lands Department
- The Powerhouse Museum
- ECNSW Archives
- Railways Department Archives
- Photographs and other material collected from former workers and other interested people
- Documents found on site

Additional documentary research was conducted for the White Bay Hotel site during 2010 and 2026 revisions.

2.6 ORAL EVIDENCE

In 2002, the Sydney Harbour Foreshore Authority commissioned the *White Bay Power Station & Rozelle Marshalling Yards Oral History Project*, which extensively interviewed several individuals with key connections to the power station, including former workers, contractors, residents, and professionals.[19] The following sections of this CMP refer to several of these accounts in recognition of the intrinsic narratives they offer to enhance an understanding of White Bay Power Station's history. No additional oral history research was carried out for this current revision.

2.7 HISTORICAL EVIDENCE

The historical evidence related to the place has been discussed within eight significant periods:

- Background to Country (Pre-1788 – Present)
- Land Grants, Reclamation, and Noxious Industry (Post-1788)
- Power Stations and Electrification in the Sydney Region (From 1870s)
- Background to the Building of the White Bay Power Station
- First Phase (1912 – 1925)
- Second Phase (1925 – 1945)
- Third Phase (1945 – 1983)
- From Closure to the Present (1983 – Present)

This is followed by a section detailing the following aspects of the White Bay Power Station during its active years:

- Workforce
- Machinery
- Maintenance
- Work Health and Safety
- Trade Union Activity
- Social Life
- Local Community

Key figures of the White Bay Power Station's history, as well as the background of the adjacent former White Bay Hotel are also detailed.

2.7.1 Background to Country (Pre-1788 – Present)[20]

White Bay is within the lands of the Wanngal clan and was used by the Wanngal and the other coastal Sydney clans (their saltwater — *gadhungal* kin), who often visited this Country to connect and share. Aboriginal people once knew White Bay and its surrounds as freshwater Country. At the height of the last ice age about 20,000 years ago, temperatures in Sydney were about ten degrees cooler and the sea level around 100 metres lower.[21] The harbour was a forested gully with a river snaking through what are now the harbour headlands to the ocean kilometres beyond the current harbour heads. White Bay was a smaller gully flanked by Balmain and a hill that became Glebe Island. A creek flowed through its middle into what is now Johnstons Bay, where it met other small creeks before flowing north into the main harbour river (see Figures 2.7.1 and 2.7.2).

About 18,000 years ago global temperatures began to warm and for the next 10,000 years the sea steadily rose, slowly drowning the forested gullies to form the harbour and its bays. By about 8,500 years ago the sea level was about 5m lower than today and the harbour looked fairly similar to what we know. Over the next 5,000 years the harbour reached its current level, then a few metres higher, before settling back to its current level about 3,000 years ago (see Figures 2.7.1 and 2.7.2).

The Wanngal and their kin witnessed this slow transformation from freshwater to saltwater Country and became intimately familiar and connected to the fishing utopia that was created. White Bay and its surrounding bays had mangrove flanked mudflats where creeks met the tidal limits of the harbour. These tidal areas were fish nurseries, rich in marine and bird life, while the mudflats and nearby rocky shores also contained abundant shellfish. The dry land above these bays had belts of different kinds of forest and woodland, which were home to a wide range of animals and plants, which were used by the Wanngal for food, medicine and for making the wide range of equipment that they used to thrive (see Figure 2.7.3).

It is hard to imagine this environment today because of the huge transformations that have occurred as the original shorelines were straightened and mudflats covered, creeks were put into underground pipes, sandstone was extensively quarried and the land was carpeted by roads, houses and factories.

Because of these impacts, few Aboriginal camping places have survived in the immediate area, but we know that the Wanngal and their kin camped around the bays, in bark huts and also in the many sandstone rockshelters that were found on the rocky slopes above (see Figure 2.7.4). One of these rockshelter camps survives across the bay at Pyrmont (see Figure 2.7.5), and the less developed headlands of the harbour are dotted with them, giving a sense of how intensively the harbour and hinterland were used. These areas also retain engraved figures and hand stencils and other motifs painted on rockshelter walls, showing the spirituality of this landscape to Aboriginal people.

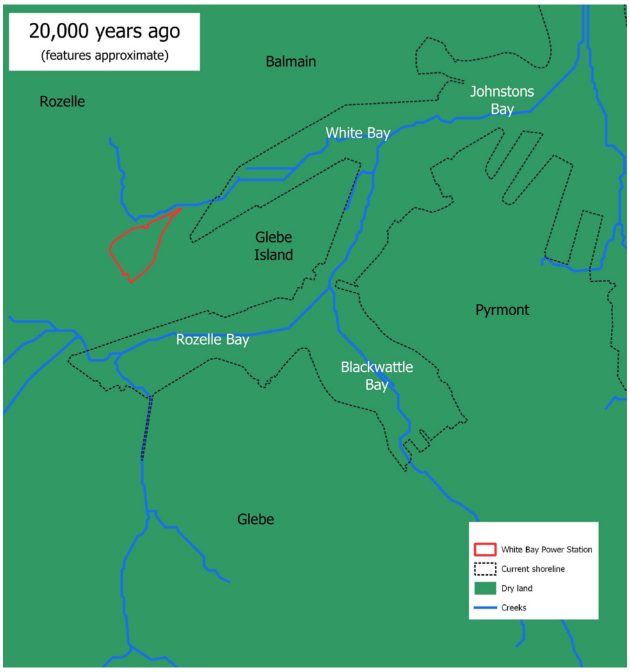


Figure 2.7.1 The White Bay and surrounding area 20,000 years ago.

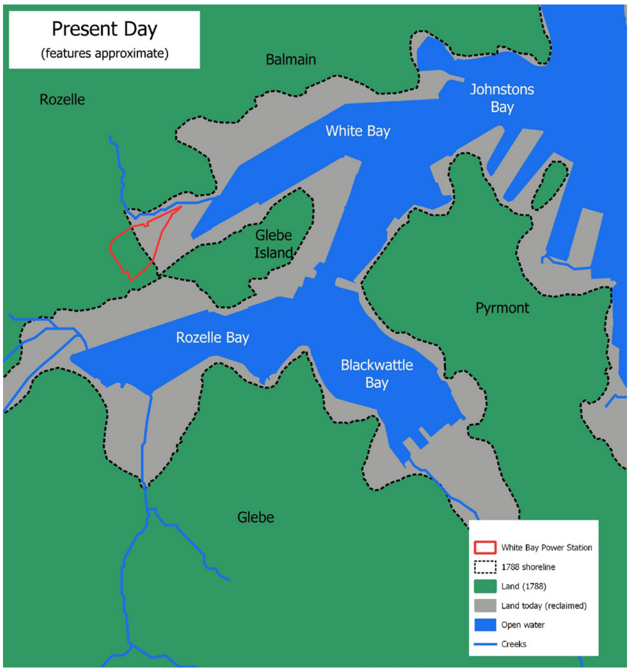


Figure 2.7.2 The White Bay and surrounding area at the Present day.

Figures 2.7.1 and 2.7.2 developed by Coast 2025 based on data and maps in Albani, A.D., Rickwood, P.C., Quilty, P.G. and Tayton, J.W. 2015. 'The morphology and late Quaternary paleogeomorphology of the continental shelf off Sydney, NSW', Australian Journal of Earth Sciences 62, pp. 681–694; Wilson, K.M. & Power, H.E. 2018. 'Seamless bathymetry and topography datasets for New South Wales, Australia' Sci. Data 5:180115 doi: 10.1038/sdata.2018.115, historical map overlays and other data from Spatial Services NSW.

Figure 2.7.3 Dien, C.M.F., Lesueur, C.A. and Peron, F. 1824. Nouvelle-Hollande, vases, armes, peche (courtesy of National Library of Australia, PIC Volume 599 #PIC/11195/30 NK1429).

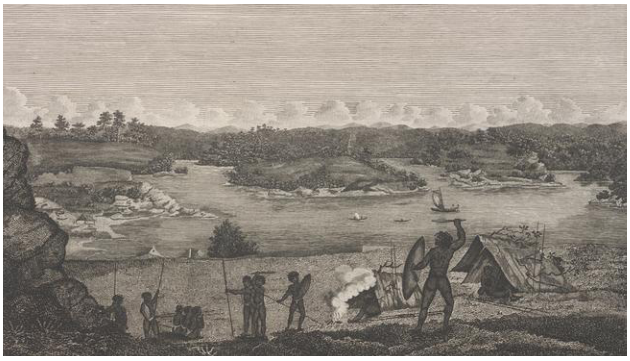


Figure 2.7.4 Looking west to Johnstons Bay over an Aboriginal camp at Millers Point in the early 1800s. Eyre, J. 1812 Native camp, Cockle Bay with Parramatta River from Dawes Pt (courtesy of State Library of New South Wales, Government Printing Office 1–09422).

Figure 2.7.5 Rockshelter at Pyrmont (courtesy of Coast History, 2025).

2.7.2 Land Grants, Reclamation, and Noxious Industry (Post-1788)

The richness of Aboriginal culture and spirituality was sadly not apparent to the first Europeans when they arrived in 1788 and set up camp near White Bay in Sydney Cove. They quickly explored the harbour and its bays, and soon conflicts arose over the theft of Aboriginal possessions and resources. In 1789 a devastating smallpox epidemic swept around the harbour and claimed many Aboriginal lives, followed by the continuing 'granting' and carving up of Aboriginal lands in the expanding colony in the decades that followed. Often this is where histories of Aboriginal people in Sydney end, but there were survivors who continued to live around the harbour bays, where they were seen by, and interacted with Europeans (see Figure 2.7.4). This includes around Blackwattle Bay where Aboriginal people continued to "come and gather oysters and cockles round the shores of the bay" and camp on the Harris family's Ultimo estate for many decades after the land was granted.[22] Many other camps like this existed and are not yet well-documented. It is important to bear this in mind when considered the European use of any area to avoid seeing this as a convenient endpoint to Aboriginal history. Instead, it is a period of interaction, adaptation and often employment in the very industries that are often thought to have erased an Aboriginal presence around the harbour.[23]

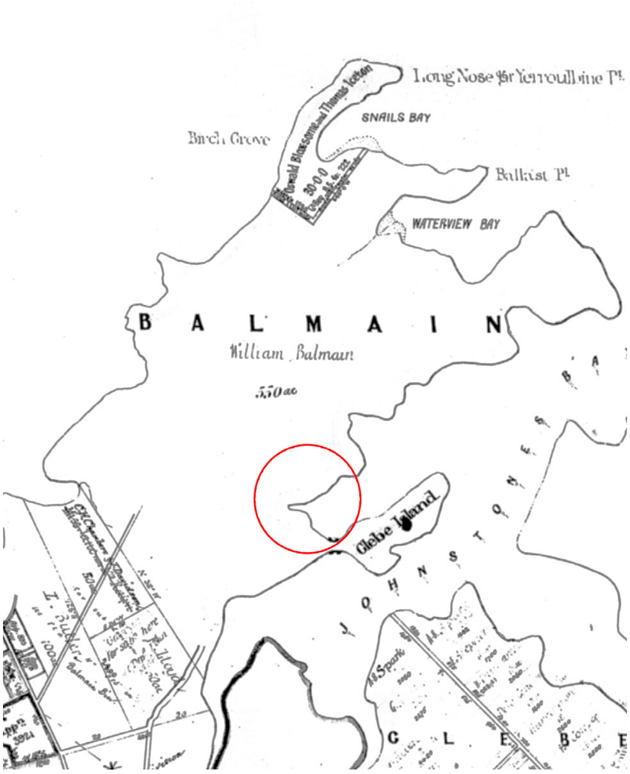


Figure 2.7.6 Extract of map dated c.1834 with the place of White Bay Power Station encircled (Image source: Department of Lands and Property Information, with Design 5 – Architects overlay).

Land grants in 1788 following European occupation were given to the free settlers and emancipists. On 26 April 1800, Governor John Hunter granted colonial surgeon William Balmain 550 acres (223 hectares) of land on an inner-harbour peninsula north of Glebe and across Johnstons Bay. Located further southwest inland was a stretch of land granted to surgeon John White with a creek known as White's Creek that emptied into White Bay. The surrounding land continued to be known as Balmain, despite William Balmain transferring his entire holding to surgeon John Borthwick Gilchrist in the following year. Contention over the legality of this transfer by Balmain's descendants prevented further development of the land and large amounts of it was instead leased for farming and cattle[24] to merchant Roland Warpole Loane. Loane's lease eventually expired in 1836, and the land was subdivided.

Figure 2.7.7 1862 Watercolour drawing of the Glebe Island by Henry Lloyd Grant. The White Bay Power Station site would be to the left of the road leading towards Glebe Island. (Source: State Library of NSW, Call Number: DL PX 42, File Number: FL208857).

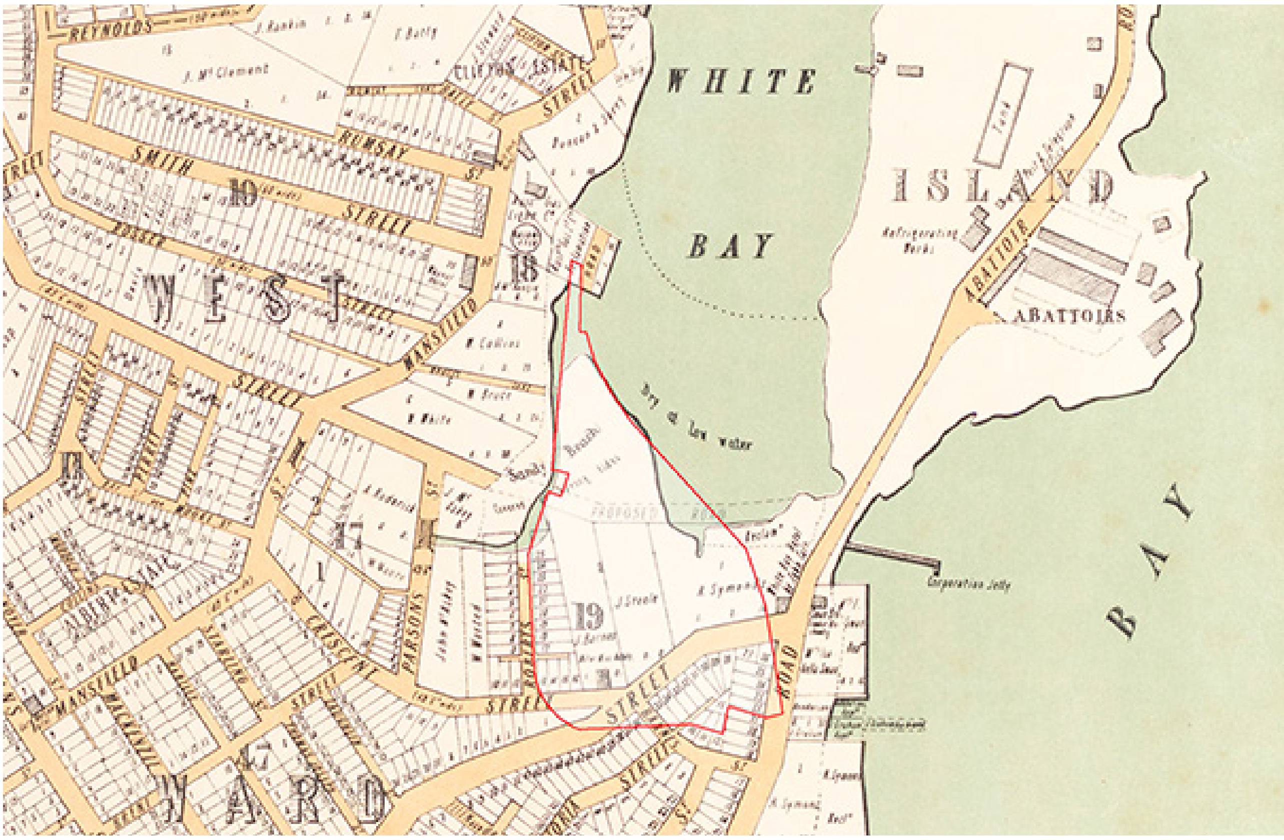


Figure 2.7.8 Detail from Higinbotham, Robinson & Harrison's 1883 Map of the Municipality of Balmain showing White Bay with sand flats, creek, reclaimed land and MLWM (Mean Low-Water Mark) shown as a dotted line. Note also the tight grained urban fabric which still exists today. The site is outlined in red. The original White Bay Hotel can be seen on the corner of Abattoir Road and Weston Street. (Image source: State Library of NSW, Call Number: MAF 811.1821/1883/1, with Design 5 – Architects overlay).

From the 1830s, noxious industries began moving from Sydney to the Bays West, and would form the defining character of the area well into the twentieth century. The area was not known as Rozelle until 1875, and was instead varyingly referred to as Balmain West and Balmain South during this period. Early industries to the area included tanneries, copper smelting, pig yards, and tobacco works. As industrial activity continued to increase throughout the nineteenth century, there was considerable pressure to subdivide the land for affordable housing to accommodate the workers. This resulted in speculators and landowners of larger parcels of land creating small building plots to sell to blue collar workers and their families (as seen from the dense small plots in Figure 2.7.8). By 1855, the subdivision was well established around the head of White Bay, which was still a mud flat.

Abattoir operations commenced in 1860 on Glebe Island and continued until 1912,[25] coinciding with the construction of the White Bay Power Station. They were accompanied by the NSW Canning Factory located along Abattoir Road. The abattoirs provided offal for families, and also raw materials of tallow and gelatin from carcasses[26] to local industries such as Cowan & Isreal's Soap and Candle factory (later replaced by Alston Soap and Candle Manufacturing company)[27] on the Annandale foreshores.

Other industries emerging in the second half of the nineteenth century included W. Bell Allen's boiling down works, timber and joinery works including J. Booth and Co., and shipbuilders such as Morts Dock & Engineering Co. (further north) and Duncan & Sorrie. Wharves were also constructed to service export trades. Booming production and trade resulted in the increased output of dust, sulphurous and acidic fumes, and other industrial byproducts leading to severe pollution in the bay area, and the "*rapid degradation of environmental amenity and quality of social life*"[28] in Rozelle. Notably, the original White Bay Hotel was constructed during this period in the 1860s, located at the north intersection of Abattoir

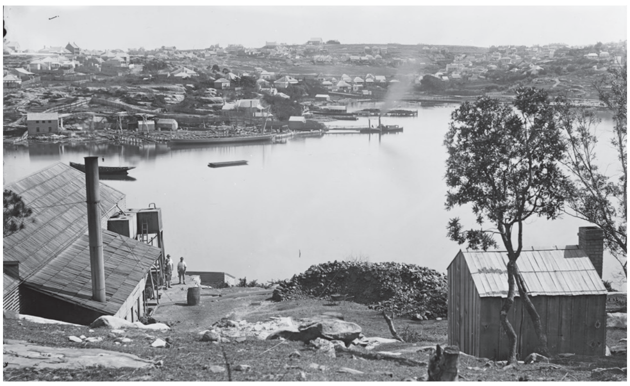


Figure 2.7.9 Balmain waterfront with small cottages and developing industries in the background, 1870-1875 (courtesy of the State Library of NSW, ON 4/Box 55/no. 211).

Figure 2.7.10 Watercolour painting of Rozelle Bay area, c.1860s-70s (courtesy of the State Library of NSW, painting by Samuel Elyard, 5, f.12).

Figure 2.7.11 Glebe Island Bridge, October 1870 (courtesy of the State Library of NSW, photograph by Charles Pickering, SPF/27).

Figure 2.7.12 Glebe Island Abattoirs, 1870-1875 (courtesy of the State Library of NSW, ON 4/Box 58/no. 299).

Figure 2.7.13 J. Booth and Co. timber merchants, Balmain Steam Saw Mills and Joinery Works at White Bay, 1880 (courtesy of the State Library of NSW, CN SPF/615).

Road and Weston Street. The hotel was known as Rozelle's "early opener"[29] (opening at 6am on weekdays), and business flourished during the industrial years as workers flocked to the bar for drinks at varying times of the day. As industrial activity gradually declined later into the twentieth century, so too did the patronage, and the hotel with it. A detailed account of the White Bay Hotel is provided in Section 2.7.10.

The sandy shore area that would eventually become the White Bay Power Station site was built up into cottages and ancillary services.[30] Around 1890, a dyke was built from Balmain across the mud flat to Glebe Island to reclaim the land at the head of the bay for a public reserve. The mangrove swamps around Glebe Island had become home to disease and foul stenches as a result of the noxious industries, and were also reclaimed not long after in 1895. Land reclamation created deeper water berths replacing the early jetties in White Bay and Rozelle Bay. Mullens Street was extended at the end of the nineteenth century, and additional housing was built (Figure 2.7.14).

The Rozelle Rail Yards also underwent an extension during this period, becoming the catalyst for further industrial development in wheat exports and power generation. Consequently, the future White Bay Power Station site was progressively resumed to make way for its construction, and a plan shows the dates of these resumptions – most of them being Gazetted 12 July, 1911. From archival photos (Figure 2.7.14), it appears that the site was completely cleared of all structures and vegetation and following further excavation along the west and south of the site. Construction of the power station began in 1912.

This period in the late-nineteenth and early-twentieth centuries was a time of great change for Aboriginal people too. The formation of the Aborigines Protection Board in the 1880s began to end a century of adaptation by coastal Sydney people to the colony. Increasing surveillance and economic pressure were exerted on their camps around the harbour, resulting in a slow and steady move of most coastal people to La Perouse by the turn of the century. The Protection Board gained legal powers in the early twentieth century, allowing them to control where Aboriginal people lived and travelled, take their children, and enforce a policy of segregation. These draconian measures prompted some Aboriginal people in rural areas to leave for the perceived greater freedoms and employment opportunities of the city. After the Second World War, migration greatly increased, and inner urban Aboriginal communities were formed.[31]

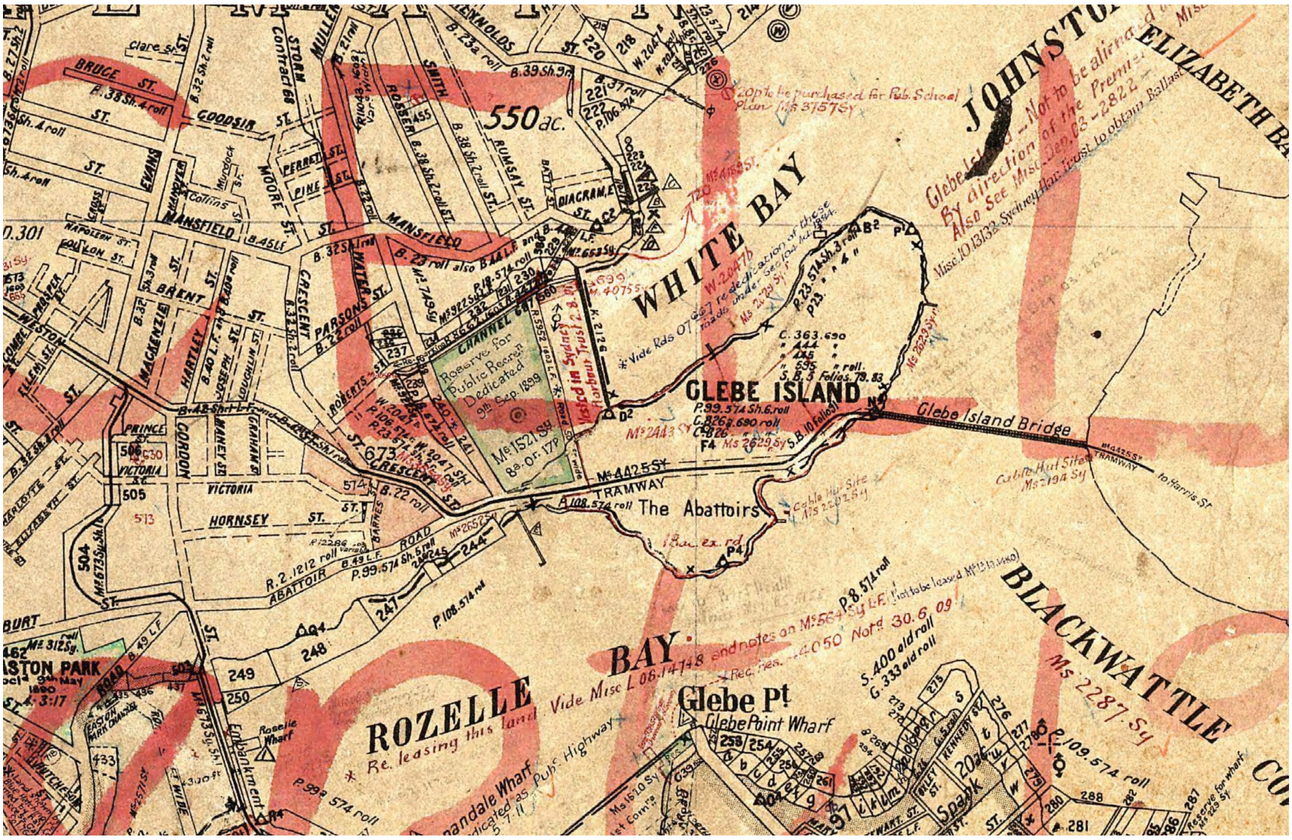


Figure 2.7.14 Detail from the 1886 Parish of Petersham Metropolitan Land district map of Balmain showing reclaimed land at the head of White Bay which was set aside as a Reserve for Public Recreation Dedicated 9 September, 1899. Mullens Street has been extended across the site. Beyond this street a slip of land has been vested in the Sydney Harbour Trust (NSW Land Registry Services scanned map number 14010902).

2.7.3 Power Stations and Electrification in the Sydney Region (From 1870s)

The commercial introduction of electricity supply began in the late 1870s. The earliest installations were almost exclusively for lighting, serving individual buildings or, at best, compact urban districts. The first urban power stations supplying both street lighting and private consumers opened in 1882, at Holborn Viaduct in London and Pearl Street in New York.

Electric lighting initially struggled to compete against the well-established coal gas system due to its high cost and low efficiency. With steady advancements in technology, this disadvantage was gradually overcome. The development of the electric motor towards the end of the nineteenth century opened new markets for electricity in industry and the railways, both of which had been dominated by the steam engine. Rapid worldwide progress in transmission technology during this time allowed power stations to serve wider areas, resulting in a proliferation of urban power stations. Some supplied power only for traction, while others supplied the general market for power and light, with declining cost and increasing reliability, so that individual consumers in their supply areas gradually shut down their own small, inefficient plants in favour of purchasing electricity.

This worldwide pattern was repeated in Sydney. By the 1890s, several small, privately-owned power companies supplied consumers with power in the central business district. There were also a handful of municipally owned stations, the largest in Redfern, and several country towns had established town lighting schemes.

The construction of a large power station to serve Sydney's central area was delayed by political rather than technological circumstances. Between 1887 and 1896, the New South Wales parliament dealt with six competing bills for the right to reticulate electricity in Sydney, eventually approving the Sydney Municipal Council (SMC).

The first significant application of electrification, however, was on public transport. Between 1879 and 1899, Sydney's tramways were powered by horse, steam, or cable. In 1896, after seven years of experiments with electric traction, including the electrification of the North Sydney and Rose Bay lines, The Railway Commissioners of New South Wales (RC) obtained parliamentary authorisation to construct an electric tramway along George Street to Harris Street, Ultimo. In 1897, they commenced construction of the Ultimo Power Station, which came into service in December 1899.

The SMC commenced construction of a powerhouse in The Rocks in 1897. However, owing to the rapid development of technology, this building had to be abandoned during construction, and an entirely new, much larger station was designed. The resultant Pyrmont Power Station, which supplied street lighting and power to a rapidly growing private clientele, came into service in July 1904.

Figure 2.7.15 Steam tram on Elizabeth Street, Sydney, c.1890s (courtesy of the City of Sydney Archives, Graeme Andrews Working Harbour Photograph Collection, A-00083068, 086\086834).

Figure 2.7.16 Ultimo Power Station, unknown date (courtesy of the City of Sydney Archives, A-00018511, 040\040903, SRC14562).

Figure 2.7.17 Pyrmont Power Station, 1919 (courtesy of the City of Sydney Archives, A-01001344, 095/095194, NSCA CRS 51/4715).

Public ownership of electricity supply was becoming widely accepted but did not prevent the establishment of the Electric Light and Power Supply Corporation (ELPSC), which commissioned the original Balmain Power Station in September 1909. In 1912, the RC commenced construction of their second power station at White Bay, to serve the rapid expansion of the electric tramway system that had commenced at the turn of the century, and the anticipated electrification of the city railway. The White Bay Power Station came on line in late 1917.

These four power stations formed the backbone of the Sydney electricity supply system until 1929, when the SMC commissioned Bunnerong Power Station. The SMC, ELPSC, and RC systems expanded their production steadily and independently – except for limited energy exchanges between the RC and SMC in the 1920s. The ELPSC secured the franchise to supply the five municipalities surrounding its power station by 1911, thus reaching its maximum geographical extent. The growing traction load was reserved by legislation for the RC, who, from March 1923, also supplied in bulk to outlying municipalities in Sydney's southwest (four of which constituted the first St. George County Council). The SMC was the least constrained in areas it could serve, and its sales grew fastest of the three supply organisations.

The advantages of integrating the separate systems had been apparent since the First World War, when an emergency 12 MW link between the SMC and RC systems had enabled the former to keep expanding its sales despite the unattainability of new plant. In 1925, the two organisations made a short-lived energy exchange agreement which was terminated soon after by the SMC in favour of building its own power station at Bunnerong and maintaining independence.

To better coordinate the development of electricity supply within Sydney and in the rest of the State, the government set up an Electricity Advisory Committee (EAC) in 1934. One of the first EAC recommendations to be taken up by the government was the transfer of the electricity undertaking of the SMC to a newly constituted local government conglomerate, the Sydney County Council (SCC), in 1935.

After many false starts, it was defence rather than economic considerations that finally interconnected the different systems in 1940. During that year, new 15 MW links were completed between the RC and SCC systems at St Leonards and Marrickville and the first ever link between the SCC and the ELPSC at Five Dock. Although no part of the system was ever subject to enemy bombardment, the interconnections proved invaluable during the post-war years, when the difficulty

Figure 2.7.18 Balmain Power Station, 1964 (courtesy of NSW State Records, NRS-20347-1-44-4755).

Figure 2.7.19 Early photograph of work commencing on the site of the White Bay Power Station, 1912 (courtesy of Powerhouse Museum Archive).

Figure 2.7.20 Boiler Room piling during construction at White Bay, 1912 (courtesy of NSW State Archives, NRS-17420-2-4-363/003).

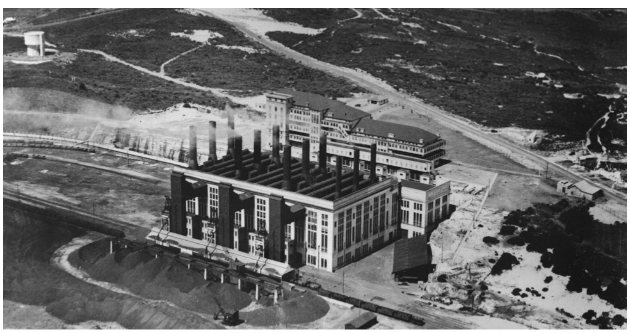


Figure 2.7.21 Bunnerong Power Station, 1930 (courtesy of the City of Sydney Archives, A-00007795, 020\020599, SRC351).

of obtaining plant and continual industrial action placed great stress on the Sydney electricity system.

Regional interconnection took the Sydney electricity system to much of the rest of New South Wales. With the connection of the Public Works Department's Southern Electricity Supply (SES) system, the Sydney regional grid extended from Taree in the north to Canberra in the south and Griffith in the west. In 1946, over 84 per cent of New South Wales electricity was generated within the grid, 11 per cent in other public supply systems and 5 per cent in private plants. About 48 per cent of Sydney's electricity was generated by the SCC (at Bunnerong and Pyrmont), 38 per cent by the RC (at White Bay and Ultimo and at Newcastle and Lithgow) and about 7 per cent each by the ELPSC (at Balmain) and the SES (at Port Kembla and smaller inland stations).

In 1950, the post-war supply crisis in Sydney saw power stations struggle to meet increased demands for electrcity. Engineer Bryan Heywood described the periodic blackouts that were used to mitigate insufficient generation:

> *Blackouts were fairly rife…there just wasn't enough generation to cope with the increased demand, so it was rationed out around the metropolitan area and the rest of the State that the County Council covered at the time.*[32]

Paul Agnew, a White Bay maintenance apprentice in the late 1950s, similarly recalled:

> *They would have a list and they would read down the list and then they would just walk along the switchboard panel and just switch areas off, such as Randwick, Coogee, Botany, Mascot – those areas would just be turned off for an hour or so and they would be turned back on, and somebody else would be turned off.*[33]

This, combined with the urgent need for electrification for the rest of the State, prompted the government to establish a central electricity generating body, the Electricity Commission of New South Wales (ECNSW). The ECNSW took control of the generating assets of the SES in November 1950, the SCC in January 1952 and those of the RC, including the White Bay Power Station, in January 1953. The takeover generated "a definite air of resentment among workers,"[34] and caused major shifts in both operational and employment practices. In 1956, after an extended legal dispute over the basis of valuation for purchase, the ECNSW also took formal control of the assets of the ELPSC.

Even before the ECNSW acquired control of the four original Sydney power stations, the pressure of technological change was in the direction of electricity generation outside the city, closer to the coalfields. The cost of high-voltage electricity transmission was negligible compared to the cost of transport of fuel, and this had been recognised by the RC, which, of all the major generating organisations, had the most widespread transmission network and the greatest freedom in power station location. From the late 1940s, the RC had planned to build three large coalfields stations, all of which were ultimately completed by ECNSW and served as prototypes for a series of progressively larger coalfields stations.

Ultimately, the decisions made independently by each of the major generating organisations during the War resulted in the post-war rebuilding of Pyrmont, White Bay, and Balmain power stations (and the installation of new equipment in Bunnerong and Ultimo).

Sydney was self-sufficient in electricity for the last time in 1954, in that outward and inward energy flows balanced over the year's cycle. In 1958, it was still generating 75 per cent of its requirements, but by 1962 only 32 per cent, and by 1965 only 10 per cent. That year, the combined output of the Sydney power stations was barely one-fifth that of Vales Point, the ECNSW's newest and largest power station. With the progressive completion of four more coalfields power stations by 1987, the amount of energy that metropolitan stations were contributing to the system had become insignificant. Nevertheless, they were retained as emergency plants until retired.

Increasing public concern over the pollution caused by metropolitan power stations added considerable pressure to close them down. The coal dust and ash became an increasingly frustrating issue for locals to contend with,[35] especially as the Balmain area moved away from an industrial character and became increasingly gentrified. In 1983, Pyrmont and White Bay were the last of the five large stations to be decommissioned.

White Bay was Sydney's longest serving power station that remains standing today. It had 70 years of continuous generation within the one building (albeit extended and with new boiler houses) compared with 64 years at Ultimo and 60 years at Balmain A. Although the Pyrmont site was in longer service, from 1904 to 1983, its buildings have been largely demolished.

2.7.4 Background to the Building of White Bay Power Station

The RC always had a more complex system than the SCC or the ELPSC. The standard lighting and motor loads of its establishments (based on a 240-volt 50 Hz AC supply) were superimposed on the 600-volt 25 Hz DC supply required by the tramways. Furthermore, the system eventually selected for railway electrification in the early 1920s was based on a 1500-volt 50 Hz DC supply, and after the First World War, the RC began high-voltage 50 Hz AC bulk supply, first to the Sydney Municipal Council (SMC) and, from 1922, to the southwestern suburbs of Sydney. The RC also supplied power to other public authorities for essential uses such as sewer, water pumping, and opening bridges.

The complementary patterns of the various loads allowed the RC to make efficient use of its generating plant, as electricity could be distributed with some flexibility across the various subsystems. This was accomplished by incorporating many frequency converters (25 to 50 Hz or reverse) and rotary converters (AC to DC or reverse) into the system and the usual transformers. The presence of such plant in the power stations and substations distinguishes the RC electrical system from those of the ELPSC and the SCC. After some initial DC development, the latter rapidly became almost exclusively 50 Hz AC (though some parts of the City of Sydney, first electrified by the SMC in the 1900s, continued to be supplied by DC into the 1980s).

After the completion of the Ultimo Power Station in 1899, electrical tramway operations increased rapidly, and the RC's projections of further growth threatened to exceed the capacity of the powerhouse. At around the same time, the Commissioners formed the view that electrification of the suburban railway and constructing a new, electric City underground railway system was essential to keep up with the growth in rail traffic. In 1910, the RC's Chief Electrical Engineer, OW Brain, recommended that an additional power source be established and, in keeping with the day's custom, travelled to Europe and America to investigate the latest developments.

Brain considered and rejected hydropower on the basis that no reliable supplies of water flow were available near Sydney. He also considered and rejected a location on the western coalfield as the unit cost of transmission marginally exceeded the cost of coal transport at the time, and the availability of cooling water was a major issue. The RC ultimately selected a site at White Bay based on the following criteria:

- it had sufficient area for a power station of "well over 100" MW;
- it was located close to the city and consumers of electrical power (issues of reticulation over long distances had not yet been solved);
- it had both rail links (the Rozelle Rail Yards) and dock facilities for coal and plant delivery and ash disposal;
- it had unlimited circulating (sea)water, with the possibility of separating inlet and outlet to avoid local heating problems;
- it was low-lying, to reduce cooling water lift; and
- it was low-cost.

Figure 2.7.22 Map of proposed city and suburban electric railways, 1915 (courtesy of the State Library of NSW J.J.C. Bradfield, MB4 811.17gme/1915/1).

Figure 2.7.23 The Electric Trams, City Lines at Circular Quay, 1905 (courtesy of NSW State Archives, NRS-17420-2-28-875/012).

2.7.5 First Phase (1912 – 1925)

Construction commenced in June 1912, with the driving of piles to support the northeast corner of the building (the rest lies on a more solid foundation). The first boilers and turbo-alternator set were steam tested on site in July 1913 before the buildings were completed. Construction then progressed relatively slowly: the First World War dramatically slowed the growth in tramway usage, delayed the electrification of the suburban railway, and created a shortage of materials and a skilled workforce, making the completion of the power station both less urgent and more complex. Another factor was technological development, which increased the ability of the Ultimo Power Station to accommodate growth.

The White Bay Power Station was planned to eventually accommodate eight boilers and ten turbines. Coal was railed into the site at the east and conveyed to the top of the Boiler House. Abutting the west of the Boiler House were the Pump House, the Turbine Hall and the Switch House. The channel taking cooling water to the condensers ran the length of the Turbine Hall. Based on experience at Ultimo, it had been designed with particular care to be able to accommodate future turbines of greater power. Similarly, problems with ash handling at Ultimo led to the adoption of a suction system of boiler ash collection at White Bay.

Figure 2.7.26 Excavation of White Bay Power Station Channel, 1912 (courtesy of Powerhouse Collection).

Figure 2.7.27 Temporary Boiler House (L) and Turbine House in 1913 (courtesy of Powerhouse Collection).

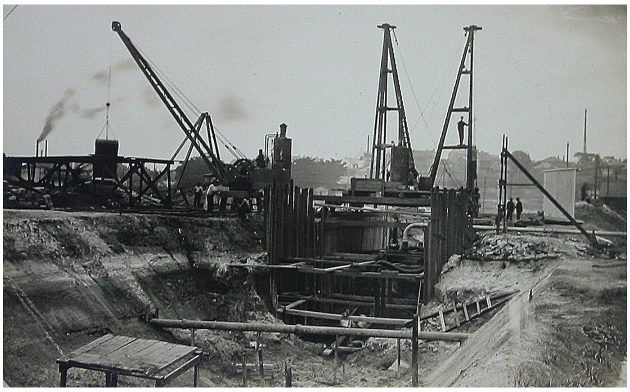


Figure 2.7.24 White Bay Power Station under construction, 1912 (courtesy of Powerhouse Collection).

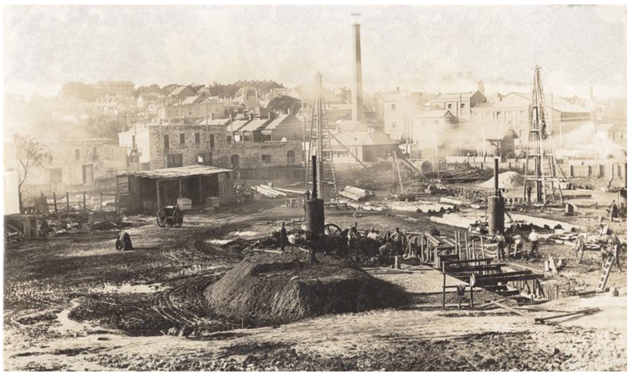


Figure 2.7.25 White Bay Power Station pile driving in full swing, 1912 (courtesy of State Rail Authority records, State Archives Collection, dated 3.8.1912, 26093 29 July 1985).

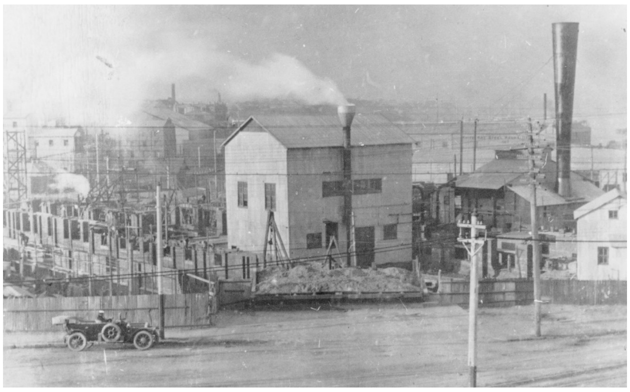


Figure 2.7.28 White Bay Power Station prior to opening, 1913 (courtesy of Powerhouse Collection).

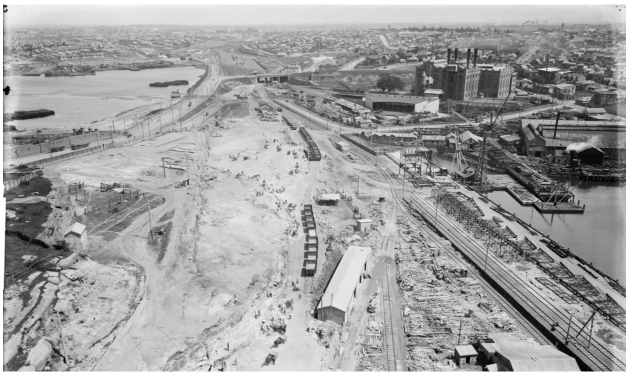


Figure 2.7.29 The quarrying of Glebe Island for the Wheat Silos – with White Bay Power Station in the background, 1920 (courtesy of Mitchell Library, State Library of New South Wales, Box 17 no. 46 RI: 9O4oZprn).

The station was built in two stages. The first, in brickwork, consisted of the first half of the Turbine Hall, the Switch House, and one boiler house. This phase had room for five generators. It was not until May 1917 that it became fully operational, with 25 Hz, 66 kV turbo-alternators installed at positions 1, 2, and 4 and a bank of four Babcock & Wilcox boilers occupying half of the Boiler House. Two of the generating sets were Willans & Robinson turbines coupled to Dick Kerr alternators, rated as 7 MW continuous and 10.5 MW overload (some sources give the rating as an average of 8.75 MW). In fact, three generating sets had been ordered, but when industrial troubles in the UK delayed the delivery of the third, a 7.5 MW Curtis General Electric turbo-alternator was installed instead in the No. 4 position. The Willans & Robinson-Dick Kerr machine intended for the No. 3 position was installed at Ultimo on arrival in 1914 but was then transferred to the No. 3 position at White Bay in late 1918, giving a total station capacity of 28.5 MW. The positions of these turbo-alternators are shown in Figure 2.7.29.

A second stage of construction began in 1923 (Figure 2.7.28) and included the construction of a second Boiler House, as well as the expansion of the Pump House, Turbine Hall, and Switch House. The No. 4 Curtis General Electric turbine was removed sometime before 1924, when a new 25 Hz, 6.6 kV, 8.75 MW English Electric turbo-alternator of largely local manufacture was commissioned. In 1925, a second English Electric set was installed, and a second bank of boilers was built inside the original Boiler House. With this, the first stage of the White Bay Power Station reached its maximum capacity of five 25 Hz turbo-alternators, aggregating some 63.75 MW. At Ultimo, there was an additional 27.5 MW of 25 Hz plant and 14.3 MW of 50 Hz plant. The two stations were operated and controlled as a unified system.

Figure 2.7.30 White Bay Power Station c.1920 (courtesy of Powerhouse Museum Archive).

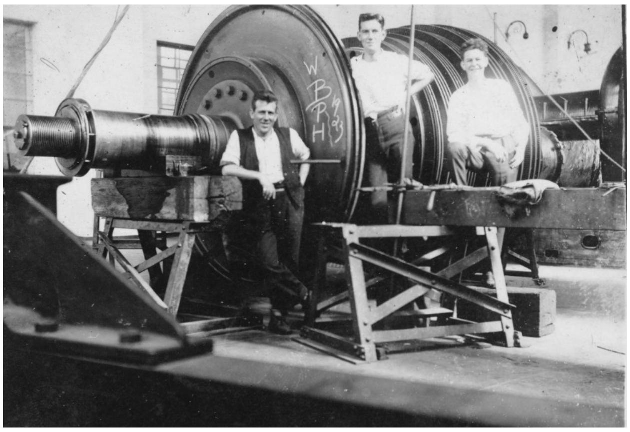


Figure 2.7.31 White Bay Power Station Channel, installation of turbine rotor, 1923 (courtesy of Powerhouse Museum Archive).

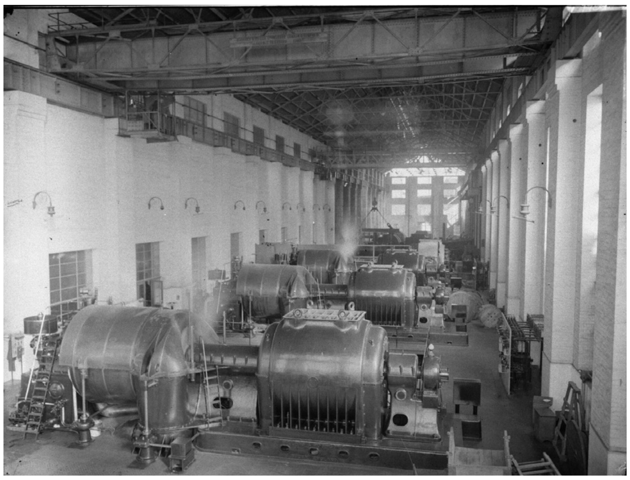


Figure 2.7.32 Turbine Hall with new turbo-alternator sets, 1925 (courtesy of the State Archives of NSW, NRS-4481-3-[7/15990]).

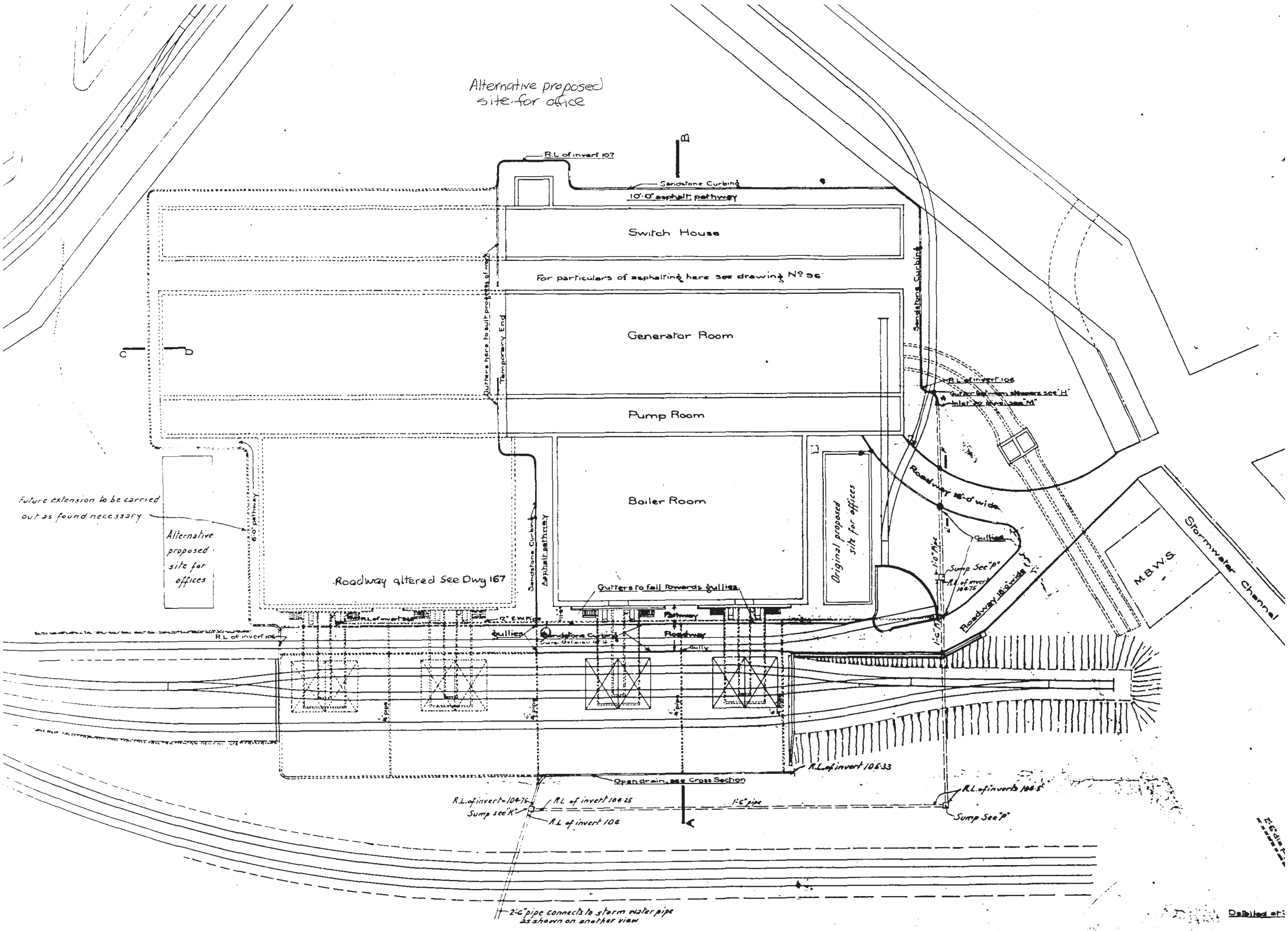


Figure 2.7.33 White Bay Power Station Building Extension Outline Arrangement, 1914 (courtesy of Placemaking NSW, WB9061).

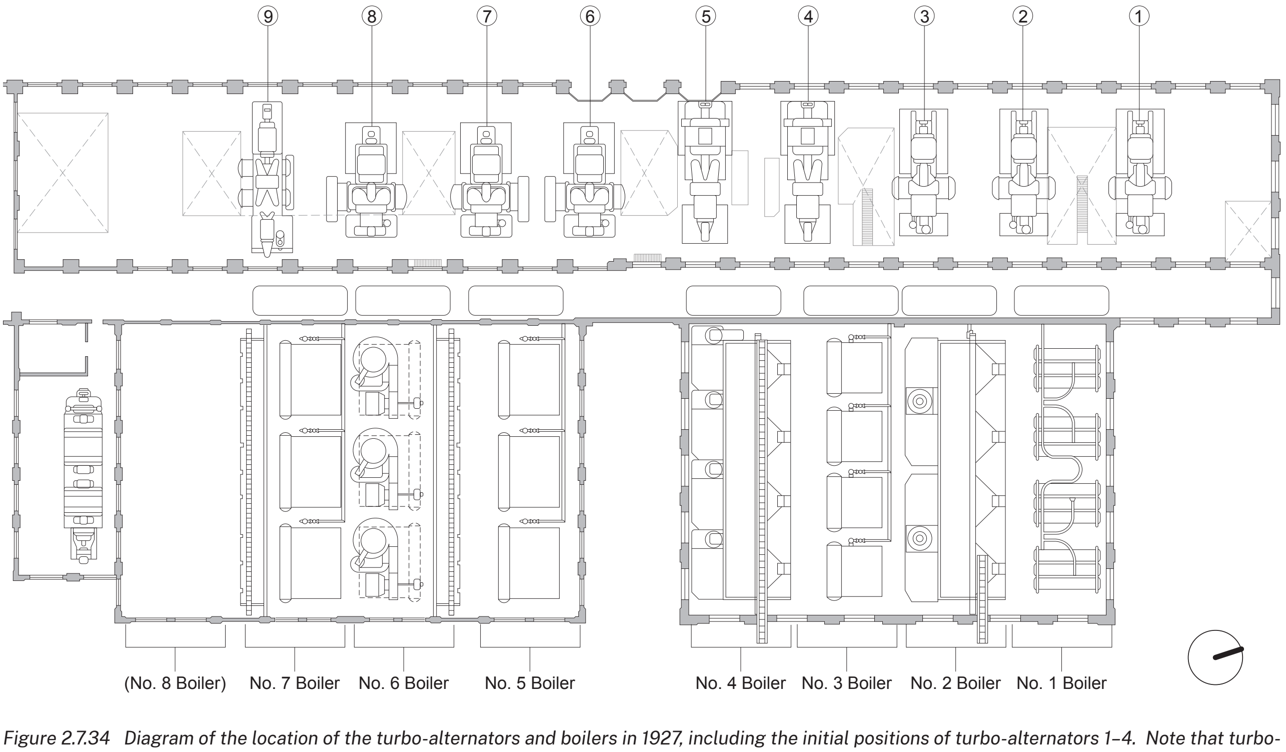


Figure 2.7.34 Diagram of the location of the turbo-alternators and boilers in 1927, including the initial positions of turbo-alternators 1–4. Note that turbo-alternator no. 9 was not installed until 1928 (redrawn by Design 5 – Architects).

2.7.6 Second Phase (1925 – 1945)

After 1925, White Bay became the RC system's main station for 50 Hz generation (around 9.7 MW of 50 Hz plant installed at Ultimo was progressively removed between 1925 and 1928, some of it to smaller RC power stations at Newcastle and Lithgow, leaving Ultimo as a dedicated tramway supplier). With the growth of electric train traffic and bulk sales to the SMC and other councils, an additional 11 kV, 50 Hz Parsons turbo-alternator of 20 MW output (No. 9) was installed in 1928. This brought the total capacity of the station's second phase to its maximum of 86 MW. The record 406 GWh of electricity generated at White Bay in 1928–29 declined to 224 GWh in 1933–34 for a number of reasons and was not exceeded until 1947–48. Bulk sales to the SMC ceased within nine months of opening the Council's Bunnerong Power Station in January 1929. Sales to other councils were affected by the 1929 stock market crash and subsequent economic depression (the Great Depression), which also halted the growth in electricity demand for rail and tram working.

No new generating plant was installed at White Bay between 1928 and 1951. After the Depression, an increasing share of the tramway load was taken by Ultimo, where two 20 MW, 25 Hz AGE-BTH units had been installed in 1930 and 1931. In 1940, the 7.5 kVa frequency changer at White Bay was replaced with a 25,000 kVa unit, allowing more power generated at 50 Hz to be fed to the 25 Hz system. From then on, the 25 Hz generators at White Bay were used mainly for peak periods and for standby purposes. In 1944, the No. 1 alternator was disconnected from its turbine and placed in service as a synchronous condenser. This provided power factor correction for the frequency changer and enabled the plant at Ultimo to operate more efficiently.

Between 1939 and 1941, the RC systems in Sydney, Newcastle and Lithgow were interconnected. In 1940, 33 kV links were established between the RC and SCC systems at Marrickville and St Leonards and in 1941, a 33/66 kV link with the Public Works Department's system was completed, also at Marrickville. While initially intended as emergency links in the event of enemy bombardment, they proved invaluable after the War in combining the resources of the State's major electricity systems. Reinforced concrete shelters, blast walls and equipment covers were installed at White Bay in early 1942 as a precaution against air raids. They were progressively removed in the first half of 1944.

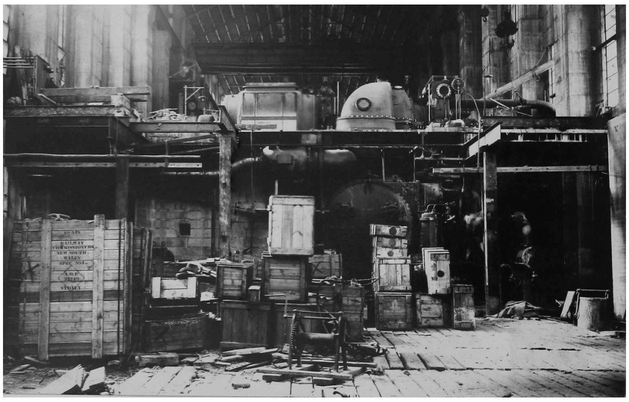


Figure 2.7.35 White Bay Power Station turbo-alternator no. 7, 1925 (courtesy of NSW State Rail Authority records, State Archives Collection, 235/51, 363/35).

Figure 2.7.37 Aerial View of White Bay Power Station, 1943 (courtesy of NSW Historical Imagery).

Figure 2.7.36 White Bay Power Station Trouble Room, 1930 (courtesy of the NSW State Rail Authority records, State Archives Collection, 26180, 235/41, 363/39).

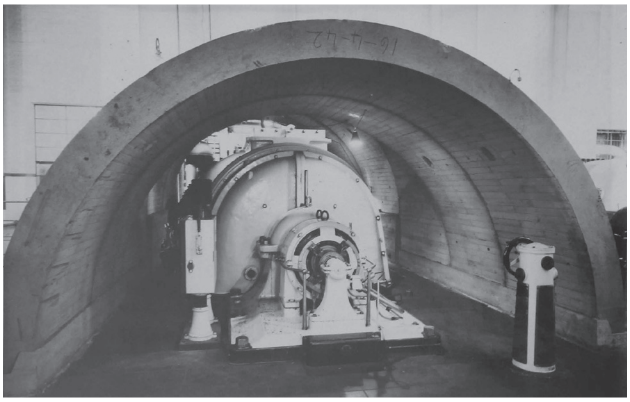


Figure 2.7.38 Concrete shelter built to protect the turbo-alternators during the war, 1942 (courtesy of the NSW State Rail Authority records, State Archives Collection, 363/76).

2.7.7 Third Phase (1945 – 1983)

After 1945, the 50 Hz plant showed increasing wear with the loss of blades from Nos. 6, 7 and 8 turbines. Work began on the third phase of development, replacing the original 25 Hz plant with the new 50 Hz plant. Between 1945 and 1948, two 50 MW, 33 kV, 50 Hz Parsons turbo-alternators and four Babcock & Wilcox boilers were ordered from Britain (some boiler components were manufactured locally at Mort's Dock). To make way for the new plant, the Nos. 1 and 2 turbo-alternators and Nos. 1 and 2 boilers (the oldest in the 25 Hz section of the powerhouse) were removed, and demolition of the original No. 1 Boiler House began. Alongside this, the construction of a new 6.6 kV 25 Hz Switch House and Control Room also began in 1948. Drawings suggest that the 25 Cycle Switches of the original Switch House were moved to the 1948 Control Room Building around this time, and the original Switch House cycle floor was repopulated with 50 Cycle Switches. Also part of this third phase was the construction of the landmark Chimney Stacks commenced in 1949, and the coal and ash handling structures also underwent considerable changes during the early 1950s.

The construction program was severely delayed by the post-war shortages of steel and other materials and further difficulties were created by labour strikes in the coal industry in 1948 and 1949. The boilers were modified to burn up to 10 per cent oil to compensate for the poor quality and grading of the coal available and two 24,000-gallon (90,850-litre) oil tanks were installed. The efficiency of the 50 Hz plant fell from 16.5 per cent in 1947–48 to 14.9 per cent on 1948–49 because of poor coal, greater use of obsolete plant and excess loading. By 1950, the Nos. 6, 7, and 8 turbines again developed problems with loss of blades (and in some cases, entire rings), and heavy load shedding became necessary. To make matters worse, the 25,000 kVa frequency changer exploded and burned in November 1950. After an unsuccessful repair attempt, it burned out again in May 1951 and did not re-enter service until April 1952.

The first Parsons 50 MW turbo-alternator (No. 1) and new boilers (Nos. 1 and 2) were finally placed in service on 8 April, 15 April and 16 June 1951 respectively, with the boilers occupying a new High Pressure (HP) Boiler House. The second Parsons 50 MW unit, which had already been on site for a year, was to be installed in the original No. 4 turbo-alternator position, which had been transferred to Ultimo to make way for it. The Nos. 3 and 4 boilers, the last remaining from the first phase of White Bay's development, were taken out of service on the 18 July 1952 for transfer to the RC power station at Lithgow. Temporary arrangements were made to provide low-pressure steam from the High Pressure (HP) Boiler House to the No. 5 turbo-alternator, the last remaining 25 Hz turbo-alternator. In late 1952, an additional floor was built onto the roof of the 11 kV Switch House to accommodate a new battery room and staff amenities, as well as an Entertainment Hall.

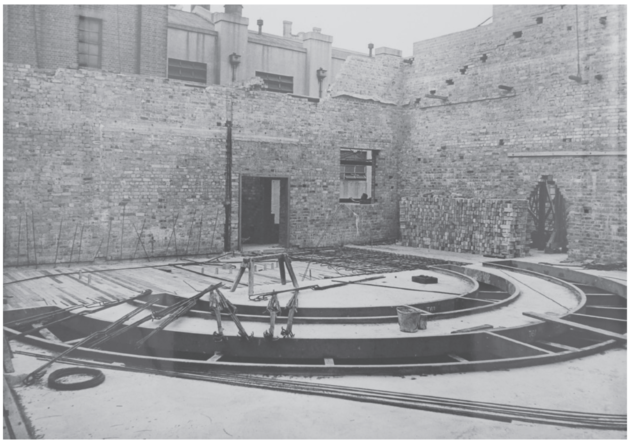


Figure 2.7.39 Construction of the new Control Room, 1949 (courtesy of the Railways Department, E1379).

Figure 2.7.40 Construction of the new Chimney Stacks, 1949 (courtesy of the Railways Department, E1391).

Figure 2.7.41 Construction of the new 6.6kV 25 Hz Switch House and Control Room, 1949 (courtesy of the Railways Department, E1393).

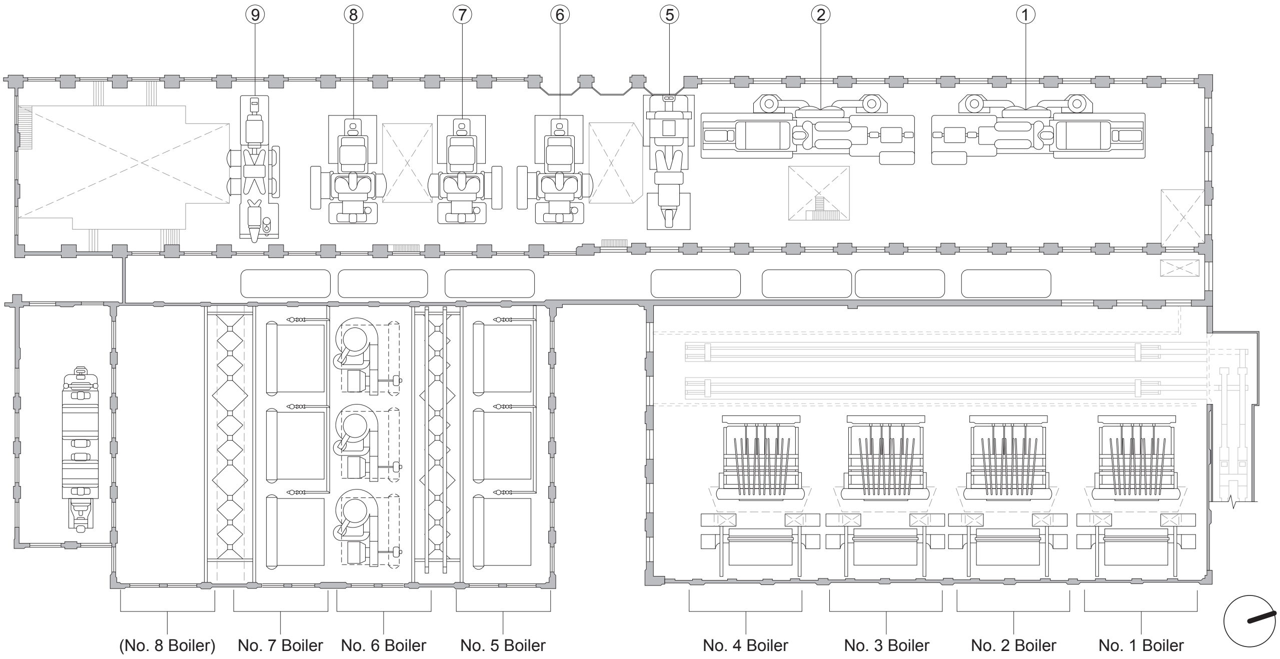


Figure 2.7.42 Diagram of the planned location of the turbo-alternators and boilers as extracted from 1953 plans by the Electricity Commission, K67079. (redrawn by Design 5 – Architects).

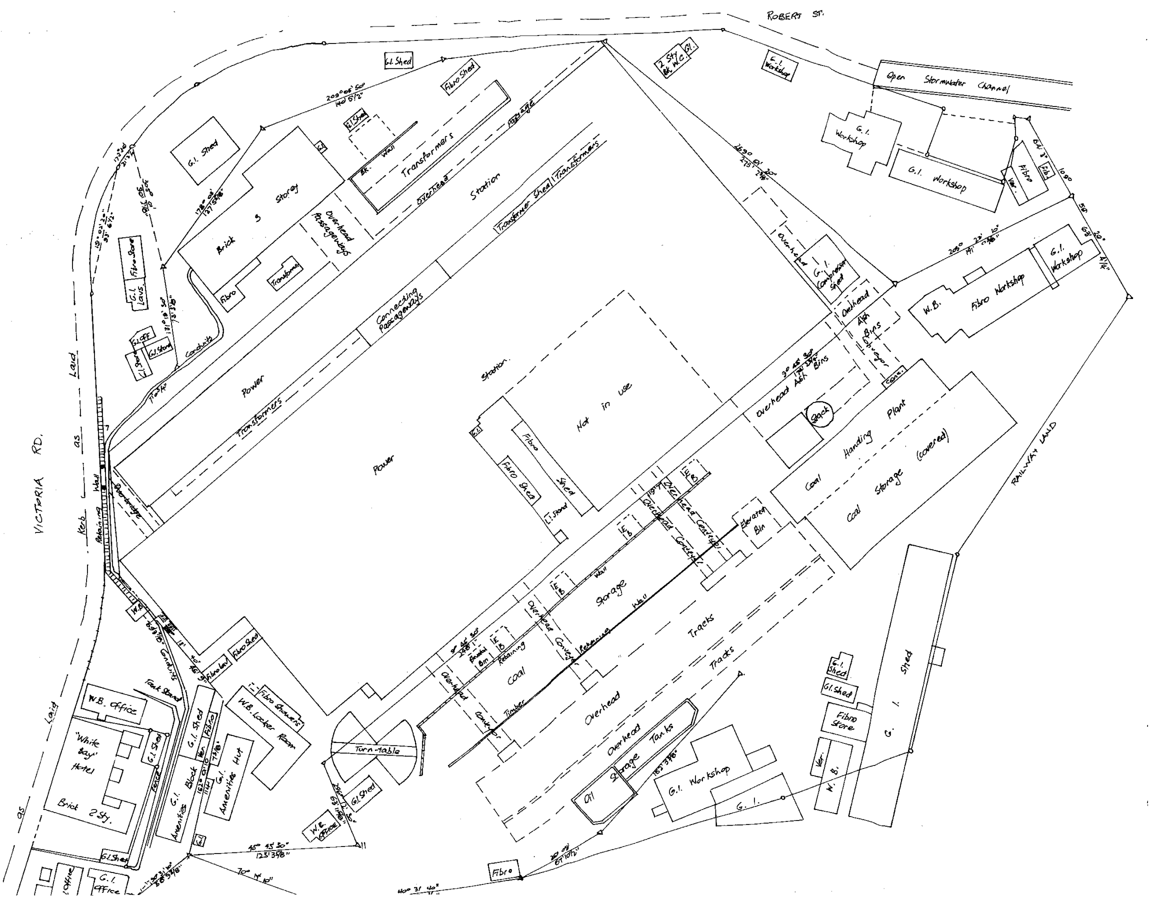


Figure 2.7.43 White Bay Power Station and White Bay Hotel Detailed Survey, July 1953 (courtesy of Placemaking NSW collection, originally from Department of Railways NSW, GEN/108, 12008).

On 1 January 1953, the White Bay Power Station was transferred to the newly formed ECNSW, along with all other RC power stations and associated facilities. The ECNSW also acquired several power stations under construction, and there were chronic shortages of materials and skilled labour. While the completion of the next phase at White Bay was further delayed, the Coal Handling Shed, External Conveyor, and Ash Handling Tower were completed later that same year, and the second 50 MW unit at White Bay was finally commissioned in the second half of 1955. Even so, it could function only as a standby for nearly three years until the new Nos. 3 and 4 boilers came into service in April and June 1958.

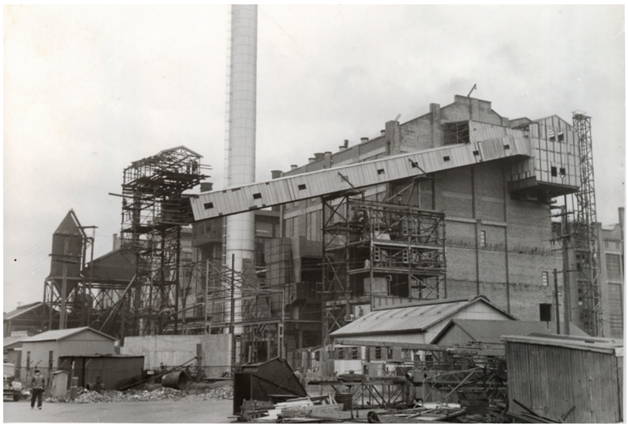


Figure 2.7.44 Construction of the Coal Handling Shed, External Conveyor, and Ash Handling Tower with one complete Chimney Stack, 1953 (courtesy of Inner West Council archives, BRN: 193659).

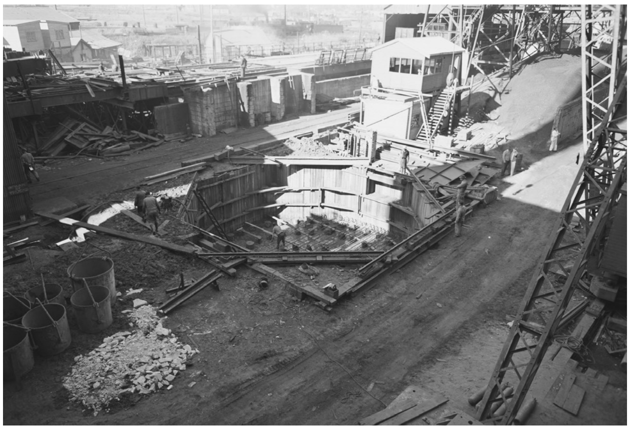


Figure 2.7.47 Construction of the footing for the second Chimney Stack, 1957 (courtesy of NSW State Archives, NRS-20347-1-42-1210-B).

Figure 2.7.45 Construction of the new (third) Boiler House, 1955 (courtesy of NSW State Archives, NRS-20347-1-41-600).

Figure 2.7.48 Construction of the second half of the new (third) Boiler House, 1957 (courtesy of NSW State Archives, NRS-20347-1-42-1210-C).

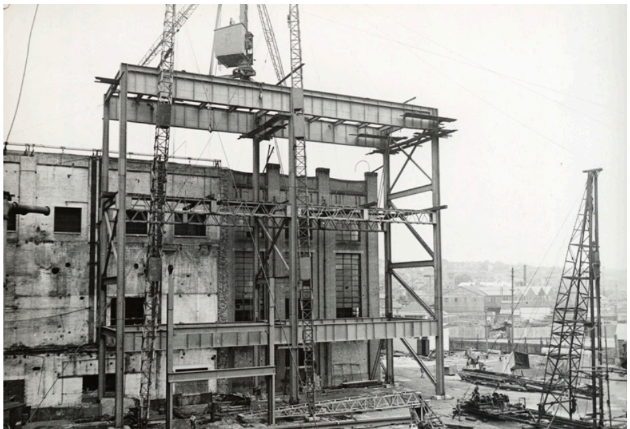


Figure 2.7.46 Construction of the new (third) Boiler House, late 1950s (courtesy of Inner West Council archives, BRN: 193376).

Figure 2.7.49 White Bay Power Station, viewed from Silo, 1958 (courtesy of Powerhouse Museum Archive, ECNSW 01509A).

Earlier in 1958 in the early hours of the morning, the Number Two generator had failed in a sizeable explosion in the north half of the Turbine Hall. The explosion caused an oil fire on the ground floor and left extensive destruction in its wake. George Perin described the aftermath as appearing "*like any terrorist bomb exploded…it looked a mess; it was really depressing…*".[36] Similarly, Alvils Paupe, an assistant in the Control Room at the time, recalls:

> *I came in and I was sort of dumbfounded; I just couldn't understand what had happened, to see all these huge chunks of metal near the other end of the turbine floor, and well, it sort of looked like there'd been a fire, the smell, etc., the polluted air. The whole impression was that something drastic had happened, until you approached further on and saw that one of the generator's turbines was missing. It was in a way somewhat lucky that this happened early in the morning, as the day staff only started work at half past seven and nobody actually was killed. Nobody was killed or injured. It was a very big surprise.*[37]

The completion of the third phase of development followed the removal of the last 25 Hz generator. It brought the capacity of the White Bay Power Station to its maximum of 186 MW. Of this, 86 MW was plant installed during the second development phase from 1925 to 1928. This plant was used only in emergencies after 1958, as the construction of newer, more efficient, and more economical power stations saw White Bay Power Station gradually confine its operations to the nighttime due to reduced demand. The extant low pressure plant was eventually decommissioned in 1975 and subsequently removed, allowing the No. 2 LP Boiler House to be demolished.

During the 1960s–70s, a series of major transformer failures and shortages occurred at newer power stations such as Liddell and Munmorah. This, combined with the operators' strikes in the early 1970s, resulted in White Bay Power Station being partially called back into daytime services. It operated at a reduced capacity (with the closure of administration and the laboratory being moved off-site to Pyrmont), and with a smaller workforce of 100 people. By 1975 however, the demand for power had once again decreased, turbo-alternators 6–9 were removed, and White Bay was once again restricted to nighttime operations.

These reduced operations were further spurred by the surrounding community's shifting perceptions of the plumes of black smoke that emerged from the chimney stacks: once seen during Rozelle / Balmain's industrial peak as a sign of production and efficiency, they were

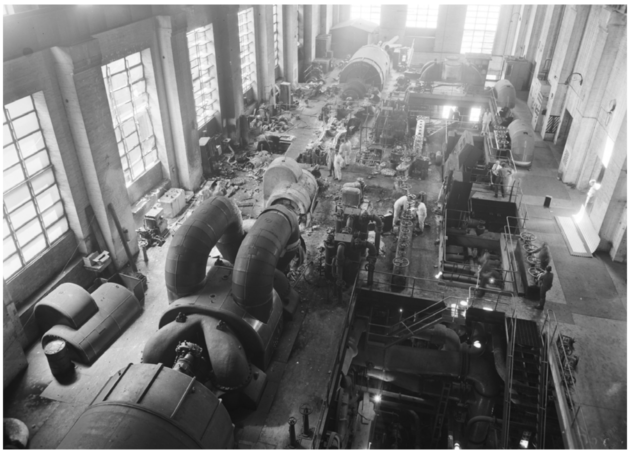


Figure 2.7.50 No. 2 Turbine Failure, 1958 (courtesy of NSW State Archives Collection, NRS-20347-1-42-1428).

Figure 2.7.51 A Japan-bound ship receiving coal, with the White Bay Power Station in the background, 1961 (photograph by John A. Tanner, courtesy of the National Library of Australia, PIC/10555/1261 LOC Box).

Figure 2.7.52 White Bay Power Station (note the lack of smoke from the chimneys during the day), 1972 (courtesy of Pacific Power records).

now viewed disapprovingly as excessive pollution and were thus camouflaged in the night. George Bolliger, who had been a Mechanical Engineer at the station, recalls the covert operations of the station in its later years:

> *...it would be turned off in the early hours of the morning, so that hopefully the commuters going to work wouldn't see the pollution that we were providing. The other aspect of it too was that we had to add, I think it was ammonia to the product that was going up the stack and so you were getting some small degree of acid rain, which again for the local residents' cars wasn't exactly favourable.*[38]

With an ageing workforce and younger workers being drawn to better opportunities at other larger power stations, White Bay's staff numbers also continued to dwindle. Dennis Thompson reiterates the grim outlook of the workers at the time regarding the future of the station:

> *We knew of course that the Metropolitan area was somewhat doomed as far as its power stations were concerned. The coalfield power stations were producing power far more economically than the Metropolitan stations, and also there were environmental pressures. Nobody wanted smoke and grit, dust blowing over the city.*[39]

The two 50 MW units remained in service for peak load and emergency purposes and were last used intensively in 1982 during major plant shortages caused by the Liddell Power Station breakdowns. They were eventually shut down on Christmas Eve of 1983 (the station had also been used for the filming of a television show, *Patrol Boat*, during that same year). White Bay Power Station was eventually (partially) decommissioned in 1984 after 70 years of service, and continued to operate as a substation in the following decade with a growing redundancy. In the late 1980s, the University of Sydney conducted a research project supported by the Australian Research Grants Committee that involved the removal of the power station's condenser to make way for experimental investigation on magneto hydrodynamic (MHD) power generation.[40] The White Bay Power Station ultimately closed in 1994.

Figure 2.7.53   The intersection of Victoria Road with Gordon Street, with the power station, (inactive during the day), 1975 (courtesy of City of Sydney Archives, John Ward Transport Collection, A-01110128).

Figure 2.7.54   The filming of Patrol Boat in the north section of the Boiler House, 1983 (courtesy of NSW State Archives, NRS-20347-1-013589_F).

Figure 2.7.55   White Bay Power Station in 1986 (courtesy of NSW State Archives, NRS-20347-1_cn70012_Q).

2.7.8 From Closure to the Present

White Bay Power Station remained static for several years after closing, while other issues preoccupied the ECNSW. The National Trust of Australia (NSW) began making representations to the ECNSW soon after it closed regarding the preservation of the station for historical reasons, particularly given the relatively good condition of much of the plant. In 1989, the ECNSW commissioned a study and assessment of the heritage significance of Balmain, Pyrmont, and White Bay Power Stations. The resultant report by Don Godden and Associates and Heritage Consultants, entitled "The Significance of White Bay and Balmain Power Stations to Sydney's Industrial Heritage"[41] determined that the White Bay Power Station was the most intact and comprehensive representation of twentieth-century coal-fired electricity generation of the three power stations and recommended that all machinery / relics be conserved in situ and the building conserved. It was also recommended to be the place of relocation of any machinery / relics from the other two power stations.[42] As a result of these considerations, the ECNSW determined to mothball the station for the immediate future and, unless a more immediate solution was forthcoming, to preserve at least one representative set of the installed equipment.

In 1992, the ECNSW adopted the name Pacific Power to handle electricity production at the power stations and in 1995, split off its high voltage electricity transmission network into TransGrid to handle the reticulation of power from various power stations across the state grid.

Difficulties with cost, public safety, and ongoing maintenance meant that the power station was stripped of everything in the late 1980s and early 1990s except those elements identified explicitly for heritage conservation. Even these items were affected by the necessary removal of all asbestos insulation and lagging, especially the surviving boiler.

Figure 2.7.56 White Bay Power Station, 1986 (courtesy of the ECNSW Archives, CN7.0012-1D).

Figure 2.7.58 Aerial view of the decommissioned and closed White Bay Power Station, c. 1995 (courtesy of the Inner West Council Archives, BRN: 184647).

Figure 2.7.57 The Turbine Hall during the decommissioning of the power station, c. 1990s (courtesy of the ECNSW Archives, CN7.0021-J).

Figure 2.7.59 The Boiler House with removed pulverising mills, 1996 (courtesy of the ECNSW Archives, CN7.0020-T).

In 1995, Pacific Power acquired ownership of the station when the ECNSW ceased operations, and White Bay Power Station was added to the NSW Heritage Register in 1999. The Sydney Harbour Foreshore Authority (SHFA) was established by Act of Parliament in January 1999 to be responsible for managing and developing the government-owned parts of the harbour foreshores. It purchased the White Bay Power Station from Pacific Power in June 2000. For a few years after, the power station would be used as the site of events, parties, films (including *Mad Max: Fury Road* and *The Great Gatsby*), media launches, fashion shoots, and other functions. An open day was held in June 2002, and opened the doors of the building to the public, allowing access to the place for people to gain a greater understanding of the building, its spaces, and its importance in the development of Sydney. Social significance questionnaires and feedback forms collected from attendees highlighted the significance of the power station despite its inactivity. A workshop was also held later that year in October, where SHFA conducted an oral history project involving former workers and other professionals involved with the White Bay Power Station. George Bolliger commented on the cultural and social significance of the power station at the time:

> *... when you look at the area as a whole, it represents a part of Sydney that touched on a lot of people's lives, both in terms of the power that was generated from there, but also from the fact that you had people living in the area, working there. A lot of the other industrial-type buildings in the area have been knocked down to make way for housing of various sorts. It shows the nature of that particular suburb, the fact that it was once a working-class suburb, that factories and offices did exist there, that it wasn't solely a place for people to reside and to go and work in the city.*[43]

A Conservation Management Plan was prepared in 2004 by Design 5 – Architects, and later updated in 2013.

Figure 2.7.60 White Bay Power Station after closure used as a set for films and fashion shoots (courtesy of GQ Magazine).

Figure 2.7.62 White Bay Power Station Workshop and Oral History Project with former workers, 2002 (Design 5 – Architects).

Figure 2.7.61 White Bay Power Station: Open Day, 2002 (Design 5 – Architects).

Figure 2.7.63 White Bay Power Station: Open Day, 2011 (photograph by Amie Zar, courtesy of Inner West Council Archives, BRN: 186000).

In February 2011, SHFA held another open day at the White Bay Power Station. This open day proved popular, with tours of the Coal Handling Shed, Boiler House, and Turbine Hall booked out in advance. Additional spaces, including the Entertainment Hall and Administration and Staff Accommodation, were also open for the public to view. The Authority collected over 800 names for notification of future open days.

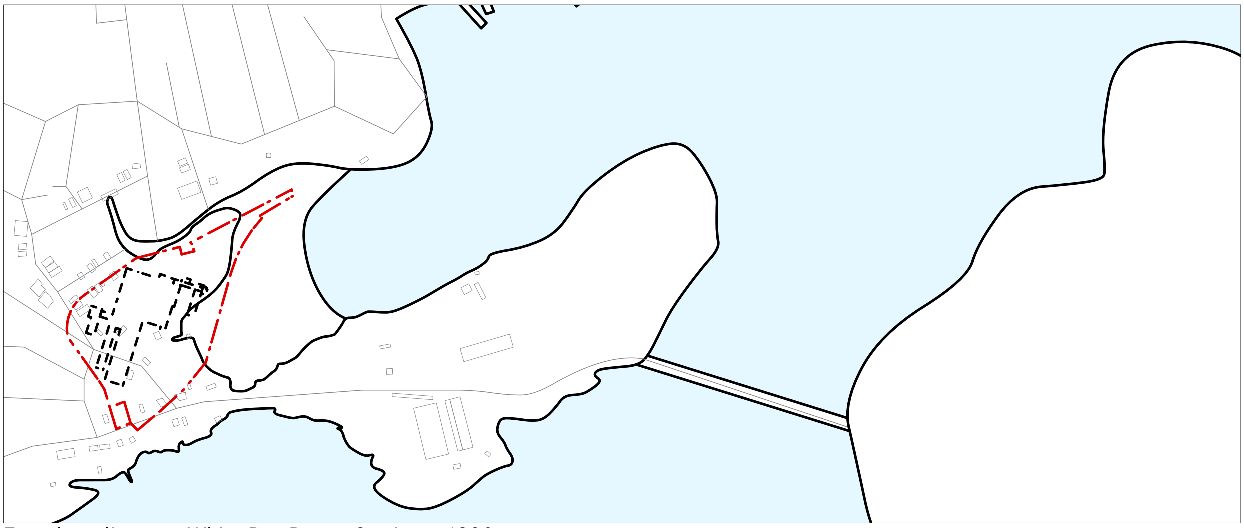
Given the success of this open day, two further open days were held over a weekend in May 2011. The Saturday comprised a talk and tours day where the public could access the Boiler House, Coal Handling Shed, Administration Building and Entertainment Hall and listen to talks by heritage experts. A guided tour provided access to the Turbine Hall and more than 1,000 people took part. The Sunday was aimed towards photographers and provided access within the building for people to spend time taking pictures of the machinery and spaces. The Authority received a significant amount of positive feedback via surveys from the public, who expressed deep enthusiasm for the retention of the building. Much like the responses from the 2002 oral history project, people were against the demolition of the power station and were keen to see it adapted for future use to ensure its longevity whilst maintaining public access to the structure.

In 2015, UrbanGrowth NSW (now Infrastructure NSW) began work on a Transformation Plan for The Bays Precinct.[44] One of its key principles and objectives was to prioritise White Bay Power Station's potential to be transformed into a public space. The resultant call for proposals was met with responses from thirteen consortiums made up from the private sectors, including Google, Lendlease, Mirvac, and Ecoworld. These proposals were eventually deemed unsatisfactory however, and UrbanGrowth NSW itself eventually assumed the role of master developer.

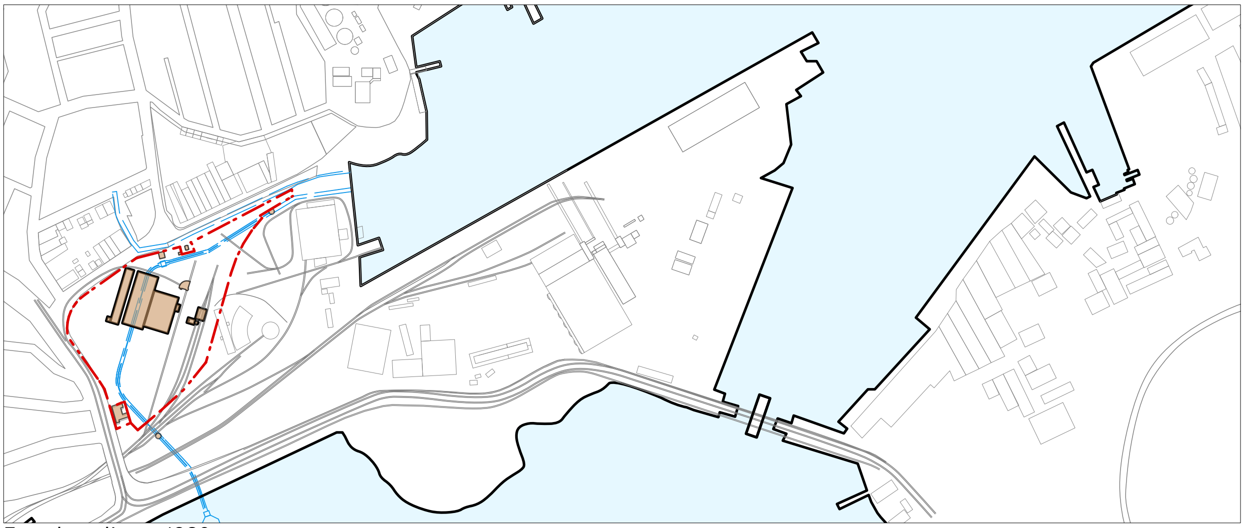
As mentioned in Section 1.6, the NSW Department of Planning, Industry and Environment commenced development of a Bays West Master Plan in 2021. The several framework documents that have emerged from this divide the Bays West into 10 key precincts, with the White Bay Power Station at the focus of the Stage 1 precinct. As part of this development, station excavation and tunnelling for the Bays Metro Station and Sydney Metro West line commenced in 2022.

In 2022, Placemaking NSW (formerly SHFA) commenced major remediation, conservation, and restoration works throughout the White Bay Power Station. This work included removal of hazardous material, addressing safety and structural issues, code compliance, façade cleaning and repair, waterproofing, internal painting, maintenance and preservation of extant machinery and moveable heritage, and reinterpretation of spaces and elements. This ultimately transformed the White Bay Power Station from a dormant shell of a place to becoming a major arts, culture, and community space open to the public. Immediate use included the temporary activation of major spaces for the 24th Biennale of Sydney, the Ministry of Sound Testament, and the Power Up Festival.

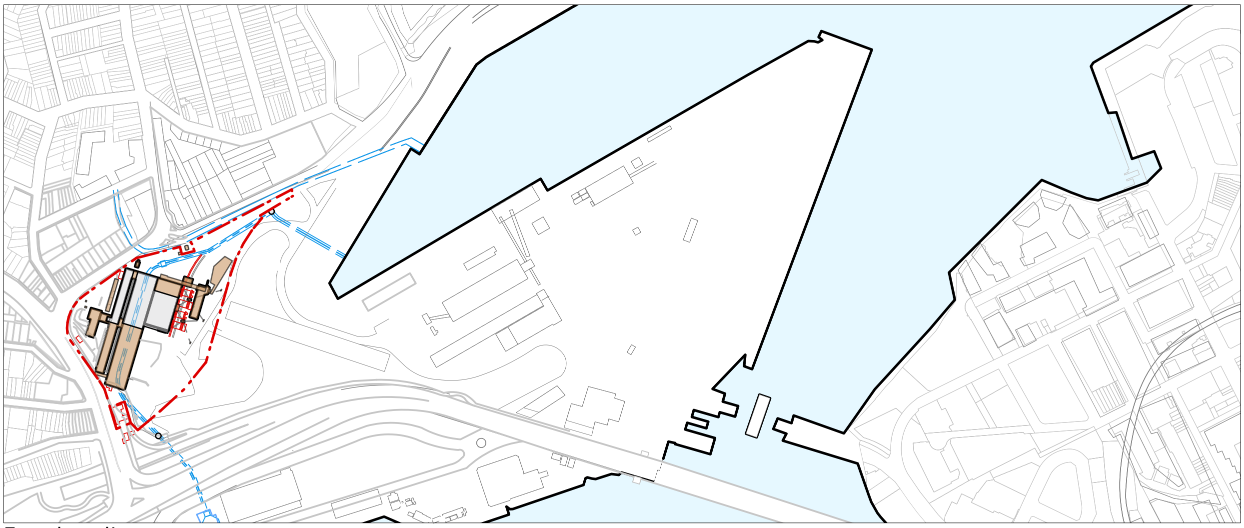
The White Bay Power Station has also since been the recipient of multiple awards for the undertaken works and its activation, including Built Conservation and Judge's Choice at the 2024 National Trust (NSW) Heritage Awards, as well as the Greenway Award at the 2025 Australian Institute of Architects (AIA) NSW Architecture Awards.



Foreshore line, pre-White Bay Power Station, c.1890



Foreshore line, c.1920



Foreshore line, present

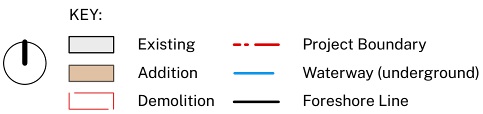
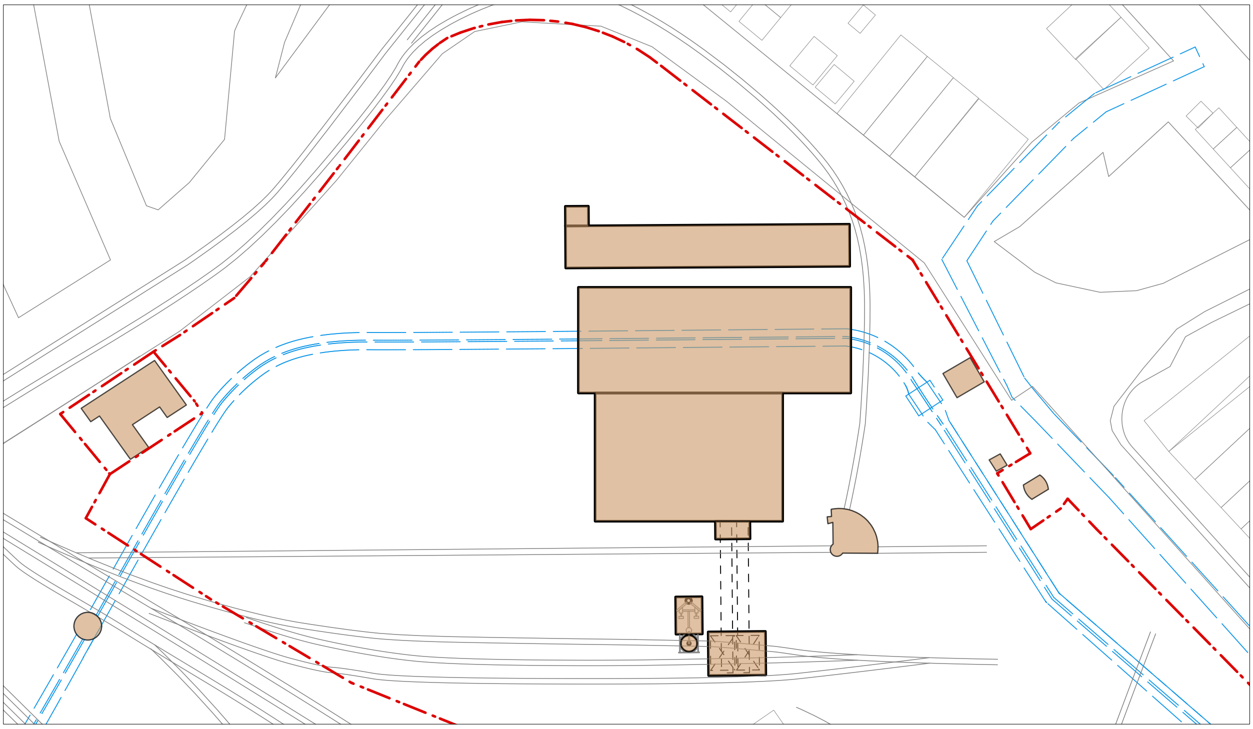
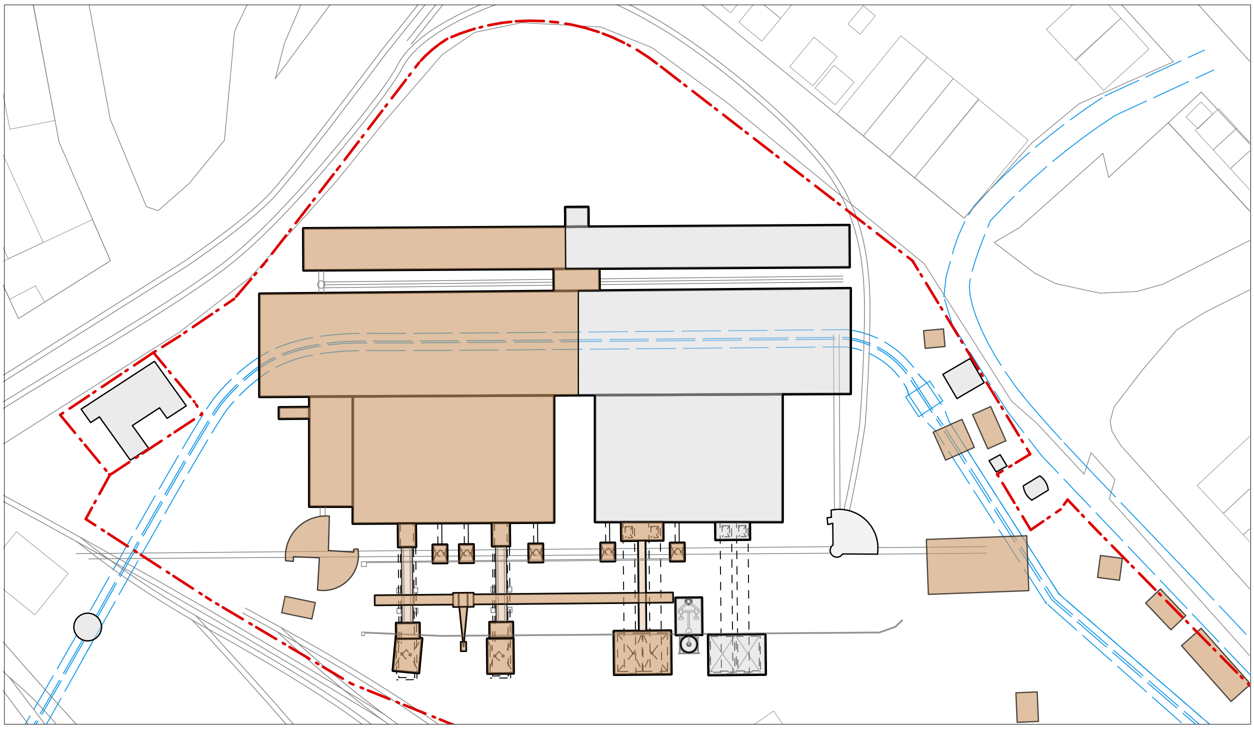


Figure 2.7.64 Foreshore Line Evolution Diagrams



White Bay Power Station - Phase 1
as completed in 1917



White Bay Power Station - Phase 2
as completed in 1928

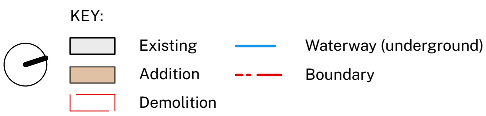
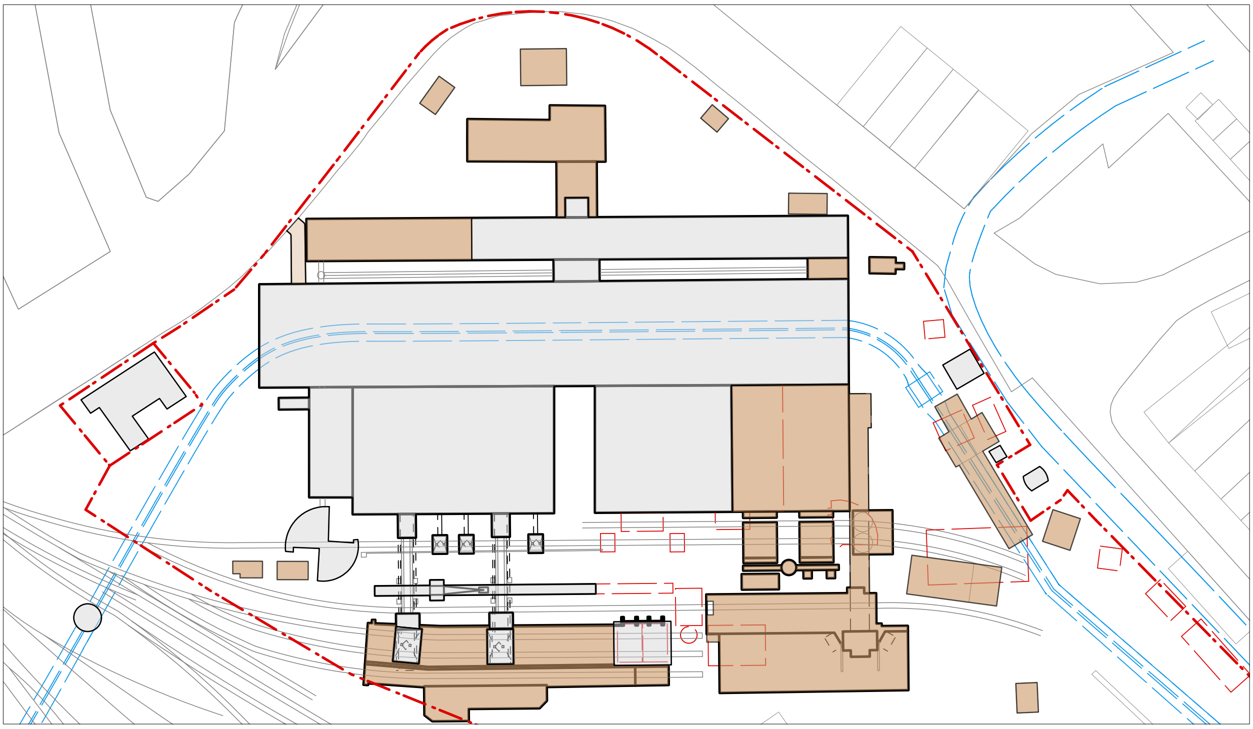
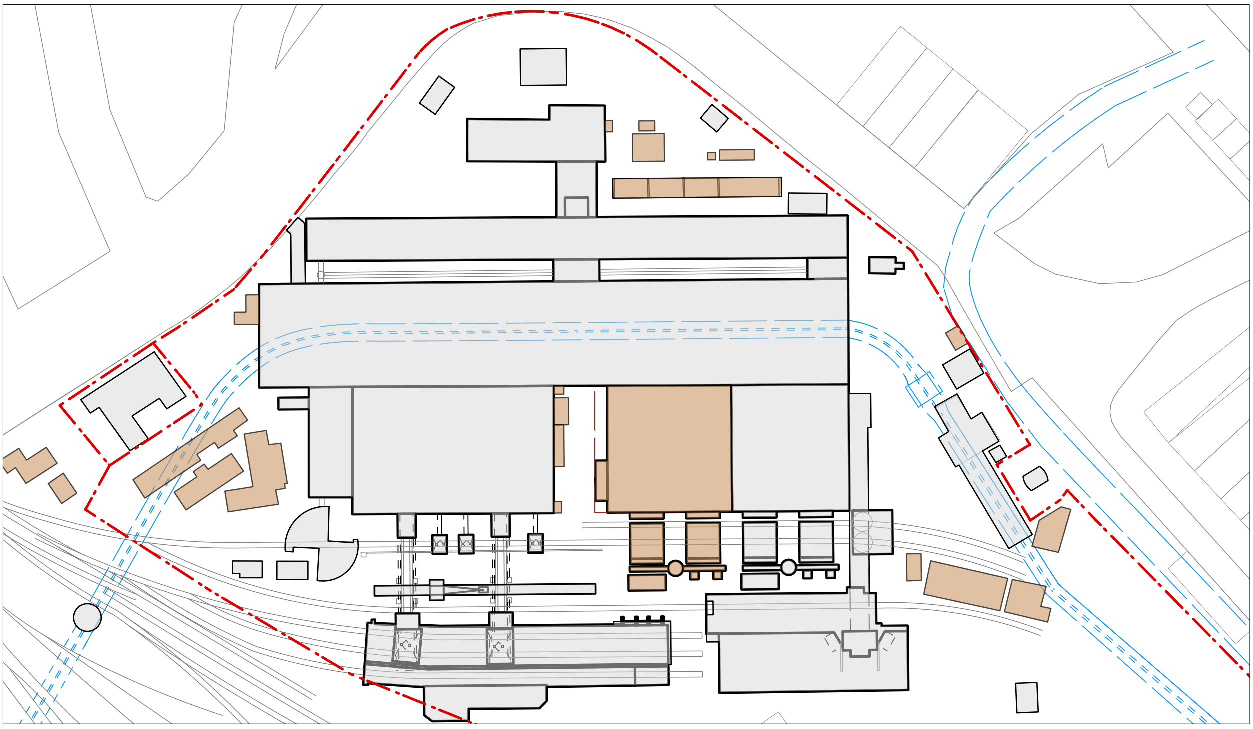


Figure 2.7.65 Evolution Diagrams



White Bay Power Station - Phase 3
as completed in 1953



White Bay Power Station - Phase 4
as completed in 1958

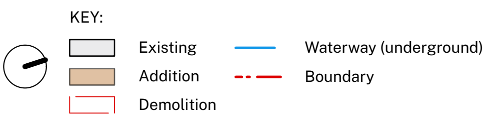
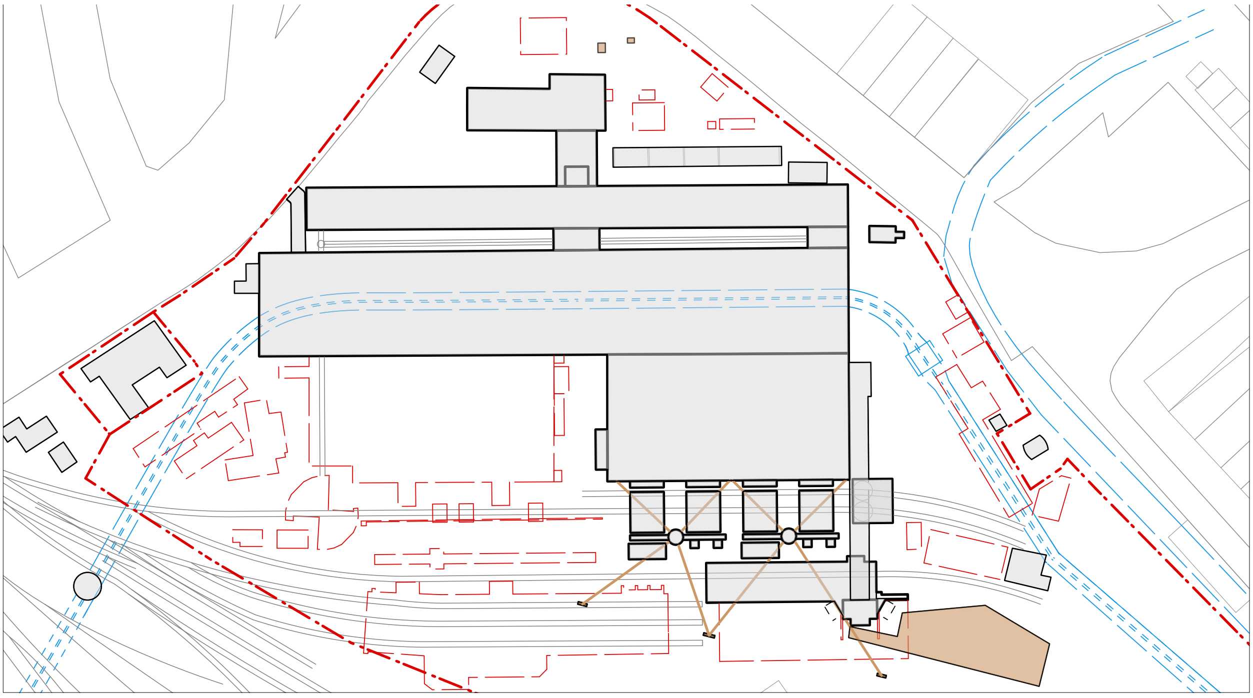
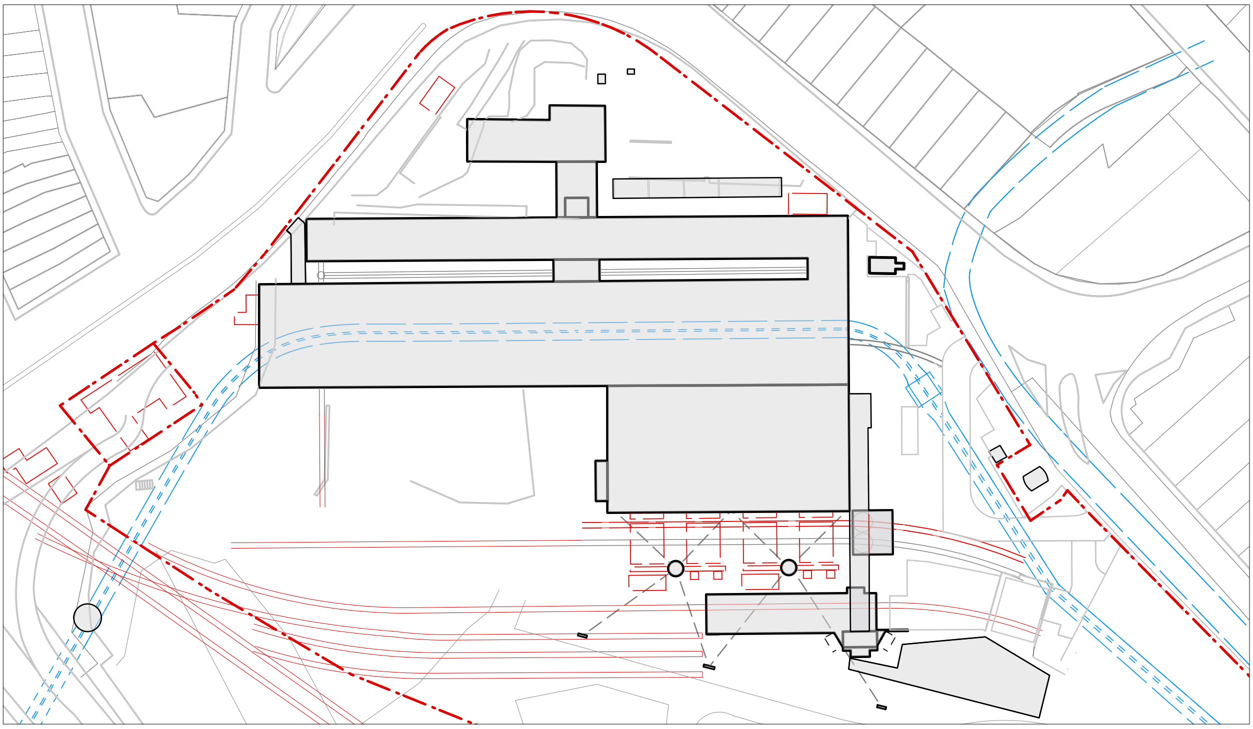


Figure 2.7.66 Evolution Diagrams



White Bay Power Station - later stage
as completed in 1976



White Bay Power Station
current

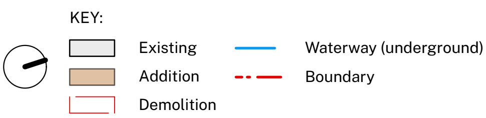


Figure 2.7.67 Evolution Diagrams

2.7.9 White Bay Power Station – Active Years

2.7.9.1 Workforce

Following the modernisation of the power station in the 1950s, and until c.1970s, the White Bay Power Station had a primarily male workforce of 500–600 people, less than 6 of which were women.[45] The workforce comprised a diverse range of trades and arranged in a distinct hierarchy. The trades involved with White Bay included plumbers, carpenters, painters, boilermakers, boiler cleaners, laggers, Steam Plant Attendants, Control Room Operators, clerical people, chemists, engineers, Power Station Assistant Superintendents, Foremen, Dynamo Attendants, etc. As output demand decreased and the power station went into decline, the workforce diminished to around 100 people. Employee numbers continued to decrease in later years due to a combination of lower demand, an ageing workforce going into retirement, and better opportunities at busier power stations. By the time White Bay Power Station ceased operations as a substation, it had only two active employees.[46]

Aboriginal migrants to Sydney living in inner urban communities at Balmain, Glebe and elsewhere, as well as coastal Sydney people living in La Perouse and elsewhere, formed part of the industrial workforce of Sydney in factories and on the docks. Most of these stories are yet to be documented because community research has been limited, and because employment records rarely specify ethnicity. In the 1930s some of Queensland Aboriginal woman Lucy Eatock's sons worked at White Bay Power Station.[47] The family had moved to Sydney in the 1910s and lived around Redfern, Bankstown and Balmain, where a number of other Aboriginal families also lived, and it is unlikely that the Eatocks were the only Aboriginal employees at the power station.[48]

2.7.9.2 Machinery

The machinery that was key to operations at the White Bay Power Station was often imported from overseas – namely, from England and USA. They included:

- Babcock & Wilcox Boilers: ordered from USA.
- Willans & Robinson Turbines: ordered from Rugby, England.
- Dick, Kerr & Co. Alternators: ordered from Preston, England (and one later transferred from Ultimo).
- C.A. Parsons & Co. Turbo-Alternators: ordered from Newcastle upon Tyne, England.
- Curtis General Electric Turbo-Alternators: ordered from General Electric in Schenectady, New York, USA.
- English Electric Turbo-Alternators: ordered from English Electric, Australia.
- Thomson-Houston Alternators: ordered from England.
- Gibson, Battle & Co. power transmission equipment: ordered from Sydney, Australia.
- Ingersoll Rand Air Compressors: ordered from Ingersoll Rand Australia.
- Standard Waygood Ltd. turbo-alternators: ordered from Clyde, Australia.
- Morison & Bearby Ltd. gantry cranes: ordered from Newcastle, Australia.

2.7.9.3 Maintenance

Maintenance was a "*constant, relentless necessity*"[49] at the White Bay Power Station. As the power station concluded its construction phases, construction workers were gradually shifted into maintenance work to meet demands. This work ranged from routine upkeep and inspections across the power station, to more specialised types of work. Bryan Heywood, who worked

Figure 2.7.68 C.A. Parsons Turbo-Alternator, 1956 (courtesy of NSW State Archives, NRS-20347-1-42-1007).

Figure 2.7.69 White Bay Power Station workers in the workshop, 1959 (courtesy of NSW State Archives, NRS-20347-1_001950_B).

as a Maintenance Engineer in the late fifties, then as an Efficiency Engineer in the late sixties, and eventually as the Chief Engineer Operations, recalls the major maintenance procedures:

The maintenance entailed stripping down, re-assembling, replacing damaged parts, re-assembling boiler turbine units, ancillary pumping units, the boilers themselves. The grates were chain grate stokers in the 'A' section – they had to be stripped out and replaced after wear and tear. Similarly with the pulverised fuel mills in the 'B' section boilers. All the moving sections of the plant, just like a motorcar had to be serviced, greased and oil changed. They were overhauled generally every year, but – again, like a motorcar – you sometimes just change the oil and grease it and other times you get in and do a bit of adjustment and every now and then you might have to strip an engine.[50]

Though procedural, maintenance and repairs were often times a painstaking process. A single missing turbine blade would mean that the entire rotor would have to be re-bladed in a process that would take weeks.[51] Similarly, when a fault occurred in the circuitry and conduits, workers would have to check vast networks of pyrotenax cables for damage, sometimes taking days to locate the break.

Maintenance was not only limited to ensuring the functionality of machinery and equipment – it also involved running tests and collecting samples to ensure that the station was operating at optimum efficiency. The Chemistry Laboratory team located in the Administration and Staff Accommodation (AS 4.15–4.17) and a three-person Efficiency Section were responsible for running daily water tests, oil analysis,and monitoring coal usage and fuel quality.

Technical officer Jim Henderson recalls an anecdote from this process:

Taking fuel samples was an atrocious job. The way you did the job was to open a valve, which released a supply of compressed air into the line, which was carrying the pulverised fuel. The flow of compressed air then blanked off the opening where you put your sampling probe in, but if for some reason the compressed air didn't flow at the rate it was intended to flow, or something happened that the valve stuck and you didn't get the flow, as soon as you opened the valve to put your tester in, out came the pulverised fuel, which was coal that was ground to around about talcum powder consistency.

I think the first time I did it was the time I had one of the riggers with me and he was standing on the platform when I didn't open the compressed air valve properly, opened the other valve to put my test in, and the rigger then had a black face, black front and black everything as he was covered with pulverised fuel. I wasn't much better, but he got more of it than I did. After that, the riggers refused to go up whenever I was doing it, so that was a case of "Go up yourself and do it, Jim; we're staying down here – we are going to stay clean; we don't trust you."[52]

More unusual forms of maintenance included the deep-sea dives for the periodic inspection of the channels through which seawater was drawn in from Rozelle Bay and expelled into White Bay. The walls of the channel had to be inspected for build-up and marine growth

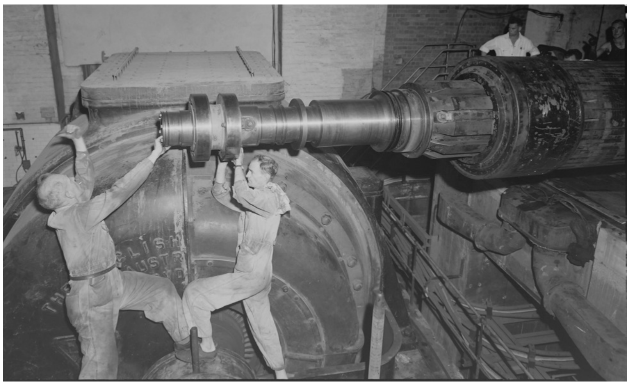


Figure 2.7.70 White Bay Power Station workers assembling the second turbo-alternator rotor, 1956 (courtesy of the ECNSW Archives, 00979D).

Figure 2.7.71 Workers conducting maintenance on the turbine blades, 1954 (courtesy of the ECNSW Archives, 00378A).

Figure 2.7.72 Workers at the power station, 1961 (courtesy of NSW State Archives, NRS-20347-1-42-3246).

which had to be removed. Henderson recounts the spectacle of these inspections:

> *The way they inspected the canals, they'd blank off the entrance from the harbour end and then use a diver in the full deep sea diving-type gear with the metal helmet, suit, pump on the boiler house floor, and down he'd go and do his inspection with just about everyone standing around, watching what was going on. It was the copper type of helmet with the round face that had to be sprayed with water before he put it on, and then screwed up and the full rubber suit. A deep-sea dive is something you don't see very often in the city, so it was something really worth observing.*[53]

Pigeons were also a frequent issue throughout the power station as Henderson remembers:

> *Because the grain terminal was on the wharves, the pigeons were attracted to the grain, so they had a good feed there and then of course White Bay was a haven of opportunity for them to build nests in warm locations. So the roof of the boiler house and parts of the turbine house were favourite nesting places. They got their food on the wharf and then they came back in and settled down for the night in there and dropped their droppings all over the top of the boilers and all over the station, which then had to be cleaned up, of course.*
>
> *Periodically, Don would decide it was time to get rid of some of the pigeons and he kept the shotgun in his office and, generally, one of the labourers was assigned the job over the weekend, eliminating the pigeons. The word soon got around the station and people who enjoyed pigeon pie either made a point of arriving on a Saturday or Sunday afternoon to collect what they could of the fallen birds on the floor. I often wonder how many holes were put in the roof with the pigeon shoots.*[54]

Figure 2.7.73   Marine Growth records from canal inspections, 1957 (courtesy of the State Archive of NSW, NRS-20347-1-001287_A, NRS-20347-1-001287_C).

2.7.9.4   Work Health and Safety

Work health and safety at the White Bay Power Station were ostensibly well-managed during its operating years – although still considered "*appalling in today's language*."[55] A Safety Committee would hold regular meetings, and systems were implemented to reduce the risk of injury. Nevertheless, when it came to general safety practices and training, the system was largely dependent on word of mouth and informal induction. Given the nature of the work, the power station was rife with hazards and not without incident: a nurse was stationed on site, treating many minor injuries including cuts, burns, falls, foreign bodies in the eyes, etc.

The risk of severe injury or death from high voltage and superheated steam was also a constant concern. Dennis Thompson recalls a particularly hazardous area in the White Bay Power Station:

> *The 11Kv switch rooms – my first impressions were those of horror. The buzz bars and connections to the switchgear were almost exposed copper bars. Walking through them, one felt almost intimidated by the innocent looking bars that nevertheless could have dealt a lethal blow if one had touched them. You always kept your hands in your pockets when you walked through those rooms...*[56]

David Logie comments on the risk of superheated steam:

> *The steam is a problem...if a boiler had a leak with super-heated steam, you can't actually see the steam, not where it's come out – 20 feet away it might condense, because it cools down and suddenly it condenses, but where it comes out of a leak you can't see it; it's like a knife... it can actually cut through skin and bone, it is that bad. It's also deafening, so the minute you hear the deafening roar you make sure you are very careful where you walk in the big power stations because you could have a leak anywhere.*[57]

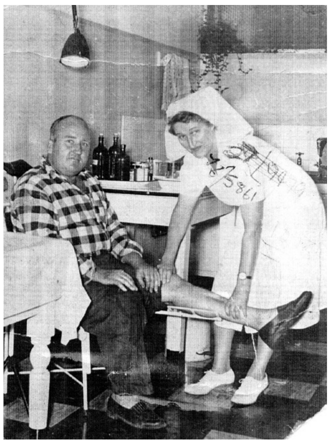


Figure 2.7.74   Nurse Cameron treating a power station worker, 1979 (courtesy of the Eitel Camilleri private collection).

Working conditions were noted in multiple accounts to be exhausting and debilitating due to immense heat, coal dust and ash, noise, and asbestos, which had detrimental long-term impacts on the workers. Eitel Camilleri describes the gruelling work environment:

> *The heat was horrible, especially in summer, because it is a locked place; it's not a big place…if you're working in between the boilers, like putting lights between the boilers or putting plugs or anything like that, the heat was intense, because you were in between two boilers and the heat was unbelievable in the old section. It was very, very hot, very hot.*[58]

Although additional standards and PPE were introduced around the 1970s–80s, for many workers, the change came too late. Paul Agnew, who became a Safety Officer in the late 1980s, suggests that "*95% of the older members of staff would all have a hearing deficiency, including myself*,"[59] and that "*there were a lot of health-related problems with older people in power stations, whether it be silicosis as a result of coal dust, whether it be noise-induced deafness, through to the worst of all: the asbestos-related diseases.*"[60] Bryan Heywood recalls the grim futility of these impacts:

> *We had one engineer, Erik Grunseit, who was very much involved in developing all the safety processes for the asbestos treatment and he developed the systems for handling, the protective gear, etc. and he was one of our first victims for mesothelioma, a tragedy. Unfortunately, there was a lethal element in power station work that people did not understand at the time.*[61]

John Ferrett also notes the lack of understanding of health and safety risks associated with asbestos:

> *If we did re-working of pipe working, we would have to take that asbestos off. The boilermakers used to get a bottle of milk a day to drink; they reckoned that would fix it, but no one seemed to worry about it. It was just that white stuff and it was powder and it made a mess, and get on with the job. I'm still fearful of what it might do in later life. Some of the blokes that I worked with have already gone down with it. They were a bit older than what I am.*[62]

David Logie affirms this notion:

> *…we used to throw it at each other, but we never knew what it was. We knew it was asbestos, we did not know its potential for injury. It was a matter of ignorance – no one told us, no one knew most probably and as a result, we just treated it as stuff that you used, either to work with or to throw at each other.*[63]

2.7.9.5 Trade Union Activity

Union activity was integral to power station workers throughout the twentieth century. David Logie notes:

> *The metropolitan power stations were a hot bed of industrial action, there was always something going on. There was always disputes festering, or developing, or coming to a head and being argued and being resolved. [White Bay] was one of those places where it was constant.*[64]

At White Bay, whilst there was the occasional political dispute, most of the issues revolved around pay, safety, or disciplinary matters.[65] The trades each had their own unions, and the Australian Railway Union (ARU) united many workers. The lasting impacts of the 1917 Railway Strike and Depression continued throughout the mid-twentieth century, with a campaign to transition from a 40-hour to a 35-hour work week occupying much of the union activity. Industrial movement at the power station began in the 1960s and initially involved staff operating the station in place of the workers. As later rules prevented this substitution, periodic blackouts were enforced due to insufficient output during strikes.

Brian Dunnett describes the headstrong nature of the union members at White Bay: "*In an industrial sense they were a fairly militant group of people that demanded some sort of respect*."[66] Nevertheless, the workplace was noted to be relatively friendly,[67] and workers formed steady friendships and enjoyed social activities and events. An example of this worker solidarity came in the aftermath of the Glebe Dole Riot in 1932 when many people were arrested after protests against government changes to dole requirements. Among them was Noel Eatock, an Aboriginal worker and unionist at the power station. After his arrest, unions in nearby industries raised money for the "Eatock Defence Fund."[68] Unions and worker solidarity also supported the Aboriginal rights movement. Aboriginal dock workers at nearby Millers Point in the 1920s formed the first national Aboriginal-run civil rights organisation (the Australian Aborigines Progressive Association), and from the 1960s unions directly supported Aboriginal rights activists and organisations, including Tranby College in nearby Glebe.[69]

By the 1980s, the militancy that characterised union activity at White Bay had faded into the background, and the number of workers had decreased considerably. George Bolliger noted that the satisfaction of working conditions and pay had gone up, and the unions were less inclined to go on strike:

> *…it was more like a graveyard in some ways [in] that most of the people had long since left, and there was only really a skeleton crew remaining…at that stage it was a case of everyone was reasonably happy.*[70]

2.7.9.6 Social Life

During its earlier, more active years, White Bay Power Station "*had been [a] lively place, full of memorable characters, social activities – and social distinctions too*."[71] Whilst some have described White Bay as characterised by a "*village atmosphere*,"[72] workers recall that certain parts of the station were run with a rigour and discipline more akin to that of ships:

> *…because most of the steam personnel, like the steam engineers and the steam operators, were all ex-ship engineers, they grew up with ships and the way ships were run, and they'd come into power stations and then they would virtually run them along the lines of a ship.*[73]

Paul Agnew affirms this notion:

> *A lot of the plant operating staff were ex-merchant seamen and to them they were virtually still on board ship. And I guess parts of the power station are very similar to the engine room of a ship, where you've got coal-fired boilers and steam turbines and all those sorts of things. The brass was polished everyday, just in case Mr. Keetch or Mr. Woolnough came for a walk around – it had to all be sparkling and shiny. It was very common to hear people at White Bay say they were going ashore. Now, considering the power station was ashore, it struck me as very strange, initially.*[74]

The Amenities Hall, now known as the Entertainment Hall, was the heart of the station's social activity. For the workers, it was a meeting place that was very much "*alive, a place for nourishment and entertainment*,"[75] with a performance stage and walls lined with murals. Here, the Social Committee organised various recreational and social activities for the workers. They procured playing cards, billiard tables, and table tennis tables for regular lunchtime entertainment and arranged for other events such as annual Picnic Days, flower arrangement competitions, and monthly shows and concerts (often performed by the workers). Eitel Camilleri recalls these concerts:

> *…a lot of the staff did play instruments, like we had a bloke [who] played the trumpet, a bloke by the name of we used to call him 'Spider Nugen' he used to play the drums, there was Jack Court his name was. Jack Court was the storeman he used to play the piano well. He also used to play the fiddle and sometimes he used to conduct performances solo on the violin, which he was pretty good.*[76]

Figure 2.7.75 White Bay Power Station general personnel, 1954 (courtesy of the ECNSW Archives, 00378C).

Figure 2.7.76 A Flower Competition taking place in the Entertainment Hall, 1959 (courtesy of NSW State Archives, NRS-20347-1-42-2275).

Figure 2.7.77 Workers playing checkers together in the Entertainment Hall, date unknown (courtesy of the Pacific Power collection).

Figure 2.7.78 A concert by the workers taking place in the Entertainment Hall, 1958 (courtesy of NSW State Archives, NRS-20347-1-42-1653_N).

It was during these various activities and events that the distinctive hierarchy of the different groups of workers would temporarily dissolve – table tennis was one key instance of this, as Dennis Thompson explains:

> *They had in-house and knockout competitions, and Lyle [Power Station Superintendent] would always take part in those, and, in this regard, you'd say it was certainly not part of the upstairs-downstairs culture. That's about the only area that I'm aware of that there was any real mixing.*[77]

Similarly, Steve Rickard describes the competitive atmosphere amongst the workers:

> *…set up to be a games room for lunchtime entertainment and there was about six table tennis tables set up in the room from my memory of it – if you were good at table tennis, you were in the inside. Lunchtime competitions were organised by the Power Station Superintendent who was an exceptionally good player. He would always pick his partner, which you could almost be assured was the second best player in the power station. There were other good players – Kevin Gleeson and I usually teamed up – we never won a competition, but we were always runner-up.… I was the up and comer. I was the young bloke who was improving all the time – I probably ranked about sixth when I started, but by the time I left the power station I reckon I could have challenged them all, but never Woolnough, but that was probably out of respect.*[78]

Alongside the Entertainment Hall, workers would also gather at the top of the 1912–1927 Switch House where the old control room had been converted into a carpet bowls room – the lines for these carpet bowls remain visible today.

By the 1980s, the diminishing workforce and increasing redundancy of the White Bay Power Station saw the mid-twentieth century's social vigour gradually decline. By then, the Power Station was what Bolliger describes as "*effectively what you could call an old men's home… the people that were there, for the most part, were in their mid-to-late-50s and they were just filling in time really, to seeing out the end of their time at that particular site.*"[79] The White Bay Hotel, too, had become increasingly isolated. Eitel Camilleri recalled his time as one of the final remnants of the workforce, before he left in 1990:

> *The final days of White Bay was that we remained there. We were two fitters, two mates, and a cleaner. That's all there was. Then Abby McDowell, who was the other fitter, he became of age and finished and the other cleaner, who was cleaning the control room at the time, he retired too and was left me and George Clockey. That's the only two which were left at the end.*[80]

Figure 2.7.79 The worker audience at a concert in the Entertainment Hall, 1958 (courtesy of NSW State Archives, NRS-20347-1-42-1653_K).

Figure 2.7.80 Playing Table Tennis in the Entertainment Hall (courtesy of Pacific Power collection).

Figure 2.7.81 The retirement of Mr Egan, 1968 (courtesy of NSW State Archives, NRS-20347-1-23-8577).

Figure 2.7.82 Retirement gathering, date unknown (courtesy of private Eitel Camilleri collection).

2.7.9.7 Local Community

The character of the locality of White Bay Power Station underwent extensive changes throughout the twentieth century, from the construction of the power station to its eventual decommissioning and closure. At the peak of the power station's activities in the 1940s, the Rozelle / Balmain area was still defined by the extensive industrial activity, and its population largely comprised a "*pretty poor, extremely working class.*"[81] Most of these residents worked in the area and commute was primarily via horse and buggy, and later, trams and buses.

In the 1960s, a wave of writers, artists, filmmakers and students were drawn to the Balmain area by its location adjacent to the city, its character, historic built fabric, and affordable housing. By the 1970s, maritime and heavy industries had begun to relocate, leaving large stretches of vacant waterfront sites, and the gentrification of Rozelle / Balmain began in earnest. As the area's social and ideological nature continued to shift, this "*gradually gave way to a second wave of wealthy professionals and empty nesters hungry for a harbour view*."[82] Balmain began to develop into rows of expensive, dense houses, as "*Balmain's once closely-knit community became increasingly divided between rich and poor*."[83] In 1992, not long before the closure of White Bay Power Station, a regional development plan allowing high-rise, high-density housing on nearby former industrial sites was approved. In spite of the development trends, the local community draws upon its industrial history as part of its identity. Lisa Willett expresses a widely held outlook on the Balmain-Rozelle area's connection to the past:

> *I think for me what makes it different to other suburbs is – though it's fast disappearing – that when you walk around, or drive around, there's remnants of a past working-class era and that's what I really like. From the worker's cottages to the power station to the old docks and it's just the ferries and the old hotels. Some of them have been converted into houses. But you just walk around and there's just that history. It's just lovely.*[84]

Figure 2.7.83 The rails transporting coal with White Bay Hotel and White Bay Power Station on the right and the Rozelle / Balmain area in the background, 1979 (courtesy of the State Archives of NSW, NRS-22818-4-T003157_12).

2.7.9.8 Key Figures of the White Bay Power Station

Hugo Stossel – Architect (1905–2002)

The White Bay Power Station was constructed under the Railway Commmission. Later building additions were largely designed by architects working as part of the Railway Commission and the Electricity Commission and were not individually attributed. The possible sole exception to this is the architect for the southern half of the third Boiler House – Hungarian Modernist émigré Hugo Stossel.

Stossel was born in 1905 in Barczanfalva, Hungary (now Barsana, Romania) and completed his secondary education in Budapest. He later studied at the Faculty of Architecture in Rome for one year, before completing his diploma in 1932 at the Faculty of Architecture at the University of Vienna. Between 1933 and 1938, Stossel worked on various projects – predominantly larger in scale – in Bucharest, Romania, including theatre interiors, apartment blocks, office buildings, and large-scale residential buildings.

Figure 2.7.84 Hugo Stossel, Hungarian Modernist architect who designed the second, south half of the third Boiler House, completed in 1957 (courtesy of Caroline Simpson collections, P.D. Georgiades thesis, 1992).

Like many other émigré architects, Stossel fled from Nazism just prior to the outbreak of World War II, arriving in Sydney as a refugee in 1939. He began working as a project manager for construction firm Cody & Willis, Builders & Contractors, primarily on government projects. Stossel also operated a private practice H. Stossel architect (later Hugo Stossel & Associates in 1961, and H. Stossel & Partners in 1972), and designed Australia's first prefabricated steel house in Ryde in 1946 in association / collaboration with Moses Eisner. Stossel registered for practice in 1947, and in the early post-war years, designed multiple modernist houses for fellow émigrés, such as the Eisner House in Warrawee (1948), the Nossal residence in Wahroonga (1948), his own Stossel Residence in Lindfield (1950), and the Kafka Residence in Roseville (1952). Further into the 1950s, Stossel worked on various larger-scale residential and commercial buildings, including the St Ursula apartments in Elizabeth Bay (1954), an office and factory for James S. Samson Pty Ltd in Gladesville (1957), the Yarrabeen Gardens, Darling Point (1957), the Broadwaters apartments, and the Narabeen High School (1959). Notably in 1954, Stossel presented a scheme for an opera house located in Wynyard Square for Sydney Symphonic Orchestra conductor Eugene Goossens, who referred to the building scheme as his "dream child."[85]

As a result of Stossel's past work managing buildings for Cody & Willis – during which the company constructed part of the Bunnerong Power Station – the Chief Architect of the Electricity Commission commissioned Stossel for further work on power stations – one of which was the south half of the third Boiler House at White Bay Power Station, which housed boilers No. 3 and No. 4.[86] Stossel also worked on Wallerawang Power Station, as well as the turbine house and administration building at Tallawarra Power Station.[87]

Stossel's projects in the later years of his career continued to comprise large-scale multi-residential and commercial buildings, including the Bayview Apartments (1969), the Wynyard Travelodge (1969), the CAGA Centre skyscraper (completed 1977), and the Airport Hilton in Arncliffe (1980). He was last registered in NSW in 1991. Stossel eventually moved to England, then to Vienna, before returning to England where he spent the remainder of his life. He eventually passed away in Cheltenham, Gloucestershire in 2002.

Andrew Lomnici – Artist (1922–1990)

Andrew Lomnici (also known as Andy or Andreas) was a Hungarian artist who painted the murals in the Entertainment Hall. Born in Hungary in 1922, Lomnici worked mainly in theatre, painting scenery and designing costumes for operas, plays, and film productions.[88]

Lomnici and his wife migrated to Australia in the 1940s (sources conflict as to whether this was during 1940 or 1949), after which he took up other jobs – as a gardener and teacher – but continued to paint for commissions and competitions. Later in the mid-1950s, Lomnici was commissioned to paint the nine landscape murals in the Entertainment Hall that would become the backdrop to social and recreational life at the power station.

Lomnici was primarily known for his oil paintings of landscapes, though he did also complete some portraits during his career. Lomnici is also known for designing and building the iconic "Big Trout" statue in Adaminaby in 1973.[89]

Figure 2.7.85 Andrew Lomnici working on one of the nine murals in the Entertainment Hall, 1954 (courtesy of NSW State Archives, NRS-20347-1-41-378_E).

2.7.10 The White Bay Hotel (1860s–1915, 1916–2008)

The first White Bay Hotel was built in the early 1860s by John Carr upon land owned by Robert Symonds, and was located on the corner of Victoria Road and Lilyfield Road (then known as Crescent Street and later Weston Road and Abattoir Road respectively, refer to Figure 2.6.81).

Given the proximity to working-class houses and the abattoir and rendering works, the Hotel was ideally placed for both residents and the workers at these facilities.[90] From 1910, the Commissioner of Railways resumed the area to build the Power Station. In January 1911, the site of the original Hotel was transferred from the owners Charles Brown and John Both to the Railways. The New South Wales Government Railways then leased the Hotel back to the Licensee.

In 1915, the original Hotel was demolished to build new rail lines servicing the Power Station. In compensation to the Hotel owners, the Railways Department provided a new parcel of land approximately 100 metres north along Victoria Road. This site was leased to Tooth & Co., and the new White Bay Hotel was subsequently built in 1916.[91] Tooth & Co. engaged various architects for their hotel designs and the architect of the White Bay Hotel is unknown. Designs were led by a Tooth & Co. style guide and architectural fashions with the White Bay Hotel typical of the Tooth & Co. hotel design of the time. An undated covenant stated that the Hotel was to "*be built from stone or brick and was to have cost not less than 5000 pounds*."[92] The Hotel was leased by the Railways to Tooth & Co. between 1916 and 1933, and Tooth & Co. purchased the Hotel outright in October 1934.[93]

With the building of the power station and the first stage operational by 1917, the new Hotel saw much of its trade from the workers at the power station.

2.7.10.1 The White Bay Hotel – Active Years

The Liquor Referendum and resulting liquor licensing laws introduced in 1916 forced public bars to close at 6pm. Known as the 6 o'clock Swill, it was the last-minute rush to buy drinks at the end of the working day. Introduced to partly improve public morals, and get more men home to their wives earlier, it often fuelled an hour-long speed drinking session.[94]

The 6 o'clock swill left a tangible mark on most pubs and hotels during this time. To cater for the hour-long drinking session, hotels would make modifications to their establishments in order to serve as many men as quickly as possible. Likely as a result of this, the White Bay Hotel underwent internal alterations in 1925 and

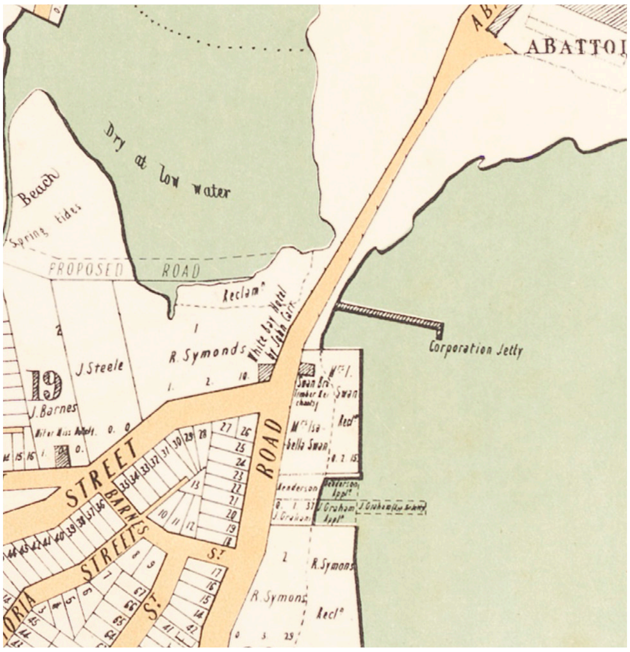


Figure 2.7.86 Extract from the Map of the Municipality of Balmain, Parish of Petersham map showing the location of the original White Bay Hotel at the corner of Abattoir Road and Weston Street, 1886 (courtesy of the State Library of NSW Archives, CN MAF 811.1821/1883/1 , Z/M4 811.1821/1883/1, map originally published by Higinbotham, Robinson & Harrison).

Figure 2.7.87 Original White Bay Hotel at corner of Victoria Road and Lilyfield Road, 1885 (previously Weston Street and Abattoir Road) (courtesy of Noel Butlin Archives, ANU, digital file N417-656-146).

Figure 2.7.88 View from Victoria Road (Quirk Street) looking to Western Road (Victoria Road), showing Power Station on the left and the new White Bay Hotel on the right, c. 1927 (courtesy of the Government Printing office, CN 1-13143).

Figure 2.7.89 Aerial view of the White Bay Power Station, with the Hotel to its right, 1930 (courtesy of City of Sydney Archives, A-00007796, SRC352, 020/020600).

Figure 2.7.90 White Bay Hotel, 1937 (courtesy of Noel Butlin Archives, ANU, N417-656-147).

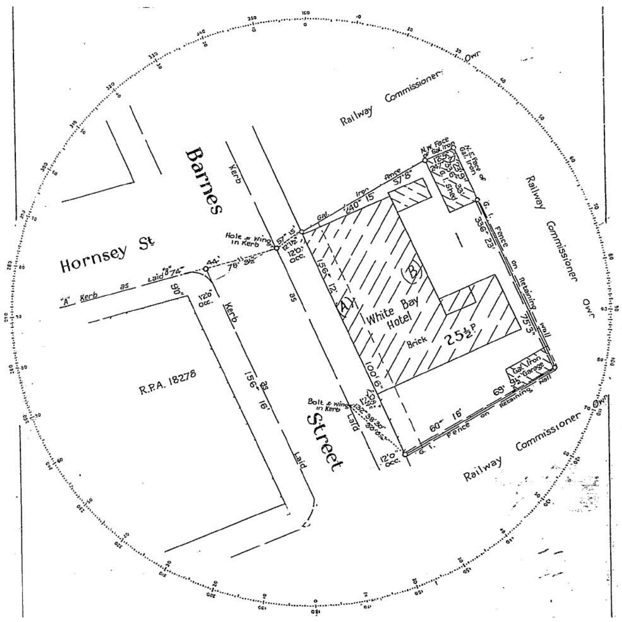


Figure 2.7.91 White Bay Hotel Detailed Survey, 26 October 1933 (courtesy of Appendix C, Report prepared by Responsive Environmental Solution, for Cole and Manning Media in July 2006).

again in 1933 to maximise the length of the bar to allow maximum service before the 6pm closing time. After these restrictions ceased in 1950, the Hotel's opening hours were extended, once in 1955 to 7:30am–6:30pm[95] and again in 1963 to 7:00am–7:00pm.[96]

Under the ownership of Tooth and Co., the Hotel had various commercial leases and licensees from 1933 to 1990.[97] The White Bay Hotel was a key location associated with the social life at the power station, and workers would often go during their lunch breaks, after work, or sometimes sneak through a gap in the fence leading to the back of the pub during work.[98] Edna, a long-term Rozelle resident, remembers the Hotel as *"one of the most famous pubs around, because it had its clientele right next door."* [99] The Hotel also represented an aspect of social history with a more somber context. Veterans that had served during the Second World War made up a substantial group in the workforce, and David Logie notes that whilst mutual support existed, there were still problems of alcoholism:

> *Some of the people at White Bay were definitely, I think, leftovers from the war. They were struggling a bit from the experiences in the war. That would be manifested in the amount of times you'd see them going up to the pub. Mostly they had alcohol problems. So, yeah, the war had an impact at different levels.*
>
> *There's an old story at White Bay that when it was no longer a power station, they decided to move the Charge Engineer, who is the top steam man, mechanical man in the power station. He's on shift, he's virtually an operator and they had their own little office. It was like a little building, a wooden structure built in a corner, and when the place was decommissioned as a power station they decided to get rid of this little building and they dismantled it and pulled it away, and when they pulled it away from the wall, from the floor to the ceiling behind this was full of empty rum bottles and obviously they'd been drunk at work. This was possibly indicative of the problem of some of the people that they had.*[100]

Similarly, Brian Nickless remembers going to the Hotel in the morning for breakfast and being *"horrified at the amount of people that were drinking there at that time of day."* [101] John Ferrett also recalls how the Hotel went hand in hand with the Power Station:

> *White Bay and the White Bay pub – one went with the other – that was the starting of the shift and the ending of the shift for many people. It used to be a very early opener. They'd get off the bus and have a drink to start*

the morning and after they'd finished at night, that's where they'd go to wash the dust out of their throat, which was more important than the staffing, I think, but it is a landmark.[102]

As industrial businesses in the area began to close, the White Bay Power Station workers became the primary source of income for the Hotel. Parking restrictions further isolated the Hotel, and the diminishing number of workers at the power station as well as its isolated location eventually saw the Hotel go into decline.

2.7.10.2 The White Bay Hotel – Decline

Coinciding with the closure of the White Bay Power Station in 1982, the decline of the pub was assured. Road developments around the site, including the busy Victoria Road, and City West Link, all but landlocked the pub from passing trade.

In 1990, Tooth and Co. Limited sold the site to Blairgrove Pty Limited, and the White Bay Hotel closed its doors in 1992. The landmark nature of the building meant that it was mainly used to hold billboards, which became the sole income source.

In June 2006, the building owner James Manning lodged a development application with the Leichhardt Council (Inner West Council) for a restaurant and bar in the basement and ground floor and the erection of a four-storey office building at the rear of the Hotel. The proposal also included a car park and an advertising panel on the side of the Hotel.[103]

The White Bay Hotel was destroyed by fire on 5 September, 2008 and demolished that same year. In June 2010, the site was acquired by the Sydney Harbour Foreshore Authority and is now partly occupied by footpath along Victoria Road and landscaping as part of the recent Rozelle Interchange redevelopment.

Figure 2.7.92 White Bay Hotel from South Yard, Administration and Staff Accommodation on right, 2002 (Design 5 – Architects)

Figure 2.7.93 Signage outside White Bay Hotel, with White Bay Power Station in the background, 1949 (courtesy of NSW State Archives, NRS-21573-2-3-PR1259).

Figure 2.7.94 White Bay Hotel showing billboard advertising, 2000 (courtesy of National Library of Australia, PIC NL38730-05 frame 8 LOC NL38730-05).

Figure 2.7.95 White Bay Hotel front view, 26 January 2008 (courtesy of J Bar, available through Wikimedia Commons, file: White Bay Hotel.jpg).

2.7.11 The White Bay Power Station – Detailed Timeline

Throughout this section, rated output is given in the current measure of Megawatts. The first reference to this use is found in the Report of the Electricity Commission of NSW for the period 22 May 1950 to 30 June 1952.[104]

Year	Event
1912–1917	• The first half of the Turbine Hall, the Switch House and one Boiler House built in brick is designed in the Drawing Office of New South Wales Government Railways. • White Bay Hotel is built c. 1916. • 1 Turbo-Alternator 7.5MW 25Hz & Boiler are installed on temporary foundations.
1914–1918	• World War I
1913	• July: the first boiler and turbo-alternator set are steam tested on site.
1917	• Building is completed. First stage of White Bay Power Station becomes operational in May. • Three 25Hz, 66kV turbo-alternators are installed at positions 1, 2, and 4 (two Willans & Robinson turbines coupled to Dick Kerr alternators and one Curtis General Electric turbo-alternator, respectively). • Four Babcock & Wilcox boilers are installed.
1918	• Willans & Robinson-Dick Kerr machine are transferred from Ultimo to the No. 3 position at White Bay. • Rated output is 28.5MW.
1919	• One 7.5MW turbo-alternator is transferred to Newcastle.
1923	• The second stage of work at White Bay Power Station commences, including the No. 2 Boiler House, constructed of steel framing and reinforced concrete. • Two 22MW 50Hz turbo-alternators are installed. • Rated output is 63.75MW.
1925	• White Bay Power Station becomes the RC system's main station for 50Hz generation. • White Bay Hotel alterations (to increase bar capacity). • The Ultimo and White Bay Power Stations are operated and controlled as a unified system.
1926	• An additional 22MW English Electric turbo-alternator is installed to meet the increasing loading supply to the Sydney City Council.

Figure 2.7.96 White Bay Power Station under construction, 1912 (courtesy of Powerhouse Museum Archive).

Figure 2.7.97 White Bay Power Station during Turbine Hall construction, 1913 (courtesy of Powerhouse Museum Archive).

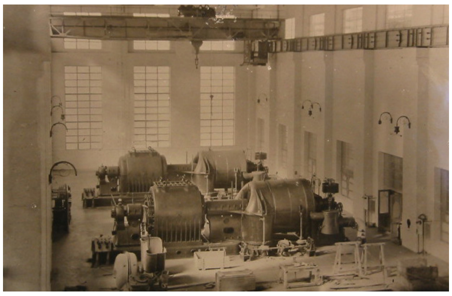


Figure 2.7.98 Nos. 1 & 2 Turbo-Alternators being installed, 1916 (courtesy of Powerhouse Museum).

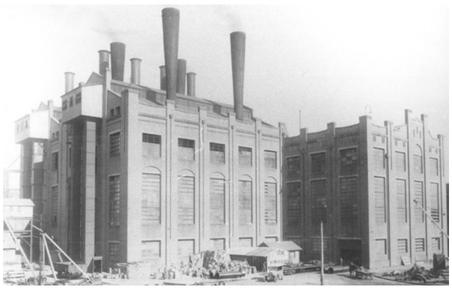


Figure 2.7.99 First Boiler House and Turbine Hall completed and operational in 1917 (courtesy of Mitchell Library, SLNSW).

Figure 2.7.100 Parsons 22,000 kW Turbo Alternator installed (No. 9), 1926 (Design 5 collection).

Year	Event
1927	• Two additional 18.75MW turbo-alternators are installed.
1928	• Five 50Hz units are installed to meet increased demand. • Rated output is 86MW.
1929–1939	• The Great Depression
1929	• January: Bunnerong Power Station is opened to supply Sydney Municipal Council. • Bulk sales of electricity from White Bay cease.
1931	• 7500 kW frequency charger is transferred to Zara Street Power Station (Newcastle).
1933	• White Bay Hotel alterations (to increase bar capacity).
1939–1945	• World War II. No new building – planning for modernisation.
1939–1940	• The 7.5kVa frequency converter is replaced with a 25,000kVa unit. From here on, the 25Hz generators at White Bay were used mainly for peak periods and standby purposes.
1939–1941	• The RC systems in Sydney, Newcastle, and Lithgow are connected.
1942	• Reinforced concrete shelters, blast walls and equipment covers are installed at White Bay as a precaution against air raids.
1944	• No. 1 alternator is disconnected from its turbine and placed in service as a synchronous condenser. • Air raid shelters for the equipment are progressively removed.
1945–1951	• The third stage of works at White Bay Power Station commence, involving the demolition of the No. 1 Boiler House and construction of the 6.6kV 25 Hz Switch House and Control Room. • Nos. 1 and 2 turbo-alternators and boilers are removed. • 1948: Two 50MW 33kV 50Hz Parsons turbo-alternators and four Babcock & Wilcox boilers are ordered from the UK.
1948–1949	• Labour strikes in the coal industry slow construction and cause coal shortages.
1948	• Construction of the first (northern) Chimney Stack begins. • Construction of a new 6.6 kV 25 Hz Switch House and Control Room begins.

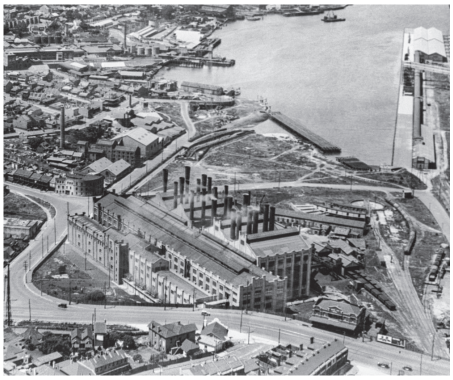


Figure 2.7.101 White Bay Power Station, c. 1930 (courtesy of City of Sydney Archives, SRC352).

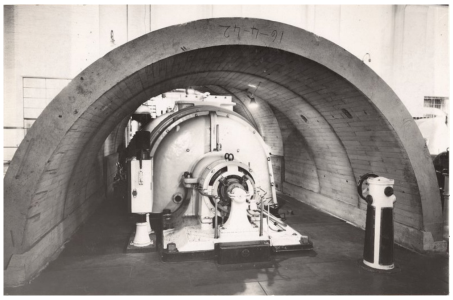


Figure 2.7.102 Air raid shelter for the turbines during World War II, 1942 (courtesy of NSW State Archives, NRS-17420-2-4-363/076).

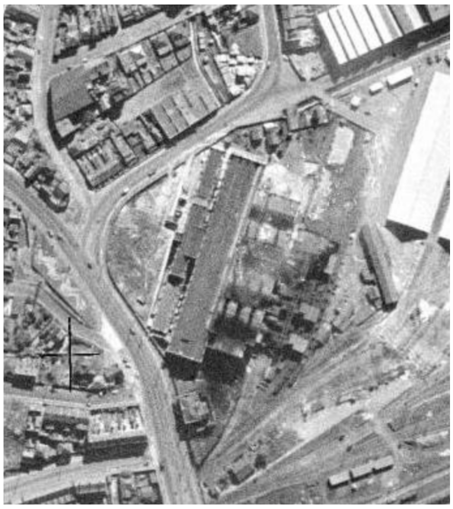


Figure 2.7.103 Aerial view of White Bay Power Station, 1943 (courtesy of NSW Historical Imagery).

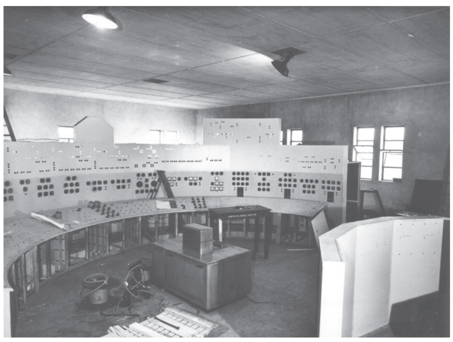


Figure 2.7.104 Progress with new Control Room, 1950 (courtesy of Placemaking NSW, E1938).

Year	Event
1949	• Boilers are modified to burn up to 10 per cent oil due to coal shortages. 24,000-gallon oil tanks installed.
1950	• The Electricity Commission of New South Wales (ECNSW) is established. • Nos. 6, 7, and 8 turbines develop problems with a loss of blades, necessitating heavy load shedding. • November: 25,000kVa frequency convertor explodes.
1951–1953	• The first half of a new steel-framed boiler house (No. 3) replaces the No. 1 Boiler House. • The first 50MW turbo-alternator (No. 1) and new boilers (No. 1 and 2) are placed into service, with the boilers occupying a new HP Boiler House (No. 3). • c.1951: a new (the current) Ash Handling Tower is constructed. • The Coal Handling Shed, Dry Coal Store, External Conveyor, and Transfer House connecting to the new Boiler House are built. • The new Control Room Building is completed.
1951	• May: 25,000kVa frequency convertor explodes again and goes out of service.
1952	• An additional floor is built onto the roof of the 11Kv Switch House to accommodate a new battery room and Amenities Hall (later known as Entertainment Hall). • April: 25,000kVa frequency convertor re-enters service. • 18 July: The Nos. 3 and 4 boilers are taken out of service for transfer to Lithgow.
1953	• 1 January: White Bay Power Station is transferred to the ECNSW. • The northern chimney stack with associated precipitators and fans is completed • Construction commences on the second half of the new boiler house.
1955	• Entertainment Hall built on top of Switch House (based on signed murals by Andrew Lomnici) • A second Parsons 50MW turbo-alternator at White Bay is commissioned but on standby.
1958–1975	• The (No. 2) LP Boiler House and 86MW system are used only for emergencies.

Figure 2.7.105 Aerial View showing construction of the No. 3 Boiler House, 1955 (courtesy of NSW Historical Imagery).

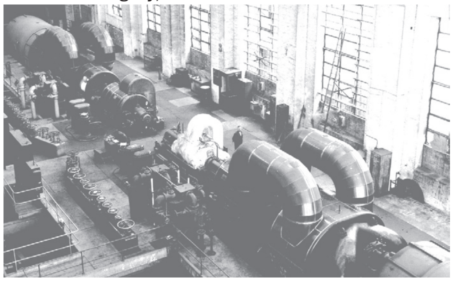


Figure 2.7.106 Parsons 50MW Turbo-Alternators in 1957 (courtesy of Pacific Power archives).

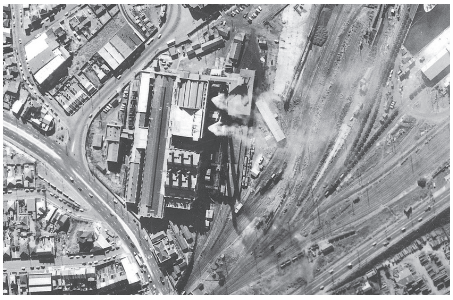


Figure 2.7.107 Aerial view showing 1958 Boiler House is complete and operational – see smoke from both chimney stacks (courtesy of NSW Land Registry Services).

Figure 2.7.108 White Bay Power Station, 1967 (courtesy of NSW State Railway Authority Archives, 235/1-89, 363/82).

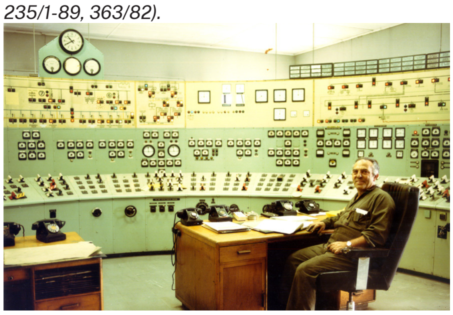


Figure 2.7.109 The 1948 Control Room, with Eitel (courtesy of Eitel Camilleri private collection).

Year	Event
1958	• No. 3 & 4 boilers commissioned but delayed due to chronic skilled labour and material shortages. • The No. 2 generator explodes and is repaired. • The rated output is now 186MW. • The second chimney stack (south) with associated precipitators and fans is completed.
1967	• Both chimney stacks upgraded with guy wires and vibration dampers.
1975	• The LP system is decommissioned.
1976	• The No. 2 Boiler House is demolished.
1982	• The Liddell Power Station suffers plant shortages. • The two 50MW units are used intensively.
1983	• Christmas Eve: the power station shuts down.
1984	• White Bay Power Station is decommissioned after 70 years of service.
1985	• White Bay Power Station is brought into service as a 133 / 33kV substation.
1992	• ECNSW becomes Pacific Power and Transgrid.
1994	• White Bay Power Station closes as a substation.
1995	• The place is decommissioned in line with the principles and recommendations of the White Bay Power Station Asset Management Plan (1995). • The principal components of one set of power generation, coal handling and associated facilities are left intact, while the rest are sold.
1996	• An asbestos removal program is undertaken. • The precipitators are removed.
1999	• Sydney Harbour Foreshore Authority (SHFA) is established.
2000	• June: SHFA purchases White Bay Power Station from Pacific Power. • The place is used for events, parties, films, media launches and other functions.
2002	• June: Community Open Day • October: Workshop with oral history project
2004–2023	• The place is unavailable to the public due to safety concerns outside of limited and highly controlled tours.
2008	• 5 September: a fire destroys White Bay Hotel and it is demolished.

Figure 2.7.110 White Bay Hotel fire aftermath (courtesy of Daily Telegraph, 8 September, 2008).

Figure 2.7.111 Workshop with former workers, 28 October, 2002 (Design 5 – Architects).

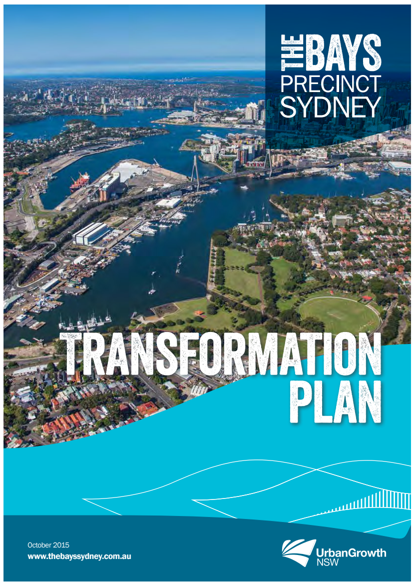


Figure 2.7.112 The Bays Precinct Transformation Plan, 2015 (courtesy of Infrastructure NSW (then UrbanGrowth NSW), The Bays Precinct Transformation Plan).

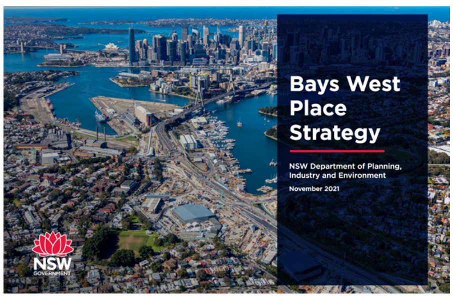


Figure 2.7.113 Bays West Place Strategy, 2021 (courtesy of NSW Planning Portal, Bays West Place Strategy).

Year	Event
2009–2010	• June 2009–March 2010: State Government establishes the Bays Precinct Community Reference Group (CRG). • First stage in public consultation for the future use of Bays Precinct and White Bay Power Station.
2010	• June: SHFA purchases White Bay Hotel and the site is cleared of debris.
2011	• February and May: Community Open Days are held.
2013	• White Bay Cruise Terminal opens
2015	• The State Government invites expressions of interest for the reuse of the White Bay Power Station and the surrounding precinct. Thirteen consortia have submitted proposals for the reuse of the White Bay Power Station. This included a major proposal by Google and Lend Lease. • UrbanGrowth NSW releases the Transformation Plan, the first of a series of major actions to the White Bay Power Station.
2021	• Bays West Place Strategy public consultation for application rezoning is conducted.
2022	• Conservation works on White Bay Power Station commences
2022	• NSW Department of Planning, Industry and Environment exhibits the Bays West Place Strategy and the Bays West Stage 1 Rezoning Proposal is finalised.
2022/23	• Remediation works commence.
2023	• Activation works commence. • September: the White Bay Power Station is announced as the host of the 24th Biennale of Sydney.
2024	• March–June: the 24th Biennale of Sydney is held at the White Bay Power Station. • This represents a start of a new chapter for the site. One that was formerly and industrial power station accessed only by workers, to an arts and culture facility with wide public access.

Figure 2.7.114 Announcement of White Bay as the location for the 24th Biennale of Sydney (courtesy of the Biennale of Sydney).

2.8 COMPARATIVE ANALYSIS

2.8.1 Introduction

White Bay Power Station was Sydney's longest serving and most prominently sited power station that remains standing today. It was active from 1913 to 1983 (and until 1994 as a substation), for a period of 70 years. Although the Pyrmont Station was in longer service, from 1904 to 1983, its buildings have been largely demolished.

Comparative analysis is undertaken to establish the level and nature of cultural significance of White Bay Power Station. It compares White Bay to remnant examples of industrial sites, including power stations, both in Australia and overseas. These sites are either in use for production activities, have been abandoned, or adaptively reused for various cultural, creative, community, and ecological benefits. As such, these examples not only attest to the significance of the White Bay Power Station, but also emphasise its potential as a valued place for future adaptive reuse.

For comparative purposes, the active dates of other key Sydney power stations and their current status are given in the table on the right. The majority were demolished at the end of the twentieth century, further demonstrating the rarity of White Bay Power Station.

Power Station	Active Period	Current Status
Redfern Municipal Electric Light Station	1891–Twentieth Century	Multi-use: offices and residences
Ultimo Power Station	1899–1963	Powerhouse Museum
Pyrmont 'A' Station	1902–1949	Demolished (1950s, 1991)
Balmain Power Station	1909–1976	Demolished (1998)
White Bay Power Station	**1913–1983**	**Temporary activation**
Cockatoo Island	1918–1991	Decommissioned, cultural events and heritage interpretation
Bunnerong 'A' Station	1929–1973	Demolished (1987)
Bunnerong 'B' Station	1939–1975	Demolished (1987)
Pyrmont 'B' Station	1946–1983	Demolished (1991)

SUMMARY LIST OF COMPARABLE BUILDINGS

National Examples			
Building Name	**Former Use**	**Reuse**	**Location**
Powerhouse Museum (Ultimo Powerhouse)	Power Station	Museum by Lionel Glendenning, 1988 Architectus and Durbach Block Jaggers Architects, 2022 (ongoing)	Ultimo, NSW
Casula Powerhouse (Liverpool Powerhouse)	Power Station	Arts Centre by Tonkin Zulaikha, 2008	Casula, NSW
Museum of Fire (Penrith Power Station)	Power Station	Firefighting Museum by Historic Fire Engine Association, 1986	Penrith, NSW
Port Kembla Power Station	Power Station	Demolished, 1998	Port Kembla, NSW
Walka Water Works (Maitland Power Station)	Power Station	Dismantled in 1978, the place was reused as Recreation and Wildlife Reserve, 1984	Maitland, NSW
Wangi Power Station	Power Station	Decommissioned in 1986, subject to redevelopment proposals since 1990s	Wangi Wangi, NSW
Brisbane Powerhouse (New Farm Powerhouse)	Power Station	Arts and Cultural Centre by Peter Roy, 2000	Brisbane, QLD
Waddamana Power Station Heritage Site (Waddamana Power Stations)	Hydro-electric Power Station	Heritage Site by Hydro Tasmania, 2015	Waddamana, TAS

Canberra Glass Works (Kingston Powerhouse)	Power Station	Glass workshop and Exhibition by Tanner Architects, 2005	Canberra, ACT
Richmond Power Station	Power Station	Country Road Headquarters by Metier 3 Architects, 1997 (now commercial offices)	Cremorne, Melbourne, VIC
East Perth Power Station	Power Station	Under Masterplanning by DevelopmentWA, 2023	East Perth, WA
International Examples			
Building Name	**Former Use**	**Reuse**	**Location**
Battersea Power Station	Power Station	Shopping mall and apartments by WilkinsonEyre, 2022	South London, England
Tate Modern (Bankside Power Station)	Power Station	Art gallery by Herzog & de Meuron, 2001	London, England
Gas Works Park (Seattle Gas Company)	Coal Gasification Plant	Public park by Richard Haag, Jeffries-Norton Corp, 1975	Seattle, Washington, USA
Beloit College Powerhouse (Blackhawk Generating Station)	Power Station	Student union and athletic centre by Studio Gang, 2020	Beloit, Wisconsin, USA
SantralIstanbul (Silahtarağa Power Station)	Power Station	Museum, recreation and educational centre by EAA, NSMH, 2007	Istanbul, Turkey
Innovation Powerhouse (Philips Power Plant)	Power Station	Offices and research facilities by Atelier van Berlo, 2018	Eindhoven, Netherlands
Wapping Hydraulic Power Station	Hydraulic Power Station	Former art gallery and restaurant (1990s–2013), currently venue for hire	London, England
Niagara Parks Power Station (Rankine Generating Station)	Hydroelectric Power Station	Historic industrial site and landmark attraction by Niagara Parks Commission, 2021	Ontario, Canada
CaixaForum (Mediodia Power Station)	Power Station	Headquarters and cultural centre by Herzog & de Meuron, 2008	Madrid, Spain
The Power Plant Contemporary Art Gallery (The Power Plant)	Power Station	Art gallery by Lett/Smith Architects, 1987	Toronto, Canada
Pratt Street Power Plant	Power Station	Mixed-use building by various groups, 1985 onwards	Baltimore, Maryland, USA
Saskatchewan Science Centre (Regina Powerhouse)	Power Station	Science museum and IMAX theatre by SaskPower and Partners, 1989	Saskatchewan, Canada
The Landmark Lofts & Garden Apartments (Comal Power Plant)	Power Station	Apartments by Chiles Architects, 2005	New Braunfels, Texas, USA
DRW College Prep (Sears Powerhouse)	Power Station	Public charter school by Synergy Construction Group, 2010	Chicago, Illinois, USA
The Powerhouse Condo (Pennsylvania Railroad Powerhouse)	Power Station	Condominium by Karl Fischer, 2008	Queens, New York, USA
The Wharf at Rivertown (Chester Waterside Station of the Philadelphia Electric Company)	Power Station	Mixed-use office and retail spaces by the Buccini/Pollin Group, 2004	Chester, Pennsylvania, USA
Seaholm Power (Seaholm Power Plant)	Power Station	Mixed-use: commercial, multifamily, retail, office, and planning by STG Design, 2016	Austin, Texas, USA

2.8.2 Within NSW

The following comparative studies are power stations located within NSW. It should be noted that the majority of these examples are located within the Greater Sydney region.

Powerhouse Museum (Ultimo Powerhouse), Ultimo, NSW

Built	1899
Former Use	Power Station
Reuse Date	1988
Reuse	Museum

Description: The Ultimo Powerhouse and Ultimo Tram Depot were constructed in 1899, just 13 years before White Bay Power Station, with major expansions and additions occurring until 1927. As Sydney trams were phased out, the powerhouse ceased operations in 1963. In 1985, works commenced to transform it into the Powerhouse Museum, which opened in 1988. During this redevelopment – which comprised of a modern addition and extensive revision of internal spaces – most of the extant machinery and equipment were lost. Following failed plans for relocation during 2015–20, the museum is currently undergoing redevelopment.

The site is comparable to White Bay Power Station as one of the few extant power stations from the late-19th/early-20th century in the Greater Sydney region. Both are of state heritage significance, and were of a similar production capacity and scale, though Ultimo was phased out of operations much earlier. In contrast to White Bay, the former Ultimo Powerhouse was built in the Italian Renaissance style, and modern alterations have transformed it considerably. Its surrounding context has become increasingly urbanised overtime, which, alongside the removal of its three chimney stacks, has diminished its landmark presence.

Figure 2.8.1 Powerhouse Museum, 2017 (courtesy of Alec Smart, CityHub).105

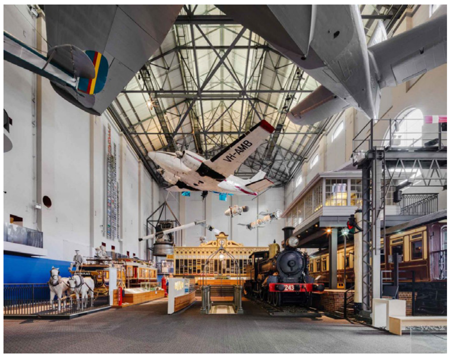


Figure 2.8.2 Powerhouse Museum transport hall, 2020 (courtesy of Katherine Lu, the Art Newspaper).106

The "Package" Power Stations: In the early 1950s, the ECNSW established four "package" power stations – in Casula, Penrith, Port Kembla, and Maitland – to provide interim local generating capacity while a state-wide grid based on regional power stations was built. These four power stations are notably smaller in scale compared to White Bay Power Station, operated for shorter periods, and are overall of lower cultural significance. They demonstrate the typical decline of power stations due to outdated technology and insufficient output over time.

Casula Powerhouse Arts Centre (Liverpool Powerhouse), Casula, NSW

Built	1951
Former Use	Power Station
Reuse Date	1994
Reuse	Arts Centre

Description: The former Liverpool Powerhouse operated from 1951 to 1976. The power station is situated along Georges River and has some landmark presence from the surrounding suburban area due to its chimney stack. It was reopened as an arts centre in 1994 and underwent a second phase of development from 2006–08. The centre accommodates exhibition spaces, a 322-seat theatre, other theatre and performance spaces, artists' studios and artists residencies, storage, and offices. While the main power station building, the chimney stack, and ancillary structures (such as the coal hoppers) survive, most of the plant including generating and switching equipment has been removed.

Figure 2.8.3 Casula Powerhouse Arts Centre (courtesy of Sydney.com).107

Museum of Fire (Penrith Power Station), Penrith, NSW	
Built	1953
Former Use	Power Station
Reuse Date	1986
Reuse	Firefighting Museum

Description: The Penrith Power Station operated from 1953 up until 1970, when it was converted to a switch yard, and becoming increasingly obsolete, much of its associated machinery and equipment was dismantled shortly after in 1974. Following its acquisition by the Historic Fire Engine Association of Australia, the power station was converted into a firefighting museum that opened in 1986. In the process, the chimneys, coal elevators, and water tanks were removed, leaving only the building itself intact. The museum currently hosts numerous heritage-listed fire service vehicles and equipment, including the Fire and Rescue NSW Heritage Fleet. The building is located a moderate distance from the Nepean River, and otherwise does not have a significant landmark presence for the area.

Figure 2.8.4 Museum of Fire (courtesy of Museums & Galleries of NSW).108

Port Kembla Powerhouse, Port Kembla, NSW	
Built	1913 (upgraded with "package" in 1952)
Former Use	Power Station
Reuse Date	–
Reuse	Demolished, 1998

Description: The Port Kembla Powerhouse was constructed in 1913 and operating by 1915. It was responsible for supplying power to the vast surrounding region in the 1920s, but slow extensions meant that by 1949, blackouts were frequent due to the station being unable to meet power demands. A "package" upgrade comprising four sets of integral units was installed and commenced operations in 1952, but not long after, the station was scheduled to be decommissioned in 1961. Operations were briefly resumed in 1965 to assist power shortages, and gas turbines were installed in 1982 as an emergency measure due to plant failures. Ultimately however, the powerhouse was demolished in 1998.

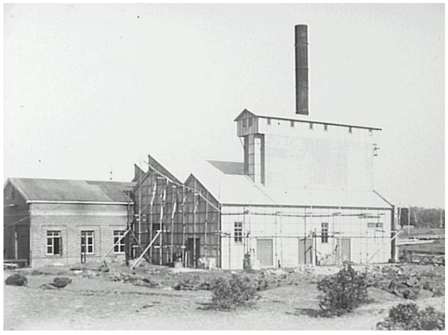


Figure 2.8.5 Port Kembla Powerhouse, c.1956 (courtesy of Wollongong City Library and the Illawarra Historical Society P16492).

Walka Water Works (Maitland Power Station), Maitland, NSW	
Built	1951
Former Use	Power Station
Reuse Date	1984
Reuse	Recreation and Wildlife Reserve

Description: Originally the site of a waterworks built in 1887, Maitland Power Station was constructed in 1951 as a temporary response to post-war power shortages, and provided electricity from 1953 up until its decommissioning in 1976. The site reopened in 1984 with the restored waterworks and surrounding site as part of Maitland City Council's Walka Recreation and Wildlife Reserve. The site has more significance as a water works than as a power station.

Figure 2.8.6 Maitland Power Station, 1954 (courtesy of the State Archives of NSW, NRS-20347-1-2-241).

2.8.3 Outside NSW

Brisbane Powerhouse (New Farm Powerhouse), Brisbane, QLD

Built	1927–1928
Former Use	Power Station
Reuse Date	2000
Reuse	Arts Centre

Figure 2.8.7 Brisbane Powerhouse (courtesy of Brisbane City Council).109

Figure 2.8.8 Brisbane Powerhouse Turbine Hall (courtesy of Hutchinson Builders).110

Description: Constructed in 1927–28, the New Farm Powerhouse powered the tramway network and multiple suburbs and underwent several alterations until the 1940s. In 1963, Brisbane City Council sold the powerhouse to the State Electricity body, and it was decommissioned in 1971, upon which most of the existing equipment and machinery was removed, and the Boiler House demolished in 1984. From the 1970s–90s, the place remained derelict as a space used by artists, a place for the homeless and street kids, and a training site for the army. In 1989, the power station was re-acquired by the Brisbane City Council, reopened as an Arts Centre in 2000, and further refurbished in 2006 to upgrade existing amenities. The external fabric has been largely retained, whilst the large internal spaces have been transformed to accommodate various multi-arts functions, offices, and event spaces with a combination of retained elements and modern alterations.

Unlike White Bay which comprises a complex of buildings on a large site, the Brisbane Powerhouse is primarily defined by a single 4-storey red brick building. The Brisbane Powerhouse is also located adjacent to a large body of water (the Brisbane River) and was similarly a derelict site for a period of time following its decommissioning. It has considerable landmark presence in its immediate context along the river.

Waddamana Power Station Heritage Site (Waddamana Power Stations), Waddamana, TAS

Built	1916
Former Use	Hydroelectric power station
Reuse Date	2015
Reuse	Heritage Site

Figure 2.8.9 Waddamana Power Station "A", 2023 (Alan Croker, Design 5 – Architects).

Figure 2.8.10 Waddamana Power Station Turbine Hall, 2023 (Alan Croker, Design 5 – Architects).

Description: As the centrepiece of the Great Lake Power Scheme, the Waddamana Power Station was the first hydroelectric power station in Tasmania. Waddamana 'A' Power station was commissioned in 1916, and a second 'B' station was built between 1941 and 1949 to meet growing power demands. The former was decommissioned in 1964, and the latter was kept on stand-by until 1994. Waddamana Power Station was added to the Tasmanian Heritage Register in 2014.

In 2015, Hydro Tasmania opened the 'A' station as a Heritage Site to visitors, with large amounts of the machinery and equipment retained or restored to offer interpretation of hydroelectricity generating technology from the twentieth century. Despite operating by hydroelectricity, the place is comparable to White Bay Power Station as a power station constructed in the 1910s and developed in stages, though it is located in the considerably more rural Central Highlands. 'A' station was built in the Federation style with pseudo-classical columns at its entrance, while 'B' station was constructed in a distinctly different functionalist style. It has some landmark presence in its immediate context and in approaching from the road, but is overall dwarfed by the vast natural setting.

Canberra Glassworks (Kingston Powerhouse), Canberra, ACT	
Built	1913–1915
Former Use	Power Station
Reuse Date	2007
Reuse	Contemporary Art Centre, Glass Studio Facility

Description: The Kingston Powerhouse was built in 1913–15 and supplied coal-fired electricity to Canberra from 1915 until its closure in 1957. Much like the White Bay Power Station's proximity to Rozelle Bay and White Bay, Kingston was constructed along the banks of Molonglo River (now Lake Burley Griffin) to provide cooling water. Following its decommissioning, the building was used as a storage and for workshops. The powerhouse later received renewed interest in the 2000s following the redevelopment of the surrounding area. Adaptive reuse included converting the building to a contemporary art centre providing studio facilities, gallery spaces, and a gallery store.

Comparable to the extant equipment at White Bay Power Station, surviving elements of the Canberra station include the boiler room with coal hoppers, engine room with gantry cranes, switch room, coal elevator, economiser room and an altered chimney stack (originally brick, then later steel, now glass). There are architectural similarities between the main gabled building of Canberra Glassworks and White Bay's Boiler House, and the two stations are comparable in terms of age, function, and materiality (though White Bay is of a considerably larger scale). The former Kingston Powerhouse has some landmark presence in its more immediate context partially owing to its glass chimney, though many nearby buildings are of a similar height and mass.

Figure 2.8.11 Canberra Glassworks, Avenue Hotel (courtesy of Decohotel).111

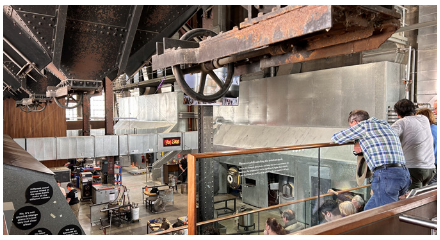


Figure 2.8.12 Workshops in former Boiler Hall (Calista Novia, Design 5 – Architects).

Figure 2.8.13 Workshops in former Turbine Hall (Calista Novia, Design 5 – Architects).

Richmond Power Station, Cremorne, VIC	
Built	1891
Former Use	Power Station
Reuse Date	1997
Reuse	Commercial Headquarters

Description: Richmond Power Station opened in 1891 – more than two decades before White Bay – and underwent several phases of renovation and upgrading of equipment as demand increased. It is one of the oldest electric power stations in Victoria and the first in the state to adopt full AC generation. In 1930, the plant was purchased by State Electricity Commission of Victoria and although obsolete, the station continued to operate as a peak generation plant until its closure in 1976.

The building remained derelict until the 1990s when the complex was converted to an office park. The two chimney stacks were demolished, the steel frame of the adjacent iron building was internally exposed, the red brick turbine hall was converted into an open office space, and a modern extension was added. Unlike White Bay, the old Richmond Power Station has lost most of its equipment – though the coal hoppers remain – and only a shell of the building and its structure remains. White Bay Power Station is also more than double the size of the old Richmond Power Station. Later works are intended to transform the building and surrounding area into a major cultural precinct.

Figure 2.8.14 Richmond Power Station as Country Road HQ (courtesy of Metier3 Architects).112

Figure 2.8.15 Extant Coal Hoppers in the former Richmond Power Station (courtesy of Insitugroup).113

East Perth Power Station, Perth, WA	
Built	1913–1916
Former Use	Power Station
Reuse Date	2025
Reuse	Venue for arts and culture events

Description: The power station was constructed between 1913–16 to generate electricity for the Perth metropolitan area and drew its cooling water from the adjacent Swan River. It was closed in 1981 following the demolition and removal of several facilities and part of the plant, though it still retains the primary coal plant, a range of remnant machinery, and equipment from five different stages of power generation.

The East Perth Redevelopment Authority (EPRA) prepared a Master Plan for the 8.5-hectare site in 2004. Early works carried out in 2004–05 included clean-up of various debris from the interior, the removal of asbestos, repair of concrete walls, reglazing of windows and repair of steel structures and painting. In 2022, remediation works commenced with the place set to be transformed into a new residential, commercial, recreational and tourism precinct to reactivate the broader area. In early 2023 however, the development deed with the preferred proponents Koomba Kalark expired, and DevelopmentWA is currently undertaking a second masterplanning process for the place.[116] In 2024, the East Perth Power Station was selected as the backdrop for the Perth Festival from 2025–28, with performances, exhibitions, light shows, and community engagement on the site. The building has been undergoing remediation for the removal of asbestos and resolving structural issues.

The East Perth Power Station is comparable to White Bay Power Station in age and active years, and both are undergoing similar remediation works at the time of writing. The site is more than double the size of the White Bay's and includes two switchyards – though the main complex of buildings is smaller, partially shielded by trees, and has considerably less landmark presence than the White Bay Power Station. Both have coal handling structures that connect to the main bulk of the power station via an external conveyor. Similar to White Bay, the East Perth Power Station is considered one of the state's most significant industrial heritage-listed buildings.

Figure 2.8.16 East Perth Power Station (courtesy of DevelopmentWA).114

Figure 2.8.17 East Perth Power Station Turbine Hall, 2020 (courtesy of ABC News: Jacob Kagi).115

2.8.4 Selected International Comparisons

Battersea Power Station, South London, England	
Built	1930s–1950s
Former Use	Power Station
Reuse Date	2022
Reuse	Shopping Mall and Apartments

Description: Battersea comprises two power stations built to identical designs: Station A was built in the 1930s, and Station B in the 1950s. The power station once generated a fifth of London's power demand, but due to pollution concerns and technological advancements, Station A was eventually closed in 1975 and Station B in 1983. A failed redevelopment attempt in the late 1980s left Battersea's interiors exposed to the elements. Following its acquisition in 2012, plans for the development of the power station as a mix of residential, retail, office, cultural, and conference spaces commenced. During the decade-long process, the control rooms were restored as a bar and event space, the gantry cranes in the Turbine Hall retained above retail spaces, the Boiler House converted into office spaces, and the four prominent landmark chimneys rebuilt – one of which has a glass lift rising through it. An interactive exhibition space detailing Battersea's history has also been built.

Battersea was built later than White Bay Power Station in the Art Deco style, and though its buildings are of a similar scale, it is near double the size of White Bay as it comprises two power stations. The station is comparable by its retained equipment and significance as a heritage-listed, landmark power station within an urban context by the water.

Figure 2.8.18 Battersea Power Station, (courtesy of Brendan Bell, Dezeen).117

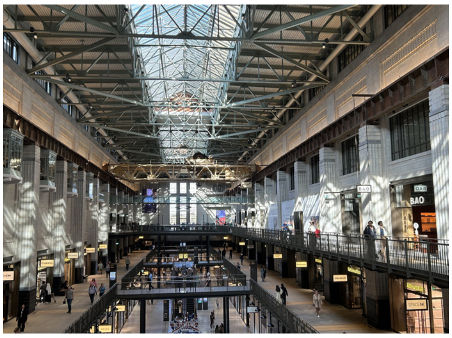


Figure 2.8.19 Battersea Power Station Turbine Hall, 2023 (Calista Novia, Design 5 – Architects).

Tate Modern (Bankside Power Station), London, England	
Built	1947–53, 1959–63
Former Use	Power Station
Reuse Date	1995
Reuse	Art Gallery

Description: The Bankside Power Station was constructed in two phases between 1947–63, and supplied London with electricity up until its decommissioning in 1981. In 1995, the power station became the Tate Modern, with the former Boiler House transformed into galleries, learning studios, and social spaces, while the Turbine Hall had a floor and its machinery removed to become the main entrance and an open event and installation space. The gantry cranes in the Turbine Hall were retained to transport artworks and serve as mobile lighting systems. The central chimney was also retained, and the three concrete oil tanks were converted into performance art spaces in 2012. An extension at the location of the former Switch House was constructed in 2016, increasing gallery space in the form of a latticed brickwork pyramidal tower.

The Tate Modern is comparable to White Bay as a decommissioned power station of similar size. It is similarly located adjacent to a large body of water (the River Thames) and has a prominent landmark presence primarily due to its chimney as well as the sheer volume of the building. However, it was constructed later, is not a heritage listed building, and is of lower historical significance – furthered by the extensive alteration of interior spaces and removal of machinery.

Figure 2.8.20 Tate Modern, 2021 (courtesy of Tate Photography).118

Figure 2.8.21 Tate Modern, 2023 (Calista Novia, Design 5 – Architects).

Gas Works Park (Seattle Gas Company), Seattle, Washington, USA

Built	1906
Former Use	Coal Gasification Plant
Reuse Date	1975
Reuse	Public Park

Description: Gas Works Park is a seven-hectare public park containing the remnants of the Seattle Gas Company's coal gasification plant. The plant was constructed in 1906 and operated until its closure in 1956 when natural gas became available in Seattle. The City of Seattle acquired the site for use as a park and opened it to the public in 1975. This master plan included the bioremediation of contaminated soil, a grass mound that would become a popular kite-flying location, a children's "Play Barn" made from a maze of painted machines, tanks and pipes from the original power station, the conversion of the boiler house into a picnic shelter, reparation of the extant towers, as well as extensive landscaping. Some restored elements of the gas plant were fenced-off, while others became an integrated part of the recreational activities in the area. The park has also become the host of multiple major events, including rallies, concerts, and filming.

Though Gas Works Park is not comparable to White Bay in its function nor its form, it presents commonalities in retained machinery, and similarly significant as an industrial landmark structure that forms part of the locality's identity. It is similarly located at the edge of a large body of water (Lake Union) and is a precedent for extensive adaptive reuse.

Figure 2.8.22 Gas Works Park, 2010 (courtesy of Tony Cyphert).119

Figure 2.8.23 Gas Works Park Playground (courtesy of Atlas Obscura).120

Beloit College Powerhouse (Blackhawk Generating Station), Beloit, Wisconsin, USA

Built	1908–1913
Former Use	Power Station
Reuse Date	2020
Reuse	Student Union and Athletic Centre

Description: The Blackhawk Generating Station was a coal-burning power plant constructed from 1908–13 adjacent to Rock River. It was expanded in 1927 and in the mid-1940s, before eventually closing in 2010. Works to transform the building into a student union for the adjacent Beloit College campus were completed in 2020. The building retained its external shell – including its landmark chimney stack – as well as key architectural features and industrial equipment throughout. A semi-opaque field house extension was added, and adaptive reuse works were combined with new sustainable practices for improved energy use and comfort. The powerhouse now offers extensive sport facilities and recreational spaces interwoven with its original industrial features.

The former generating station is comparable to White Bay in terms of age and function, as well as through its history and aesthetic significance. The powerhouse bears some semblance to the Turbine Hall and Pump House at White Bay with its brick walls, proportions, large windows, and landmark qualities – due to its chimney stack and building mass – though its building complex is notably smaller and is not heritage-listed.

Figure 2.8.24 Beloit College Powerhouse, 2021 (courtesy of Tom Harris, Archdaily).121

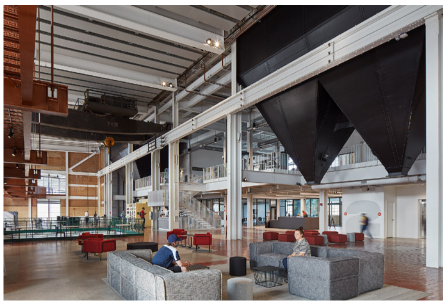


Figure 2.8.25 Beloit College Powerhouse Turbine Hall with gantry crane and coal bunkers (courtesy of Threshold Acoustics).122

SantralIstanbul (Silahtarağa Power Plant), Istanbul, Turkey

Built	1902
Former Use	Power Station
Reuse Date	2007
Reuse	Museum, Recreation and Educational Centre

Description: Silahtarağa Power Station was constructed in 1902 and provided electricity to the tram network, the sultan's palace, and later the city as part of the national grid between 1914 and 1983, before closing and becoming derelict. Redevelopment commenced almost twenty years later, and the former power station was converted to become part of the Istanbul Bilgi University campus, including a myriad of arts, cultural, educational, and social spaces.

Some equipment and machinery has been preserved as part of the interactive Museum of Energy, including multiple turbine-generator groups and the control room equipment. Remediation to building fabric was also undertaken to renovate facades and improve the quality of existing spaces. Two new buildings were constructed upon the foundations of the demolished boiler houses, retaining their scale and form with modern materials.

The Silahtarağa Power Station is comparable to White Bay Power Station in terms of its age and function, though the complex has a less prominent landmark quality with its smaller massing and volume. It is also similarly located near a body of water (the Alibey Stream). Silahtarağa is historically and technologically significant as the Ottoman Empire's first power plant.

Figure 2.8.26 Istanbul Bilgi University Santralistanbul Campus, 2023 (courtesy of Kurmanbek).123

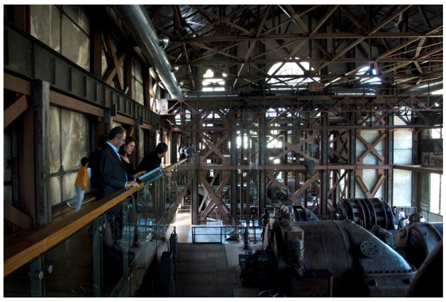


Figure 2.8.27 Turbine Hall in SantralIstanbul (courtesy of santralistanbul).124

Innovation Power Station (Philips Power Plant), Eindhoven, Netherlands

Built	1953–1972
Former Use	Power Station
Reuse Date	2018
Reuse	Offices and Research Facilities

Description: Constructed in four stages between 1953 and 1972, the former Philips Power Plant once provided the nearby Philips factories with power generated by coal, gas, and oil until its decommissioning. It housed various tenants and was slated for demolition until Van Berlo initiated adaptive reuse works in 2018 to transform the building into an innovation hub, with offices, collaboration, educational, and social spaces in an "open ecosystem."[127] The roof was partially opened to create a skylight, and a glass extension was introduced at the back of the building. Equipment and machinery were retained and integrated into the spaces, including the chimney stacks, gantry cranes, pipes, and coal hoppers. The raw industrial aesthetic of the extant walls and structure were also maintained throughout the building.

The Innovation Power Station has a considerably shorter and less significant history, and its building mass is of a smaller scale compared to that of White Bay Power Station. Though the architectural style also differs, Innovation Power Station bears similar landmark qualities with its overall massing and two salient brick stacks at 80 metres tall – slightly taller than those at White Bay – which form iconic views from a distance. It is also a precedent for adaptive reuse.

Figure 2.8.28 Innovation Power Station (courtesy of Tycho Merjin).125

Figure 2.8.29 Extant coal hoppers and industrial interior aesthetic (courtesy of Tycho Merjin).126

Wapping Hydraulic Power Station, London, England	
Built	1890
Former Use	Hydraulic Power Station
Reuse Date	1990s
Reuse	Former art gallery and restaurant, closed in 2015

Description: Built near the end of the 19th century by the London Hydraulic Power Company, Wapping Hydraulic Power Station was one of the last running hydraulic power stations that provided electricity to London. Eventually overtaken by advancements in power generation technology, the station closed in 1977.

In the 1990s, the building served as the base for The Wapping Project arts programming, during which it was converted to a complex containing an art gallery and restaurant. The hall with the hydraulic pumps retained its machinery – which was painstakingly restored – with furniture and services installed to transform it into a restaurant. It was sold in 2013 and is currently serving as a venue for hire with potential for further adaptive reuse.

In comparison to White Bay, the listed red brick hydraulic power station is considerably smaller with less of a landmark presence along the River Thames and adjacent to the Shadwell Basin. While considered significant, Wapping is more recognised for its historical and technological significance due to its age and machinery. Both stations retain a large amount of restored extant equipment, and have potential in integrating their industrial features with future adaptive reuse.

Figure 2.8.30 Wapping Hydraulic Power Station, 2011 (courtesy of Chris Allen).128

Figure 2.8.31 Turbines and seating inside Wapping Hydraulic Power Station when cafe was active (courtesy of Phil Adams).129

Niagara Parks Power Station (Rankine Generating Station), Ontario, Canada	
Built	1905
Former Use	Hydro-electric power station
Reuse Date	2021
Reuse	Historic industrial site and landmark attraction

Description: Rankine Generating Station was built in the Beaux-Arts style in 1915 along the Niagara River, and provided hydro-generated electricity to Ontario. The station was eventually closed and decommissioned in 2005-06 following a decrease in production demand. In 2019, the Niagara Parks Commission commenced plans to reopen the station as a historic industrial site with interactive exhibitions – including a projected light show – and restored machinery and equipment. The station reopened as Niagara Parks Power Station in 2021.

Unlike White Bay, Niagara Parks Power Station comprises of a single building (of similar size to White Bay's Turbine Hall) and is of a distinctly different architectural stylem with a landmark presence defined by the length of the building form at the edge of the water. Though they differ in generation methods, the two stations are comparable in age and level of historical significance, with Niagara Parks Power Station playing a key role in the harnessing of hydro power of the Niagara River. Niagara Parks also retains extensive amounts of its machinery, which have been integrated into its adaptive reuse as a tourist attraction.

Figure 2.8.32 Niagara Parks Power Station (courtesy of Clifton Hill).130

Figure 2.8.33 Niagara Parks Power Station generator floor (courtesy of Niagara Falls Canada).131

CaixaForum (Mediodia Power Station), Madrid, Spain	
Built	1901
Former Use	Power Station
Reuse Date	2008
Reuse	Headquarters and Cultural Centre

Description: The Mediodia Power Station was designed in 1899 and constructed in 1901 on the site of a former candle factory. It supplied south Madrid with electricity up until its closure in the twentieth century.

The la Caixa Foundation acquired the old power station in 2001 and began plans for redevelopment. Completed in 2008, this project turned the power station into the headquarters of Caixa, featuring offices, a restaurant, showrooms, a 300-seat auditorium, and other social and functional amenities. Works were extensive: the roof and interior had to be replaced extensively due to the extensively deteriorated state of the original building. The building was vertically extended above the roof line with perforated cast-iron panels, whilst existing arched window openings were closed, and new rectilinear apertures introduced. The existing granite plinth was also removed.

While the former Mediodia Power Station is similar in age to White Bay, only a shell of its industrial life remains. All the industrial equipment has been removed, and the station stands as one monolithic building unlike the complex of buildings that comprise the White Bay Power Station. Though its building mass is taller than those in its surrounding context, the density of the urban setting detracts from the former power station's landmark presence.

Figure 2.8.34 CaixaForum (Duccio Malagamaba, Divisare).132

2.8.5 Chimney Stacks

White Bay Power Station has two extant steel riveted chimney stacks located between the Coal Handling Shed and the Boiler House. Constructed around the mid-twentieth century, these stacks are landmark features of the place. Each stack has a steel ladder, four supporting guy wires, is around 3.8 metres in diameter and approximately 76.5 metres tall. The stacks were once connected to induced draft fans and electrostatic precipitators at their base, though these were removed during the decommissioning of the power station, leaving the chimneys as a pair of standalone structures.

The construction of riveted steel chimney stacks was considerably more common near the end of the nineteenth century and beginning of the twentieth century. Around this time, the construction of brick stacks (such as those of Ultimo, Pyrmont, and Battersea) was also not unusual. The White Bay stacks were constructed across almost a decade, with the first being built from 1949–1951, and the second completed by 1958. Possibly due to the necessary materials already being on site, the latter is likely one of the last stacks constructed using riveted steel – an examination of other power station stacks constructed in the 1950s suggests that most were built using welded steel. Comparable examples of riveted steel stacks that remain standing today are from other types industrial facilities – such as steel works and factories – rather than power stations. Similarly, construction dates and periods of these stacks range from the end of the nineteenth century to pre-World War II, with the stacks at White Bay being one of the newest of their make.

Most of the stacks of the aforementioned comparable power stations have either been demolished or are of a different materiality and construction.

Nationally, the chimney stacks at White Bay are one of a kind.

Figure 2.8.35 Top of a chimney stack at White Bay with views towards Rozelle / Balmain, 1994 (courtesy of the State Archives of NSW, NRS-20347-1_cn70017_G).

National Examples	
Building Name	**Chimney**
Powerhouse Museum (Ultimo Powerhouse)	Brick, demolished
Casula Powerhouse (Liverpool Powerhouse)	Welded steel
Museum of Fire (Penrith Power Station)	Welded steel, demolished
Port Kembla Power Station	Welded steel, demolished
Walka Water Works (Maitland Power Station)	Welded steel, demolished
Wangi Power Station	Concrete
Brisbane Powerhouse (New Farm Powerhouse)	Welded steel
Waddamana Power Station Heritage Site (Waddamana Power Stations)	N/A
Canberra Glass Works (Kingston Powerhouse)	Welded steel, replaced with glass
Richmond Power Station	Brick, demolished
East Perth Power Station	Welded steel, demolished

Beloit College Powerhouse (Blackhawk Generating Station), Beloit, Wisconsin, USA

Built	1945–49
Chimney Stacks	Riveted steel

Description: The former Blackhawk Generating Station has a single extant riveted steel stack protruding from the main building of the station. The approximately 70 metres-tall stack has a steel ladder and was constructed between 1945–1949 as part of an extension to the station, and is a little older than its White Bay counterparts. The current campus building is one of the few extant power stations comparable to White Bay with a riveted steel chimney stack.

Figure 2.8.36 Stack at Beloit College Powerhouse, 2020 (cropped, courtesy of Dezeen).133

Gas Works Park (Seattle Gas Company), Seattle, Washington, USA

Built	1906
Chimney Stacks	Riveted steel

Description: Constructed in 1906, the stacks of the former Coal Gasification Plant are steel-riveted and located in a cluster with the gas plant towers. Their heights vary and they are significantly shorter than the White Bay Stacks at approximately 15 metres tall. The stacks and surrounding structures are a landmark feature of the park, and have been at the heart of various events, including an aerialists' show.

Figure 2.8.37 Gas Works Park gas plant cluster with stacks, 2019 (courtesy of Seattle Magazine).134

Bethlehem Steel Mill (SteelStacks), Bethlehem, Pennsylvania, USA

Built	c.1915
Chimney Stacks	Riveted steel

Description: Though not a power station, the old Bethlehem Steel Mill has two riveted steel stacks, each around 70 metres tall. The first stack was constructed around 1915, and the second is likely to have been constructed around the same year. The pair of stacks are similar in make and height to those of White Bay's, but are considerably older, and were used for the output of the blast furnaces as opposed to boilers.

Figure 2.8.38 Bethlehem Steel Mill, (courtesy of Discover America).135

Rivers of Steel (Carrie Blast Furnaces), Pittsburgh, Pennsylvania, USA

Built	First half of twentieth century
Chimney Stacks	Riveted steel

Description: The old Carrie Blast Furnaces are now a national historic landmark and have one riveted steel smokestack. This stack is less than half the height of the White Bay stacks at approximately 30.5 metres tall. It was constructed in the first half of the twentieth century and is considered part of an "extremely rare example of pre-World War II iron-making technology."[137] Unlike the White Bay stacks, this riveted steel smokestack is brick-lined on the inside and has a small arched opening to its inside (the door leaf is missing).

Figure 2.8.39 The Carrie Blast Furnaces, 2006 (courtesy of Rivers of Steel).136

Former Steam Plant / Factory, Montgomery, Alabama, USA	
Built	First half of twentieth century
Chimney Stacks	Riveted steel

Description: Once a minor steam plant used by the Alabama Power Company, the old factory (now used a hemp processing facility) has a single riveted steel stack with a small arched door to its inside. The plant and chimney were constructed in the first half of the twentieth century,[138] and are older than the pair of stacks at White Bay Power Station.

Figure 2.8.40 Base of stack at former steam plant (courtesy of Gabe Janke).

2.8.6 Curtain Walls

The Boiler House at White Bay Power Station has multiple curtain walls on its east and south elevations. On the east façade, four curtain walls are located at ground floor level in line with where the four boilers once stood. Each comprises glazing framed with aluminium, though the panels have since been replaced with clear corrugated polycarbonate due to deterioration and damage. The walls continue to Level 1, and the doors in front of former boiler nos. 2 and 3 in the middle have large double doors. The fifth curtain wall on the east elevation is the largest and is located along the south half where boiler nos. 3 and 4 used to be. It is supported by riveted steel I-beams, beginning above Level 1 of the Boiler House and continuing for the remaining height of the elevation. On the south elevation are four curtain walls; the largest starts at ground level and continues up to the Level 1, while three smaller curtain walls are located above offset by red brickwork. The curtain walls afford visibility and light into the building which once housed the four boilers and equipment of the Steam-Raising System.

The first half of the Boiler House was constructed in 1951, and the second half in 1953. Shortly after this in the later half of the 1950s, the emergent Modern Movement saw many new office buildings incorporating curtain walls into their designs. Whilst not uncommon for these urban buildings, the use of curtain walls for industrial buildings has always been unusual and extremely rare (this continued to be the case for later modern power stations). The aforementioned comparable power stations and industrial buildings also do not feature curtain walls (unless built later as part of adaptive reuse), further highlighting the rarity of this element at White Bay Power Station on both a national and international scale. The following comparable examples of curtain walls are parts of office buildings located within NSW and were constructed around a similar period to the walls at White Bay Power Station.

Figure 2.8.41 Boiler House Curtain Wall, east elevation, 2024 (courtesy of Chris Bennett: Evolving Picture).

Berger House, Sydney, NSW

Built	1955

Description: The Berger House was constructed in 1955 with its west facade comprising a lightweight curtain wall system that was considered the first of its kind in Sydney. Unlike the White Bay curtain walls, the Berger House curtain wall makes up the entire west façade with the exception of the ground level wall.

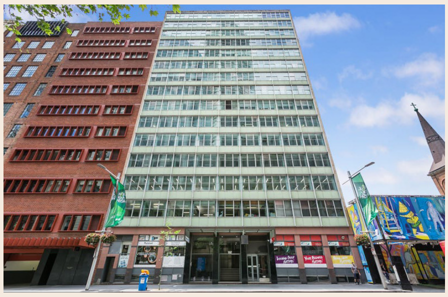


Figure 2.8.42 West facade of the Berger House (courtesy of RealCommercial).139

MLC Building, North Sydney, NSW

Built	1955–57

Description: The eastern and western facades of this building comprise curtain walls with aluminium spandrels. The curtain walls are significantly vaster than those of White Bay and form the entire elevation. The MLC Building is considered one of the first uses of the curtain wall system in the design of a high-rise office block.

Figure 2.8.43 MLC Building west facade (courtesy of Bates Smart).140

Commonwealth Bank Building, Sydney, NSW

Built	1956

Description: The Commonwealth Bank Building is a 12-storey bank branch that was designed in 1952 in the modernist International Style. Its south facade to Market Street is a curtain wall with aluminium spandrels located from the second floor upwards and is of a moderate level of significance.

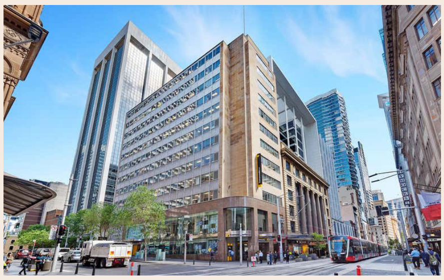


Figure 2.8.44 South and east facades of Commonwealth Bank Building (courtesy of RealCommercial).141

The Supreme Court Hospital Road Court Complex, Sydney, NSW

Built	1959

Description: The eastern elevation of this red brick building comprises an expansive curtain wall with offset rows of red spandrel panels. The complex was built during a similar period of time to that of White Bay's curtain walls, and its larger curtain wall is characteristic of the 1950s Modern style.

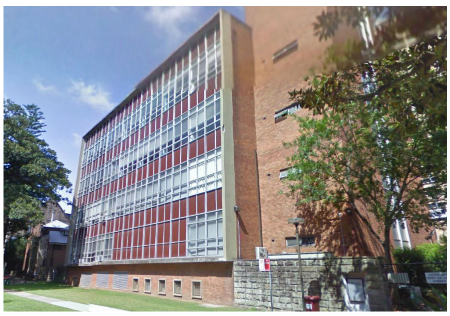


Figure 2.8.45 The east facade of the Supreme Court Hospital Road Court Complex (courtesy of NSW Courts).142

2.8.7 Summary of Comparative Analysis

The comparative analysis of White Bay Power Station with other industrial sites that share key features and characteristics highlights its cultural significance. The analysis demonstrates its rarity as an extant coal-fired power station that retains moderate amounts of its operational equipment and machinery at a large scale, as well as the significance of its visually striking, iconic landmark presence near a large body of water and adjacent to a significant bridge, which many case studies either lack or have lost over time due to removal or change in their structures and growing density of their surrounding context. The comparative studies also present precedents for adaptive reuse in generally comparable contexts.

Additionally, distinctive features of the power station including its Boiler House curtain walls and the pair of landmark riveted steel chimney stacks are shown to be very rare – on both a national and international scale. This reiterates the need for White Bay Power Station to be conserved as a distinguished and rare place.

Figure 2.8.46 Transformer Alley looking south, 2024 (courtesy of Toby Peet).

SECTION 3
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SECTION 3
ASSESSMENT OF CULTURAL SIGNIFICANCE

Figure 3.1.1 West facade, roofs, and parapets of the White Bay Power Station, 2024 (courtesy of Toby Peet).

3.1 BASIS OF ASSESSMENT

The Australia ICOMOS (*International Council on Monuments and Sites) Charter for Places of Cultural Significance 2013* (known as The Burra Charter) is a best-practice standard for the conservation and management of culturally significant places in Australia.

The 'Guidelines to the Burra Charter: Cultural Significance' states that the assessment of cultural significance and the preparation of a statement of cultural significance, embodied in a report as defined in section 4.0 [of the Guidelines] are essential prerequisites to making decisions about the future of a place.

This section considers all of the information collected in Section 2 and clarifies what the culturally significant attributes of the place are. All aspects of significance are discussed and assessed to formulate clear statements of cultural significance.

"Cultural significance" is defined in The Burra Charter as meaning the aesthetic, historic, scientific, social or spiritual value for past, present or future generations. These four criteria for values are used as the basis for this discussion. The Charter further clarifies that cultural significance is embodied in the place itself, its fabric, setting, use, associations, meanings, records, related places, and related objects. Places may have a range of values for different individuals or groups.

With the creation of the State Heritage Register under Part 3A of the Heritage Act in April 1999, Heritage NSW has developed a set of seven criteria against which the cultural significance can be assessed to determine the level of significance, i.e. State or Local. State Significance means significance to the people of New South Wales, and Local Significance means significance with the Local Government Area (LGA). In this assessment, significance is discussed with regard to the four categories set out in The Burra Charter (2013).

Following this discussion, the significance of the place is assessed against the seven criteria for State Heritage Register listing to determine its level of significance. However, it is already deemed to be of State Significance by virtue of its being on the Register.

3.2 AESTHETIC SIGNIFICANCE

Aesthetic significance covers such areas as massing, expression of architectural form and detail. One's perception of these is the aesthetic experience via the senses of sight, sound, touch, and smell. The aesthetic significance of the White Bay Power Station lies primarily in the industrial and landmark qualities of the building, which are discussed below in terms of views – both historic and present – and the individual structures and spaces.

3.2.1 Historic Views

As detailed in the historic research, the current site and surrounding area result from foreshore reclamation and heavy alteration to the natural environment and topography. As early as the 1840s, there is evidence of the construction of the causeway connecting the mudflats and the flattening of Glebe Island. Some industrial activities predate the twentieth century, but virtually all early pre-twentieth-century industrial structures have been removed, and the natural landscape has been drastically altered.

The early twentieth century saw large scale modern industrial and maritime activities established at White Bay and on Glebe Island. The Sydney Harbour Trust (later Maritime Services Board) constructed broadside wharfage, serviced by rail, with warehousing and factories. The White Bay Power Station, completed in 1917, was the first large modern industrial building built within what is now referred to as Bays West. Soon afterwards, the grain silos at Glebe Island were completed in 1921, which included 143 initial silos and,

Figure 3.2.1 Construction of the original Glebe Island silos with White Bay Power Station located in the background on the right, 1919 (courtesy of the State Archives of NSW, NRS-4481-4-56-[AF00195038]).

by 1925, had expanded by another 63 silos to a total of 206 silos. At 108 feet high (33m), they were the only structure in the area to rival the visual presence, size and scale of the White Bay Power Station. By 1927, the size of the White Bay Power Station was doubled with the completion of the second stage.

Apart from the silos and the power station, the remainder of Glebe Island and White Bay were further developed for industrial use with the construction of rail lines, warehouses, jetties, and wharfage. These were large structures, but they were also relatively low in height and, therefore, did not rival the visual dominance of the Power Station, particularly from distant views. The post-WWII modernisation of White Bay Power Station saw the first boiler house demolished and replaced with a larger structure and the construction of two chimney stacks close to 80m in height (1951 and 1958). At this time, several of the large warehouses and factories in White Bay were demolished and replaced with the export coal loader, dating from the early 1950s to the early 1990s. The export coal loader consisted of large cranes, suspended conveyors and gantries, and the transitory docking ships that made a striking appearance in the landscape. However, these structures would only partially rival the scale and dominance of the power station and the silos at this time. In 1974, the 30 new silos of the Sydney Terminal Extension were constructed and were of a scale that eclipsed the original silos, which were eventually demolished in the year 2000. This Sydney Terminal Extension, together with the advertising signage, now dominate the southern part of Glebe Island.

An added level of significance for the White Bay Power Station, over other landmarks, is its relationship with the surrounding suburbs, which traditionally housed the workforce for industrial and maritime activities in modest worker accommodation. The White Bay Power Station retains its dominance and imposing structure to the north and west approaches. There are also many unexpected vistas of the power station in many of the backstreets on the view axes. This is part of a strong cultural, economic, and social infrastructure between these areas, linked by views.

As detailed further below, the power station is visible along the axial approaches of surrounding streets, including Johnston Street, ANZAC Bridge, Victoria Road, Robert Street, Mullens Street, and Glebe Point Road. Apart from ANZAC Bridge, these approaches predate the power station. The post-1995 relationship of the power station with ANZAC Bridge is a recent view but also an important one. It has been the primary view of the White Bay Power Station for those travelling from the city to the Inner West, and for many that have not visited nor approached the power station, it is their main view and perspective of the structure and its site.

Since its construction, the White Bay Power Station has always been seen within the maritime industrial context from the south and east, consisting of large buildings and structures. However, from the north and west, it has been seen in the context of much smaller scale modest worker housing. In historic views, the White Bay Power Station has always been a visual anchor in the landscape and a dominating structure within the immediate vicinity.

Figure 3.2.2 View of the White Bay Power Station from the Coal Loader area, 1965 (courtesy of the NSW State Archives, NRS-21573-3-[6/12047]-PR6846). With its overall bulk and height of the chimney stacks, the power station had a dominating landmark presence within its surrounding industrial setting.

Figure 3.2.3 View of the White Bay Power Station from White Bay, c.1951 (courtesy of the City of Sydney Archives, A-00082255).

Figure 3.2.4   View of the White Bay Power Station north elevation over the canopy, 2024 (courtesy of Toby Peet).

3.2.2 Views

3.2.2.1 Distant views of the Power Station

When viewed from a distance, the White Bay Power Station is a key landmark from all angles, as one of the largest building complexes in the locality, providing an industrial-scale focal point in many approach vistas. It is visually prominent from a number of significant roads in surrounding suburbs and neighbourhood areas, (see Figure 3.2.4) due to the height of its chimney stacks and the length and mass of the buildings.

These views are reinforced by the Bays West Urban Design Framework: *"Viewsheds: White Bay Power Station"* and are recognised in the *"Bays West Stage 1 Master Plan and Urban Design Framework."* The Bays West Design Framework identifies White Bay Power Station, together with the ANZAC Bridge and the Glebe Island Silos, as being critical viewsheds:

> *The character of these landmarks varies from large scale elements such as White Bay Power Station, Glebe Island Silos and the Anzac Bridge, to smaller more localised elements such as Glebe Island Bridge and the working harbour areas. The large elements help to signify the precinct from afar and act as visual markers and gateways on the journey between the Inner West and the CBD.*
>
> *These landmarks form part of the living narrative of the place allowing community attachment and positive association to the place. These are iconic elements that have the potential to unlock the future of the site, engage the community and define the future character of Bays West. This is a truly unique opportunity to build on the existing character through opening these landmarks to the public and integrating them into the land use and activity of Bays West.*

The White Bay Power Station is a focal point of approaches along Victoria Road when proceeding towards the city, the end of Mullens Street when looking south and at the end of Johnston Street, Annandale, when proceeding north. It is also framed by the pylons of the ANZAC Bridge when proceeding west from the city and distant views from the Sydney Harbour Bridge and Observatory Hill. In the view from ANZAC Bridge, the power station reads as a singular mass, with the extent of its bulk made more obvious by the large, marred grey concrete wall left after the demolition of the second boiler house in 1976.

The two chimney stacks are key, dominant features that render the landmark quality of the White Bay Power Station. Once a common sight in the city and inner suburbs during the booming industry of the twentieth century, they are now among the last few twentieth-century stacks remaining and are the only large-scale riveted steel stacks in Australia. They are visible from great distances and along main roads, including from Victoria Road, the city, Balmain, Drummoyne, the Inner West Link route, Lilyfield Road, The Crescent, and Johnston Street, Annandale. They have been repainted, and the corrugated steel cladding and roofs have been replaced in the 2022 / 24 remediation works. These reflect the sunlight, particularly on the north and east elevations.

In all of these views, the White Bay Power Station is seen as part of a group of large-scale industrial structures and spaces that give this area a unique identity and character within the Sydney region.

Within the area are a series of other structures, spaces and landmarks that relate to the industrial, maritime and transport role of the precinct and the development of Sydney. Two large-scale landmark structures in the vicinity of the White Bay Power Station are the Glebe Island Silos and the ANZAC Bridge. Smaller places of interest include the Glebe Island Bridge, former container terminals and areas that make up the former working harbour, including the Glebe Island and White Bay ports area, the wharf aprons, and the commercial and light industrial buildings on the north side of Robert Street. As a group, they signify the threshold to the city with its high skyline, as further west and north, the industrial scale gives way almost entirely to domestic-scaled construction. While undergoing redevelopment as part of Bays West, the area retains its industrial character, supported by maintaining physical and visual connections.

The changing vistas of these White Bay and Glebe Island structures when approaching ANZAC Bridge are a symbol of the industrial heritage of the Rozelle /Balmain area, which is rapidly being lost due to the large-scale redevelopment of these areas for domestic scale and residential use.

The following section examines these views through the following dimensions:

Main Axial Views: These are views of the power station that are relatively unobstructed or are aligned with major axial approaches. These viewpoints focus on the power station and emphasise its landmark qualities as a significant focal element.

Secondary Views: These views are shown in the diagrams with lighter shading. They represent views to the power station from various vantage points and public spaces. Views from these locations may be significant within the broader harbour setting, but they may be partially obstructed or considered less important than the main axial views.

View 1: Barangaroo, Observatory Hill and Harbour Bridge

Barangaroo, Observatory Hill and Harbour Bridge have historically significant connections with the Bays West area and are important geographical anchors. The main character of this view is provided by the twin chimneys silhouetted on the skyline. Other structures, including the Boiler House, are blended with the horizon and are not prominent landmarks from this distance.

Figure 3.2.5 Barangaroo, Observatory Hill and Harbour views.

View 2: ANZAC Bridge

View to the Power Station from the Anzac Bridge is a gateway view on the exit from the City to the west. The chimneys are landmark anchors, including the east façade of the Boiler House, which is visible over the Coal Handling Shed. The view shifts in scale on approach and is slightly changed from the roadway or the pedestrian and cycle path. The view to the Power Station from Anzac Bridge has been significant since its opening in 1995, being the only view for many people for over 30 years.

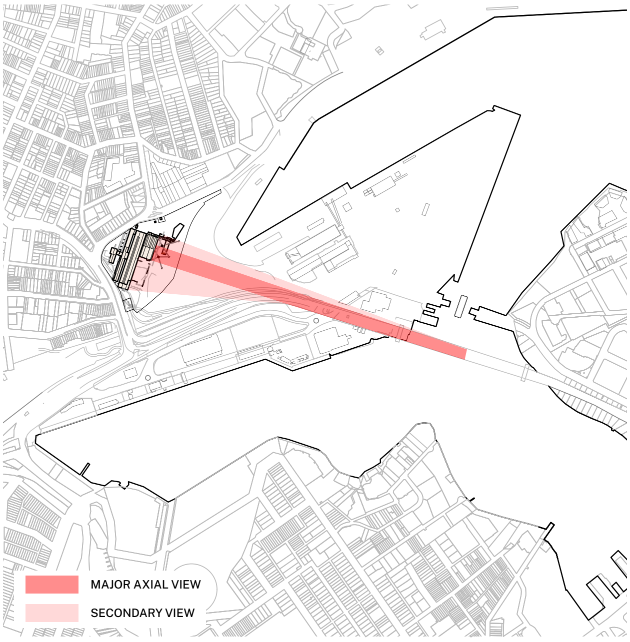


Figure 3.2.6 ANZAC Bridge views.

View 3: Glebe Point Road and Foreshore

The White Bay Power Station is located on the axis of Glebe Point Road. The top of the Boiler House and chimneys are visible from Glebe Point Road before descending to Rozelle Bay. At the head of Glebe Point Road, at foreshore level, only the silhouette of the chimneys is visible against the skyline, while the Rozelle Bay boat shed (constructed in 2014) blocks the remainder. The Boiler House and the chimneys are visible from Blackwattle Bay Park's east foreshore, but these views are also compromised and have moderate significance.

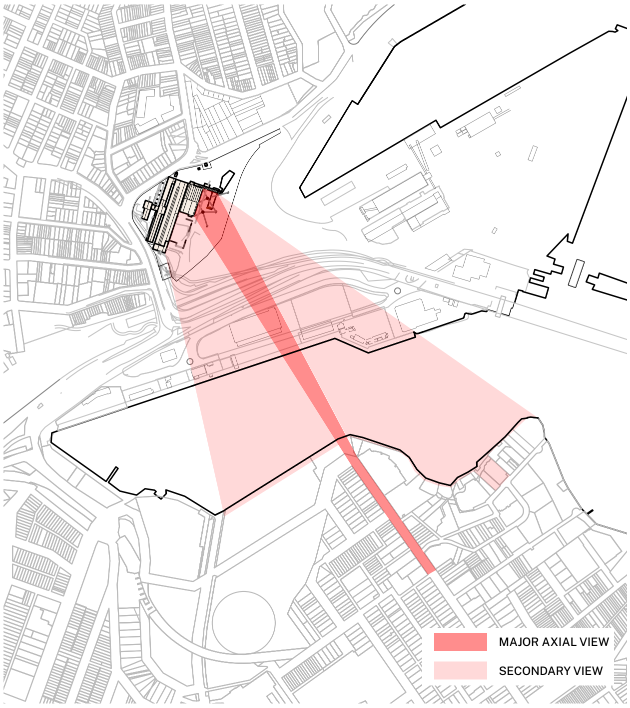


Figure 3.2.7 Glebe Point Road and Foreshore views.

View 4: Johnston Street, Annandale and Foreshore

The view from Johnston Street aligns with the north-south axis of White Bay Power Station and the chimneys. This axial view is coincidental but is significant for Annandale and its historic maritime and industrial identity. The character of this view changes as one moves along Johnston Street. At the south end, near Hinsby Park, the view of the chimneys is blended with the distant buildings of St Leonards on the horizon. As one approaches, the silhouette of the chimneys against the sky and the south elevation of the Boiler House becomes more dramatic and prominent.

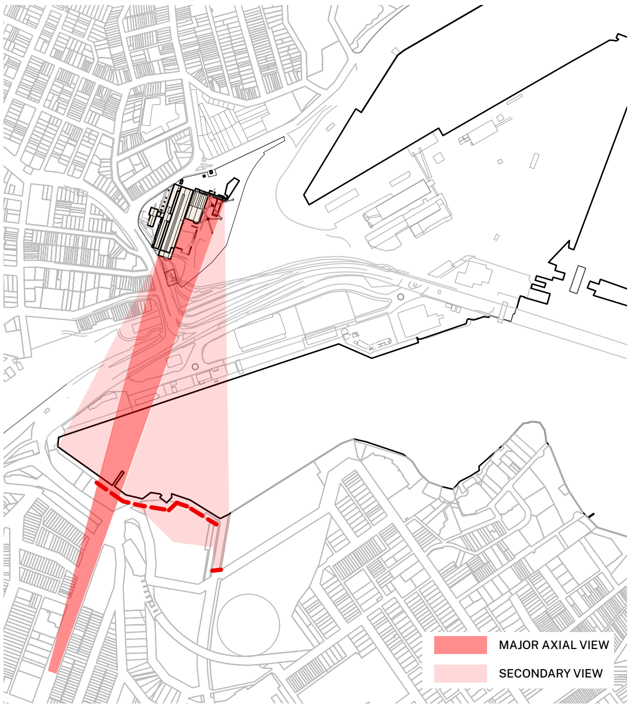


Figure 3.2.8 Johnston Street, Annandale and Foreshore views.

View 5: Victoria Road

The Victoria Road approach is a significant gateway view of the approach to the City. It is characterised by the layering and stepping of the roof lines, including stone and brick parapets. The foreground buildings slowly increase in scale to more significant buildings behind them, starting with the Control Room Building, Switch House, Turbine Hall, Boiler House and the chimneys behind. The view is generally from close range and changes along the approach of Victoria Road, setting the Power Station within a busy and gritty urban context.

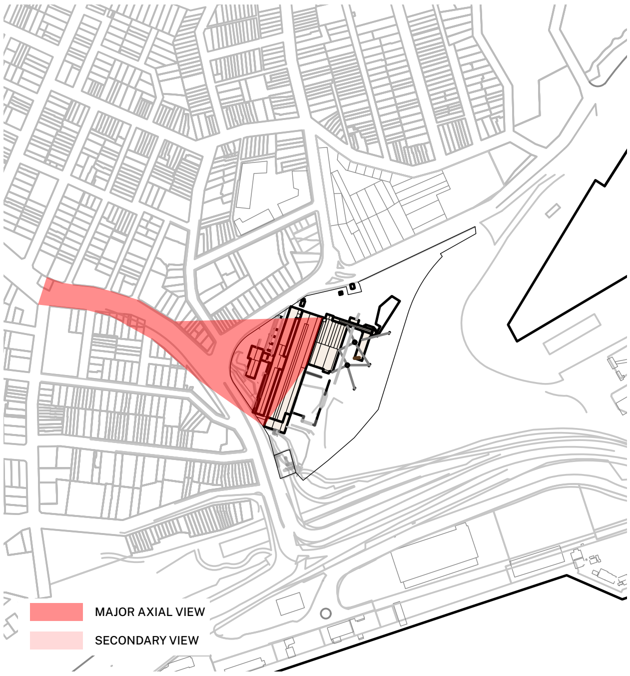


Figure 3.2.9 Victoria Road views.

View 6: Mullens Street

The view looking south along Mullens Street is framed by domestic-scale dwellings and medium-sized warehouses, which contrasts with the dramatic scale and material of the power station. The entire vista of the power station's iconic north elevation opens up at the south with the intersection of Robert Street. The north elevation, including soaring masonry structures, the Coal Handling Shed, the External Conveyor and the Transfer Shed, is directly related to the power production process and machinery, allowing an interpretation of the linear power production process. The north elevation presents a defining characteristic of the industrial precinct, which is also highly significant to the twentieth century working class identity of Rozelle and Balmain. This view is exceptionally significant and must be maintained.

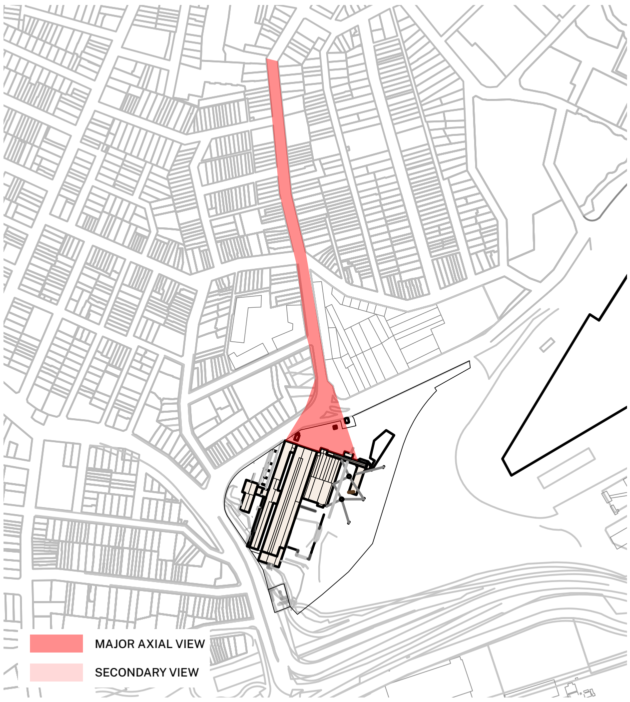


Figure 3.2.10 Mullens Street views.

View 7: Robert Street & White Bay

Robert Street offers an axial view of the power station characterised by the iconic and uniquely identifiable building elements of the Boiler House, the External Conveyor, the Transfer House, and the Ash Handling Tower. The power station is seen within the context of the light industrial brick buildings along the north side of Robert Street. Robert Street joins with Mullens Street, where the whole iconic north elevation can be appreciated. As with Mullens Street, the view is significant as one of the last remaining large industrial buildings in the Bays and important to the area's identity as a whole.

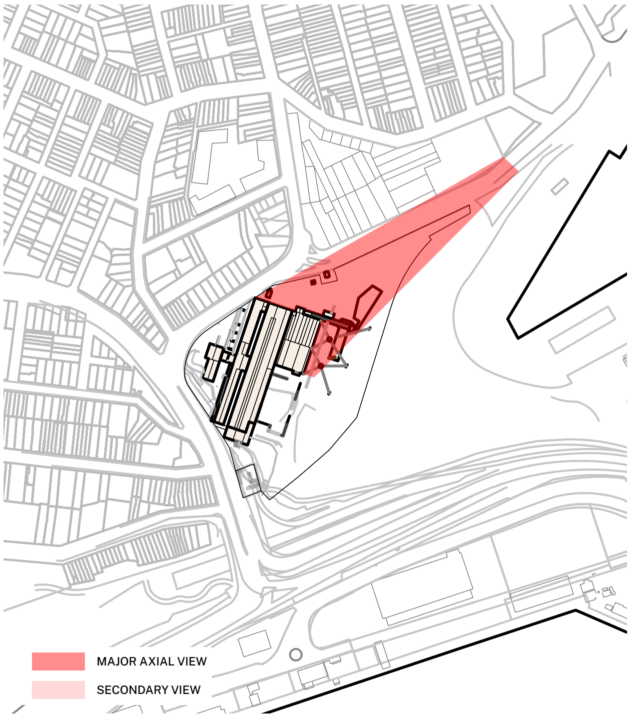


Figure 3.2.12 Robert Street and White Bay views.

View 8: Blackwattle Bay East

The view from the east side of Blackwattle Bay is characterised by the distant view over the water of the two chimneys. The east elevation of the Boiler House is discernible but is not a landmark as it blends into the ridge of Rozelle behind. The Anzac Bridge frames the view and dominates the vista from this angle. The view has minor significance, visually connecting former 20th-century industrial and working harbour lands. This characteristic is not unique since other vantage points offer a better view and are obscured by smaller structures.

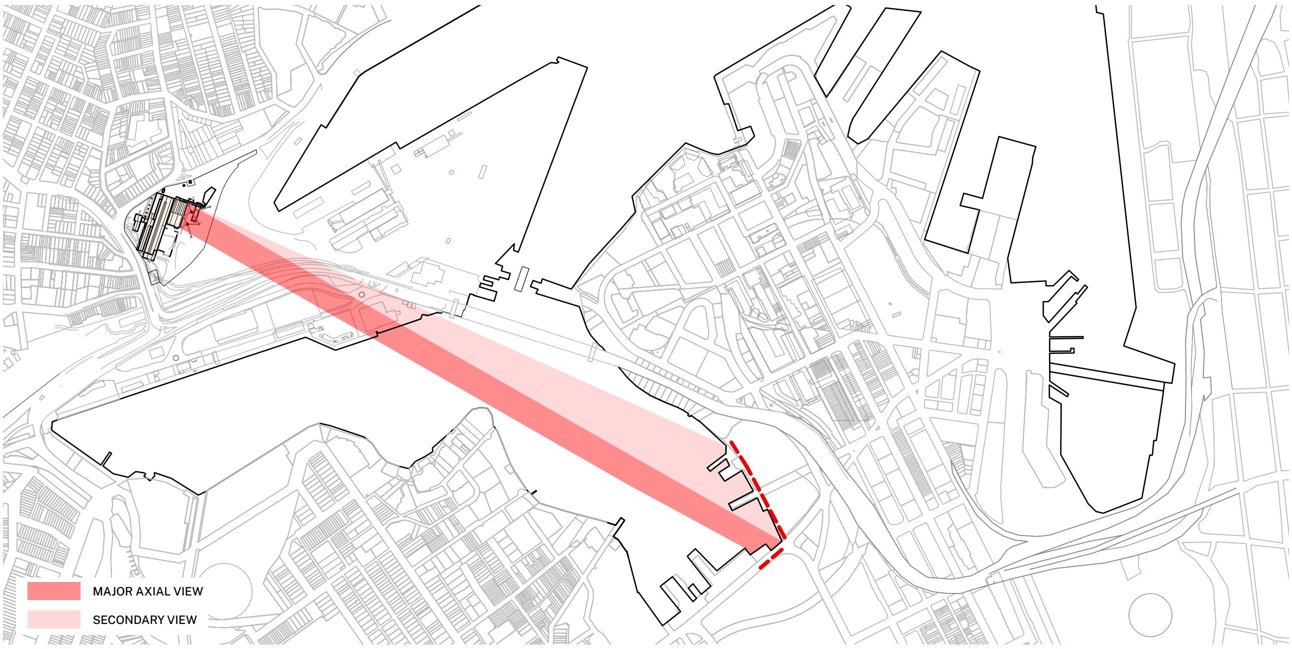


Figure 3.2.13 Blackwattle Bay views.

View 9: Pyrmont

Views of the Power Station are from the east foreshore of Johnston Bay, Pirrama Road and Giba Park's raised terrace. The view is characterised by the east side of the Boiler House and the twin chimneys silhouetted by the sky. The cement terminal partially blocks views and is entirely blocked by Glebe Island Silos further south. The historical significance of this viewshed is reduced on the basis that the 1920s silos, demolished in 2000, would have entirely blocked this view, and the park at Pirrama Road dates from the mid-2000s.

Figure 3.2.14 Pyrmont views.

3.2.2.2 Contribution to Streetscape

Already a prominent form when viewed from a distance, the White Bay Power Station dominates the surrounding streetscape in its scale and configuration of structures and buildings. The site's boundary is demarcated by fencing and the sidewalk on Robert Street and Victoria Road. The Coal Handling Shed and External Conveyor, with their galvanised corrugated steel cladding and unique shape, are juxtaposed with the massive brick forms of the Boiler House, Pump House, Turbine Hall, Switch House, and Control Room Building. Together with the two steel chimney stacks, these structures render a landmark quality to the Power Station and offer a visual quality that is distinctly representative of the locality's twentieth-century industrial character.

An emerging streetscape consideration is views toward the White Bay Power Station from the east and road networks that will be formed through the implementation of the Bays West Masterplan. The Coal Handling Shed, External Conveyor, Boiler House and Chimney Stacks are an impressive and dramatic scale that dominate the open spaces to the east.

3.2.2.3 Views within and throughout the Power Station

Within and throughout the White Bay Power Station are many views, which are an important part of the aesthetic significance of the place. Many of these give glimpses of part of the building, which lend themselves to an appreciation of the scale of the complex. At the time when the complex was complete and still operational –i.e. with the second boiler house erected, the precipitators lined in a row of four above the rail lines between the present boiler house and the chimneys, and a number of sheds and other ancillary buildings located around. The place appeared busier and more densely occupied by buildings. Following its deactivation, this gave way to a different aesthetic character of ruins and deserted industrial sites. The remediation and activation of the power station complex has improved its condition and has removed smaller lightweight buildings that have allowed broadened and increased views and visual connections within the place.

Figure 3.2.15 Northern Elevation, viewed from Robert Street, March 2024 (Design 5 – Architects).

Figure 3.2.17 Western Elevation, viewed from Victoria Road, March 2024 (Design 5 – Architects).

Figure 3.2.16 Southeastern Elevation, July 2024 (courtesy of Chris Bennett: Evolving Picture).

Figure 3.2.18 Southern Elevation, viewed from Victoria Road, July 2024 (Design 5 – Architects).

3.2.3 Architectural Style

The large spaces, uninterrupted spans and the massive power generating machinery have resulted in White Bay Power Station comprising an architecture of rhythmical bays and massive proportions, with a repetition of elements such as windows and columns. This entirely functional design, where all the materials are used to maximum efficiency and where ornament is stripped to a minimum, has all the hallmarks of the prelude to internationalism and the modern movement. In particular, the slender form of the pair of steel chimney stacks against the massive bulk of the Boiler House and Turbine Hall has formed a composition of abstract beauty and a key industrial icon on the Sydney skyline for the past century. Following the 2022–24 remediation works, the power station has shed its former aesthetic of abandoned industry and ruin and instead bears a closer semblance to what it would have looked like during its active years.

It is now widely accepted that modern concepts of architecture, prevalent from the 1920s to the 1960s, derived a large part of their inspiration from functional buildings of the early twentieth century, such as grain silos, grain elevators, railway buildings, exhibitions buildings, bridges etc. White Bay Power Station is a nuanced example of one of these Functionalist Buildings, and would have been the boldest expression of functionalism in Sydney at the beginning of the twentieth century.

As White Bay Power Station steadily took shape between 1912 and 1917 beside the modest workers' terraces of Balmain, it would have formed a composition of bulk and massing not seen before on the Sydney skyline. Not only were its forms large and functionalist with elements of the Arts and Crafts movement in the brick structures, but its styling and imagery symbolised the new century, the machine age, the wonders of industry and technology, and the benefits of power and transport for the masses.

The symbolic role of White Bay Power Station to Sydneysiders changed over the length of the twentieth century as public opinion of industry shifted. Originally a proud symbol of modernity, technology, and the promise of a new century, it later became a polluting eyesore representing the "evils of industry." Since its closure in 1983, the Power Station has again acquired a different symbolic value to the surrounding community, one that is largely landmark in nature, with few being aware of the details of its past. Many of the visitors to the place since were unaware that the building had been a power station at all.

Figure 3.2.19 Ash Handling Tower, Chimney Stacks, and the north facade of the Boiler House, December 2023 (courtesy of Toby Peet).

Figure 3.2.20 Boiler House Control Room, 2023 (courtesy of Toby Peet).

3.2.4 Structures & Spaces within the White Bay Power Station

The **Coal Handling Shed and External Conveyor** are uniquely shaped structures that contribute to the power station's dramatic landmark presence. Distinct in shape and material, they embody a functionalist aesthetic typical to industrial buildings at the time. As a spatial and visual experience, they complement the scale of other spaces within the complex and play a key role in understanding the process of generating electricity in the mid-twentieth century.

Once a structure that characterised the state of industrial ruin and decline with its heavily rusted roof and facades, the Coal Handling Shed and its External Conveyor now afford a revitalised appearance following remediation works in 2022 / 23. The building now catches the sunlight and articulates a landmark presence in a similar way to how it would have during the White Bay Power Station's active years.

The **Ash Handling Tower**, though distinctly smaller than the Boiler House adjacent, it contributes to the aesthetic significance of the power station as a functionalist structure. Once part of a much larger Ash Handling System, the tower is a skeletal steel-framed with two large drums, a series of walkways, pipework, and a crane. During remediation works, the tower was newly cladded with corrugated galvanised steel and painted. It is a key element that communicates the industrial function of the White Bay Power Station visible from outside.

The **Chimney Stacks** have an exceptional level of aesthetic significance despite the removal of the induced draft fans and precipitators that connected them to the Boiler House. The Chimney Stacks are one of the power station's defining landmark structures and have become even more prominent following remediation works.

The **Boiler House** presents as a massive form externally. The brick building comprises a gabled roof in the north half and a flat roof in the south half in an incongruous marriage of two different construction techniques and styles. Similarly, the vast, steel-framed glazed curtain wall is juxtaposed with the earlier smaller windows in the northern half. The large openings – where the exhausts to the precipitators have been removed – and the sections of crudely cut large steel I-beams on the façade present the most obvious evidence of the transformation imposed by the process of decontamination.

Figure 3.2.21 Coal Handling Shed exterior, November 2023 (courtesy of Chris Bennett: Evolving Picture).

Figure 3.2.22 Ash Handling Tower and north facade of Boiler House, March 2024 (Design 5 – Architects).

Figure 3.2.23 Chimney Stacks, 2024 (courtesy of Toby Peet).

Figure 3.2.24 Boiler House Exterior east facade, March 2024 (courtesy of Toby Peet).

Internally, the Boiler House is an awe-inspiring space of cathedral proportions. Sunlight penetrates the space through the large windows on the east elevation. This, combined with the towering presence of the massive No. 1 Boiler at the northern end, give the space a truly unique experience whilst retaining strong interpretability of its former industrial activity. Before the decontamination in 1994, the boiler unit was entirely clad with steel-faced, asbestos-filled walls to contain the enormous heat of the fire, leaving only the gauges and controls visible externally. With this cladding now removed, the complex and sinuous configuration of the water pipes are exposed, giving a partially skeletal view of the boiler workings. These densely arranged pipes rise from the firing floor to the ceiling, some 30m above, and surround a void which was once the centre of the explosive fire of the boiler's furnace. Though technically inaccurate, the view inside the boiler strengthens the industrial aesthetic.

The removal of boiler nos. 2, 3, and 4 (and the resultant voids) mean that the sheer scale of the Boiler House is much more readily perceived and that a better view of the extant machinery is afforded. The unpainted walls and surfaces retain much evidence and fixings of earlier structures and offer clues for interpretation of the industrial activity that once filled the space. The enormous, curved face of the coal hoppers high on the western side add a scale and form which reinforces the sense of being inside a machine space.

The Pump House and Turbine Hall form one building under separate roofs. While they are connected at the lower levels by broad openings, internally they read as separate spaces.

At the northern end, the **Pump House** is filled with pumps, pipes, water tanks and their supporting steel structures, gantry cranes, walkways, and stairs. In the southern half, all except the steel supporting structures for the tanks have been removed. This gives the space a sense of considerable height and length which is greatly accentuated by the narrow width of the space. All surfaces are painted and the experience is defined by the spatial quality rather than surface texture. Very little direct daylight reaches the inside of the Pump House, except from the north end and the original space between the two Boiler Houses.

A major loss to the complex was the demolition of the No. 2 Boiler House in 1976. This has left a raw and disfigured blank wall externally along the south half of the Pump House.

Figure 3.2.25 Boiler House Interior, March 2024 (courtesy of Chris Bennett: Evolving Picture).

Figure 3.2.26 Turbine Hall / Pump House Exterior, West Elevation, March 2024 (courtesy of Toby Peet).

Figure 3.2.27 Turbine Hall / Pump House Exterior, from southeast, July 2024 (courtesy of Chris Bennett: Evolving Picture).

Figure 3.2.28 Pump House Interior, March 2024 (courtesy of Toby Peet).

The **Turbine Hall** is the other major awe-inspiring industrial cathedral-like space. Its exterior has overtones of the Arts and Crafts movement. At Ground Level, the vast size of the Turbine Hall is intermittently visible through the voids of the floor above that permit views through to the roof. At the northern end the Turbine Hall below Level 1, the space is dominated by the sheer size and complexity of the extant turbine, condenser machinery and pipework, and a series of walkways. Where the remainder of the turbines have been removed, massive buttresses, pillars and plinth blocks remain, supporting a now relatively clean but fragmented platform area above.

Levels 1 and 2 of the Turbine Hall were one of the main operational floors of the power station, and the scale of this hall emphasises its singular purpose and importance. This is a place of precision, of cleanliness and efficiency, and all fittings and finishes are tidy, generally painted or polished, carefully arranged, and placed. Above these levels, the entire length of the hall is open to the gabled roof, except for the three remaining gantry cranes, which contribute to an aesthetic of heavy, large-scale industrial use. The daylight which enters the space along the vented ridge, and the bays of large windows to the west and north, give the sense of a large industrial cathedral. The elevated northern end (Level 2) is dominated by the large pipes, turbine housings and associated control panels etc. of Unit No. 1, the 50MW Parsons turbine generator installed in 1952. Although its scale is enormous, it is dwarfed by the singular volume of the hall space.

A sense of surveillance and monitoring in this space is highlighted by the three bay windows of the original central control room high on the west wall, and the windows to the administration area on the south wall.

The **Administration and Staff Accommodation** is divided into smaller offices and staff facility areas. For any visitor to the Power Station, and for many of the "clean" – administrative or higher-up – staff, this was the front of house and point of entry to the place. As such, the main lobby area is finely finished with polished Queensland Maple, a tiled floor, pressed metal ceiling, lift, and stair. The external entrance area is restrained and smaller in scale compared with the rest of the place.

Apart from the Victoria Road entry lobby, the spaces are standard in their finishes, though some remain evocative of their earlier use, such as the offices of the Power House Superintendent, the Laboratory, the Dining Room and the locker rooms. Given its function, the visual and spatial experience of the Administration and Staff Accommodation differs considerably from the vast industrial spaces of the rest of the Power Station. Nevertheless, views to the outside and overlooking the Turbine Hall ensure that the building maintains visual connections to its industrial context.

Figure 3.2.29 Turbine Hall Interior looking north, July 2024 (courtesy of Chris Bennett: Evolving Picture).

Figure 3.2.30 Turbine Hall Interior south, July 2024 (courtesy of Chris Bennett: Evolving Picture).

Figure 3.2.31 Administration Building Arrival, June 2024 (courtesy of Chris Bennett: Evolving Picture).

The **Switch House** is a long and narrow 4-storey brick and reinforced concrete building containing a variety of spaces with an aesthetic unique to twentieth-century electricity generation and distribution. The lower levels of the building have limited access to daylight, and the numerous cable channels along the east and west walls give the space a defining functionalist character. Several spaces – particularly the lower two floors north of the central lift – are cellular in nature and lined up, side by side. These spaces with their heavy steel grille or sliding fire doors suggest a machinic environment, despite most of the equipment having been removed.

A particularly evocative space is the original Control Room area on the top floor which, despite being almost devoid of the original equipment, retains the sense of control and surveillance by virtue of its elevated location and view over the Turbine Hall through three sets of bay windows. Adjacent to the former Control Room is the 11kV Switch Room with its intact bank of switchboards, generators, and equipment which visually presents a narrative of energy reticulation.

Another notable space is on the third level where some Bus Bars remain. Besides the precise surviving machinery and cable elements, the rows of regular open concrete enclosures in this space create a nuanced labyrinthian and rhythmic spatial quality.

The semi-underground cable tunnel commencing south of the central lift and exiting east of the Administration and Staff Accommodation is a unique subterranean space indicative of how services were reticulated within urban areas. Meanwhile, the original 1917 lift and stair is a rare and intact element from this period and retains its high-quality decorative grillwork and control panels.

One of the spaces most aesthetically evocative of the social life of the power station workers is the Entertainment Hall on the top floor, built in the early 1950s. It retains its original details, stage and painted murals, and offers a glimpse into recreational life at the power station.

The **Transformer Alley** is another visually evocative industrial space that offers an important spatial experience. Tall, long, and narrow and bridged by large pipes, ducts, and gangways, this is a tight service laneway space of a purely utilitarian nature.

In the **Control Room Building**, the Control Room is the clearest and most intact physical expression on the site of the monitoring, measuring and total control of the station's generation and reticulation processes. The curved and ordered arrangement of the control

Figure 3.2.32 Switch House Motor Generator Switch Room, November 2023 (courtesy of Chris Bennett: Evolving Picture).

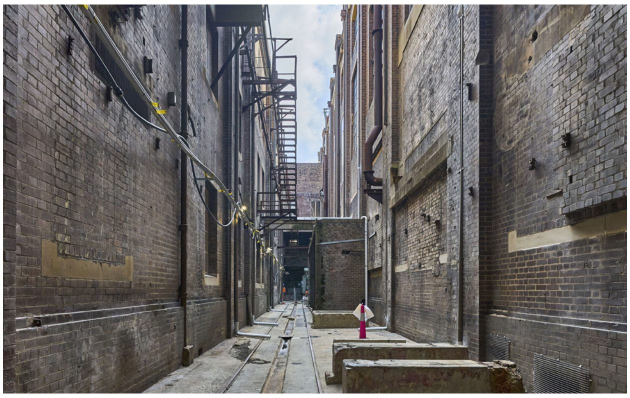


Figure 3.2.33 Transformer Alley, November 2023 (courtesy of Chris Bennett: Evolving Picture).

Figure 3.2.34 Control Room, East Elevation, November 2023 (courtesy of Chris Bennett: Evolving Picture).

Figure 3.2.35 Control Room Interior, November 2023 (courtesy of Chris Bennett: Evolving Picture).

panels, dials and switches, clean, polished surfaces, and abundant daylight all elicit the power and efficiency of the machine age.

Meanwhile, the notably darker **Cable Room** and associated **Cable Tunnels** below the control room are of an industrially raw but precise and efficient aesthetic, with every cable labelled and deliberately placed. This is akin to experiencing the inner circuitry of a mid-twentieth century computer and is a spatially and visually intriguing. Since the closure of the power station, some of the equipment has been spray-painted in a flat grey colour – but its fabric and texture remains entirely recognisable.

The **Switch House** spaces, particularly on the middle level, retain some of the labyrinthian concrete boxes and cable trays similar to those found in the 1912–1927 Switch House.

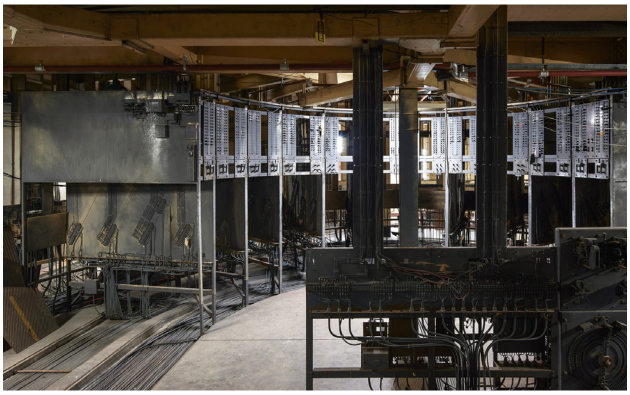


Figure 3.3.1 Cable Room in the Control Room Building, November 2023 (courtesy of Chris Bennett: Evolving Picture).

Figure 3.3.2 Switch House spaces in the Control Room Building, November 2023 (courtesy of Chris Bennett: Evolving Picture).

3.3 HISTORICAL SIGNIFICANCE

White Bay Power Station holds great historical significance and impact as a symbol of the development of power generation in twentieth century NSW. It was originally built by the NSW Rail Commissioners to supply power to the rail and tramway system. Alongside other factors including access to vast quantities of water, its location was determined by the establishment of the Rozelle Rail Yards and the Glebe Island Wheat silos and shipping terminal. It was not long before it began to also supply power to the domestic, commercial, and industrial sectors via the municipal electrical distribution system.

The acquisition of the power station by the Electricity Commission in 1953 was a response to a major energy crisis which was crippling the state's post-war industrial and commercial growth. The station is representative of the rapid growth in Sydney and the increasingly important contribution of electricity to the growth of industry and economy of NSW and hence the country. In addition, the station's original links with the period of major expansion of the railway and tramways systems associates it with major events in the interwar years.

White Bay Power Station is the only extant city power station that retains components and machinery for use as a coal-fired power station. It was the longest-serving city power station that remains standing today, from 1913 to 1983 (70 years – although it was not fully operational until 1917). Its history is representative of the technological and operational changes required to cope with an increasingly insatiable demand for electrical power by transportation systems, businesses, and domestic users. During its active years, the power station made a major contribution to the State's rail networks and the daily lives of millions.

White Bay Power Station is one of the twentieth-century industrial landmarks around the working maritime foreshores of Sydney Harbour. It is representative of a process of increasing foreshore industrial use that prevailed throughout the nineteenth and early twentieth centuries in Sydney Harbour. It is one of the few surviving large-scale industrial structures in the maritime foreshore environment (which has substantially decreased in late twentieth century with relocation of industries and the gentrification of the area).

Much of the historical significance of the Power Station lies within its technological significance. For this reason, discussion of the significance of changes in machinery equipment that took place during the operational years are made in the following section.

No associations with major figures or historical events outside that of power generation are known.

3.4 SCIENTIFIC (TECHNICAL / RESEARCH) SIGNIFICANCE

Power stations are composed of a series of completely interdependent operating systems. In turn, each of these systems comprise several interdependent items, assemblages and collections of machinery, plant, and equipment. In all large power stations, there is more than one example of each operating system. Following its decommissioning in 1994, White Bay Power Station retains a single representative example of each operating system, some of which includes machinery dating as far back as the early twentieth century. Each of these systems are substantially intact, which allow the generating process to be interpreted. The nature of this resource is such that it cannot be appreciated, understood, or interpreted merely as individual component parts, but must be read as a series of integrated operational systems within which are a subset of contributing elements. The operating systems and their extant equipment and machinery used in the generation of electrical power at White Bay Power Station represents an invaluable resource of the history and development of power generation in Sydney and New South Wales which is not available from other sources. They demonstrate the technological and engineering advances in power generation alongside the working conditions and practices which evolved in tandem both for the workers at White Bay Power Station and the expanding industrial workforce of New South Wales. The production of electric power at White Bay Power Station, and its increasing reticulation and availability, stimulated associated industrial and suburban growth in the Sydney region throughout the twentieth century. Its rarity is furthered by the developments during the post-war era when the power industry became increasingly automated, leading to the redundancy of equipment more closely associated with a labour-intensive phase in the history of electrical generation.

The exceptional aesthetic value of the machinery and equipment is also enhanced by the landmark value of the buildings within which they are housed. The extant items within the operating systems are of an impressive scale and exhibit a high degree of creative and technical achievement in their design and configuration. They also have exceptional historic, technical, and aesthetic value representative of the technological advances and influences of English technology and engineering design. This suite of machinery in its original working location with the suite of intact power station buildings and structures is now a rare survivor at a state level, and as time goes on, at a national and international level.

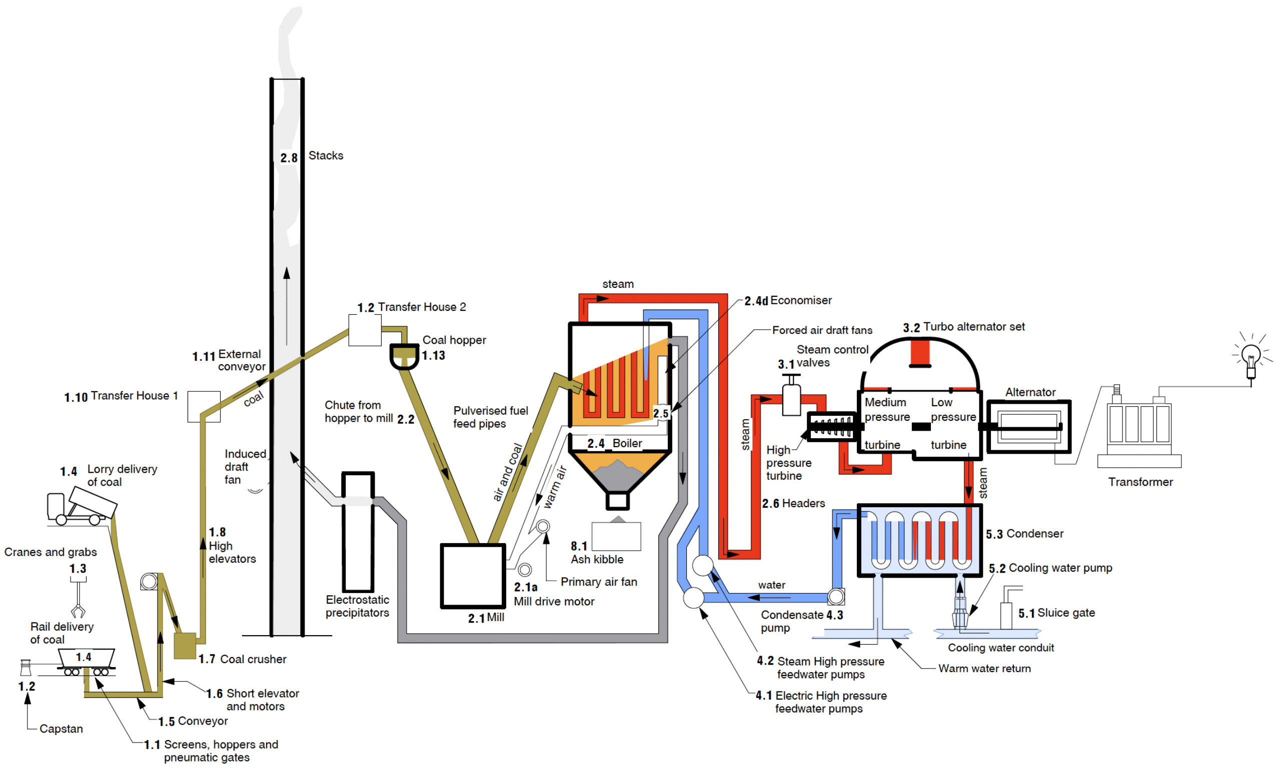


Figure 3.4.1 Diagram of the process of electricity generation from coal (courtesy of Godden Mackay Logan, Historic Machinery Inventory & Conservation Strategies, 2003, p.17).

These elements in situ, which are now a substantially intact representative sample of the operating system, contribute to the overall rarity of the machinery and equipment extant at White Bay Power Station now. They are integral parts of the station and are complete systems which would be diminished if any parts were removed. They are as follows:

The Coal Handling System has a historical association with the beginnings of the electrification of the Sydney rail and tramways systems. The system is indicative of engineering design principles, and is a rare demonstration of the changing patterns of materials handling that can yield information on the development of less labour-intensive practices of the post-war period. The Coal Handling System evidences the need for locating medium voltage power stations in metropolitan areas close to the consumers.

The Steam Raising System is composed of a number of elements which evidence early to mid-twentieth century advances in engineering development of steam production to power the Sydney tram and rail systems. When introduced, it was the latest technology in steam power generation.

The Feedwater System demonstrates the technology by which feedwater is constantly recycled via a change in state. It has the ability to enhance our understanding of the technology of power generation with information that is not available from other sources.

The Cooling Water System evidences the way in which steam was converted to water in order to recycle it through the massive cast iron condensers. The cooling water system has the potential to yield information on the technology of power generation that is no longer available from other sources.

The Power Reticulation System retains elements which are over forty years old and which are evocative of the technological developments in the management of the reticulation of electrical power. Elements associated with the Power Reticulation System demonstrate the transition from the early phase of power reticulation to the increasingly sophisticated developments in the electrical distribution system from the post-war period to the later twentieth century.

The Electricity Supply and Auxiliary Systems demonstrates the historical development of increasingly complex methods of electrical energy production and reticulation. The power station retains elements contemporary with the earliest phase in electrical power generation which are now rare in a process increasingly dependent on automatic systems. The system retains diverse elements that are now extremely rare and have a high technical value, particularly as they are in situ at the power station.

The Ash Handling System is demonstrative of early attempts efficiently to dispose of industrial waste and to reduce pollution. The system has been depleted by the removal of the precipitators which were integral and vital component parts, that demonstrated changing attitudes to, and methods in the management of industrial pollution. The retained elements are demonstrative of an operational system developed specifically for White Bay.

The Chimney Stacks associated with the modern boilers are significant not only as a visible reminder of the modernisation of the Power Station but also as an integral part of the system for exhausting waste gases. They are of steel plate riveted construction dating from the 1950s. This form of construction technology is considered late for this type and is extremely rare in the context of NSW, Australia, and potentially internationally.

The site of the former White Bay Hotel: the hotel was of standard construction and of a style and technology typical of the era in which it was built and has since been demolished. There are many other surviving examples of this type of building.

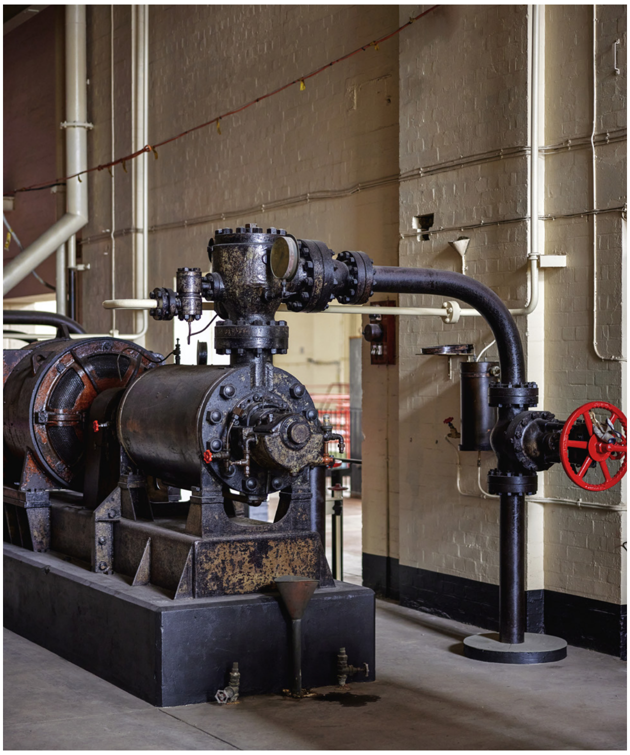


Figure 3.4.2 One of the High Pressure Feedwater Pumps in the Pump House, March 2024 (courtesy of Toby Peet).

3.5 SOCIAL / SPIRITUAL SIGNIFICANCE

Two main communities have demonstrated associations with White Bay Power Station:

- Former workers, including contractors
- Residents of the areas adjoining the power station.

In addition, as part of the traditional Country of the Wanngal people and their saltwater (*gadhungal*) kin, the power station area has ongoing significance to descendants to these coastal Sydney clans.[143]

For the 2013 edition of this CMP, information from "representatives" of the workers and residents was gathered through a series of questionnaires. An oral history research project was also conducted with former works of the power station in 2002, although the small sample of former workers limits the conclusions that can be drawn.

More recently, the social significance of the place has increased considerably with the activation of major spaces in the power station for public access and use. This has resulted in a greater and more widespread appreciation and interpretation of the White Bay Power Station and its significant values. With the power station set to develop further as an active culture and arts precinct, this social significance is expected to continue to grow and become synthesised with values associated with newer uses of the place.

Analysis of the social significance of White Bay Power Station involves consideration of the following values which are embodied in the NSW State Heritage Register Criteria:

Community esteem: Items that are esteemed by the community for their cultural values. This would include places representing any cultural value held in high esteem by the community;

Sense of loss: Items which if damaged or destroyed would cause the community a sense of loss; and/or

Community identity: Items which contribute to a community's sense of identity. This would include:

- Importance to a community as landmark, marker or signature
- Importance as a reference point in a community's identity
- Strong or special attachment developed from long use and/or association.

3.5.1 Community Esteem

White Bay Power Station is of *exceptional social significance* for the associated communities because of the esteem in which it is held for its cultural values:

- It is recognised as an important surviving example of the power stations that once were prominent within Sydney.
- It is regarded as an important surviving element of the industrial history of Sydney Harbour, and of this locality.
- It is valued for its powerful physical presence and industrial aesthetic.

These values are widely held across all the "associated communities" that were surveyed as part of this project.

For the former power station employees, White Bay Power Station is of *exceptional social significance* for its ability to demonstrate the development of power industry technology of a particular era, providing outstanding evidence through the retention of machinery and associated systems, artefacts, and workspaces.

More recently, the power station has acquired a new status as a growing culture and arts precinct, which will continue to increase its community esteem for the broader community.

Figure 3.5.1 White Bay Power Station Open Day, 2002 (Design 5 – Architects).

Figure 3.5.2 Former White Bay Power Station Workers during Open Day, 2002 (Design 5 – Architects).

3.5.2 Sense of Loss

White Bay Power Station is of *high social significance* for the local community as a rare survivor of the industrial era. The loss of other industrial structures in this locality has increased the significance of White Bay Power Station. For this community, White Bay Power Station represents these lost places and connections to the locality's industrial past. The possibility that White Bay Power Station may too be lost was a strong concern in earlier research, with people expressing a strong desire for the buildings and machinery to remain and be interpreted.

For the former power station employees, White Bay Power Station is of *high social significance* as a place that represents past working lives, practices and technologies that are considered "redundant" and are therefore in danger of being lost.

Concerns surrounding the loss of the power station have been considerably alleviated in the recent years following the remediation works and activation. This sense of loss, alongside other significant values, also ensures the conservation and retaining of extant machinery and equipment amidst future uses for the power station.

3.5.3 Community Identity

3.5.3.1 Importance as a landmark, marker or signature

White Bay Power Station is of *exceptional social significance* for both local residents and former employees as an important landmark, one of few surviving industrial structures that were once the signature of this locality. As a landmark it is a highly visible and widely recognised, as discussed in section 3.2.1.

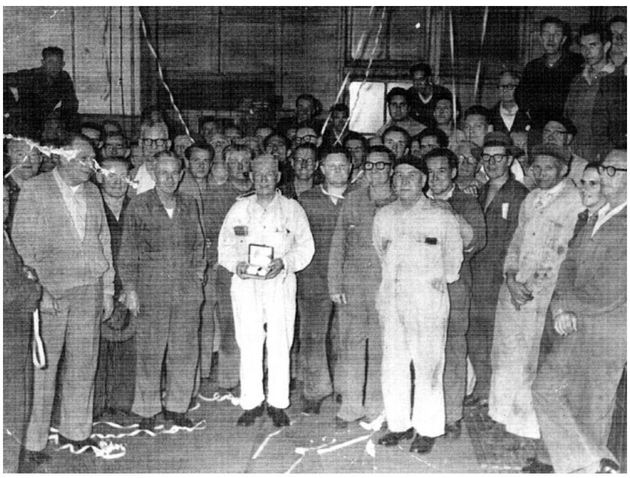


Figure 3.5.3 Retirement Party, 1984 (courtesy of Eitel Camilleri private collection).

White Bay Power Station is of *exceptional social significance* for local residents as the most prominent entry marker to the Balmain peninsula; it signifies the transition from the inner city to the suburbs.

3.5.3.2 Importance as a reference point in a community's identity

White Bay Power Station is of *exceptional social significance* for the local community as a key symbol and identity of the area's industrial origins and working traditions. It has influenced domestic and community life and is associated with a 'working class' character.

White Bay Power Station is of *high social significance* for the local community because it represents an historical connection with the past and is highly valued by newer and older residents alike.

White Bay Power Station is of *exceptional social significance* for former power station employees for its ability to demonstrate technological systems and processes. These were a feature of their working lives and create for them an important and highly valued connection between the past and the present.

White Bay Power Station is of *high social significance* for former power station employees because of the ability of the place to evoke their experience of working at the power station. The power station retains a prominent place in their lives and working history, despite the time that has elapsed since they worked at the site. It evokes memories of their working lives, of people and events that still resonate for them today.

The social significance of White Bay Power Station is also expected to develop as a reference in the local community as an active arts and culture precinct key to future development in the Bays West area.

3.5.3.3 Strong or special attachment developed from long use and/or association

White Bay Power Station is of *high social significance* to the local community and former power station employees as a place associated with an important public function that has over time, gained important associations and meanings for these two communities. This will likely continue to develop for a broader community in relation to the newer uses of the power station.

3.5.4 Significant Areas and Elements

3.5.4.1 The Setting

The harbourside location, relationship between the buildings and the water, and the views out from and to the power station are highly valued by local residents. The setting and historical connections between the power station, waterfront, docks and railway are valued as evidence of the industrial history of the locality. As an area key to the Bays West masterplan development, future developments will continue to transform the harbourside.

The mulberry trees that once populated the edge of the site near Robert Street were valued by local residents.[144] Residents recall more extensive gardens, creating a small green oasis around the power station and within this highly built-up area. One surviving mulberry tree was recorded in the 2013 CMP. No further horticultural assessment was conducted for this 2026 edition of the CMP.

3.5.4.2 The Complex of Buildings

The complex of buildings is highly valued as a landmark, because of its size and visual dominance, and as an entry marker to the locality. Its historical associations to this locality add to its significance. The industrial aesthetic of the exterior of the complex of building is much admired by locals, especially the Federation façade, particular qualities of the building fabric (windows, architectural detailing), the chimney stacks and the coal conveyor.

Former power station workers also value the complex of buildings for its landmark value, but also for the extant technology they contain and their historical role in the power industry.

Over the years, Open Days have provided public access to some of the interiors of the power station, leaving a strong impression on visitors. The remediation and activation works have allowed even broader community access into major spaces within the power station. Its social significance continues to increase as opportunities for use of the complex as a burgeoning arts and culture precinct continue to develop.

3.5.4.3 Boiler House

The representative "slice" of the Boiler House containing the surviving boiler (and associated equipment) is of exceptional significance to former employees as a key aspect of the technological significance of the place and survives as a key feature in one of the major spaces for future activities and events at the power station.

3.5.4.4 Turbine Hall

The Turbine Hall with the surviving turbine is of exceptional significance to the former power station workers; for them it is the heart of the system and a key component of the technology. It is also highly significant as a monument to the working people of that time in the power station, in recognition of their abilities and skills in successfully managing these difficult technologies. The Turbine Hall is also important as the public face of power production, and was viewed by visitors through the observation windows in the administration area, including the entry foyer from Victoria Road.

Alongside the Boiler House, the Turbine Hall is a major space for future activities and events that will continue to develop the social significance of the power station.

Figure 3.5.4 The Opening Night of the 24th Biennale of Sydney, March 2024 (Design 5 – Architects)

3.5.4.5 Administration & Staff Accommodation

The Administration and Staff Accommodation is of high significance for former workers with associations with this part of the site. This building housed general amenities and facilities, the kitchen and canteen which served as a gathering place for many workers; as well as the main front of house entry to the power station. This building was also the managing base for several higher-ranking individuals at the power station and was essential to managerial operations.

3.5.4.6 Switch House & Transformer Alley

The Switch House is of exceptional significance to the former power station employees. It formed a key part of the overall power generation and distribution system. Key areas include the Control Room, the workshops (most internal fittings have gone), the pyrotenax cabling, and the switch gear rooms. Additionally, the Entertainment Hall is an exceptionally significant space as it embodies the social and recreational life of the workers and represents a sense of community and camaraderie at the power station.

3.5.4.7 Control Room Building

The Control Room Building and its contents are of exceptional significance. The Control Room in particular is highly intact and contains evidence of the processes and work practices of energy generation and reticulation, as well as evidence of the changes in technology over time. The Cable Room below and the connecting Cable Tunnels are regarded as providing remarkable evidence of a high level of workmanship that is now rare, as well as representing the technology of a recently past era.

Figure 3.5.5 Audience at Entertainment Hall (courtesy of Pacific Power collection).

3.5.4.8 Significant Processes & Technologies

For the former employees, the place is of exceptional significance for its ability to demonstrate power station technology. While the technologies at White Bay were once represented at a number of twentieth-century power stations, they are now exceedingly rare. These technologies are of exceptional significance because they were central to the operation of the power station and represent certain historical phases in the power industry.

Specifically, these technologies are demonstrated on the site by:

- The survival of and relationship between each of the following key areas associated with power production and supply: railway, coal handling and pulverising, boilers, turbines, switching and control functions.
- The survival of machinery, systems (eg. conveyors, walkways etc.) and other equipment and contents associated with each area.

Figure 3.5.6 Cable Room in Control Room Building, July 2024 (courtesy of Chris Bennett: Evolving Picture).

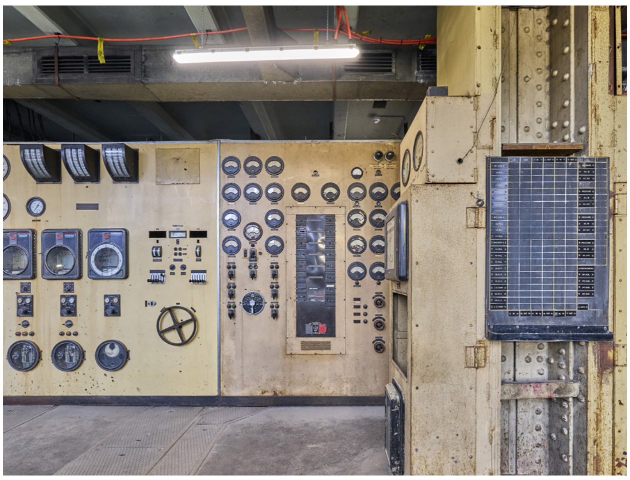


Figure 3.5.7 Boiler House Control Room, May 2024 (courtesy of Chris Bennett: Evolving Picture).

3.5.4.9 *Workplaces*

For the former workers, their own workplaces are of high significance. This means that areas unfamiliar to a particular worker may be regarded as insignificant, whereas for another worker the same place may be highly valued.

Specific aspects of each work area enable former workers to:

- demonstrate their work procedures and skills
- recall memories of particular events (eg. the No. 2 Turbine Failure, the discovery and repair of a fault).

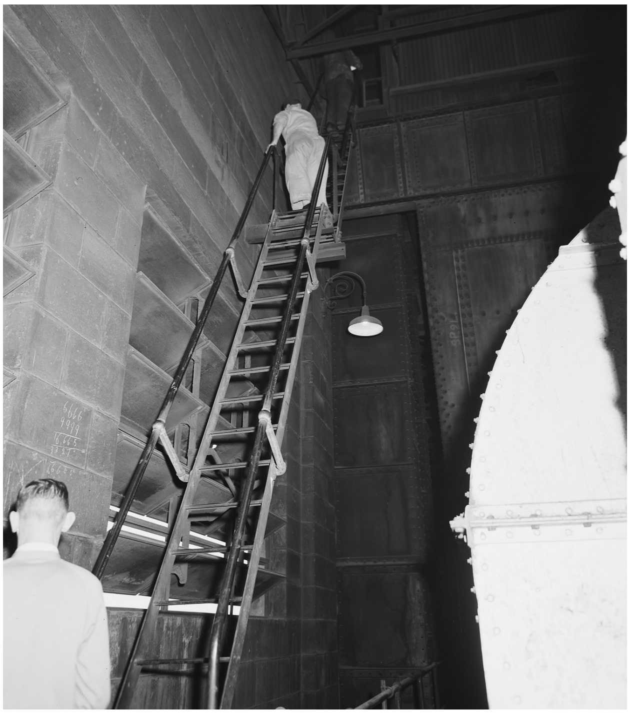


Figure 3.5.8 Workers on a ladder, likely in Boiler House No. 2, 1958 (courtesy of State Archives of NSW, NRS-20347-1_001656_A).

Figure 3.5.9 Workers welding a crack in a turbine cover, 1958 (courtesy of the State Archives of NSW, NRS-20347-1-001774_A).

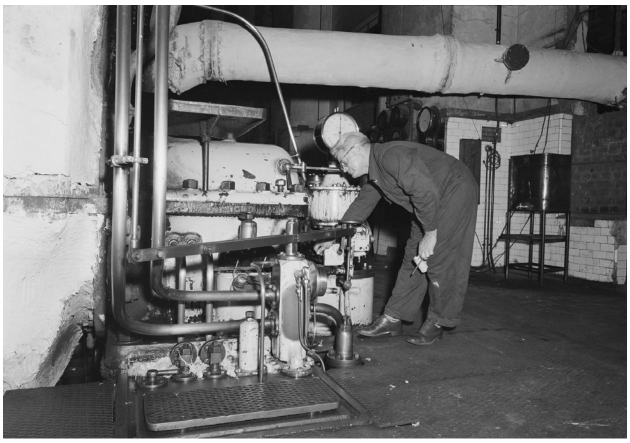


Figure 3.5.10 Worker inspecting machinery, 1954 (courtesy of State Archives of NSW, NRS-20347-1-41-378_C).

3.6 NSW STATE HERITAGE REGISTER CRITERIA

3.6.1 Discussion of assessment against SHR Criteria

In order to determine whether the place meets the threshold for listing on the State Heritage Register, the above discussion and values of the place are now tested against the criteria for such listing. Criteria and definitions below are extracted from the NSW Heritage Council document "Assessing Heritage Significance."[145]

State significance is defined by the NSW Heritage Council as follows:

> *"A State Heritage Register listing recognises a place or object as significant for all of NSW. The listing is assessed and recommended by the Heritage Council of NSW and made under the Heritage Act 1977 by the NSW Minister. The place or object may be, for example, a building, Aboriginal site, cultural landscape, single object or collection, known archaeological item or a heritage conservation area."*[146]

Criterion (a) Historical significance – an item is important in the course, or pattern, of NSW's cultural or natural history (or the cultural or natural history of the local area).

The White Bay Power Station is significant as part of the states' development of electrical power for industry across the state for 70 years during the twentieth century. It is the only power station in NSW to retain a complete set of structures and machinery from this period, all of which provide important and rare tangible evidence of large-scale power generation. The historical significance of the White Bay Power Station also extends to its extensive archives, reports, and oral histories. These, in combination with the tangible elements of the place give White Bay Power Station the rare ability to demonstrate in detail technological progress, social histories, and standard work practices of the early to mid-twentieth century which are now almost entirely discontinued.

Criterion (b) Historical association – 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 (or the cultural or natural history of the local area).

The White Bay Power Station has special associations with the lives and work of the large group of former workers of the power station, who have a vibrant and well-documented history during its years of operation. The operational buildings of the White Bay Power Station reflect the working conditions experienced by the workers, while the Administration and Staff Accommodation, Entertainment Hall, White Bay Hotel, and associated oral histories speak to the social and recreational history of the workers. Additional notable individuals associated with the power station include Hugo Stossel, the modernist architect of the third Boiler House, and Andrew Lomnici, the painter responsible for the murals in the Entertainment Hall. These historical associations are generally of local significance to the cultural history of the area.

Criterion (c) Aesthetic / creative/ technical achievement – an item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW (or the local area).

The White Bay Power Station has exceptional aesthetic, creative, and technical achievement at a state level. It retains exceptional aesthetic value that extends well beyond the immediate site as an icon of early to mid-twentieth century industry. The White Bay Power Station has always been a visual anchor and a prominent marker signalling the entry to the city from the west. It stands near the waters of White Bay as a key landmark visible from all angles and one of the largest building complexes in the area, and an important component of a rare group of harbourside industrial structures. Its iconic landmark qualities are primarily defined by its two towering chimney stacks – which are a constant reference point from the inner west – and the massive proportions of its building forms.

Internally, the White Bay Power Station retains a broad range of spaces and elements including machinery, which are exceptional for their raw industrial aesthetic qualities. The large spaces, uninterrupted spans and the massive power generating machinery have resulted in White Bay Power Station comprising an architecture of rhythmical bays and massive proportions, with a repetition of elements such as windows and columns. This entirely functional design, where all the materials are used to maximum efficiency and where ornament is stripped to a minimum, has all the hallmarks of the prelude to internationalism and the modern movement.

As White Bay Power Station steadily took shape between 1912 and 1917 beside the modest workers' terraces of Balmain, it would have formed a composition of bulk and massing not seen before on the Sydney skyline. Not only were its forms large and functionalist with elements of the Arts and Crafts movement in the brick structures, but its styling and imagery symbolised the new century, the machine age, the wonders of industry and technology, and the benefits of power and transport for the masses. As such, White Bay Power Station is an Australian exemplar of early international modernist architecture and a symbol of development of power generation throughout the twentieth century'. Its design and construction while typical for its time is now a rare surviving example of such industrial buildings and machinery complexes. It also demonstrates technological achievements of its time in the erection of the 1927 reinforced concrete structures and the 1958 Boiler House, with its large areas of steel framed and glazed curtain walling. The White Bay Power Station also notably includes work by the modernist European architect Hugo Stossel, who designed the third Boiler House.

Criterion (d) Social, cultural, and spiritual – an item has strong or special association with a particular community or cultural group in NSW (or the local area) for social, cultural or spiritual reasons.

The White Bay Power Station has strong and special associations and meanings for the local community, for former power station workers and for others who have used the place and is of high social significance. As part of the traditional Country of Wanngal people and their saltwater (*gadhungal*) kin, the power station area has ongoing significance to descendants of these coastal Sydney clans.[147] For former employees at the White Bay Power Station, this place provides a link to their past working lives and evokes memories of people and events that remain important to them today. It represents the post-war period of power station operation, and through the retention of technologies, systems and machinery it has the ability to evoke this period and demonstrate the production methods and working conditions of the time. It is a potent symbol of the area's industrial origins and working traditions, aspects of community identity that are strongly valued today by both older and new residents. It is one of few surviving features that provide this symbolic connection.

In a more current context, the White Bay Power Station also holds social significance for its association with and demonstrated interest in by industrial heritage enthusiasts, including the NSW Heritage Engineers and National Trust Industrial committee. The White Bay Power Station is also a widely recognised landmark, the most important surviving industrial signature building locally and the marker of the entry to the Balmain peninsula and its industrial harbour. It retains a powerful physical presence and industrial aesthetic for the local community.

Further, since its activation in 2024 following remediation works, it has served as the site and backdrop to numerous art, performance, entertainment, and community events, which have allowed the general public of the broader Sydney region unprecedented access to this twentieth-century industrial icon. From this, its social, cultural, and spiritual associations and significance are only expected to grow as the White Bay Power Station continues to gain greater contemporary relevance as a core aspect of a revitalized arts and community precinct.

Criterion (e) Research potential – an item has potential to yield information that will contribute to an understanding of NSW's cultural or natural history (or the cultural or natural history of the local area).

As a now rare and intact surviving early twentieth century industrial complex in the inner Sydney Harbour region and particularly in Balmain, the White Bay Power Station contributes considerably to our understanding and appreciation of these areas and foreshores as formerly places of heavy industry and intense port activity.

As an early power station for the early twentieth century tram and rail network, it was a vital component in the expansion and daily life of suburban Sydney.

The White Bay Power Station contains a complete and in situ assemblage of machinery, spaces and elements comprising all the systems and processes for generation of coal-fired electricity from the early to mid-twentieth century. This is the only surviving assemblage in NSW and it has the potential to yield information not found anywhere else in the State.

Figure 3.6.1 Boiler House hopper chutes, 2024 (courtesy of Toby Peet)

Criterion (f) Rare – an item possesses uncommon, rare or endangered aspects of NSW's cultural or natural history (or the cultural or natural history of the local area).

As the only intact power station of its type left in NSW, with one complete power generating system retained in situ for conservation, the rarity of the White Bay Power Station is firmly established as a surviving symbol of twentieth century industrial activity in an area of Sydney which was once almost entirely dependent on such industries for its livelihood. The power station also contains unique elements (such as the Boiler House curtain walls and Chimney Stacks) that are rare even on an international level, furthering its rarity.

Criterion (g) Representative – an item is important in demonstrating the principal characteristics of a class of NSW's cultural or natural places; or cultural or natural environments (or a class of the local area's cultural or natural places; or cultural or natural environments).

The White Bay Power Station retains a complete set of equipment and machinery used for the steam turbine generation of electricity from combustion of fossil fuels and is historically and technologically representative of this type of power station. Whilst other modern power stations use similar technology, their operations and equipment are more modern and efficient. As a complex of structures, buildings and machinery, it demonstrates the extensive configuration and processes of an early to mid-twentieth century city power station.

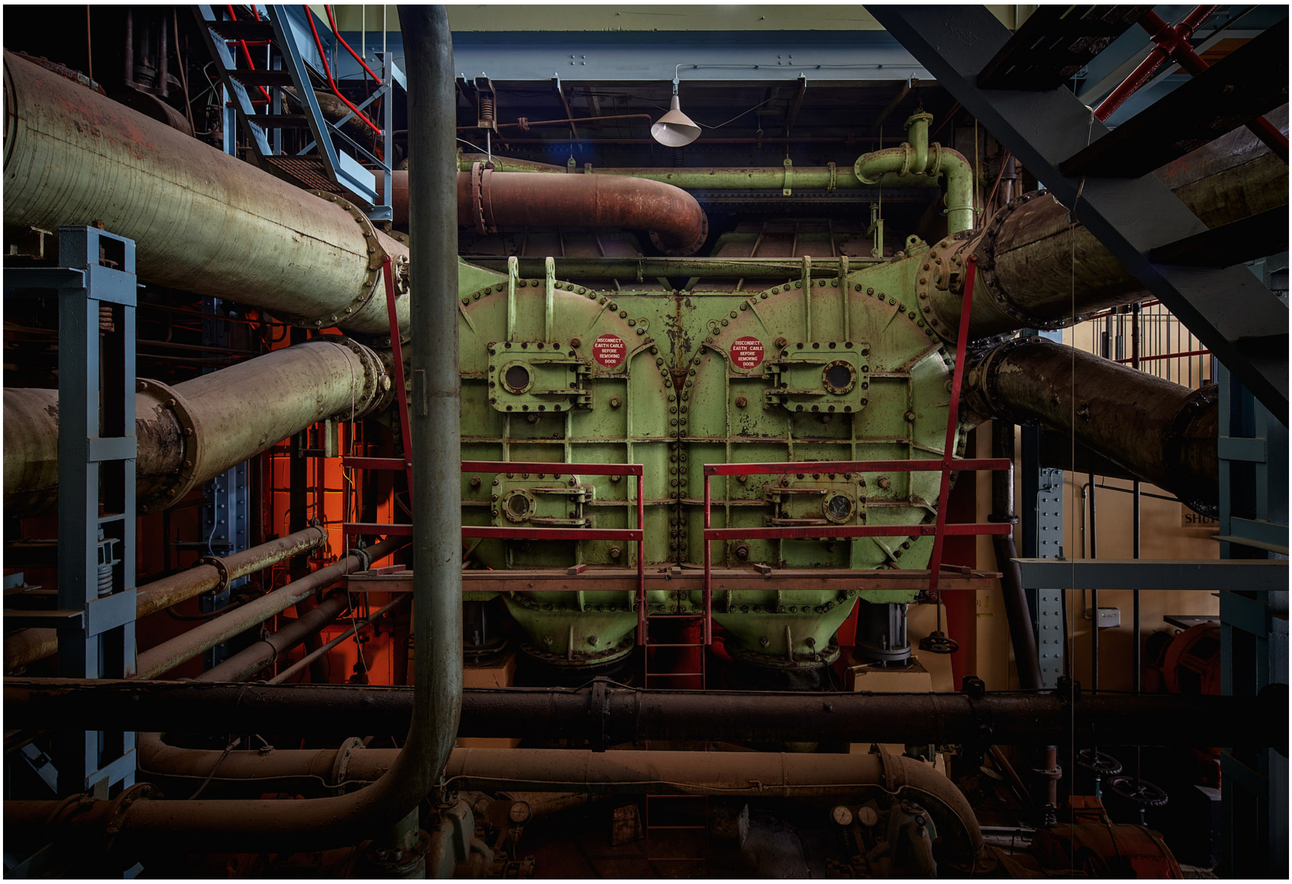


Figure 3.6.2 Turbine Hall Condenser, 2024 (courtesy of Toby Peet)

3.7 ASSESSMENT FOR LISTING ON THE NSW STATE HERITAGE REGISTER

The discussion of the significance of the White Bay Power Station against the criteria set by the Heritage Council of New South Wales to determine cultural significance are summarised below. This table provides a summary of the justification of the listing of the Power Station on the NSW State Heritage Register.

NSW State Heritage Register Criteria:						
Grading		**Exceptional**	**High**	**Moderate**	**Little**	**Intrusive**
	Justification	Rare or outstanding item of Local or State significance. High degree of intactness, Item can be interpreted relatively easily.	High degree of original fabric. Demonstrates a key element of the item's significance. Alterations do not detract from significance.	Altered or modified elements. Elements with little heritage value, but which contribute to the overall significance of the item.	Alterations detract from the significance. Difficult to interpret.	Damaging to the item's heritage significance.
	Status	Fulfils criteria for Local or State listing	Fulfils criteria for Local or State listing	Fulfils criteria for Local or State listing	Does not fulfil criteria for Local or State listing	Does not fulfil criteria for Local or State listing
a	The item is important in the course, or pattern, of NSW's cultural or natural history.	✓				
b	The 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.		✓			
c	The item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievements in NSW.	✓				
d	The item has strong or special association with a particular community or cultural group in NSW for social, cultural or spiritual reasons.	✓				
e	The item has potential to yield information that will contribute to an understanding of NSW's cultural or natural history.	✓				
f	The item possesses uncommon, rare or endangered aspects of NSW's cultural or natural history.	✓				
g	The item is important in demonstrating the principal characteristics of a class of NSW's cultural or natural places; or cultural or natural environments.	✓				

Figure 3.7.1 Chimney Stacks, External Conveyor, and Boiler House looking northwest, 2024 (courtesy of Toby Peet).

SECTION 4
STATEMENT OF CULTURAL SIGNIFICANCE 144

4.1 Summary Statement of Cultural Significance 145

4.2 Significance Gradings 146

SECTION 4
STATEMENT OF CULTURAL SIGNIFICANCE

Figure 4.1.1   Chimney Stacks, External Conveyor, and Boiler House looking northwest, 2024 (courtesy of Toby Peet).

4.1 SUMMARY STATEMENT OF CULTURAL SIGNIFICANCE

White Bay Power Station was the longest serving power station in metropolitan Sydney, generating electricity continuously for more than seventy years. Its extant buildings, structures and machinery provide important and rare tangible evidence of the first phase of large-scale power generation in twentieth-century New South Wales. It made a major contribution to the expansion of Sydney's electric tram and rail network and the daily lives of millions.

It is the only surviving power station in New South Wales from the early and mid-twentieth century to retain a substantially intact and representative set of buildings, structures and in-situ machinery that demonstrate the complete operating systems and processes of coal-fired power generation and supply. Its extant machinery elements and associated structures are, both individually and collectively, of exceptional historic, technical and aesthetic significance. The complex includes a representative sample of the coal, ash and smoke handling systems, boilers and feedwater systems, circulating cooling water, turbines and generators, electrical switch gear, and control systems.

White Bay Power Station contains buildings, structures, and internal and external spaces of exceptional historic, aesthetic, technical and social significance. They include raw industrial spaces of a scale, quality, and configuration, which are increasingly rare and inspire visitors and users alike. The significance of these structures and spaces is greatly enhanced by, and in most cases dependent on their associated, extant, in-situ machinery elements.

White Bay Power Station is of exceptional aesthetic and social significance to Sydney residents as a prominent and widely recognised harbourside industrial landmark, signalling the entry point to the Balmain peninsular from the south and east, and is highly visible from major approach roads, streets and surrounding areas. The form and arrangement of the buildings, and in particular the two chimney stacks, are visible from many parts of the inner west and are a constant reference point. The power station, defines a major entry point to the city from the west. It also forms part of a closely related group of industrial and large-scale structures and spaces on this western edge of the city (the former White Bay container terminal, Glebe Island silos and the Anzac Bridge).

White Bay Power Station is of exceptional social significance for both local residents and former employees. It is an important landmark and potent symbol of the area's industrial origins and working traditions, which have influenced domestic and community life and is associated with a "working class" character. It is of exceptional social significance for those who worked in the power station for its ability to demonstrate technological systems and processes that were a feature of their working lives. For the general public and local residents, the buildings, spaces and machinery have the ability to showcase and educate with regard to industrial technology, working conditions and production of energy from coal fired sources, that span the breadth of the twentieth century that is increasingly rare to Sydney.

As part of the traditional Country of Wanngal people and their saltwater (gadhungal) kin, the power station area has ongoing significance to descendants of these coastal Sydney clans.[148]

The body of archives, reports and oral history recordings associated with the White Bay Power Station provide evidence for the development of technology and work practices at the station and are an integral part of the exceptional significance of the place.

The former White Bay Hotel was located south of the Administration Building and had strong associations with the social life of the workers. It was also associated with the poor mental health of some workers, particularly those dealing with trauma after serving or impacted by the war.

The White Bay Power Station holds exceptional state significance and is listed on the State Heritage Register. With its increasing rarity and significant values, as well as its recent revitalisation for public access and use as an arts and cultural precinct, there is potential for the recognition of White Bay Power Station at a level of national significance.

4.2 SIGNIFICANCE GRADINGS

The former White Bay Power Station includes external and internal spaces, structures, and elements of varying cultural significance within this overall significance. These gradings are shown on the diagrams following the summary table. For detailed information on these gradings, refer to Volume 2 for structural and spatial elements, and Volume 3, Appendix C (former CMP Volume V) for machinery elements.

A table setting out the Grading of Significance for each space and element, according to historic, technical, aesthetic, and social values is included in Volume 2.

The Grading levels are as follows:

1 Exceptional
2 High
3 Moderate
4 Little / neutral
5 No significance / intrusive

Grade 1: *Spaces/structures/elements of Exceptional significance*

These spaces, structures or elements are of exceptional cultural significance for at least three of the four categories of historical, technical, aesthetic or social values or they contain significant machinery/plant. They play a crucial role in supporting the significance of the place.

Examples of Grade 1:

- Coal Handling Shed
- Boiler House Boiler No. 1 space
- Turbine Hall – space and machinery
- Control Room – space and machinery

Grade 2: *Spaces/structures/elements of High significance*

These spaces, structures or elements are of high cultural significance but slightly less than those in Grade 1. They retain exceptional level rankings (1) for no more than two of the four categories of historical, technical, aesthetic or social values or have high level rankings (2) for at least two of these categories. They may also retain significant machinery elements. They play an important role in strengthening and supporting the significance of the place, but less than that of Grade 1.

Examples of Grade 2:

- Former Boiler House No. 2
- Boiler House – spaces formerly occupied by Boilers 2, 3 and 4
- Turbine Hall – platform areas where turbine generators have been removed

Grade 3: *Spaces/structures/elements of Moderate significance*

These spaces, structures or elements retain a moderate level of cultural significance. They retain moderate level rankings (3) for at least three of the four categories of historical, technical, aesthetic or social values. They play a moderate role in supporting the significance of the place.

Examples of Grade 3:

- Southwest Transformer Yard
- Coal Washpit
- Control Room Building Level 2, 25 Cycle Switch Floor

Grade 4: *Spaces/structures/elements of Little / Neutral significance*

These spaces, structures or elements are of minor cultural significance. They retain little / neutral level rankings (4) for at least three of the four categories of historical, technical, aesthetic or social values. They play a minor role in supporting the significance of the place.

Examples of Grade 4:

- Pump House south end
- Administration and Staff Accommodation Level 2 Locker Rooms
- Control Room Building Ground Level

Grade 5: *Spaces/structures/elements of Intrusive*

These spaces, structures or elements are not significant and are deemed intrusive or damaging to the cultural significance of the place. They obscure rather than support the significance of the place.

Examples of Grade 5:

- Turbine Hall power cables suspended on catenaries

4.2.1 General Grading of Significance

The following table provides a summary of levels of signfiicance for the place, including built elements and the operational systems.

Item	Grading of Significance
Place Generally	1
Buildings	
Coal Handling Shed	1
External Conveyor	1
Boiler House	1
Pump House	1
Turbine Hall	1
Administration and Staff Accommodation	2
Switch House	1
Control Room Building	1
White Bay Hotel Site (plinth and archaeology)	3 (2 prior to fire)
Machinery	
Coal Handling System	1
Ash Handling System	1
Chimney Stacks	1
Feedwater System	1
Steam Raising System	1
Power Generating System	1
Cooling Water System	1
Power Reticulation System	1
House Electrical and Auxiliary Supply System	1

4.2.2 Level of Significance Diagrams

Plans of the site, the structures, and spaces within those structures are shown on the following pages. Each space is numbered and given a Grade of Significance in accordance with the provided definitions. A character statement is also provided for each of the principal structures of the power station, outlining its significant qualities contributing to its grading of significance.

Policies covering these areas are provided in Section 6.

Examples of Grade 1: Exceptional

Figure 4.2.1 Coal Conveyor / Chimneys, 2023 (courtesy of Chris Bennett: Evolving Picture).

Figure 4.2.2 No. 1 Boiler, 2024 (courtesy of Chris Bennett: Evolving Picture).

Examples of Grade 2: High

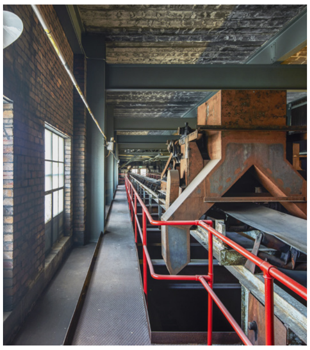


Figure 4.2.3 Boiler House Conveyor Level, 2023 (courtesy of Toby Peet).

Figure 4.2.4 Pump House Level 2, 2024 (courtesy of Toby Peet).

Examples of Grade 3: Moderate

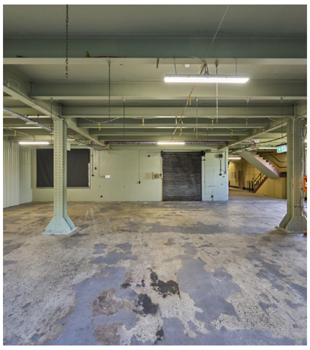


Figure 4.2.5 Administration Building Level 1, 2023 (courtesy of Chris Bennett: Evolving Picture).

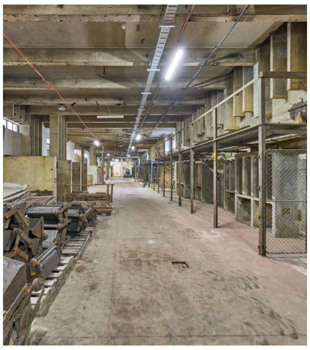


Figure 4.2.6 Switch House Ground Level South end, 2023 (courtesy of Chris Bennett: Evolving Picture).

Examples of Grade 4: Little

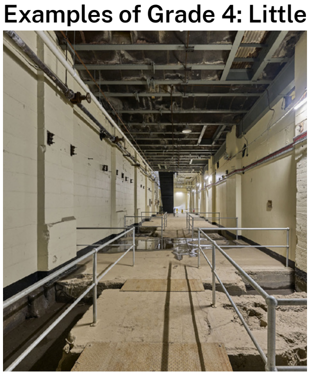


Figure 4.2.7 Pump House South, 2023 (courtesy of Chris Bennett: Evolving Picture)

Figure 4.2.8 Switch House Level 1-North, 2023 (courtesy of Chris Bennett: Evolving Picture).

SIGNIFICANCE DIAGRAMS OF ELEMENTS / SPACES

SITE PLAN

0 20 50m

SIGNIFICANCE KEY

1. EXCEPTIONAL
2. HIGH
3. MODERATE
4. LITTLE/NEUTRAL
5. INTRUSIVE

HERITAGE CURTILAGE

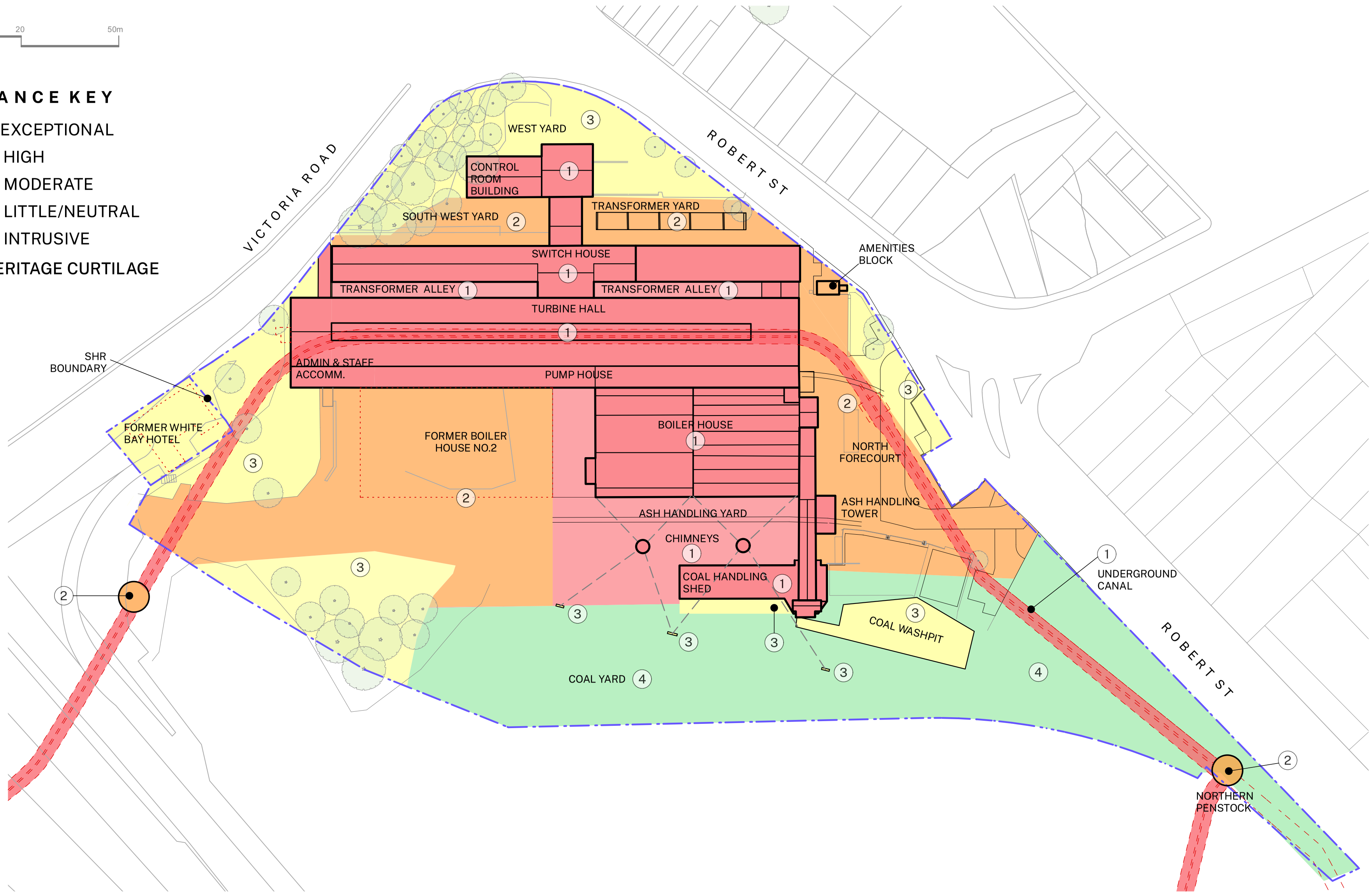
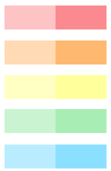


Figure 4.2.9 Gradings of significance of the site.

SIGNIFICANCE DIAGRAMS OF ELEMENTS / SPACES

NORTH ELEVATION

SIGNIFICANCE KEY



1. EXCEPTIONAL
2. HIGH
3. MODERATE
4. LITTLE/NEUTRAL
5. INTRUSIVE

refer to Section 6.6 for further information on tolerance for change

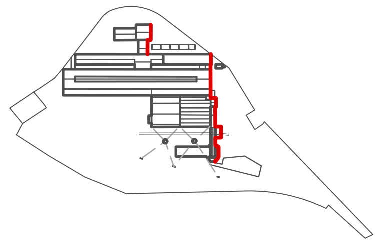


Figure 4.2.10 Gradings of significance: north elevation.

SIGNIFICANCE DIAGRAMS OF ELEMENTS / SPACES

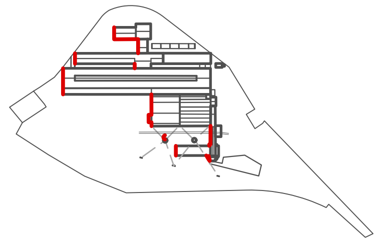
SOUTH ELEVATION

0 5m 10m

SIGNIFICANCE KEY

1. EXCEPTIONAL
2. HIGH
3. MODERATE
4. LITTLE/NEUTRAL
5. INTRUSIVE

refer to Section 6.6 for further information on tolerance for change



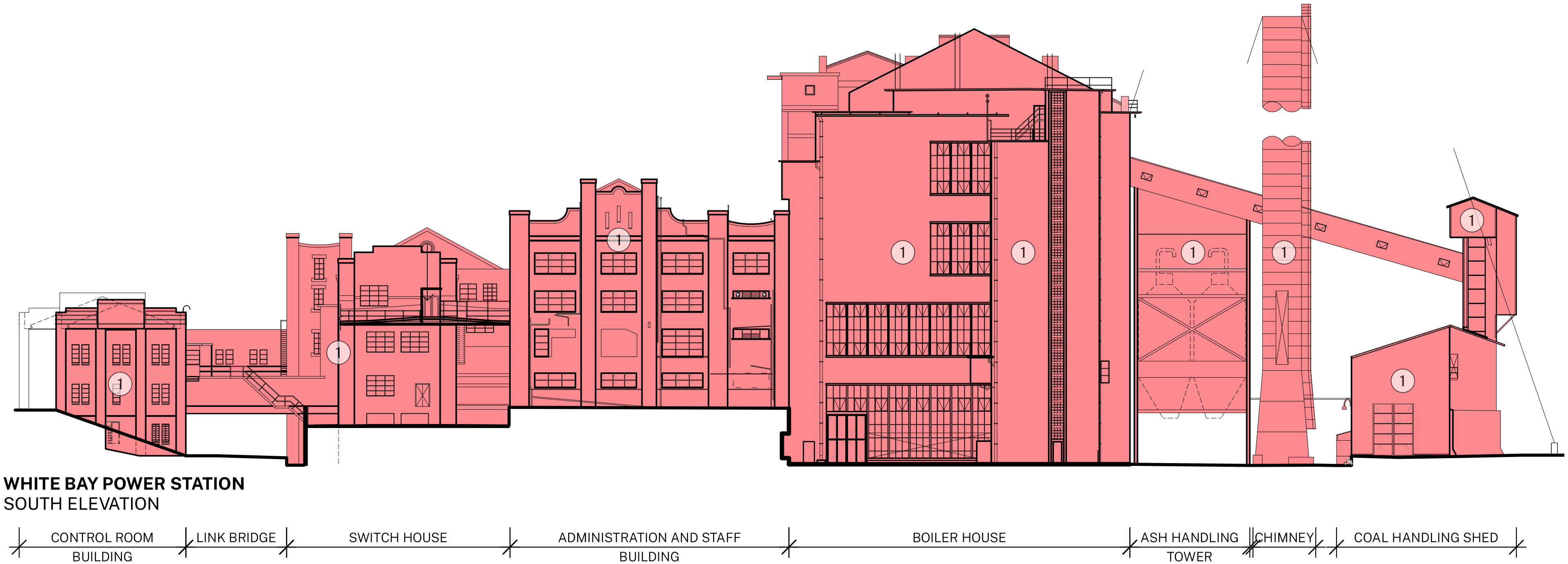


Figure 4.2.11 Gradings of significance: south elevation.

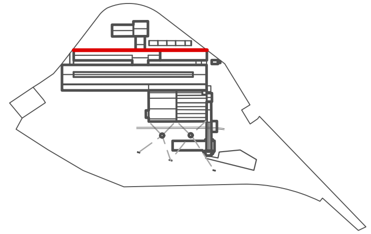
SIGNIFICANCE DIAGRAMS OF ELEMENTS / SPACES

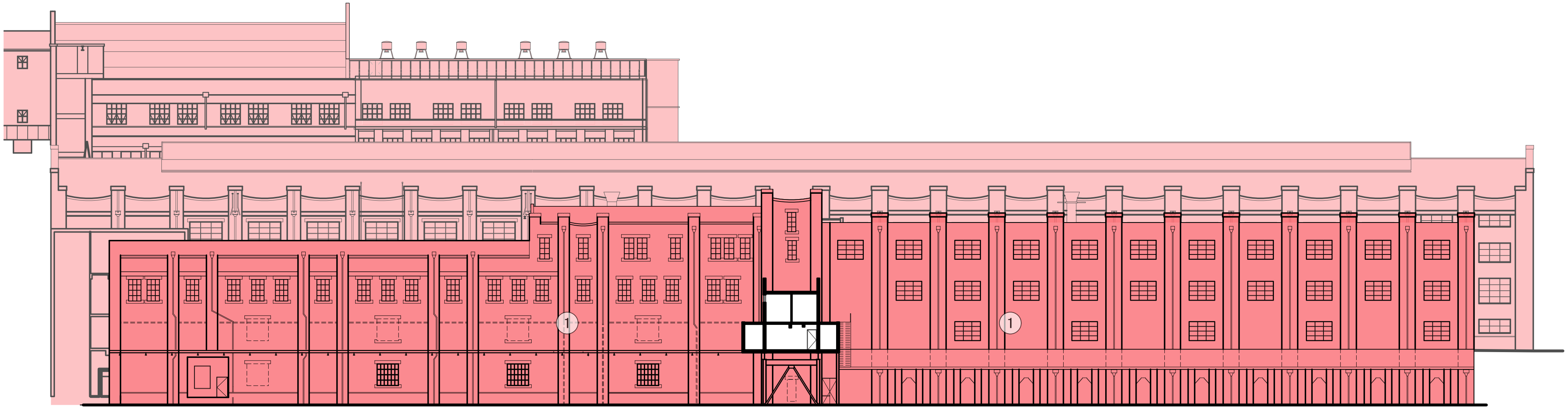
WEST ELEVATION

SIGNIFICANCE KEY

1. EXCEPTIONAL
2. HIGH
3. MODERATE
4. LITTLE/NEUTRAL
5. INTRUSIVE

refer to Section 6.6 for further information on tolerance for change





WHITE BAY POWER STATION
SWITCH HOUSE WEST ELEVATION

Figure 4.2.12 Gradings of significance: west elevation.

SIGNIFICANCE DIAGRAMS OF ELEMENTS / SPACES

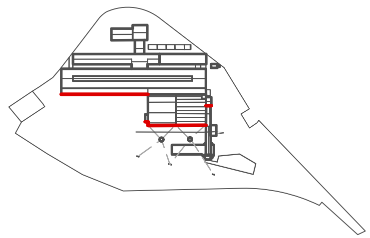
EAST ELEVATION

0 5m 10m

SIGNIFICANCE KEY

1. EXCEPTIONAL
2. HIGH
3. MODERATE
4. LITTLE/NEUTRAL
5. INTRUSIVE

refer to Section 6.6 for further information on tolerance for change



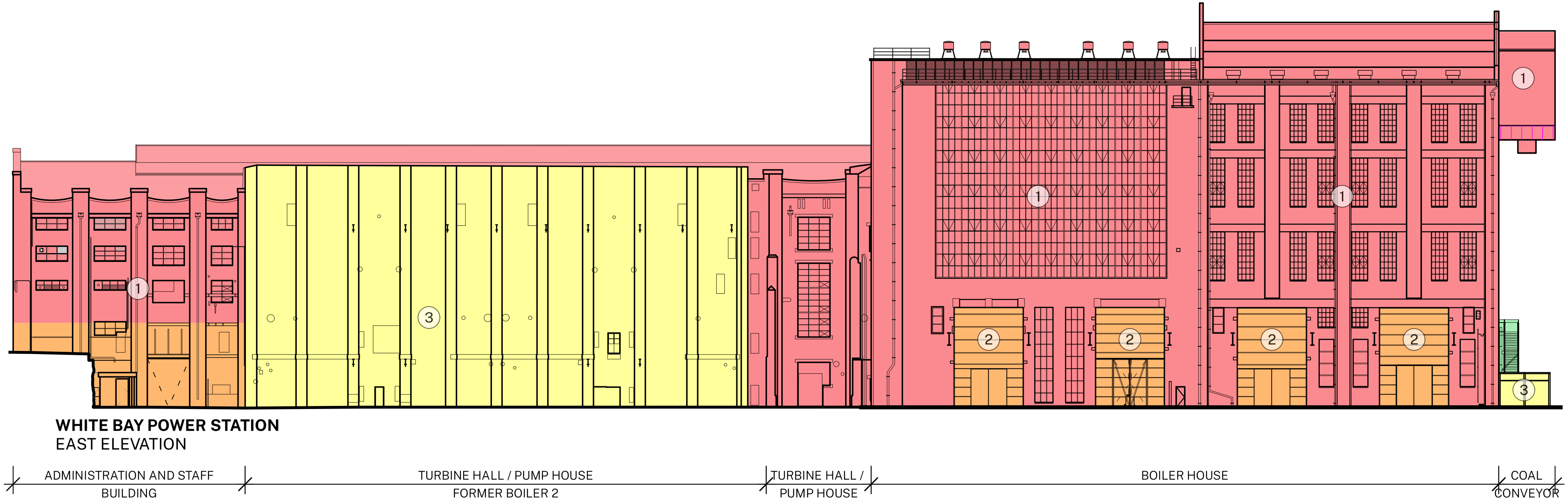


Figure 4.2.13 Gradings of significance: east elevation.

SIGNIFICANCE DIAGRAMS OF ELEMENTS / SPACES

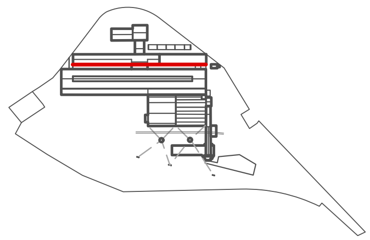
TRANSFORMER ALLEY

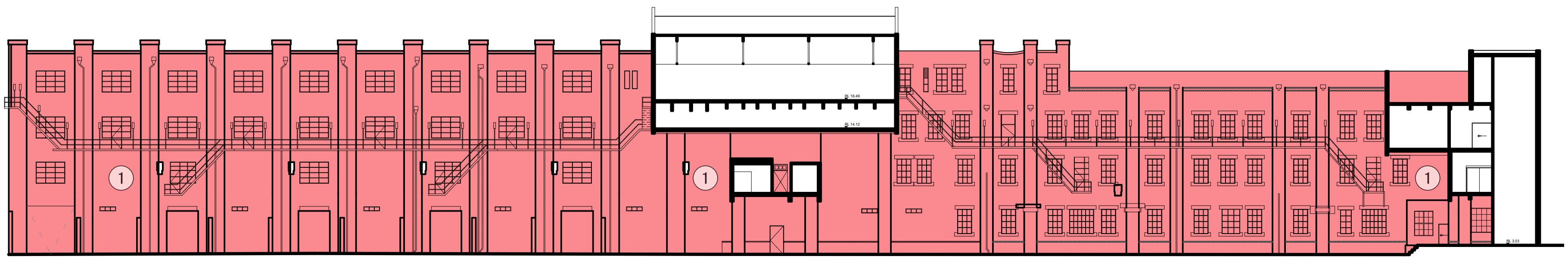
0 5m 10m

SIGNIFICANCE KEY

1. EXCEPTIONAL
2. HIGH
3. MODERATE
4. LITTLE/NEUTRAL
5. INTRUSIVE

refer to Section 6.6 for further information on tolerance for change



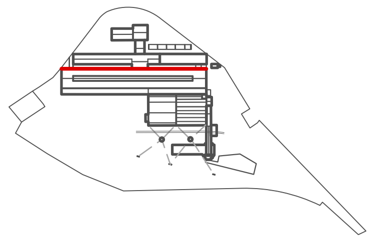


TRANSFORMER ALLEY
SWITCH HOUSE EAST ELEVATION

Figure 4.2.14 Gradings of significance: Transformer Alley, Switch House east elevation.

SIGNIFICANCE DIAGRAMS OF ELEMENTS / SPACES

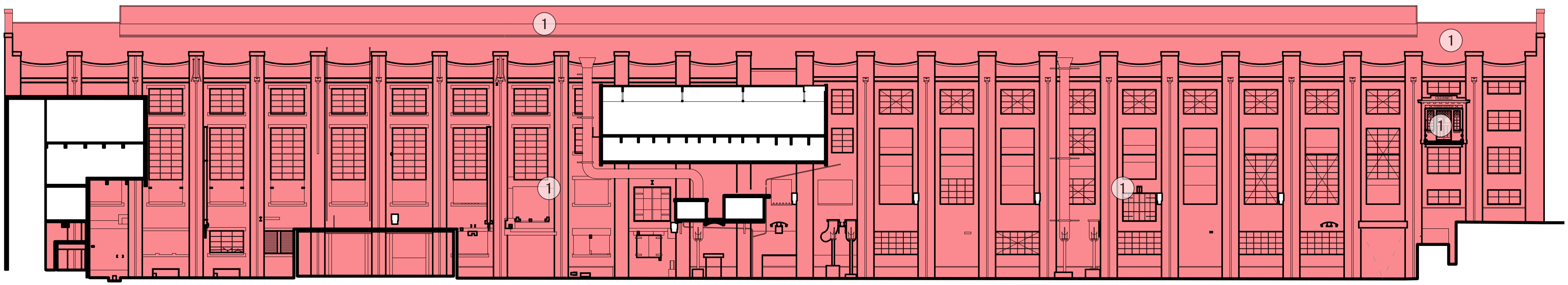
TRANSFORMER ALLEY



SIGNIFICANCE KEY

1. EXCEPTIONAL
2. HIGH
3. MODERATE
4. LITTLE/NEUTRAL
5. INTRUSIVE

refer to Section 6.6 for further information on tolerance for change



TRANSFORMER ALLEY
TURBINE HALL WEST ELEVATION

Figure 4.2.15 Gradings of significance: Transformer Alley, Turbine Hall west elevation.

SIGNIFICANCE DIAGRAMS OF ELEMENTS / SPACES

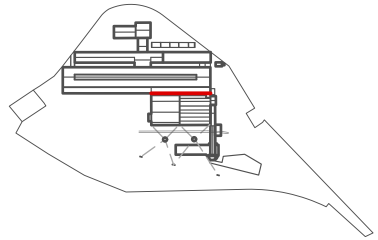
BOILER HOUSE

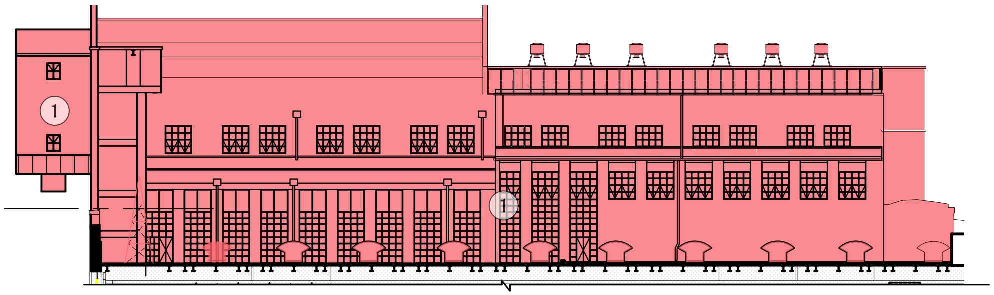
0 5m 10m

SIGNIFICANCE KEY

1. EXCEPTIONAL
2. HIGH
3. MODERATE
4. LITTLE/NEUTRAL
5. INTRUSIVE

refer to Section 6.6 for further information on tolerance for change





BOILER HOUSE
WEST ELEVATION

Figure 4.2.16 Gradings of significance: Boiler House west elevation.

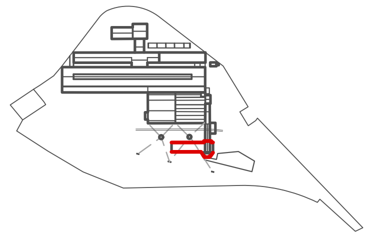
SIGNIFICANCE DIAGRAMS OF ELEMENTS / SPACES

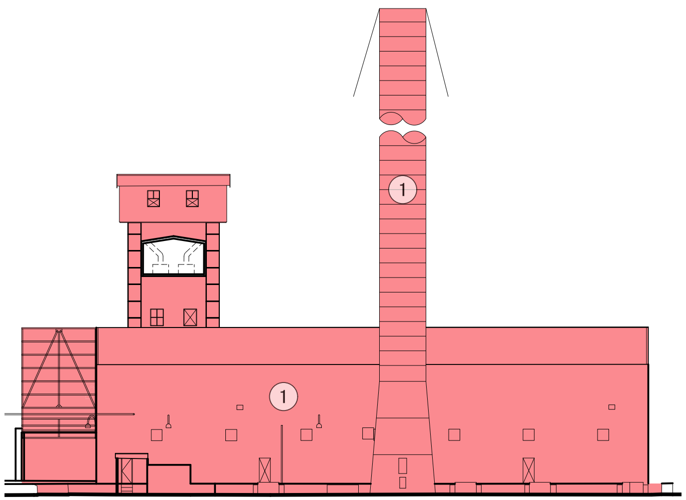
COAL HANDLING SHED

SIGNIFICANCE KEY

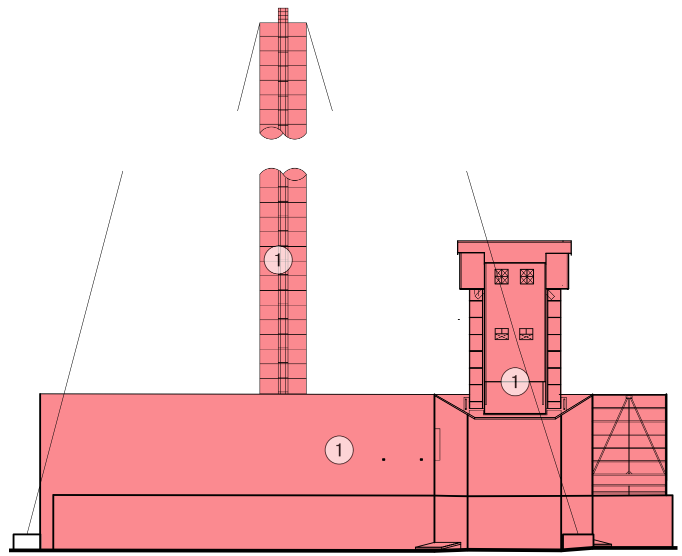
1. EXCEPTIONAL
2. HIGH
3. MODERATE
4. LITTLE/NEUTRAL
5. INTRUSIVE

refer to Section 6.6 for further information on tolerance for change





COAL HANDLING SHED
WEST ELEVATION



COAL HANDLING SHED
EAST ELEVATION

Figure 4.2.17 Gradings of significance: Coal Handling Shed east and west elevations.

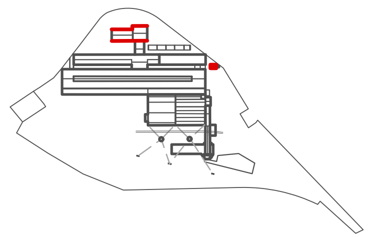
SIGNIFICANCE DIAGRAMS OF ELEMENTS / SPACES

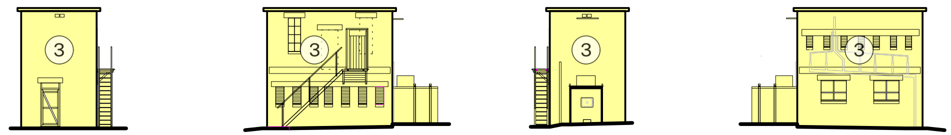
CONTROL ROOM BUILDING / AMENITIES BLOCK

SIGNIFICANCE KEY

1. EXCEPTIONAL
2. HIGH
3. MODERATE
4. LITTLE/NEUTRAL
5. INTRUSIVE

refer to Section 6.6 for further information on tolerance for change





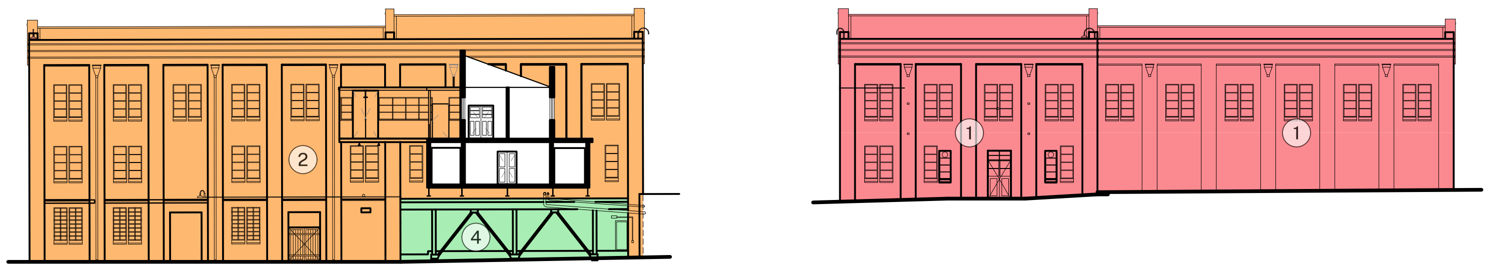
AMENITIES BLOCK SOUTH ELEVATION

AMENITIES BLOCK EAST ELEVATION

AMENITIES BLOCK NORTH ELEVATION

AMENITIES BLOCK WEST ELEVATION

AMENITIES BLOCK IS GRADED AS 'HIGH' WITHIN THE CONTEXT OF SITE



CONTROL ROOM BUILDING EAST ELEVATION

CONTROL ROOM BUILDING WEST ELEVATION

Figure 4.2.18 Gradings of significance: Control Room Building and Amenities Block elevations.

4.2.2.1 Coal Handling Shed & External Conveyor

Grading of Significance: 1, Exceptional

The Coal Handling Shed, including the elevators and External Conveyor are iconic and major structures in the White Bay Power Station building complex. It houses major equipment and machinery of the Coal Handling System and presents extensive interpretation of the first stage of the coal-fired, steam raising, power generation process. The Coal Handling Shed frames the north-south visual connection along the rail corridor and also articulates the process of power generation through its connection to the Boiler House via the External Conveyor. As a key part of the power station's iconic north elevation, the Coal Handling Shed is integral to the mass and silhouette of the power station and is a key component in views to the power station. The building is visually distinct with its industrial "shed" character that comprises a steel-frame structure with corrugated galvanised steel cladding. The Coal Handling Shed also contains a unique, subterranean basement which is densely populated with equipment and machinery. Further, the External Conveyor contains a unique, sloped space and its form clearly defines the progression of the operational systems at the power station.

For detailed descriptions and catalogues of the individual spaces, machinery, and moveable heritage, refer to Volume 2 – Heritage Inventory of this CMP.

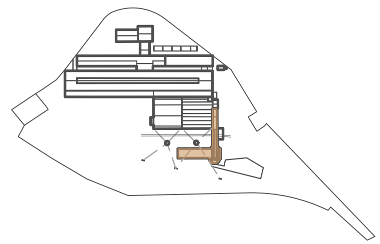
Figure 4.2.20 The Coal Handling Shed basement level, 2023 (courtesy of Toby Peet).

Figure 4.2.19 The Coal Handling Shed looking south, 2023 (courtesy of Toby Peet).

Figure 4.2.21 The Coal Handling Shed looking north, 2023 (courtesy of Toby Peet).

SIGNIFICANCE DIAGRAMS OF ELEMENTS / SPACES

COAL HANDLING SHED



SIGNIFICANCE KEY

1. EXCEPTIONAL
2. HIGH
3. MODERATE
4. LITTLE/NEUTRAL
5. INTRUSIVE

refer to Section 6.6 for further information on tolerance for change

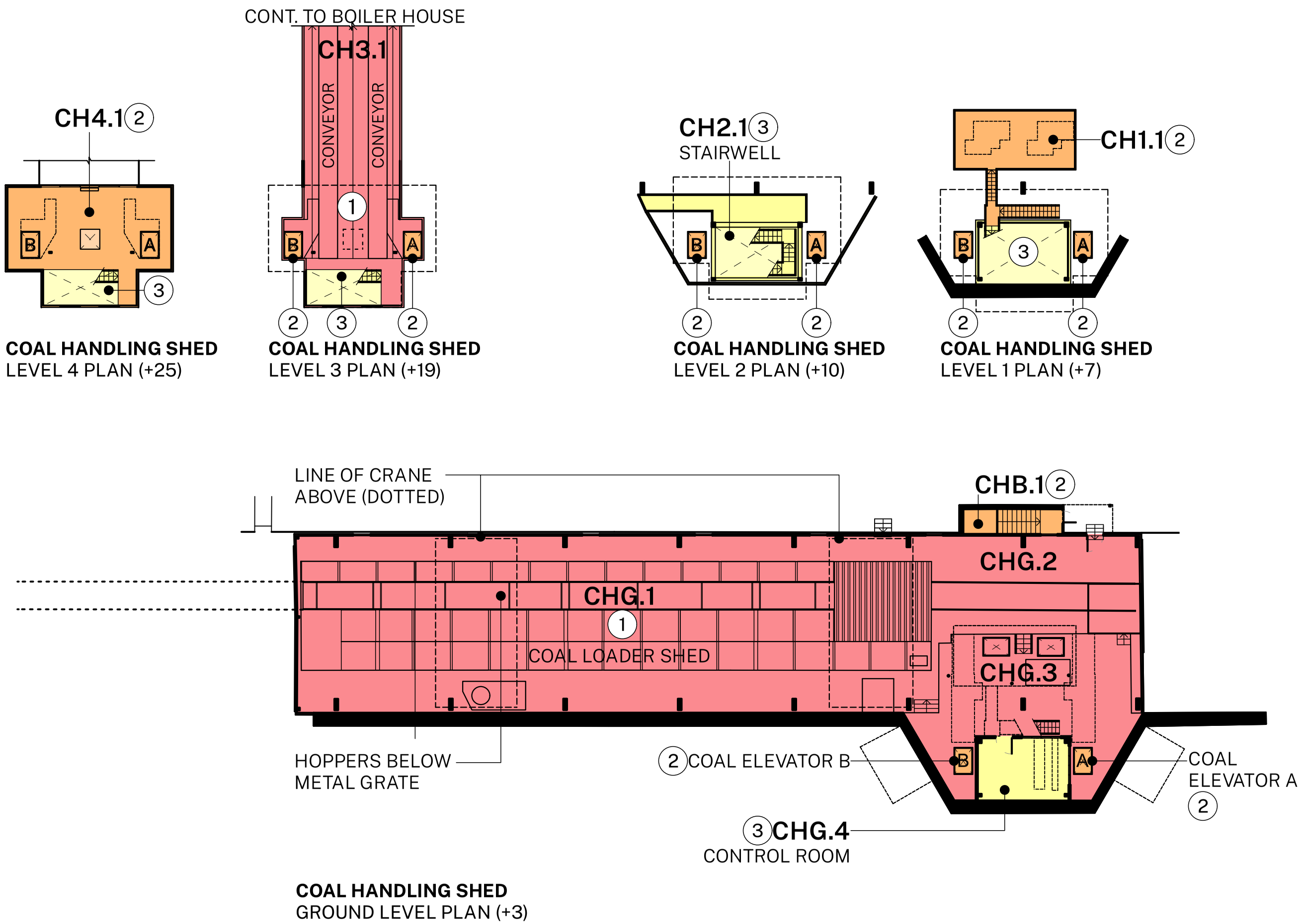


Figure 4.2.22 Gradings of significance: Coal Handling Shed Ground Level, Level 1, 2, 3, and 4 plans.

SIGNIFICANCE DIAGRAMS OF ELEMENTS / SPACES

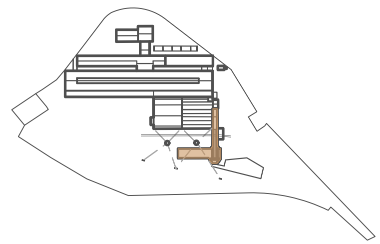
COAL HANDLING SHED

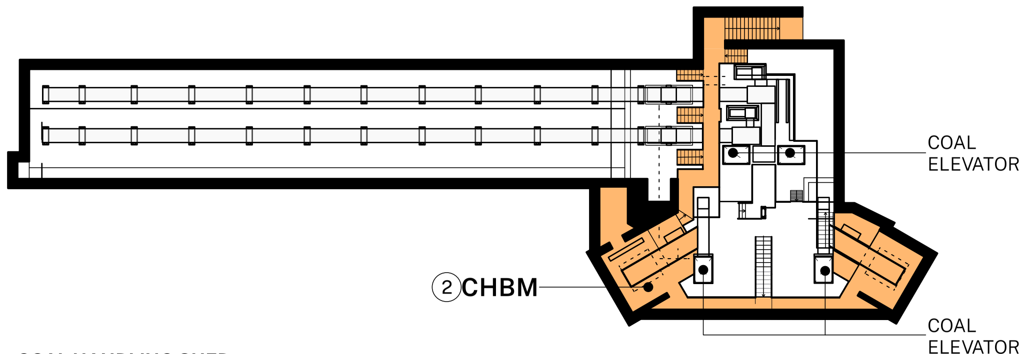
0 5m 10m

SIGNIFICANCE KEY

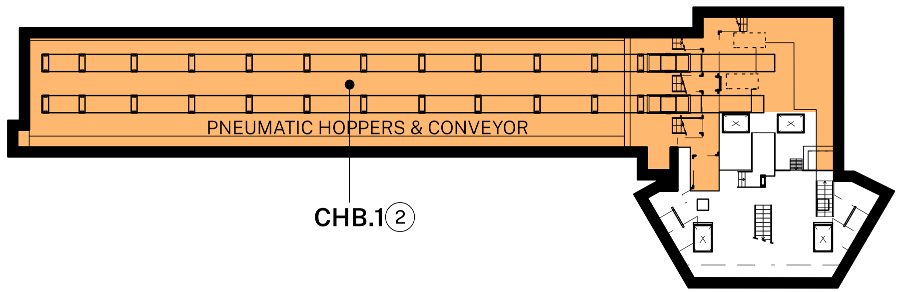
1. EXCEPTIONAL
2. HIGH
3. MODERATE
4. LITTLE/NEUTRAL
5. INTRUSIVE

refer to Section 6.6 for further information on tolerance for change

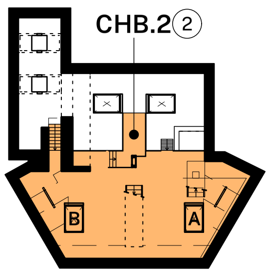




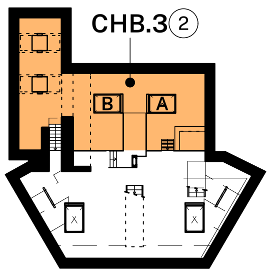
COAL HANDLING SHED
BASEMENT MEZZANINE PLAN (-0.5)



COAL HANDLING SHED
BASEMENT 1 LEVEL PLAN (-2)



COAL HANDLING SHED
BASEMENT 2 LEVEL PLAN (-4)



COAL HANDLING SHED
BASEMENT 3 LEVEL PLAN (-6)

Figure 4.2.23 Gradings of significance: Coal Handling Shed Basement plans.

4.2.2.2 Boiler House

Grading of Significance: 1, Exceptional

The third Boiler House is a prominent structure in the White Bay Power Station building complex. It houses major equipment and machinery components of the Coal Handling and Steam Raising operational systems. The Boiler House is a highly salient structure in key views to the power station. Alongside the Pump House and Turbine Hall, it forms the bulk of the White Bay Power Station's silhouette, particularly in views from the north and the east. It is a massive steel-frame and reinforced concrete structure with a corrugated galvanised sheet roof, external brick walls and glazed curtain walls on its east and south facades – a rare feature in industrial buildings. The eastern glazed curtain wall introduces considerable amounts of natural light into the space. With the exception of the uppermost conveyor levels, the Boiler House is primarily a vast open space up to the underside of the roof.

The Boiler House contains the extant No. 1 Boiler with surrounding walkways and platforms at its north end and has a set of large voids on the first level that identify the location of the three other original boilers (2, 3, and 4). Other key characteristics of the Boiler House that contribute to its significance include the large Coal Hoppers that span the length of the building, the Boiler House Control Room and associated elements relating to management and control of operations, and the building's connections to the Pump House and External Conveyor, which are indicative of the hierarchy of operational systems. The Boiler House also features new stairs, balustrades, seating, and other elements resulting from the 2022 / 24 remediation and activation works.

For detailed descriptions and catalogues of the individual spaces, machinery, and moveable heritage, refer to Volume 2 – Heritage Inventory of this CMP.

Figure 4.2.24 View of No. 1 Boiler, 2023 (courtesy of Toby Peet).

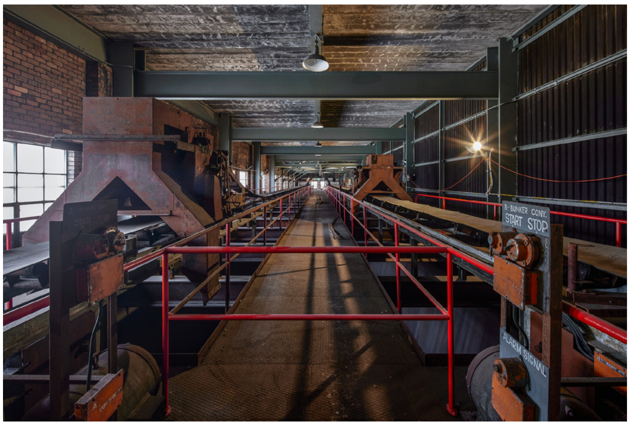
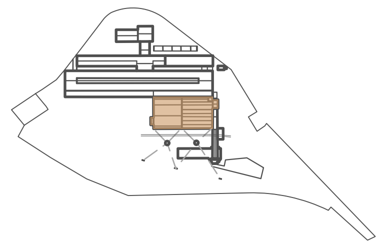


Figure 4.2.25 Conveyor Level of the Boiler House looking north, 2023 (courtesy of Toby Peet).

SIGNIFICANCE DIAGRAMS OF ELEMENTS / SPACES

BOILER HOUSE



SIGNIFICANCE KEY

1. EXCEPTIONAL
2. HIGH
3. MODERATE
4. LITTLE/NEUTRAL
5. INTRUSIVE

refer to Section 6.6 for further information on tolerance for change

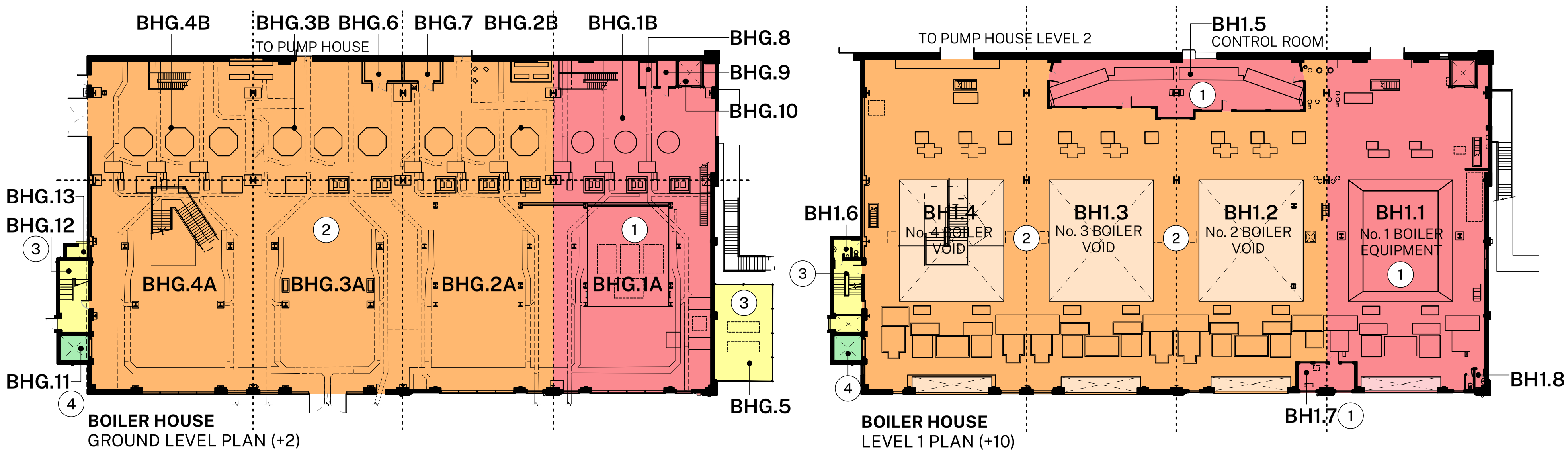
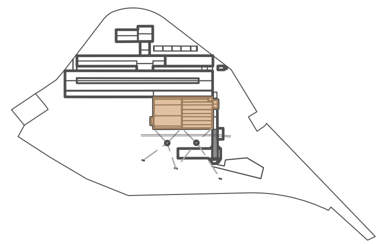


Figure 4.2.26 Gradings of significance: Boiler House Ground Level and Level 1 plans.

SIGNIFICANCE DIAGRAMS OF ELEMENTS / SPACES

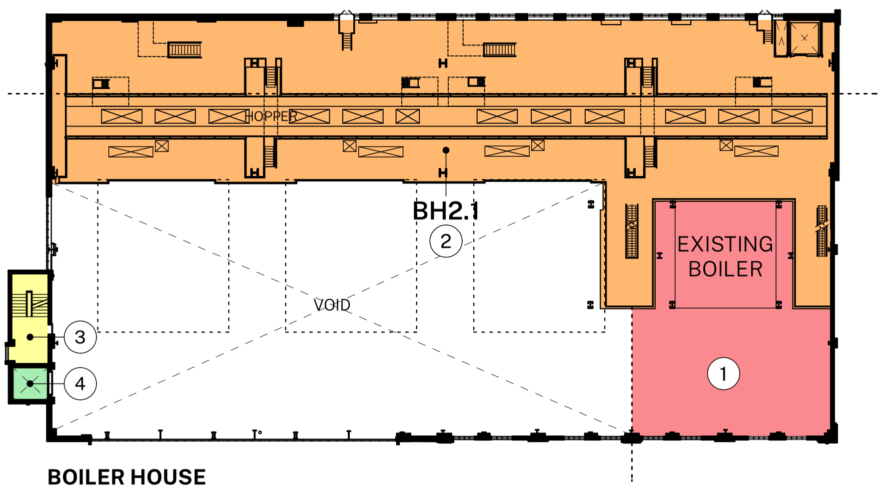


BOILER HOUSE

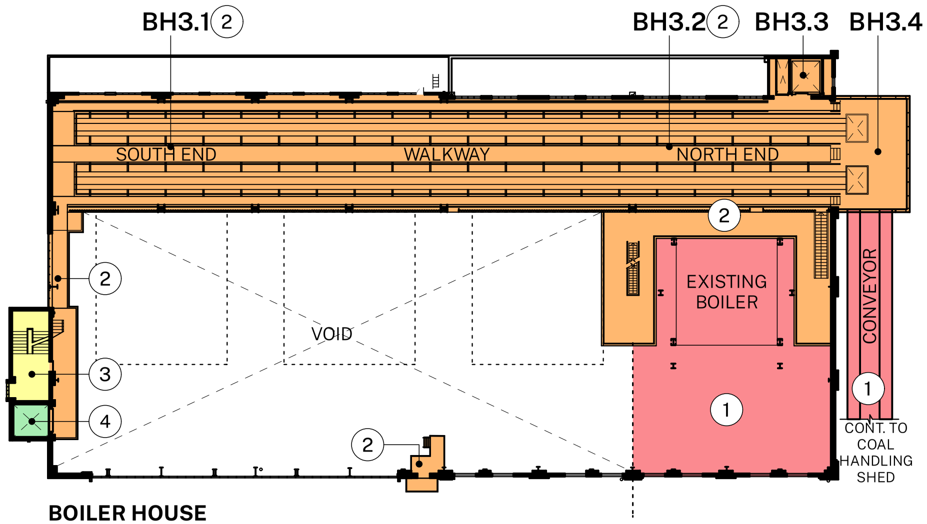
SIGNIFICANCE KEY

1. EXCEPTIONAL
2. HIGH
3. MODERATE
4. LITTLE/NEUTRAL
5. INTRUSIVE

refer to Section 6.6 for further information on tolerance for change



BOILER HOUSE
HOPPER LEVEL PLAN (+22)



BOILER HOUSE
CONVEYOR LEVEL PLAN (+32)

Figure 4.2.27 Gradings of significance: Boiler House Hopper and Conveyor Level plans.

4.2.2.3 Pump House

Grading of Significance: 1, Exceptional

The Pump House, with the Turbine Hall, is part of the building that forms the largest bulk of the White Bay Power Station. It houses key equipment and machinery components of the Feedwater System. The Pump House was constructed in two stages, and is brick in the north half and reinforced concrete in the south half, with a corrugated galvanised steel roof. It is primarily defined by its narrow, longitudinal spatial quality. The Pump House also has strong visual and physical connections to the adjacent Turbine Hall, as well as connections to the Boiler House to its east and a south connection to the Administration and Staff Accommodation. Externally, the removal of the No. 2 Boiler House in 1976 has left a marred, grey wall on the southern half of the eastern façade, with several bricked-up doorways and openings.

The nature of the space varies considerably from the north half to the south half of the Pump House. The northern half of the Pump House is characterised by a dense configuration of original pipes, tanks and machinery. Above it is a soaring void space with remnant walkways and steel beams at higher levels. The Pump House also contains evidence of former workshops on the second-floor level. In contrast, the southern half of the Pump House is largely devoid of machinery and pipework and less representative of the historical use of the place, resulting in a lower grading of significance. The Pump House also contains modern additions, notably in the form of a glass elevator and stairs.

For detailed descriptions and catalogues of the individual spaces, machinery, and moveable heritage, refer to Volume 2 – Heritage Inventory of this CMP.

4.2.2.4 Turbine Hall

Grading of Significance: 1, Exceptional

The Turbine Hall is a major structure in the White Bay Power Station complex. Alongside the narrower Pump House, it forms the largest bulk of the White Bay Power Station and is integral to views of the power station and its landmark status. Like the Pump House, the Turbine Hall is brick in the northern half (1917) and reinforced concrete in the southern half (1928), with a steel truss and corrugated galvanised steel roof. The Turbine Hall houses key equipment and machinery components of the Feedwater, Circulating Water, and Power Generation Systems, including the extant "heart" of electricity generation in the form of the No. 1 Turbo-Alternator. The extant machinery presents interpretation of the pivotal stage at which steam is converted into electricity.

Additional key characteristics of the Turbine Hall that are attributed to its significance include the evidence of removed machinery and the industrial character of the space through the voids, platforms, and large plinth blocks, the sheer scale and openness of the structure, the soaring height of the upper floors, and its connections to Rozelle Bay and White Bay via the subsurface inlet and outlet channels. The Turbine Hall also contains modern additions as part of the 2022 / 24 remediation and activation works, including ramps and stairs.

For detailed descriptions and catalogues of the individual spaces, machinery, and moveable heritage, refer to Volume 2 – Heritage Inventory of this CMP.

Figure 4.2.28 Pump House looking north, 2024 (courtesy of Chris Bennett: Evolving Picture).

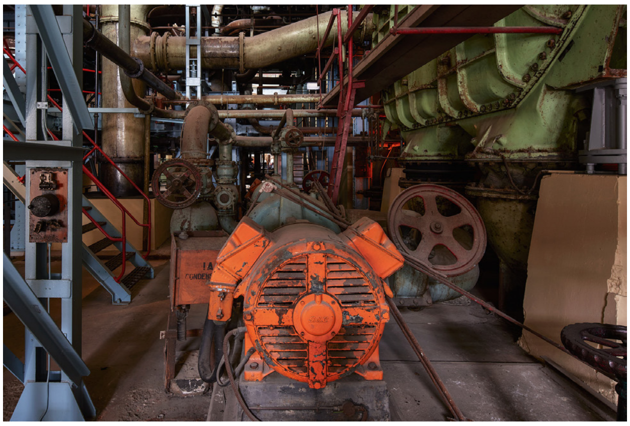


Figure 4.2.29 Extant No. 1 Turbo-Alternator, 2024 (courtesy of Toby Peet).

SIGNIFICANCE DIAGRAMS OF ELEMENTS / SPACES

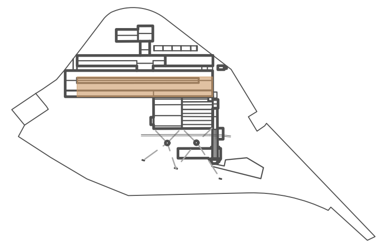
TURBINE AND PUMP HOUSE

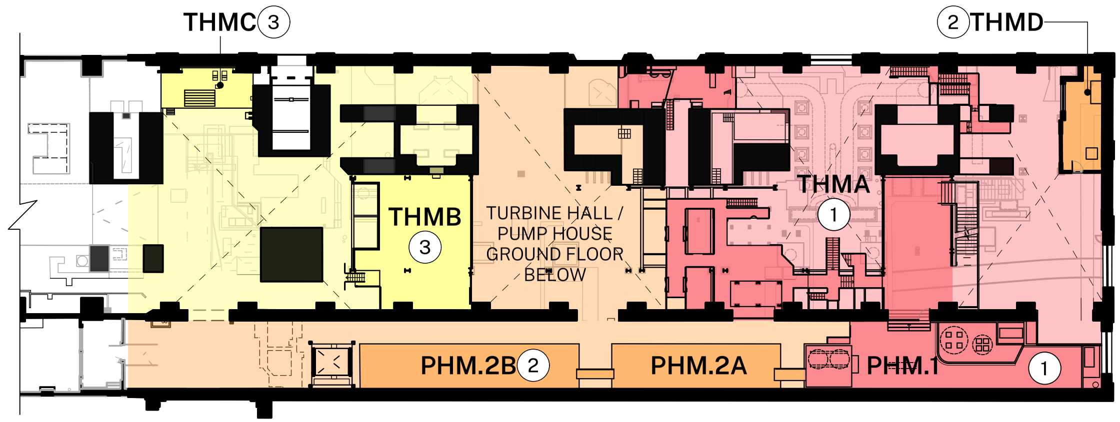
0 5m 10m

SIGNIFICANCE KEY

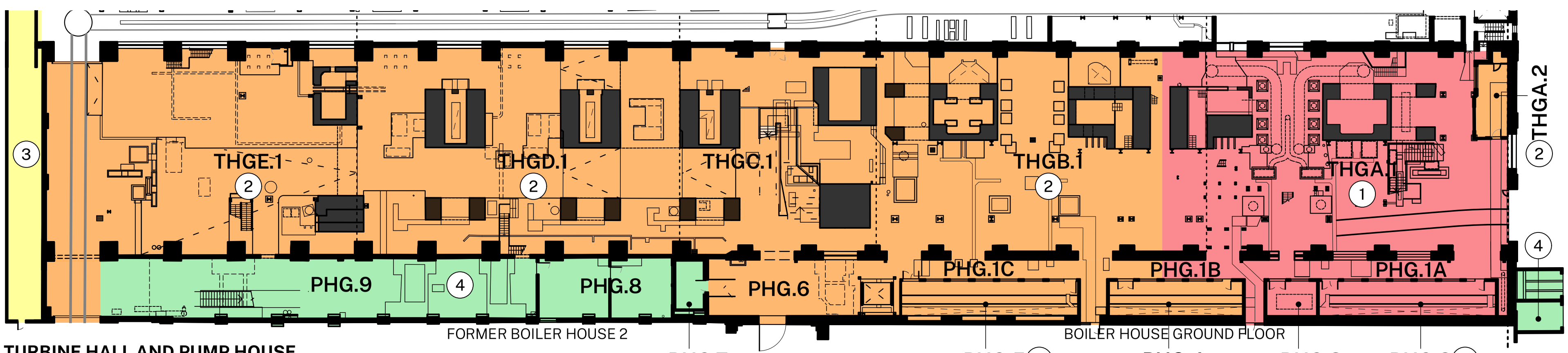
1. EXCEPTIONAL
2. HIGH
3. MODERATE
4. LITTLE/NEUTRAL
5. INTRUSIVE

refer to Section 6.6 for further information on tolerance for change





TURBINE HALL AND PUMP HOUSE
MEZZANINE PLAN (+6)



TURBINE HALL AND PUMP HOUSE
GROUND FLOOR PLAN (+2)

Figure 4.2.30 Gradings of significance: Turbine and Pump House ground and mezzanine level plans.

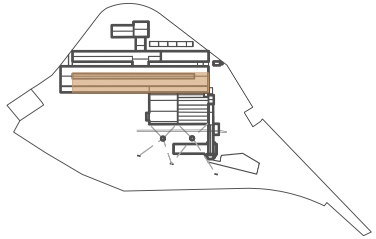
SIGNIFICANCE DIAGRAMS OF ELEMENTS / SPACES

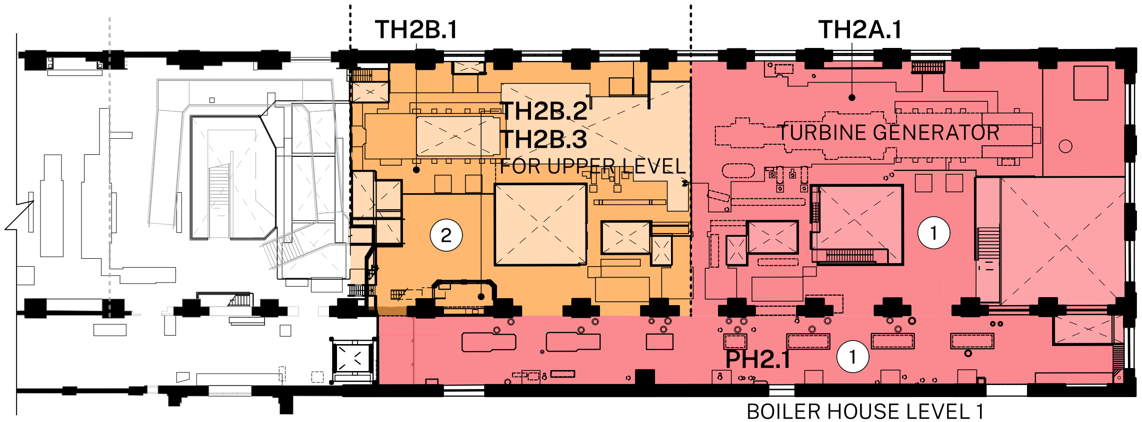
TURBINE AND PUMP HOUSE

SIGNIFICANCE KEY

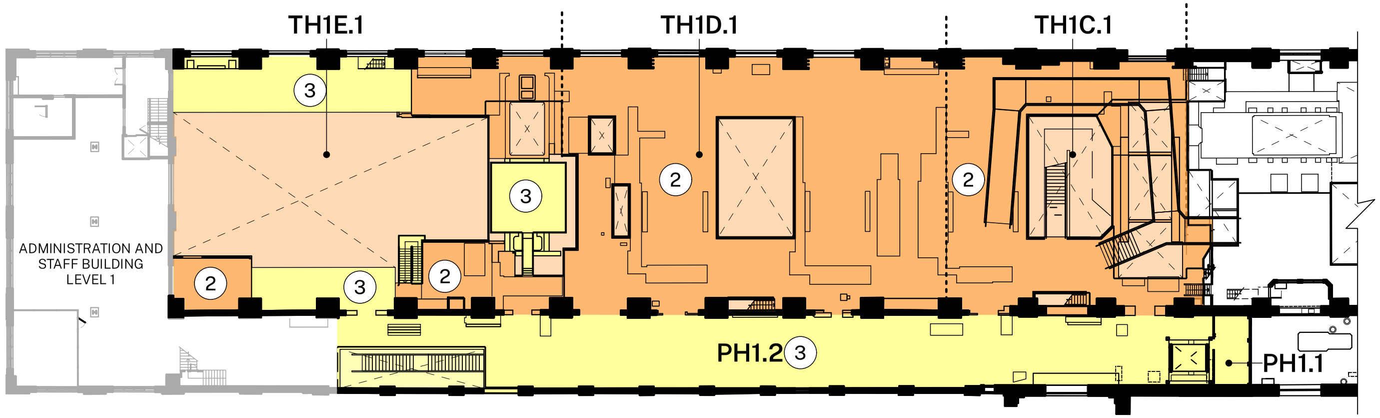
1. EXCEPTIONAL
2. HIGH
3. MODERATE
4. LITTLE/NEUTRAL
5. INTRUSIVE

refer to Section 6.6 for further information on tolerance for change





TURBINE HALL AND PUMP HOUSE
LEVEL 2 PLAN (+10)



TURBINE HALL AND PUMP HOUSE
LEVEL 1 PLAN (+8)

Figure 4.2.31 Gradings of significance: Turbine Hall and Pump House level 1 and 2 plans.

4.2.2.5 Administration and Staff Accommodation

Grading of Significance: 2, High

The Administration and Staff Accommodation is a key part of the White Bay Power Station complex. It comprises a series of spaces that once facilitated the administrative, management, and monitoring aspects of the power station operations, as well as a various staff facilities and amenities that played a role in the social life of workers. These are further evidenced through its extant fitout, equipment, furniture, signage, and fixtures. Other characteristics of the Administration and Staff Accommodation that constitute its high significance include its status as the front of house main entry to the power station. This is embodied with the lobby on Level 3 and the Victoria Road Access Bridge, which also connected to the Entertainment Hall.

The laboratories on Level 4 are also key to the significance of the building, as they were integral to the testing and monitoring of efficiency and output of the power station.

For detailed descriptions and catalogues of the individual spaces, machinery, and moveable heritage, refer to Volume 2 – Heritage Inventory of this CMP.

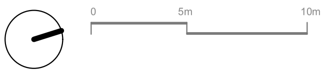
Figure 4.2.33 The eastern facade of the Administration and Staff Accommodation, 2024 (courtesy of Chris Bennett: Evolving Picture).

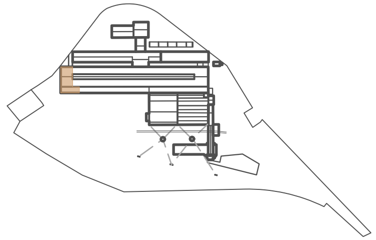
Figure 4.2.32 The Main Lobby space on Level 3 of the Administration and Staff Accommodation accessed via the Victoria Road Access Bridge, 2024 (courtesy of Chris Bennett: Evolving Picture).

Figure 4.2.34 The Laboratory space on Level 4 of the Administration and Staff Accommodation, 2024 (courtesy of Chris Bennett: Evolving Picture).

SIGNIFICANCE DIAGRAMS OF ELEMENTS / SPACES

ADMIN AND STAFF ACCOMMODATION

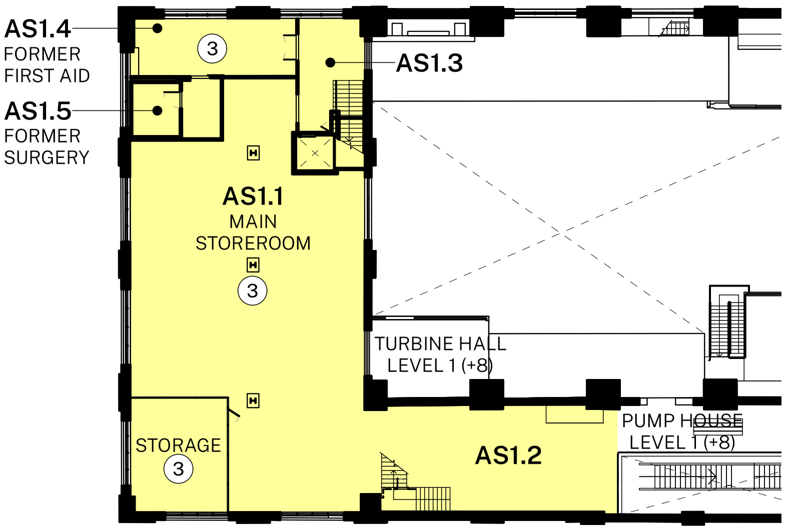




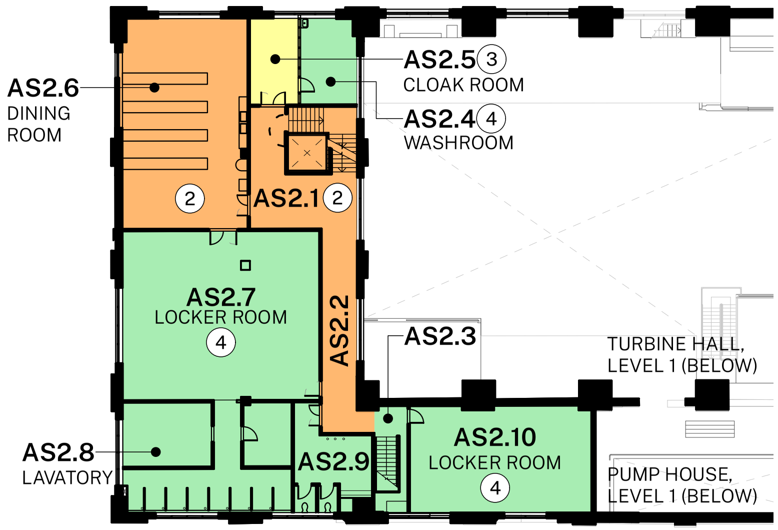
SIGNIFICANCE KEY

1. EXCEPTIONAL
2. HIGH
3. MODERATE
4. LITTLE/NEUTRAL
5. INTRUSIVE

refer to Section 6.6 for further information on tolerance for change



ADMIN & STAFF ACCOMMODATION
LEVEL 1 PLAN (+8)

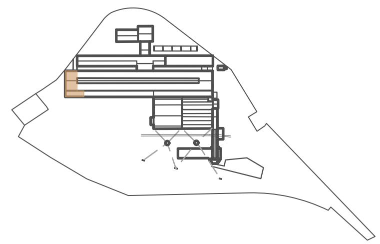


ADMIN & STAFF ACCOMMODATION
LEVEL 2 PLAN (+12)

Figure 4.2.35 Gradings of significance: Administration and Staff Accommodation Level 1 and 2 plans.

SIGNIFICANCE DIAGRAMS OF ELEMENTS / SPACES

ADMIN AND STAFF ACCOMMODATION

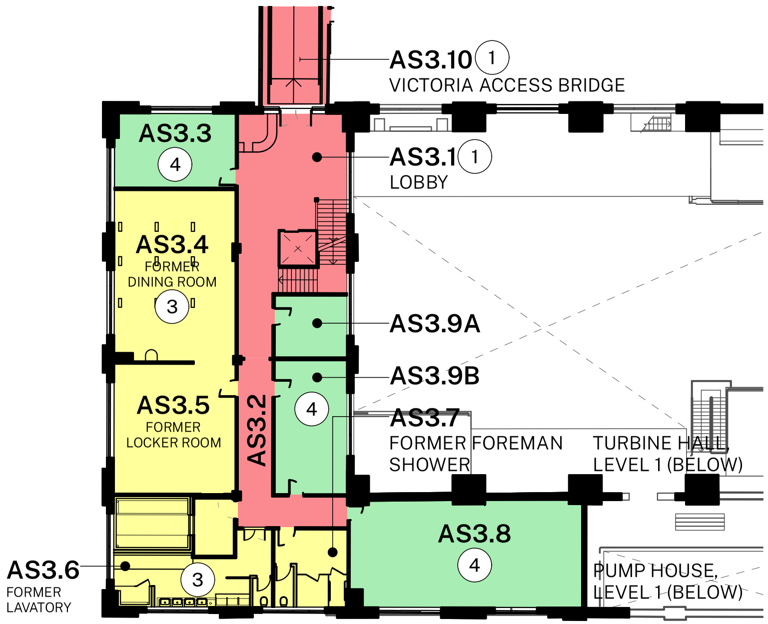


0 5m 10m

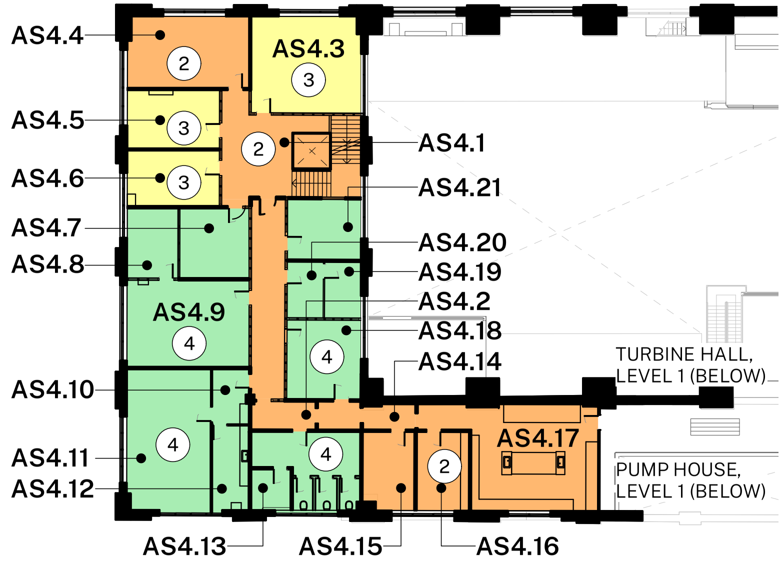
SIGNIFICANCE KEY

1. EXCEPTIONAL
2. HIGH
3. MODERATE
4. LITTLE/NEUTRAL
5. INTRUSIVE

refer to Section 6.6 for further information on tolerance for change



ADMIN & STAFF ACCOMMODATION
LEVEL 3 PLAN (+16)



ADMIN & STAFF ACCOMMODATION
LEVEL 4 PLAN (+20)

Figure 4.2.36 Gradings of significance: Administration and Staff Accommodation Level 3 and 4 plans.

4.2.2.6 Switch House

Grading of Significance: 1, Exceptional

The Switch House is a major structure in the White Bay Power Station building complex. It houses key equipment and machinery components of the Power Reticulation, Electrical Supply, and Auxiliary Power Supply Systems. It forms a key section of western views to the power station. The Switch House contains several sets of repetitive, modular rooms for the equipment of these operational systems, and maintains an industrial, machinic quality through such spaces. Another defining element of the building attributed to its significance is the Entertainment Hall at the south end of Level 3, which is a unique space in the power station representative of the social and recreational lives of the workers. The Transformer Alley located between the Turbine Hall west elevation and the Switch House east elevation is a unique space, notable for its longitudinal, narrow, spatial quality.

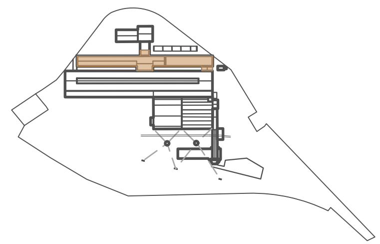
For detailed descriptions and catalogues of the individual spaces, machinery, and moveable heritage, refer to Volume 2 – Heritage Inventory of this CMP.

Figure 4.2.38 Transformer Alley looking north, 2024 (courtesy of Toby Peet).

Figure 4.2.37 Workshop space in the Switch House, 2024 (courtesy of Toby Peet).

Figure 4.2.39 Motor Generator Room in the Switch House, 2024 (courtesy of Toby Peet).

SIGNIFICANCE DIAGRAMS OF ELEMENTS / SPACES

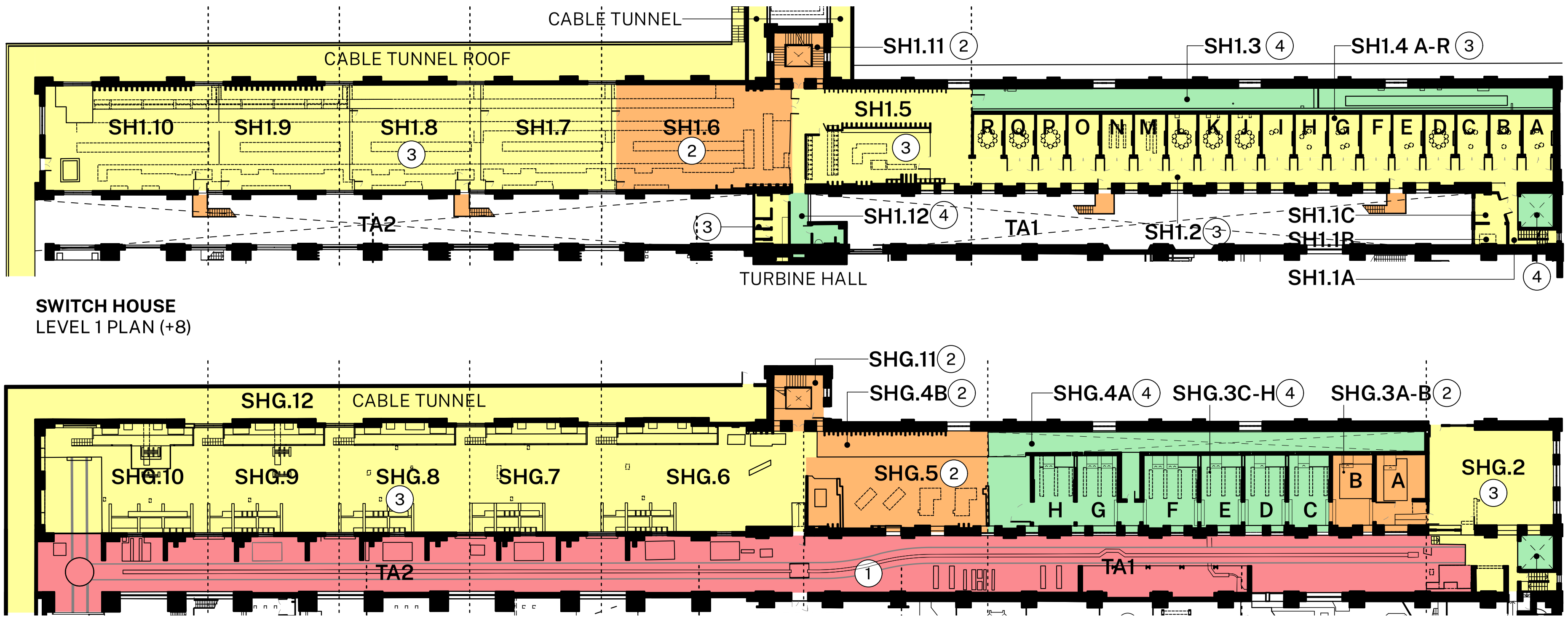


SWITCH HOUSE / TRANSFORMER ALLEY

SIGNIFICANCE KEY

1. EXCEPTIONAL
2. HIGH
3. MODERATE
4. LITTLE/NEUTRAL
5. INTRUSIVE

refer to Section 6.6 for further information on tolerance for change



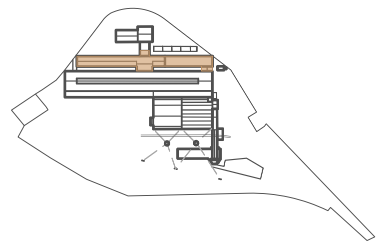
SWITCH HOUSE
LEVEL 1 PLAN (+8)

SWITCH HOUSE
GROUND FLOOR PLAN (+2)

Figure 4.2.40 Gradings of significance: Switch House / Transformer Alley ground level and level 1 plans.

SIGNIFICANCE DIAGRAMS OF ELEMENTS / SPACES

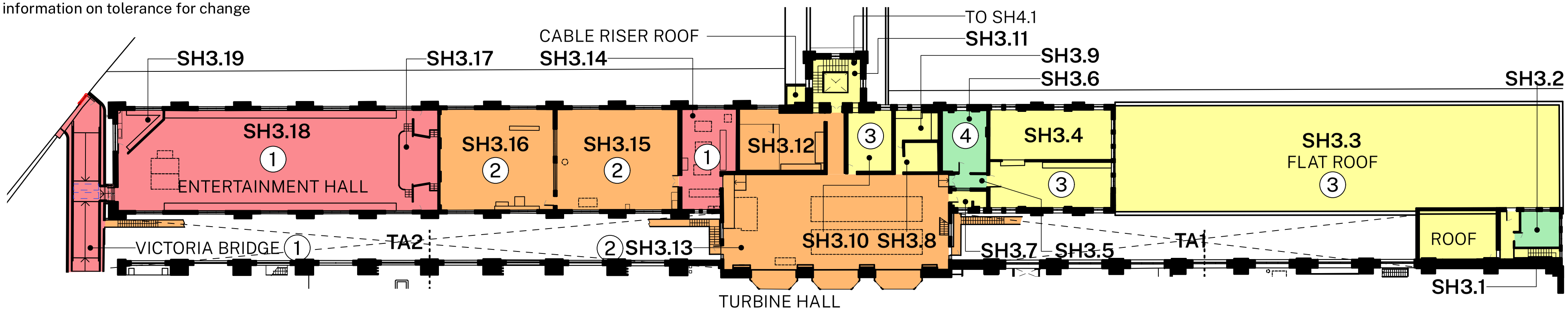
SWITCH HOUSE / TRANSFORMER ALLEY



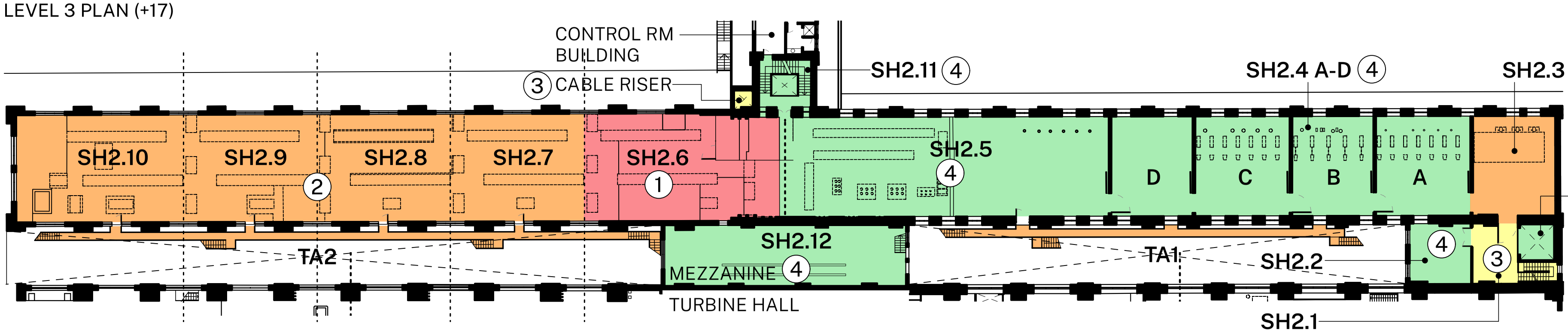
SIGNIFICANCE KEY

1. EXCEPTIONAL
2. HIGH
3. MODERATE
4. LITTLE/NEUTRAL
5. INTRUSIVE

refer to Section 6.6 for further information on tolerance for change



SWITCH HOUSE
LEVEL 3 PLAN (+17)



SWITCH HOUSE
LEVEL 2 PLAN (+12)

Figure 4.2.41 Gradings of significance: Switch House / Transformer Alley level 2 and 3 plans.

4.2.2.7 Control Room Building

Grading of Significance: 1, Exceptional

The Control Room Building is a major structure in the White Bay Power Station building complex. It is a brick annexe located on the western side of the place and connected to the Switch House via a link bridge. The Control Room Building houses key equipment and machinery components of the Power Reticulation and the House Electrical and Auxiliary Supply systems. Notably, the Control Room with its machinery, fittings, furniture, documents, and parts, as well as the Cable Room and adjacent Cable Tunnels with extensive pyrotenax cabling are spaces that are highly evocative of the original function of the building.

For detailed descriptions and catalogues of the individual spaces, machinery, and moveable heritage, refer to Volume 2 – Heritage Inventory of this CMP.

Figure 4.2.42 The Rheostat Room in the Control Room Building, 2024 (courtesy of Chris Bennett: Evolving Picture).

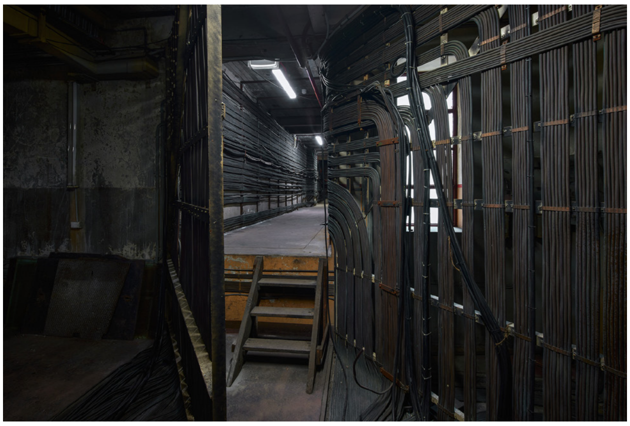
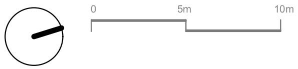


Figure 4.2.43 The Cable Room in the Control Room Building, 2024 (courtesy of Toby Peet).

Figure 4.2.44 The 1948 Control Room, 2024 (courtesy of Toby Peet).

SIGNIFICANCE DIAGRAMS OF ELEMENTS / SPACES

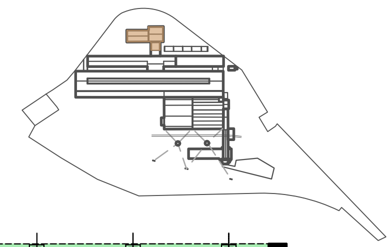
CONTROL ROOM BUILDING

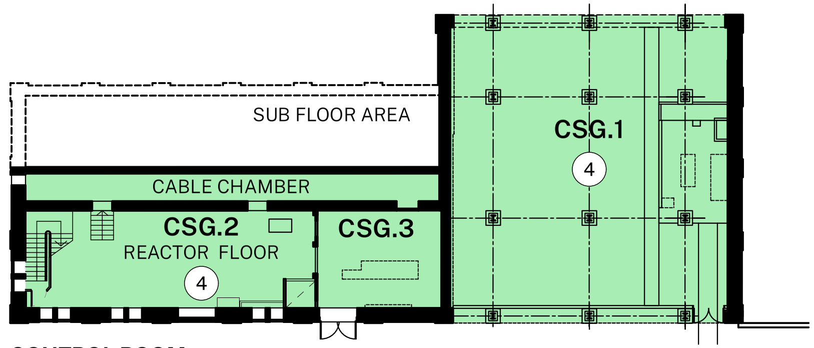


SIGNIFICANCE KEY

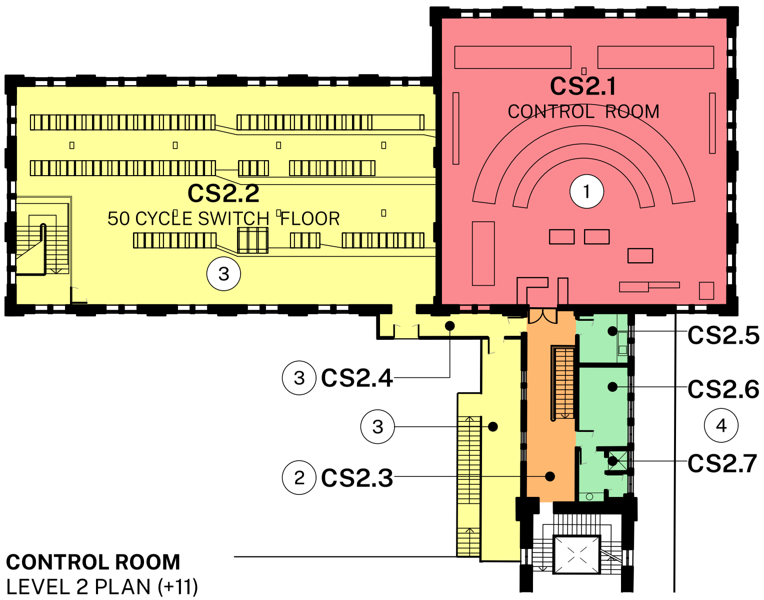
1. EXCEPTIONAL
2. HIGH
3. MODERATE
4. LITTLE/NEUTRAL
5. INTRUSIVE

refer to Section 6.6 for further information on tolerance for change

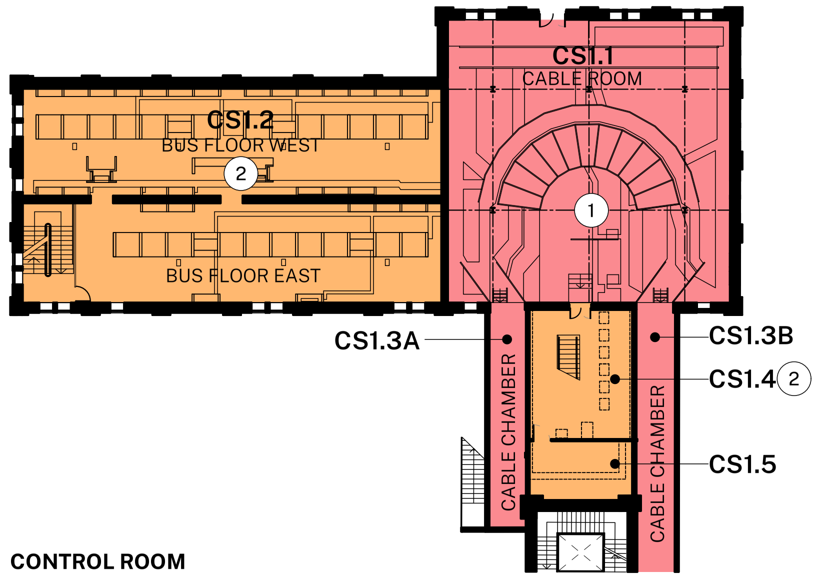




CONTROL ROOM
GROUND FLOOR PLAN (+3)



CONTROL ROOM
LEVEL 2 PLAN (+11)



CONTROL ROOM
LEVEL 1 PLAN (+7)

Figure 4.2.45 Gradings of significance: Control Room Building plans.

4.2.2.8 Ash Handling Tower

Grading of Significance: 1, Exceptional

The Ash Handling Tower is a key structure of the White Bay Power Station. Despite its small size relative to the other buildings of the power station, it is one of the primary structures of the Ash Handling System. The Ash Handling Tower is also significant for its connection to the External Conveyor and framing of the north-south corridor between the Coal Handling Shed and the Boiler House.

For detailed descriptions and catalogues of the individual spaces, machinery, and moveable heritage, refer to Volume 2 – Heritage Inventory of this CMP.

4.2.2.9 Chimney Stacks

Grading of Significance: 1, Exceptional

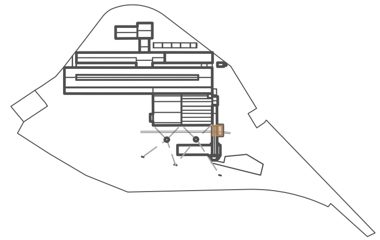
The two extant chimney stacks are exceptionally rare and a key feature of the White Bay Power Station. They are major structures of the Ash Handling System and are of a scale and salience that is intrinsic to views of the power station and its landmark identity. The Chimney Stacks are also significant for their riveted steel structure, which were constructed during the mid-twentieth century and are exceedingly rare nationally and even internationally.

For detailed descriptions and catalogues of the individual spaces, machinery, and moveable heritage, refer to Volume 2 – Heritage Inventory of this CMP.

Figure 4.2.46 The Ash Handling Tower, 2024 (courtesy of Chris Bennett: Evolving Picture).

Figure 4.2.47 The Chimney Stacks behind the External Conveyor, 2024 (courtesy of Toby Peet).

SIGNIFICANCE DIAGRAMS OF ELEMENTS / SPACES



ASH HANDLING TOWER

SIGNIFICANCE KEY

1. EXCEPTIONAL
2. HIGH
3. MODERATE
4. LITTLE/NEUTRAL
5. INTRUSIVE

refer to Section 6.6 for further information on tolerance for change

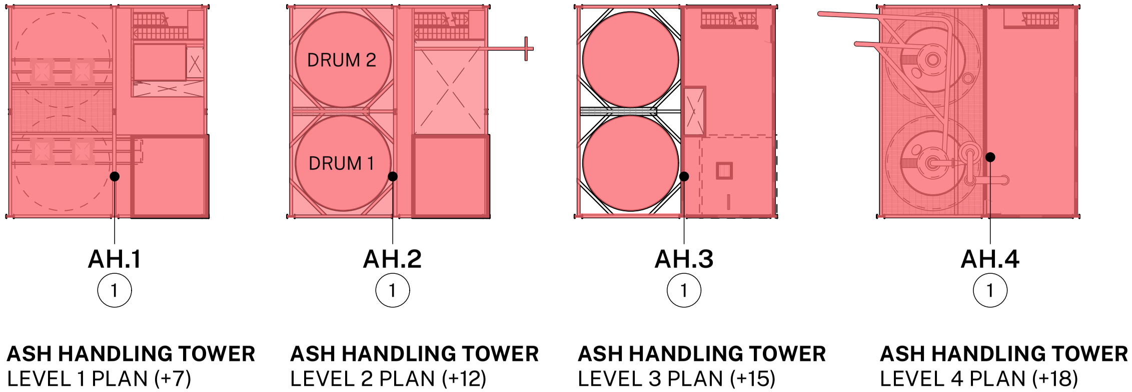


Figure 4.2.48 Gradings of significance: Ash Handling Tower plans.

4.2.2.10 External Spaces

Grading of Significance: 1–4, Exceptional–Little/Neutral

The External Spaces of the White Bay Power Station are of varying significance. The character statement of each of the individual spaces is provided below.

For detailed descriptions and catalogues of the individual spaces, machinery, and moveable heritage, refer to Volume 2 – Heritage Inventory of this CMP.

Coal Wash Pit
Grading of Significance: 3, Moderate

The Coal Wash Pit has some historical significance for its role in the Coal Handling Process. Coal would be washed at this pit before being sent to the Coal Handling Shed. It is currently a relatively deactivated part of the place, and does not have much aesthetic significance.

Transformer Yard
Grading of Significance: 2, High

The Transformer Yard is of high significance. It contains brick dividers and concrete plinths that once housed multiple transformers used for the power station's operations. While it does not retain any extant equipment or machinery, it nonetheless is a unique space once integral to the power generation and reticulation process.

North Forecourt
Grading of Significance: 2, High

The North Forecourt is of high significance as it serves as the primary point of entry to the place and is the foreground to the iconic facade of the White Bay Power Station Building complex. Each step of the coal-fired electricity generation process is visually represented from this facade. It is also a vast and impressive space that is a dramatic increase in scale from the smaller development in the surrounding context. The North Forecourt also contains evidence of the rail tracks used during the ash handling process.

Ash Handling Yard
Grading of Significance: 1, Exceptional

The Ash Handling Yard is of exceptional significance for its role and location between the Coal Handling Shed and Boiler House. It contains the two extant chimney stacks, which are a major, exceptionally rare feature of the White Bay Power Station. The Ash Handling Yard also contains evidence of the rail tracks used during the ash handling process.

South and East Yards
Grading of Significance: 4, Little / Neutral

The South and East Yards are of little significance to the cultural significance of the White Bay Power Station. Historically, the space was used to store vast amounts of coal before it was sent to the Coal Handling Shed, though there remains nothing in the yards at the present day that indicates this former use.

Mid & Upper South Yards
Grading of Significance: 3, Moderate

The Mid and South Yards are of moderate significance for once housing several smaller staff amenity buildings and possibly workshops – though at present, there are only some concrete foundations remaining. These structures would have been integral to the social significance of the place for the workers of the power station.

West Yard
Grading of Significance: 3, Moderate

The West Yard is of moderate significance. Though part of the yard is overgrown with trees and vegetation, it had multiple sheds during the active years of the power station, and has a centrally located extant concrete plinth from a former shed.

South West Yard
Grading of Significance: 2–3, High–Moderate

The South West Yard is of both high and moderate significance. The overgrown, vegetated south area of the yard is of moderate significance and is not indicative of any function specific to the power station. The section of the yard that is covered in hard landscaping has extant rails that were used to move the transformers during the active years of the power station.

Former White Bay Hotel Site
Grading of Significance: 3, Moderate

The former White Bay Hotel site is of moderate significance. The White Bay Hotel was of considerable social significance to the social and recreational life of the workers of the power station. It was also a place that was indicative of the darker side of the workers' lives, including war veterans that turned to alcoholism. The site is only graded as being of moderate significance as there is little to no evidence of the building that remains.

Figure 4.2.49 Conveyor Level in the Boiler House, 2023 (courtesy of Toby Peet).

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SECTION 5
STATUTORY & STRATEGIC CONTEXT

Figure 5.1.1 Control Panel in the 1948 Control Room, 2024 (courtesy of Toby Peet).

This section outlines the management framework and major considerations to inform the preparation of the conservation policies and guidelines for the place. It considers the procedural constraints, opportunities and conservation methodology set out in the *Australia ICOMOS Charter for Places of Cultural Significance (The Burra Charter)*. It also identifies all statutory and non-statutory listings and other planning and building statutory requirements applying to the place, as well as the Placemaking NSW management requirements for the future use of the place.

5.1 PLACEMAKING NSW

The White Bay Power Station is managed by Placemaking NSW (PMNSW) under the Place Management NSW Act 1998.[149]

The principal functions of PMNSW, as stated in its Act, are to:

- Protect and enhance the natural and cultural heritage of the foreshore area.
- Promote, coordinate, manage, undertake, and secure the orderly and economic development and use of the foreshore area, including the provision of infrastructure.
- Promote, coordinate, organise, manage, undertake, secure, provide and conduct cultural, educational, commercial, tourist, recreational, entertainment and transport activities and facilities.

In addition, Placemaking NSW has the following functions in relation to particular classes of land within the foreshore area:

- To develop and manage core land,
- To develop, manage and deal in non-core land,
- To manage land in accordance with the terms of the agreement with the owner or occupier of the land, and
- To enhance and manage the landscape of the public domain and to improve, maintain and regulate the use of the public domain.

5.2 AUSTRALIAN ICOMOS CHARTER FOR PLACES OF CULTURAL SIGNIFICANCE 2013 (THE BURRA CHARTER)

The *Australia ICOMOS Charter for Places of Cultural Significance 2013*, known as *The Burra Charter*, is widely accepted in Australia as the underlying methodology by which all works to sites/buildings identified as having national or state heritage significance are undertaken.

While compliance with The Burra Charter is not a statutory requirement, PMNSW manages its heritage assets in accordance with the recognised conservation methodology of The Burra Charter. Further information can be found at https://australia.icomos.org/publications/burra-charter-practice-notes/, and a copy of The Burra Charter is also in Appendix A of this CMP.

5.3 HERITAGE LISTINGS

Listing on heritage registers is generally regarded as an indication of an item's heritage or cultural significance. Statutory obligations arising from these listings are also discussed in this section.

5.3.1 NSW State Heritage Register

White Bay Power Station was listed on the NSW State Heritage Register (SHR) on 2 April 1999 as item 01015. The present 1999 State Heritage Register listing followed the boundary for the place at the time. In June 2010, the Sydney Harbour Foreshore Authority acquired the former White Bay Hotel site and is presently excluded from the SHR listing. This CMP recommends that the SHR boundary be adjusted to match the revised property boundary, thus incorporating the site of the former White Bay Hotel.

5.3.2 Section 170 Heritage Register

The White Bay Power Station is listed on the following Section 170 Heritage Registers:

- Pacific Power: White Bay Power Station Complex (no. 74)
- Sydney Harbour Foreshore Authority (now Placemaking NSW): White Bay Power Station Complex
- Port Authority of NSW Section 170 Register (inlet and outlet canals)
- Sydney Ports Corporation: White Bay Power Station (Outlet) Canal (no. 4560026)

5.3.3 Aboriginal heritage items within and near the Study Area

Although Aboriginal people lived around White Bay, Johnstons Bay and surrounding suburbs for thousands of years, the intensive historical impacts to these areas through quarrying, land reclamation and industrial and residential development, has destroyed many of the physical traces of their use. Despite these impacts, the Heritage NSW Aboriginal Heritage Information Management System (AHIMS) contains records of several campsites (middens) in rockshelters and in the open across the bay at Pyrmont and around the Balmain Peninsula. They suggest that many more Aboriginal sites would once have been present across this area, and some may also survive and have yet to be recorded — such as rockshelters on private land or obscured by vegetation, or former land that has been covered by fill.

A site, located adjacent to the southern boundary of the SHA curtilage, measuring approximately 80mx40m, was registered on the NSW Government's Aboriginal Heritage Information Management System (AHIMS) as #45-6-3826. Archaeological test excavation of this area was recommended to determine whether the original soils of this foreshore are actually present and if so, whether they contain any Aboriginal archaeological remains.[150]

5.4 NON-STATUTORY LISTINGS

5.4.1 Register of the National Estate

White Bay Power Station is entered on the Register of the National Estate Number 019512. The Register is administered by the Australian Heritage Commission, a Commonwealth statutory body superseded by the Australian Heritage Council. The Register is legally binding only upon the Federal government and its agencies; entry of that property on the Register has no direct legal constraints on private individuals, private corporations, or state or local governments.

5.4.2 National Trust of Australia (NSW)

The National Trust of Australia (New South Wales) classified the White Bay Power Station on 26 March 1994. While the National Trust is a non-statutory body, its listings are highly regarded by the government and other authorities. The National Trust should be asked to comment on any development of the place, and their comments and recommendations will need to be addressed.

The Trust does not advocate rigid and unnecessarily restrictive development controls concerning listed items or places but recommends that their significance – as part of the national, state, regional or local heritage – should be conserved through controls that allow, where necessary, for new and compatible development and associated works, which respect the character of the place or item through enhancement rather than conflict.

5.4.3 Inner West Council

The White Bay Power Station and curtilage is owned by the NSW State Government and managed by PMNSW. As this is state government land, it is not within the jurisdiction of Inner West Council Local Environment Plan (LEP) and is instead zoned within the State Environmental Planning Policy (Precincts - Eastern Harbour City 2021). No heritage listings are therefore required in the Inner West LEP or other registers.

5.4.4 Australian Institute of Architects (AIA) NSW Chapter

The White Bay Power Station is listed on the Australian Institute of Architects (AIA) NSW Chapter's, Register of Significant Architecture NSW. The register is non-statutory and is managed by the Heritage Committee of the Australian Institute of Architects, NSW Chapter. A place included in the AIA NSW Chapter's list where is an example representative of architectural merit during the 20th Century or a rare work of a notable architect.

5.4.5 Engineers Australia

The White Bay Power Station was proposed to be nominated as an Item of Engineering Heritage Interest as part of the Engineers Australia Engineering Heritage Recognition Program in 2023, but has not been listed at the time of writing this CMP.

5.5 ENVIRONMENTAL PLANNING AND ASSESSMENT ACT – SEPPS

Three principal State Environmental Planning Policies (SEPPs) under the Environmental Planning and Assessment Act 1979 (EP&A Act 1979) apply to the White Bay Power Station. These include:

- *State Environmental Planning Policy (Planning Systems) 2021*
- *State Environmental Planning Policy (Biodiversity and Conservation) 2021*
- *State Environmental Planning Policy (Precincts – Eastern Harbour City) 2021*

The *Sydney Regional Environmental Plan No. 26 – City West 2005*, referred to in previous editions of this CMP, has been repealed and superseded by the Precincts SEPP 2021.

5.5.1 State Environmental Planning Policy (Planning Systems) 2021

The State Environmental Planning Policy (Planning Systems) 2021 applies to development within the White Bay Power Station site. It identifies the Bays Precinct, including the White Bay Power Station site, as a State Significant Development Site on Sheet SSDS_001 (SEPP_PLS_BPR_SSDS_001_20221110). This is primarily in relation to the Bays Precinct being a major site for the Sydney Metro West Project and the Bays Station Site being adjacent to the White Bay Power Station site.

5.5.2 State Environmental Planning Policy (Biodiversity and Conservation) 2021

The State Environmental Planning Policy (Biodiversity and Conservation) 2021 applies to development within the White Bay Power Station site. It contains the previous *Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005*, which covers Sydney Harbour and its waterways, foreshores and catchment.

The Biodiversity SEPP identifies the White Bay Power Station site as within the Foreshores and Waterways Area on Sheet FWA_001 (SEPP_BAC_WC_FWA_001_20221110). Development on the White Bay Power Station site must consider a variety of matters as a result, including the principles and provisions outlined in Chapter 6, Division 3 for Foreshores and Waterway Areas. These include maintaining public and equitable use of the foreshore area and consideration of impacts on archaeological sites or relics.

5.5.3 State Environmental Planning Policy (Precincts – Eastern Harbour City) 2021

Under the provisions of "Appendix 8 Stage 1 Bays West Precinct" of the State Environmental Planning Policy (Precincts – Eastern Harbour City) 2021, the White Bay Power Station is located within the Stage 1 Bays West Precinct created by SEPP 2021 (repealed from its original Bays Precinct from the SREP No. 26). The Minister is the consent authority for developing the site if the development has an estimated cost of not more than $10 million and is carried out by a person other than a public authority (unless delegated under Division 2.1 clause 2.4 of the EP&A Act).

Appendix 8 outlines the matters the consent authority must consider before granting consent to a development application relating to land in the Bays Precinct. Additional miscellaneous provisions are detailed in Part 6.

Figure 5.5.1 View of the Boiler House during the Ministry of Sound event, 2024 (Design 5 – Architects).

5.5.3.1 Master Plans

The White Bay Power Station was identified as land subject to master planning requirements within the former SREP 26 (Map 5, Sheet 3 of SREP 26). At the time, consent could not be granted to a development that relates to land indicated on Map 5 as requiring a Master Plan unless:

- *There is a Master Plan for the land, and*
- *The consent authority has taken the Master Plan into consideration.*

A Master Plan encompassing the White Bay Power Station site was prepared in 2022 in accordance with the SREP at the time and is informed by the 2013 edition of this CMP. Refer to Section 5.7 for the Bays West Master Plan.

5.5.3.2 Zoning

The White Bay Power Station is part of a broader land area of former and current industrial uses known as Bays West. The area has been rezoned into the sub-precinct known as The White Bay Power Station (and Metro). The area encompassing the White Bay Power Station and the open space immediately surrounding it is zoned as "***SP1 – Special Activities***". The adjacent precincts to the north and east are RE1 – Public Recreation, E2 – Commercial Core, and MU1 –Mixed Use. Refer to the Land Zoning Map (Sheet SEPP_EHC_BWP_LZN_001_20221108).

In the Special Activities Zone, environmental protection works are permitted without consent. The following activities are permitted with consent: "*Commercial premises; Community facilities; light industries; Educational establishments; Entertainment facilities. Hotel or motel accommodation, information and education facilities, recreation facilities (indoor) and recreation facilities (outdoor).*" The objectives of the zone are:

- *To provide for special land uses that are compatible and consistent with the White Bay Power Station Conservation Management Plan, dated March 2013.*
- *To provide for sites with special natural characteristics that are not provided for in other zones.*
- *To facilitate development that is in keeping with the special characteristics of the White Bay Power Station, and that minimises any adverse impacts on surrounding land.*
- *To facilitate development in the White Bay Power Station that will enable a range of appropriate commercial, creative, entertainment and community uses.*

5.5.3.3 Height of buildings

Building heights should not exceed the 0-20 metre limit on all areas of the place, except for the northeast corner, where RL23 is permitted and the former No. 2 Boiler House, where RL40 is permitted. Refer to Section 7:

(1) The objectives of this section are as follows —

(a) to ensure buildings are compatible with the height, bulk and scale of the desired future character of the area, and positively contribute to the streetscape and public spaces,

(b) to ensure protected view corridors to and from the White Bay Power Station are kept,

(c) to ensure the height of buildings includes lift overruns, plant and architectural roof features and other roof elements,

(d) to protect the amenity of residential accommodation, neighbouring properties and public spaces in relation to —
(i) visual and acoustic privacy, and
(ii) solar access and view sharing.

(2) The height of a building must not exceed the maximum height shown for the land on the Height of Buildings Map.

5.5.3.4 Floor space ratio

The floor space ratio standards (Sections 8–10) do not apply to the White Bay Power Station site according to the SEPP 2021 Bays West Stage 1 Precinct Floor Space Ratio Map, Sheet FSR_001 (SEPP_EHC_BWP_FSR_001_20221108.

Figure 5.5.2 View of the Turbine Hall during the Power Up Festival, 2024 (Design 5 – Architects)

5.5.3.5 Heritage Conservation

The White Bay Power Station is identified as a Heritage Item in Part 5 of Appendix 8 (Heritage Conservation) and Schedule 9 (Heritage items). It is indicated as heritage item 11 on the SEPP 2021 Bays West Stage 1 Precinct Heritage Map, Sheet HER_001 (SEPP_EHC_BWP_HER_001_20221108).

Development of, or in the vicinity of, a heritage item or within a conservation area must be compatible with the conservation of the heritage significance of the item or the character of the conservation area. Part 5 section 15 subsection (2) requires the consent authority to consider the following matters before granting consent to any development:

> *(a) the heritage significance of the heritage item,*
>
> *(b) the impact the development will have on the heritage significance of the heritage item and its setting,*
>
> *(c) the measures proposed to conserve the heritage significance of the heritage item and its setting,*
>
> *(d) whether an archaeological site or potential archaeological site will be adversely affected by the development.*

In accordance with Part 5 Clause 15 subsection (1), development consent must not be granted unless the consent authority:

> *(a) has considered a conservation management plan or heritage impact statement setting out an assessment of the matters listed in subsection (2), and*
>
> *(b) is satisfied the development is compatible with the conservation of the heritage significance of the item.*

5.5.3.6 Design Excellence

Part 6, Section 17 details the necessity of design excellence for any development in the Bays West Stage 1 Precinct. The objective is to ensure that development exhibits the highest standards of landscape, architectural, and urban design as part of the built environment. The objective of this section applies to the construction of a new building or the external alterations, or enlargement or extension of an existing building.

The consent authority must take into consideration a range of factors when considering design excellence, which is detailed in Subclause 4 and includes:

> *(a) whether a high standard of architectural and landscape design, materials and detailing appropriate to the building type and location will be achieved,*
>
> *(b) whether the form and external appearance of the development will improve the quality and amenity of the public domain,*
>
> *(c) whether the development detrimentally impacts view corridors, including views of Sydney Harbour and views protected under the White Bay Power Station Conservation Management Plan, dated March 2013,*
>
> *(d) how the development addresses the following matters —*
>
> > *(i) the suitability of the land for development,*
> >
> > *(ii) existing and proposed uses and use mix,*
> >
> > *(iii) heritage issues and streetscape constraints,*
> >
> > *(iv) the relationship of the development with other existing or proposed development on the same site or on neighbouring sites in terms of separation, setbacks, amenity and urban form,*
> >
> > *(v) bulk, massing and modulation of buildings,*
> >
> > *(vi) street frontage heights,*
> >
> > *(vii) environmental impacts, including sustainable design, overshadowing, wind and reflectivity and visual and acoustic privacy,*
> >
> > *(viii) the achievement of the principles of ecologically sustainable development,*
> >
> > *(ix) pedestrian, cycle, vehicular and service access, circulation and requirements, including the permeability of any pedestrian network,*
> >
> > *(x) the impact on, and proposed improvements to, the public domain, including landscape design,*
> >
> > *(xi) the relationship of the development with the street and building frontage,*
> >
> > *(xii) the integration of landscape design with the surrounding area.*

5.5.3.7 Role and land use

White Bay Power Station is listed in the SEPP (Precincts – Eastern Harbour City) 2021 as Site C within the Stage 1 Bays West Precinct on the Bays West Stage 1 Precinct Land Application Map (Sheet LAP_001). Part 6, section 28 discusses development specific to Site C:

> *Development consent must not be granted to development on land in Site C unless the consent authority is satisfied at least 50% of the gross floor area of a building resulting from, or involved in, the development will be used for one or more of the following purposes —*
>
> *(a) community facilities,*
>
> *(b) creative industries,*
>
> *(c) entertainment facilities,*
>
> *(d) food and drink premises.*

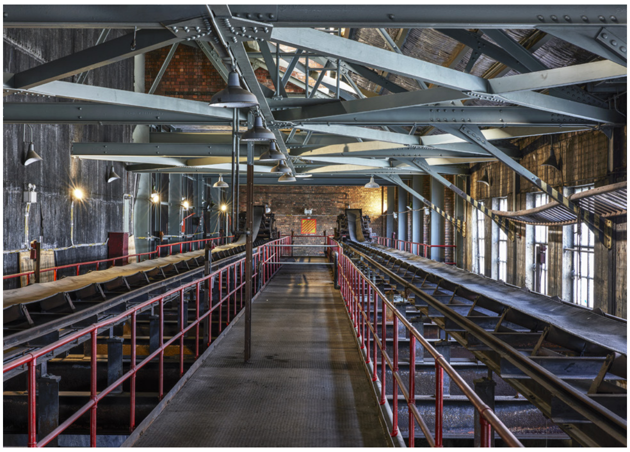

Figure 5.5.3 Conveyor Level of the Boiler House looking north, 2023 (courtesy of Toby Peet)

Figure 5.5.4 South end of the Turbine Hall with displayed artworks during the Power Up Festival, 2024 (Design 5 – Architects)

5.6 NSW HERITAGE ACT, 1977

The White Bay Power Station is listed on the State Heritage Register as SHR Item No. 01015. It is, therefore, subject to the provisions of the Heritage Act 1977 (New South Wales). The Heritage Act 1977 (NSW) aims to conserve the environmental heritage of New South Wales. The objectives of the Act, as stated in Part 1, Clause (3) of the Act, are as follows:

> *(a) to promote an understanding of the State's heritage,*
>
> *(b) to encourage the conservation of the State's heritage,*
>
> *(c) to provide for the identification and registration of items of State heritage significance,*
>
> *(d) to provide for the interim protection of items of State heritage significance,*
>
> *(e) to encourage the adaptive reuse of items of State heritage significance,*
>
> *(f) to constitute the Heritage Council of New South Wales and confer on it functions relating to the State's heritage,*
>
> *(g) to assist owners with the conservation of items of State heritage significance.*

The Act is administered by Heritage NSW to ensure that the cultural heritage in NSW is adequately identified and conserved.

Under Section 57(1) of the NSW Heritage Act, any major works proposed for State Heritage Register items must be assessed and approved by the Heritage Council of NSW or its delegate to ensure that the item's heritage significance will not be adversely affected. Demolition of an SHR item is prohibited under the NSW Heritage Act unless it constitutes a danger to its occupants or the public.

The listing of White Bay Power Station on the State Heritage Register also means that the Heritage Council becomes the joint consent authority for proposals for changes that may affect the White Bay Power Station's significance. This process is known as Integrated Development Assessment (IDA).

PMNSW is one of the few agencies that has delegation under the Heritage Act to endorse Section 57(2) exemption applications and determine Section 60 applications for works that do not 'materially affect' the item's significance. For works likely to 'materially affect' significance, approval from the Heritage Council of NSW is required. The Placemaking NSW Design and Place (heritage) team can advise applicants whether applications can be assessed under delegation or whether they need to be approved by the Heritage Council.

If the Heritage Council endorses a Conservation Management Plan for White Bay Power Station and the owner prepares proposals that are in line with the endorsed CMP, approval by the Heritage Council of those proposals would be likely; however, formal approval under Section 60 of the Heritage Act would still be required.

Whether or not endorsement is achieved, the Conservation Management Plan for White Bay Power Station should accompany any application for approval under the Heritage Act. The Heritage Council will then consider the information and policies in the CMP when assessing the application.

5.6.1 Standard Exemptions and Standards

Under Section 57(2) of the NSW Heritage Act, the Minister, on the recommendation of the Heritage Council, may grant exemptions for certain activities that would otherwise require approval under Section 57(1) of the Heritage Act. There are various types of exemptions:

- Standard exemptions that apply to all State Heritage Register items;
- Site-specific exemptions that apply only to an individual State Heritage item; and
- Agency-specific exemptions for Placemaking NSW.

If the proposed works are likely to be covered by an exemption from approval, a s57 Exemption Record of Use Form should be completed and submitted to Placemaking NSW before the works are undertaken, with enough detail provided to determine whether the proposed works meet an exemption from approval. The Landowner's Consent must be sought from and approved by PMNSW before the commencement of any works.

Applicants must first consult with Placemaking NSW Design and Place (heritage) team for advice if any proposal would likely fall under an exemption.

5.6.1.1 Archaeology

Regardless of whether the place is listed on the SHR, all archaeological deposits are subject to the Heritage Act and must be managed and dealt with in accordance with its provisions. Refer also to Standard Exemptions below.

5.6.1.2 Standard Exemptions

The topics covered by the Standard Exemptions for State Heritage Register listed places are listed below. The full text of the Standard Exemptions, current at the time of finalisation of this CMP, is included in the Appendices.

The following Standard Exemptions do not apply to anything affecting relics, items, or sites of heritage significance to Aboriginal people or which affect traditional access by Aboriginal people.

- *Standard Exemption 1: Maintenance and cleaning*
- *Standard Exemption 2: Repairs to non-significant fabric*
- *Standard Exemption 3: Alteration to non-significant fabric*
- *Standard Exemption 4: Alteration to interiors of non-significant buildings*
- *Standard Exemption 5: Repair or replacement of non-significant services (mechanical, electrical and plumbing)*
- *Standard Exemption 6: Non-significant telecommunications infrastructure*
- *Standard Exemption 7: Fire safety detection and alarm systems*
- *Standard Exemption 8: Excavation*
- *Standard Exemption 9: Painting*
- *Standard Exemption 10: Restoration of fabric that forms part of the significance of the item (significant fabric)*
- *Standard Exemption 11: Subdivision of non-significant buildings*
- *Standard Exemption 12: Temporary structures*
- *Standard Exemption 13: Vegetation*
- *Standard Exemption 14: Burial sites and cemeteries*
- *Standard Exemption 15: Signs*
- *Standard Exemption 16: Filming*
- *Standard Exemption 17: Temporary relocation of moveable heritage items*
- *Standard Exemption 18: Compliance with minimum standards and orders*
- *Standard Exemption 19: Safety and security*
- *Standard Exemption 20: Emergency situations and lifesaving*
- *Standard Exemption 21: Change of use*

5.6.1.3 Agency-specific Exemptions

Placemaking NSW manages the White Bay Power Station. The *NSW Government Gazette Number 449 –Planning and Heritage, dated Friday, 23 September 2022,*[151] allows for agency-specific exemptions (listed below) for properties owned, leased, managed, or controlled by Placemaking NSW. Refer to the gazette for further details.

- *Exemption 1: Maintenance and Cleaning*
- *Exemption 2: Repairs and reconstruction*
- *Exemption 3: Painting*
- *Exemption 4: Vegetation*
- *Exemption 5: Signage*
- *Exemption 6: Filming*
- *Exemption 7: Recovery works*
- *Exemption 8: Investigating the condition of significant fabric*
- *Exemption 9: Minor internal activities and works to significant fabric*

Activities covered in the agency-specific exemptions and Standard Exemptions do not require approval from the authority. Still, they must be self-assessed subject to compliance with the General Conditions that apply to all agency-specific exemptions. Assessment of agency-specific exemptions will require Land Owners' Consent.

Figure 5.6.1 Lift Shaft of the Switch House, 2024 (courtesy of Toby Peet).

5.6.1.4 Site-specific Exemptions

There are no site-specific exemptions for the White Bay Power Station at the time of writing this CMP. If PMNSW, as the owner of the White Bay Power Station intends to develop site-specific exemptions, they must be endorsed by the Heritage Council of NSW. Site-specific exemptions can only be approved by the Minister of Planning on the recommendation of the Heritage Council.

The Conservation Management Plan for the White Bay Power Station is a basis for developing site-specific exemptions and will only apply to works with little to no impact on heritage significance. Refer to section 6.14.3 for the relevant policy on recommended site-specific exemptions.

5.6.1.5 Minimum Standards

Owners of State Heritage Register items are required to keep their properties at a minimum standard of maintenance and repair as prescribed by the Heritage Act and specified most recently in Section 118 of the Heritage Regulations 2012 (see Appendices). These are minimum standards to ensure that heritage significance is maintained. The standards for buildings, works and relics are set out in the Regulation, and they relate to:

- weatherproofing;
- fire protection;
- security; and
- essential maintenance and repair.

Regular inspections are needed to monitor items at least once every year (or at least once every three years for essential maintenance and repair standards).

5.6.1.6 Section 170 Heritage and Conservation Register

Section 170 of the Act requires all government instrumentalities (in this case, Placemaking NSW) to prepare Heritage and Conservation Registers with details of each item of environmental heritage under their jurisdiction, irrespective of whether or not it is already covered by another conservation instrument. Such registers are to be reviewed not less than once each year. Refer to Section 5.3.2 for list of Section 170 listings.

5.6.2 National Parks & Wildlife Act 1974

The NSW Parks and Wildlife Act 1974 (NPW Act), administered by Environment and Heritage in the Department of Climate Change, Energy, the Environment and Water, is the primary legislation that provides statutory protection for all 'Aboriginal objects' (Part 6, Section 90) and 'Aboriginal places' (Part 6, Section 84) within NSW.

An Aboriginal object is defined through the NPW Act as:

> *"any deposit, object or material evidence (not being a handicraft made for sale) relating to the Aboriginal habitation of the area that comprises New South Wales, being habitation before or concurrent with (or both) the occupation of that area by persons of non-Aboriginal extraction, and includes Aboriginal remains."*

The NPW Act defines 'harm' to Aboriginal objects and places as:

> *"…any act or omission that:*
>
> *(a) destroys, defaces or damages the object or place, or*
>
> *(b) in relation to an object-moves the object from the land on which it had been situated, or*
>
> *(c) is specified by the regulations, or*
>
> *(d) causes or permits the object or place to be harmed in a manner referred to in paragraph (a), (b) or (c)."*[152]

The NPW Act also establishes penalties for 'harm' to Aboriginal objects and declared Aboriginal places, as well as defences and exemptions for harm. One of the primary defences against the harming of Aboriginal objects and cultural material is to seek an Aboriginal Heritage Impact Permit (AHIP) under Section 90 of the NPW Act, under which disturbance to Aboriginal objects could be undertaken, in accordance with the requirements of an approved AHIP.

A search of Heritage NSW Aboriginal Heritage Information Management System (AHIMS) Web Services was undertaken in 2025. The search showed that no declared Aboriginal places are present in or near the power station. However, a site, located adjacent to the southern boundary of the SHA curtilage, measuring approximately 80x40m, was registered on the NSW Government's Aboriginal Heritage Information Management System (AHIMS) as #45-6-3826. Archaeological test excavation of this area was recommended to determine whether the original soils of this foreshore are actually present and if so, whether they contain any Aboriginal archaeological remains.[153]

5.7 BAYS WEST PLACE STRATEGY

The Bays West Place Strategy, released in November 2021, provided a guide to the transformation of the Bays West. The Draft Bays West Place Strategy included the *Connecting with Country Framework*, a *Strategic Place Framework*, an *Urban Design Framework*, and a *Sustainability Framework*. It identified the White Bay Power Station and proposed Metro as one of 10 distinct sub-precincts (Figure 1.6.2). The precincts reflect changes in topography, roadways, key public domain zones and uses and users, but they also set the desired future character zones.

These documents outline the overarching goals for the precinct, including plans to repurpose the White Bay Power Station. The Bays West Place Strategy identified White Bay Power Station (and Metro) as central to the renewal, providing a "nexus of connection" between other sub-precincts and the adjacent suburbs. In particular, the White Bay Power Station was declared one of the "key heritage landmarks… which act as destination markers and speak directly to the place narrative and history." Additionally, the *Stage 1 Bays West – White Bay Power Station (and Metro): Design Guide* (released December 2022) refers to the CMP as a fundamental and essential document that details the place's significance and should guide any reuse and change at the White Bay Power Station.

The Bays West Place Strategy outlines the following precinct themes that drive the master planning and development framework. These themes have also been discussed in relation to this specific Stage 1 precinct.

- **Land use and function** that address further land uses of Bays West and the role it will play in Sydney's future.
- **Design of places and spaces** that guide how Bays West will feel to people and what is important in the design of buildings and public domain.
- **Transport and movement** that recognises the constrained nature of Bays West and establishes how the precinct will move people and goods to, from and through Bays West.
- **Heritage and culture** that recognises the importance of the past and how understanding history and culture is critical to creating a place with meaning.
- **Infrastructure delivery and governance** recognise that the precinct will evolve over time and that multiple stakeholders must ensure that Bays West is successfully delivered.

These themes are, in turn, supported by six 'Big Moves', two of which are pertinent to stage 1 of the master plan:

1. **Repurpose White Bay Power Station to become a focal point of the precinct.**
2. Reinstate a crossing from Bays West to Pyrmont to create more convenient and direct active transport connections.
3. Connect the community to water while recognising and supporting the working harbour and port operational requirements.
4. Deliver a significant, connected, activated public open space near the water at an early stage.
5. **Make the most of the opportunity that a new Metro Station presents to renew the precinct and surrounds through development that strongly depends on public and active transport.**
6. Enable a world-class foreshore walk.

Figure 5.7.1 Artistic impression of potential development of the White Bay Power Station (and Metro) sub-precinct, 2021 (courtesy of Terroir, Bays West Place Strategy).

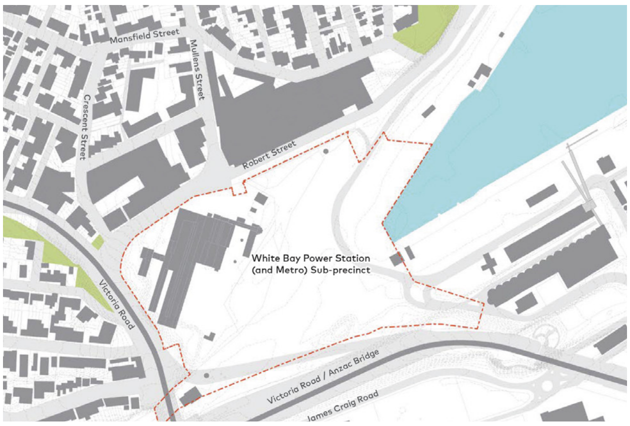

Figure 5.7.2 White Bay Power Station (and Metro) Sub-precinct Boundary, 2022 (courtesy of Bays West Stage 1 Master Plan and Urban Design Framework).

5.8 BAYS WEST STAGE 1 MASTER PLAN

Placemaking NSW commenced works for the Master Plan and Rezoning of the White Bay Power Station (and Metro) Precinct during the development of the Rezoning Proposal in 2022. This included major remediation works at the White Bay Power Station and the excavation and tunnelling of the Bays Metro Station and Sydney Metro West line that will run from the City to Westmead. Further, in line with the overarching masterplanning goals, activation works to the outdoor areas, the Boiler House, the Pump House, and the Turbine Hall commenced in 2024. The remediation and activation work in 2022–24 has allowed for public to access and experience the areas of the power station mentioned above.

The Master Plan anticipates that the existing uses immediately surrounding the White Bay Power Station will be continued. These uses include existing warehouse and industrial buildings to the north of the site, primarily residential and open space to the west, port and working harbour to the east, and Rozelle Bay Maritime Industries to the south. The Master Plan makes it a requirement to integrate and activate the White Bay Power Station into new public domain works. Future use of the White Bay Power Station site is expected to support, develop, and enhance existing uses. While these existing uses are to be retained, they will likely need to evolve to accommodate greater activity and engagement in a mixed-use context. In particular, the master plan notes that given the presence of the Metro station and increased accessibility and connectivity of the precinct, there is expected to be an increased demand for commercial use within the surrounds of the power station.

Figure 5.8.1 Indicative development of the White Bay Power Station (and Metro) sub-precinct, 2022 (courtesy of NSW Planning & Environment, Bays West Stage 1 Master Plan and Urban Design Framework).

The Master Plan also identifies several opportunities for the public domain to enhance the quality, experience, and use of the White Bay Power Station (and Metro) sub-precinct. These include celebrating Country, integrating Water Sensitive Urban Design, creating a heritage forecourt, activating public open spaces by the water, and drawing upon and highlighting heritage elements. The Master Plan and Urban Design Framework also discuss in detail the impacts that movement networks and new buildings will have on the significant view corridors associated with the White Bay Power Station.

The opportunities relating to the built form identified in the Masterplan that are relevant to the White Bay and Metro precinct are listed below:

- Adaptively reuse the White Bay Power Station to become a public, cultural and community landmark for NSW.
- Deliver public access to all significant features within the White Bay Power Station.
- Protect district and local views and vistas, maintaining the prominence and significance of the White Bay Power Station, the silos and Glebe Island Bridge as key heritage landmark structures.
- Incorporate the heritage-listed sewage pumping station SP0007 on Robert Street.

The Masterplan also aims to "reinforce the evolving industrial, maritime and cultural narratives" and includes other aims specifically related to the White Bay Power Station:

- Create a heritage forecourt and public plaza adjacent to the White Bay Power Station to allow events and programming to "spill out" of the Power Station.
- Focus activation, innovation, community and start-up, creative culture and social infrastructure in and around the White Bay Power Station.

Key considerations and requirements for the White Bay Power Station and the broader precinct include the site's tendency to flood, solar access to outdoor spaces, wind and weather events, car parking and access, entry points and suggested uses. The considerations around built form and view corridors are of particular interest, noting that views to the White Bay Power Station "*are preserved where possible in the proposed Built Form Composition Strategy and Building Heights.*"

5.8.1 Public Domain Concept Plan

A Public Domain Concept Master Plan is included in the overall sub-precinct master plan and is described as "just one of many permutations...for the White Bay Power Station (and Metro Sub-precinct)."[154] The White Bay Power Station is not included as part of its focus areas, but the remainder of the site is subdivided into eight Focus Areas. The focus areas immediately surrounding the White Bay Power Station propose how these public spaces, curtilages, and interfaces might enhance access, interpretation, and experience of the White Bay Power Station. The key points of development for the focus areas have been summarised below:

1. **White Bay Power Station North Curtilage**: a landscaped green space off Robert Street and a sunken plaza in the north forecourt. In between is a canal for stormwater flow that will mitigate imminent flooding issues from the Beattie Street channel and redirect the flow to White Bay.
2. **White Bay Power Station Eastern Curtilage**: The eastern curtilage of the White Bay Power Station continues the proposed sunken plaza and discusses retaining key visual connections and interpretation of shorelines and rail lines.
3. **Southern Entry**: A southern entry from the Rozelle Railway Parkland and Anzac Bridge Cycleway is proposed with a "passive" landscaped open space, an interpretation of penstock and cooling channels. An Intake Substation (ISS) is also proposed in the southwest corner of the sub-precinct.
4. **White Bay Power Station West Gardens**: proposal for integrating and interpreting existing heritage fabric and various typologies of plants and landscape around the Control Room Building.
5. **Southern Development Precinct**: the area is to comprise proposed new development access to multiple forms of public transport and streets prioritising walking and cycling, connected to the Anzac Bridge cycleway. Views to the harbour bridge and foreshore are also to be maintained.
6. **Metro Park and Harbour Interface**: this north interface of the metro station includes a porous public domain that will prioritise pedestrian movement with the capacity to accommodate event use and maintain key visual connections to and from the power station. Connections to the proposed foreshore walk and connection to water and parklands are also emphasised.
7. **Future Park**: the parklands proposed to the northeast of the White Bay Power Station along the foreshore of White Bay will embed Country into the land and convey the "story of the water, as it flows from 'fresh to sour to salt'." The park is sunken down from the access road and the immediate edge of the water, incorporating various landscaped spaces, recreation and park facilities.
8. **Robert Street Community Zone**: This area is north of the White Bay Power Station, along Robert Street. The space comprises a community hub and includes the northern penstock area.

Figure 5.8.2 Public Domain Concept Plan indicating the eight focus areas of the White Bay Power Station (and Metro) sub-precinct, 2022 (courtesy of the Bays West Master plan and Urban Design Framework, 132).

5.8.2 Interpretation Strategy 2022

The *Bays West Sub-Precincts White Bay Power Station and Robert Street: Heritage Interpretation Strategy*[155] was finalised in February 2022 as part of the exhibited Mast Plan. It discusses interpretation strategies for the White Bay Power Station site and the sub-precinct as a whole. The Interpretation Strategy identifies the several themes, including:

- Aboriginal Pre-contact
- Drowned River Valley
- Establishment of Industry
- Worker Housing
- Land Reclamation
- Transport and Rail Corridors
- Coal Export
- Demolished Structures
- Social History
- Power Generation
- Connection to the Water
- Defending Australia
- Decline

The Heritage Interpretation Strategy also discusses the application of forms of physical and non-physical interpretation, both on and off-site. These forms of interpretation should be implemented as part of the following implementation process:

- Stage 1: Interpretation Strategy
- Stage 2: Community Consultation
- Stage 3: Options Development
- Stage 4: Prepare the Interpretation Plan
- Stage 5: Detailed design and installation
- Stage 6: Post-installation

The Interpretation Strategy is the first stage of interpretation for the stories encapsulated in the place to be given a prominent and integrated role in the place's future. This was undertaken with the masterplanning and development proposals to incorporate interpretation into future use and design appropriately. Such stories should include (but are not limited to):

- Pre-Power Station history – including Aboriginal use of the place and surrounding land, early land grants, subdivisions for housing, resumption by the State
- The construction and evolution of the Power Station, including demolished/removed structures and elements
- The import of machinery and equipment from England and the USA (Parsons, Babcock & Wilcox, Curtis General Electric, etc.)
- The process of power generation through the eight operational systems and the evolution of this technology over time
- Links with the coal fields and bringing the coal to White Bay Power Station – rail and road
- Reticulation of power
- Changing uses and requirements for power – rail, trams, public and private power demands
- Life inside the White Bay Power Station
- Industrial action from c.1960s–80s
- The decline of the power station
- Decommissioning and removal of equipment
- The use of the power station after its decommissioning, including by filmmakers, events people, fashion and photography shoots, tours, and more recent years following remediation and activation of the power station.

Figure 5.8.3 White Bay Power Station "Trouble Room," 1930 (courtesy of the State Rail Authority records, State Archives Collection, 0363-069).

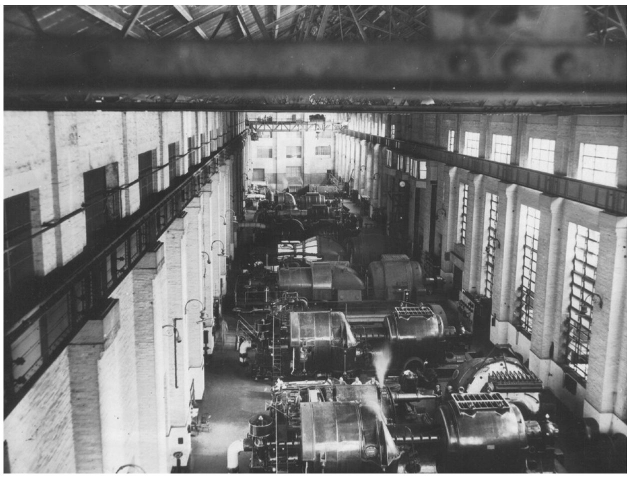

Figure 5.8.4 Turbine Hall, unknown date (courtesy of ECNSW Archives).

5.9 REVIEW OF ENVIRONMENTAL FACTORS

A Review of Environmental Factors (REF) was prepared by Placemaking NSW and The Planning Studio NSW Pty Ltd in 2024 to assess the environmental impacts that might arise from future uses and works associated with the White Bay Power Station site (up to the opening of the Bays West Metro Station):

> *The REF considers the impact and provides mitigation measures for a range of 'event categories' that will take place in the building and forecourt over the next 8-10 years, as outlined below:*
>
> - *Arts and Cultural partnerships with PMNSW (e.g. Biennale, Sydney Festival, Vivid, Sydney Fringe, Sydney Comedy Festival);*
> - *PMNSW state significant ('hallmark'), community or local events (e.g. New Years Eve, local markets, open days, rehearsal spaces, maker spaces);*
> - *Commercially ticketed events that are of an entertainment, artistic, food or cultural nature;*
> - *Commercial filming; and*
> - *Occasional private hire for events, workshops, conferences or educational/school programs.*[156]

These event categories have been developed in parallel with PMNSW's "Activation Principles" listed below:

- **Response to Place**: events and activations that speak to the history and identity of the place, both as Wanngal Country and as a significant heritage asset.
- **Point of Difference**: taking advantage of the unique location, heritage, and history.
- **Culture and Creativity**: positioning White Bay Power Station as the cultural flywheel of a progressive, creative district.
- **Memorable Experiences**: social, shared, iconic.
- **Diverse and Inclusive:** diverse, quality cultural experiences for various audiences.
- **Sustainable**: social, economic and environmental benefits.

These event categories fall under the designated zoning uses of the SEPP 2021. The REF further describes activities, planning context, consultation, and an extensive environmental impact assessment, including identification of risks and mitigation measures.

As the Determining Authority and as required under Part 5 of the EP&A Act 1979, Placemaking NSW has determined that the ongoing temporary activation of WBPS can proceed subject to the identified mitigation measures identified being implemented.

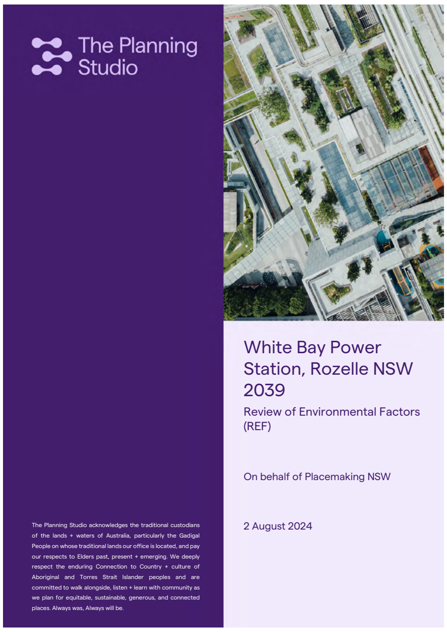

Figure 5.9.1 White Bay Power Station Review of Environmental Factors, 2024.

5.10 NATIONAL CONSTRUCTION CODE 2022 (NCC)

The National Construction Code (NCC) (2022) is a performance-based code that provides the minimum requirements for the safety, health, amenity, accessibility, and sustainability of certain buildings. It primarily applies to the design and construction of new buildings and also applies to new work in existing buildings. The NCC was developed to incorporate all on-site construction requirements into a single code and covers the Building Code of Australia (BCA) and Plumbing Code of Australia. It is managed by the Australian Building Codes Board and divided into three volumes. The code is regularly reviewed and revised.

The BCA is a performance document that provides Deemed to Satisfy (DtS) solutions. In some cases, DtS solutions are one-size-fits-all responses and are not suitable or compatible with the heritage values of White Bay Power Station. Where DtS solutions are incompatible or will result in a high level of heritage impact, alternative Performance Solutions should be used.

The Environmental Planning and Assessment Act (EP&A Act) contains the legislation applicable to the development of buildings. The EP&A Act applies the Building Code of Australia as the technical requirements to be met in:

- new buildings; and
- new building work.

The EP&A Act does not apply the BCA retrospectively to existing buildings. The BCA provides a set of measurable construction standards for the design and construction of new building work. This means:

- For an existing building where no work is being proposed, the building is not subject to the current BCA and, therefore, is not required by legislation to be upgraded whenever the BCA is amended.
- For an existing building undergoing alteration and/or additions, the new work must comply with the BCA and the existing part of the building, subject to the discretion of the approval authority, may require upgrades based on fire safety matters or where the development involves more than 50% of the building.

5.10.1 Building use classification

The zoning for the White Bay Power Station site and curtilage under SEPP 2021 is Special Uses (SP1) specifically for Commercial premises; Community facilities; light industries; Educational establishments; Entertainment facilities; Hotel or motel accommodation, information and education facilities, recreation facilities (indoor) and recreation facilities (outdoor). It does not include residential use (subject to the provision of heritage objectives). Based on this, the constraints imposed by the National Construction Code on residential use are not explored. The following classes/ uses are explored:

- Class 5 – office Building used for professional or commercial purposes
- Class 6 – building for the sale of goods by retail or the supply of services, i.e. shops or restaurants
- Class 7 – a storage-type building: warehouse (7b)
- Class 8 – a process-type building: laboratory, factory, etc.
- Class 9b – a building of a public nature, an assembly building
- Class 10 – non-habitable structures (10b), i.e. the Chimney Stacks

5.10.2 Structure

The compliance of the existing structure of the White Bay Power Station with modern structural building codes can only be assessed following a more detailed structural analysis than the scope of this report allows. New structures within the complex or on the place must comply with the relevant provisions of Section B of Volume 1 of the NCC, which refers to the Australian Standards for the various construction standards for different materials, risks and uses.

Figure 5.10.1 Bus bars space on Level 1 of the Control Room Building, 2024. This space would impose design and BCA upgrade challenges in reuse application. (courtesy of Chris Bennett: Evolving Picture).

5.10.3 Climate Zone

For the NCC, the White Bay Power Station is located within Climate Zone 5 – Warm Temperate.

5.10.4 Fire Resistance

Section C of Volume 1 of the NCC provides provisions for fire resistance.

5.10.4.1 C2 Fire resistance and stability

Part C2 sets out the deemed-to-satisfy provisions for fire resistance construction based on the number of storeys, type of construction and use.

For instance, the reuse of the administration wing for office use requires Class A construction as it is four storeys. The requirements for Class A construction are set out in Table C2D2. The structural adequacy/integrity /insulation (Fire Resistance level or FRL) depends on the Use Class as detailed in Specification 5.

As per table S5C11g, Class 5 office use will require internal floors to have 120/120/120 FRL. The existing concrete floors may already achieve this standard but will require testing. The timber floor to the upper floor is set over a concrete base and may be deemed an access floor under clause S5C.12 (e).

Class 6 use requires an FRL of 180/180/180 for this element.

Class 8 use requires an FRL of 240/240/240 for this element.

The roof of the office wing requires Class 5 use an FRL of 120/60/30. It is unlikely the present roof achieves this standard. The roof can be retained if alternatives deemed to satisfy solutions are found and can be supported, such as the building being comprehensively sprinklered.

Figure 5.10.2 Administration and Staff Accommodation, Level 4 timber flooring, 2024 (courtesy of Chris Bennett: Evolving Picture).

5.10.4.2 C3 Compartmentation and separation

Part C3 sets out the deemed-to-satisfy provisions for compartmentation, separation, and construction requirements to facilitate fire brigade intervention.

Class 5, 6, 7, 8 and 9b uses cannot exceed certain areas and volumes subject to certain concessions.

Classes 5, 9b:	Type A Construction area: 8,000m^2, volume 48,000m^3.
	Type B Construction area: 5,500m^2, volume 33,000m^3.
Classes 6, 7, 8:	Type A Construction area: 5,000m^2, volume 30,000m^3.
	Type B Construction area: 3,500m^2, volume 21,000m^3.

The Turbine Hall and Boiler House greatly exceed these volumes.

The concession set out in section C3D4 (a) for large, isolated buildings does not apply because of the requirement of an 18-metre clear curtilage around the building. Furthermore, adjacent building blocks are within 6 metres and are considered in the compartment volume calculation. The large and open volume of both the Turbine Hall and the Boiler House spaces are essential to the place, and a Fire Engineering solution to the risks of the place and its proposed uses should be sought.

Clause C3D5.1 sets out the requirements for open space.

Clause C3D7 sets out the requirements for vertical separation of openings in external walls. The spandrel separation of the office block glazing meets the objectives in paragraph (a).

C3D8 sets out the requirements for separation by fire walls, while C3D9 and C3D10 set out the requirements for separation of classifications in the same storey and different storeys, respectively. As stated in clause C3D9.1, if a building has parts separated between compartments of different use classifications, it requires a fire wall, the FRL of which depends on the use class. Should a fire wall divide different uses, the higher FRL requirement applies. Clause C3D10 (a) states that if parts of different classifications are situated in different storeys, the floor between the adjoining parts must have an FRL of not less than that prescribed for the classification of the lower storey.

The glazed windows of the Administration and Staff Accommodation overlooking the Turbine Hall compromise fire resistance between the required stair of the Administration Building and the compartment of the Turbine Hall. Retaining this glazed link to the Turbine Hall is ideal, and a fire engineering solution to the issue of compartmentalisation should be sought.

Clauses C3D.11 and C3D.12 set out the requirements for separating lift shafts and stairways. For class 5 use in the Administration and Staff Accommodation, the lift shaft will require separation from the stairway and the remainder of the building. This would mean that the present open lift within the stairwell cannot be used as a lift if either is required to be in a fire-resisting shaft.

The fire resistance of the lift shaft needs to be upgraded to an FRL of 120/120/120 under tables S5C11e–f unless a fire-engineered solution is approved.

5.10.4.3 C4 Protection of Openings

Part 4 sets out the deemed-to-satisfy provisions to protect openings and reduce the risk of fire spreading within or between buildings.

The Control Room Building is sufficiently distant from the Switch House not to require protection of openings. However, the connecting structure may need to be protected. Separation of the Switch House and the Turbine Hall may also require some form of protection and must be considered. Consideration of protection will be required for any development that proposes to reinstate a new building on the site of the former Boiler House No.2 as that roof may be higher than the Turbine Hall.

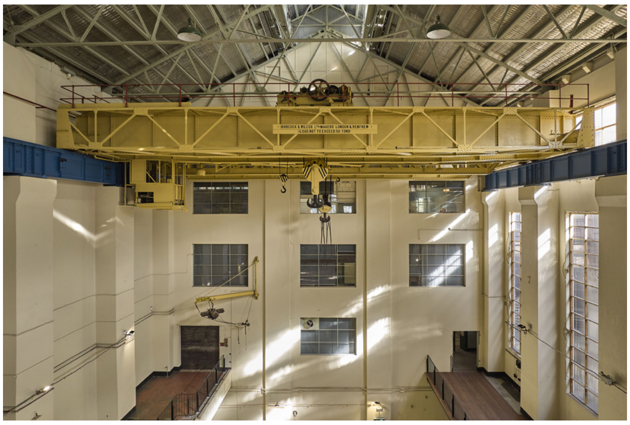

Figure 5.10.3 Windows of the Administration and Staff Accommodation overlooking the Turbine Hall, 2024 (courtesy of Chris Bennett: Evolving Picture).

Figure 5.10.4 The link building between the Switch House and the Control Room Building, 2024 (courtesy of Chris Bennett: Evolving Picture).

5.10.5 Access & Egress

Section D of Volume 1 of the NCC provides provisions for access and egress.

Part D2D3 requires buildings of classes 2–8 to have, in addition to any horizontal exit, not less than two exits if the building has an effective height of more than 25 metres.

Part D2D4 (2) states that every stairway or ramp serving as a required exit must be fire-isolated unless it is part of an open spectator stand, or (in any other case) if the building is sprinklered, or if the required exit is separated from the extra storey with an FRL of –/60/60 (non-loadbearing), FRL of 90/90/90 (Type A)/FRL of 60/60/60 (Type B) if load bearing, and no opening that could permit the passage of fire or smoke.

In accordance with D2D5 (3), for buildings of classes 5–9, no point on a floor must be more than 20 metres from an exit, or a point from which travel in different directions to 2 exits is available, in which case the maximum distance to one of those exits must not exceed 40 metres. In a class 5 or 6 building, the distance to a single exit serving a storey at the level of access to a road or open space may be increased to 30 metres. The distance to exits in certain class 9(b) buildings may be 60 metres, provided the provisions of clause (6) are met.

D2D6 states that distances between alternative exits must be distributed as uniformly as practicable in positions where unobstructed access to at least two exits is readily available from all points on the floor and be not less than 9m or further than 60m. The size of the exit is determined by the provisions of D2D7–D2D11. In most cases, the width of existing openings has been determined by machinery access, which is wider than most average buildings.

Part D3 deals with the Construction of Exits. This part contains deemed-to-satisfy provisions for safety aspects of parts of a building, including stairways, ramps, handrails, balustrades, fall prevention barriers and operation of doors that are part of an exit, as well as fall prevention requirements for openable windows.

5.10.5.1 D4 Access for people with disabilities

Refer to Section 5.10. Part D4 is discussed in relation to the Disability Discrimination Act.

5.10.6 Services & Equipment

Minimum standards for services and equipment are set down in Section E. The nature of these constraints does not substantially affect the use of the place.

5.10.7 Health & Amenity

5.10.7.1 Sanitary and other facilities

The tables in F4D4 set out the minimum requirements for these facilities based on the classification use of the building.

5.10.7.2 F5 Room heights

F5D2 (3) states that the height of rooms and other spaces in a class 5, 6, 7, or 8 building must not be less than 2.4m for all except for in corridors, passageways or the like, which must not be less than 2.1m in height.

5.10.7.3 F6 Light and ventilation

Part F6 sets out the minimum requirements for adequate access to natural and artificial lighting and fresh air to prevent illness, injury, or loss of amenity.

Under the provision of F61, natural light is not required for Class 5, 6, 7 and 8 buildings. Class 9 (a) buildings must provide an average daylight factor of not less than 2%.

The building may be naturally or artificially ventilated to the provisions for part F6.

5.10.8 Ancillary Provisions

5.10.8.1 G3 Atrium construction

Part G3 sets out the criteria for the application of codes for atria. An atrium connects more than two stories (3 if sprinklered or if one of those storeys is situated at a level with direct egress to a road or open space). An atrium well must have a minimum diameter of 6 metres.

G3D3 states that an atrium must be separated from the remainder of the building at each storey by bounding walls set back not more than 3.5m from the perimeter of the atrium well except in the case of the walls at not more than three consecutive storeys, provided that one of those storeys is at a level at which direct egress to a road or open space is provided. The sum of the floor areas of those storeys within the atrium is not more than the maximum area permitted in Table C3D3.

G3D4 sets out the provisions for the construction of bounding walls, including the requirement for bounding walls to have an FRL of not less than 60/60/60 FRL.

G3D7 iterates that all areas within an atrium must have access to at least two exits.

5.10.9 Special Use Buildings

5.10.9.1 I1 Class 9b Buildings

Part I1 sets out the requirements for certain types of class 9b buildings where a large number of people assemble and which contain a stage and backstage area.

I1D2 sets out the requirement for separation and sprinklering.

I1D3 sets out the requirements for the construction of proscenium walls.

In addition to the requirements of section I, refer to the NSW NCC appendix.

If an entertainment venue forms part only of a building, NSW I4D2 requires 60/60/60 FRL between the theatre and the rest of the building.

NSW I4D3 requires a minimum foyer space of 0.25m^2 for each person the auditorium accommodates.

5.10.9.2 Energy Efficiency

Section J is intended to reduce greenhouse gas emissions in buildings. Any reuse of the White Bay Power Station must satisfy the energy efficiency criteria set out in this section. For reuses not excluded from this section, an existing building fabric and glazing audit will be required and measured against Section J's Performance Requirements. Potentially, upgrading building fabric insulation and introducing performance glazing or external shading devices are needed.

Part J1 sets out the thermal performance properties of building fabric, the energy efficiency of crucial energy-using equipment and the features a building must have to facilitate the future installation of distributed energy resources.

Part J4 sets out the deemed-to-satisfy provisions for the building envelope, including roofs, ceilings, roof lights, walls, glazing and floors.

Part J5 sets out the deemed-to-satisfy provisions for sealing a building to increase occupants' thermal comfort and to reduce the energy consumption of any installed air-conditioning systems.

Part J6 sets out the deemed-to-satisfy provisions for the efficiency and control of air-conditioning, space heating and ventilation equipment, the efficiency, sealing and insulation requirements for ductwork systems containing fans, and the efficiency and insulation of pipework and pump systems.

Part J7 sets out the deemed-to-satisfy provisions for designing and configuring artificial lighting and power, boiling and chilled water units, lifts and escalators and moving walkways.

Part J8 sets out the deemed-to-satisfy provisions for water heaters, swimming pool and spa heaters and pump systems.

Part J9 sets out the deemed-to-satisfy provisions for monitoring energy use and retrofitting renewable energy and EV charging equipment. J9D3 requires that buildings with floor area greater than 2,500m^2 (as will be the case at the White Bay Power Station) must have energy meters configured to enable individual time-of-use energy data recording of –

(a) air-conditioning plant including, where appropriate, heating plant, cooling plant and air handling fans; and

(b) artificial lighting; and

(c) appliance power; and

(d) central hot water supply; and

(e) internal transport devices including lifts, escalators and moving walkways where there is more than one serving the building; and

(f) on-site renewable energy equipment; and

(g) on-site electric vehicle charging equipment; and

(h) on-site battery systems; and

(i) other ancillary plant.

These energy meters must be interlinked by a communication system that collates the time-of-use energy data to a single interface monitoring system where it can be stored, analysed and reviewed.

5.11 ACCESS & ACCESSIBILITY

5.11.1 Generally

The Disability Discrimination Act 1992 (DDA) deems it unlawful to discriminate against differently-abled persons in providing access to building premises. The *Disability (Access to Premises – Buildings) Standards 2010* (referred to as *Premises Standards*) set performance requirements and give references to technical specifications (including the NCC and relevant Australian Standards) to ensure dignified and equitable access to and use of buildings for differently abled people.

Heritage-listed places are distinguished by features, materials, spaces and spatial relationships that contribute to their significance. These significant elements, such as steep or uneven terrain, monumental steps, narrow or heavy doors, decorative ornamental hardware, and narrow pathways and corridors, often pose barriers for people with disabilities, especially wheelchair users.

Further and more general advice may be found in *Access to Heritage Places Guidelines NSW* (January 2018) by Eric Martin, which addresses many issues relating to access to places of Cultural Significance for people with disabilities.

The current NCC addresses the physical infrastructure and provisions needed to ensure accessibility. Part D4 (Access for people with a disability) of Volume 1 of the NCC 2022 sets out the provisions for which buildings, and parts of a building, must be accessible, provision of accessible carparking spaces, braille and tactile signage, hearing augmentation, tactile ground surface indicators and seating in assembly buildings, and access to swimming pools.

Notably, clause (6) of D4D2 in Volume 1 of the NCC requires that for buildings of class 5, 6, 7b, 8, and 9a, access must be provided to and within all areas normally used by the occupants. For a class 9b building, assembly buildings, wheelchair seating spaces must be provided per D4D10, and access to all other areas normally used by the occupants. Access to tiers or platforms of seating areas that do not contain wheelchair seating spaces does not need to be provided.

The Access Code in the NCC is accepted as a Premises Standard (included in its appendices). However, some misalignments remain between the NCC and the Premises Standards, partially resulting from varied review cycles.[157] The Premises Standards apply to new buildings and new work on existing public buildings, which could apply to an existing building; White Bay Power Station, therefore, is held to the Premises Standards.

The Premises Standards generally apply to all parts of the building used by occupants. However, there are several exemptions and concessions as provided in Part 4:

- *A list of factors for general exemption due to unjustifiable hardship is provided in section 4.1. Clause (l) refers to loss of heritage significance as a dependent factor for determining unjustifiable hardship.*
- *Acts done under statutory authority – for instance, actions taken in compliance with a court order or industrial instrument will not be subject to the Premises Standards.*
- *Exemptions apply to the building certifier, developer, and manager if the lessee (more than one person) of a new part of a building applies for approval for the building work.*
- *Requirements for lift and toilet concessions are provided in sections 4.4 and 4.5, but do not apply in the case of White Bay Power Station.*

Part 5 states that The Australian Human Rights Commission can grant temporary exemptions concerning the special requirements applied to existing public transport buildings.

Appropriate certification expertise must be sought when undertaking changes.

Figure 5.11.1 Stairs and ramp built in the Turbine Hall as part of the 2022–24 works, 2024 (courtesy of Chris Bennett: Evolving Picture).

5.11.2 Wheelchair Accessibility

Many areas of the White Bay Power Station remain inaccessible or cumbersome to reach by those in wheelchairs or those with mobility impairments.

Accessibility on site has begun to be addressed through the 2024 activation of the Boiler House, Pump House and Turbine Hall spaces, with floor remediation, ramps, and the installation of a lift in the Pump House.

Equitable access should be developed in accordance with the policies of this CMP, and the approach to design solutions may vary. It will be location-specific, dependent on the nature of the spaces and the configuration of significant fabric.

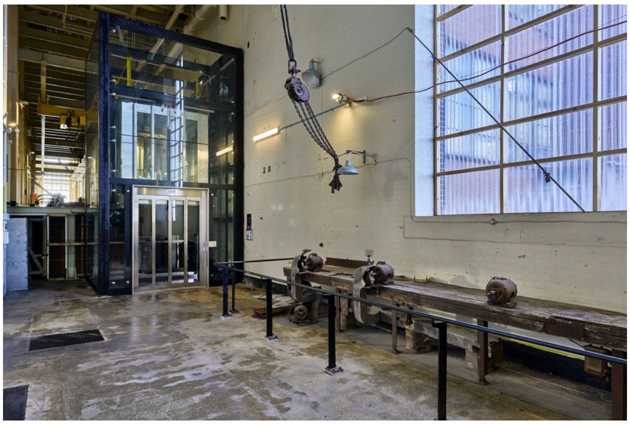

Figure 5.11.2 New glass elevator installed in the Pump House, 2024 (courtesy of Chris Bennett: Evolving Picture).

5.11.3 Hearing & Vision Support

In any buildings or spaces in the White Bay Power Station that are to be activated for use by the public, it is necessary to have appropriate amenities and support to assist those with hearing and vision impairments. D4D8 of Volume 1 of the NCC 2022 sets out the provisions for hearing augmentation.

Visual aids to assist those with vision impairment should include visual contrast at changes of level and appropriate visibility, legibility, and tactility of signage for safe navigation through and within spaces. Other facets of adaptation initiatives, such as signage and lighting, should incorporate hearing and vision support under the provisions of part D4 of Volume 1 of the NCC 2022. Appropriate certification expertise must be sought when undertaking changes.

Figure 5.11.3 Evacuation chair installed in the Pump House near the top of the south stairs, 2024 (Design 5 – Architects).

5.12 DEVELOPMENT GUIDELINES

The following development guidelines provide general guidance for new designs that affect and are adjacent to sensitive heritage sites. They may be used to guide and support the practice of good design for any future developments on or near the White Bay Power Station site. All the following development guidelines may be accessed through the NSW Government Environment and Heritage website. The list below is not definitive and may be updated.

5.12.1 NSW Government Architect Better Placed: Heritage

This guideline is published by the NSW Government Architect and the Heritage Council of NSW. It is a design guide based on the Burra Charter principles that "provides advice to guide a wide range of design work in heritage places in NSW"[158] through a series of principles and key design considerations.

5.12.2 NSW Heritage Council – New Uses for Heritage Places

This guideline is published by the NSW Heritage Council and the Royal Australian Institute of Architects (now the Australian Institute of Architects). It provides a series of guiding principles for sympathetic design, interpretation, and adaptation of heritage sites.

5.12.3 NSW Heritage Council – Design in Context

This guideline is published by the NSW Heritage Council of NSW and the Royal Australian Institute of Architects (now the Australian Institute of Architects). It establishes six criteria for assessing new development within a heritage conservation area or adjacent to a heritage item to ensure that the design respects the significance and context of the heritage item. These six criteria include character, scale, form, siting, materials and detailing.

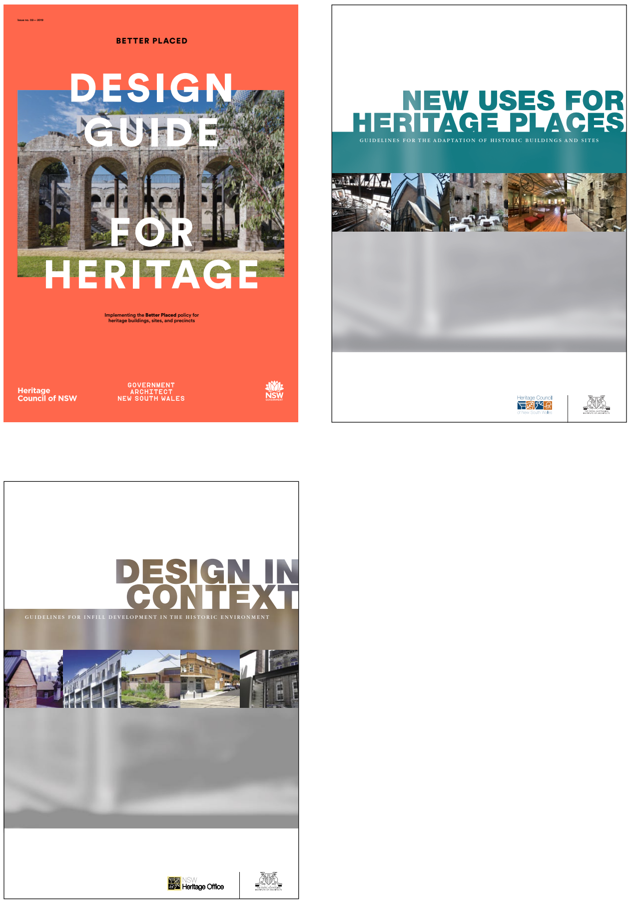

Figure 5.12.1 Development guidelines that may be used to guide and support future developments on or near the White Bay Power Station site.

5.13 CONSENT AUTHORITY

There are a range of consent authorities for applications for activities and works. These are described in the preceding sections and are summarised as follows:

Consent Authority	Works or Activities for which Consent Authority is Responsible
Minister, Environmental Planning and Assessment Act 1979	Work that falls under an existing SEPP. Work that is deemed "state significant" with an estimated development cost above $10M. May direct preparation of a master plan (a deemed Development Control Plan) for a strategic foreshore site.
Placemaking NSW	Landowners consent (to lodge an application). Determining Part 5 applications for works less than $10M. Determining applications under the Heritage Act for works that will not materially affect the significance of the SHR item. Additions/removals/revisions to the item's listing on the PMNSW heritage and conservation schedule (s170 register). Notifying the heritage council of the transfer or ceasing to occupy the item. Implementing Community Participation Plan (CPP) requirements for assets in the PMNSW portfolio. Endorsing applications for standard, site-specific and agency exemptions from approval under the Heritage Act. Determining applications for monitoring and test excavation of minor archaeological remains and minor archaeological works.
Heritage Council of NSW	Determining applications for works that are likely to have a material effect on the heritage significance of the item. Listings/de-listing/revisions to its state heritage register listing. Determining applications to disturb, move, damage or destroy relics. Regulation and enforcement of the Heritage Act, including the minimum standards of maintenance and repair for heritage items.
Heritage NSW	Any Aboriginal Heritage Impact Permits that may be required in relation to the registered Aboriginal area of Potential Archaeological Deposit AHIMS #45-6-3826 (The Bays PAD 01).[159]
Accredited Private Certifiers	Issue of Crown Building Certificates and Occupation Certificates.

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SECTION 6
CONSERVATION POLICY – ISSUES, OPPORTUNITIES & POLICIES ARISING

Figure 6.1.1 (left) Chimney Stacks, 2024 (courtesy of Toby Peet).

OVERARCHING POLICIES

6.1 PURPOSE & FRAMEWORK

Sections 1–4 of this CMP have identified the significant values of the White Bay Power Station. To retain the cultural significance of the White Bay Power Station, policies must be developed to assist and guide decisions and work to the place and for any potential future uses. In this section, key issues and opportunities arising from the White Bay Power Station's cultural significance, the Burra Charter, statutory controls and requirements, the client's brief and the physical condition of the place are identified and considered, and appropriate policies drafted.

The policy sections are set out in the following order:

Overarching Policies

- Purpose & Framework
- Client Requirements & Use (PMNSW)
- Cultural Significance
- Conservation Principles – Australian ICOMOS Charter for Places of Cultural Significance (The Burra Charter) 2013

The Place & its Fabric

- Context & Setting
- Buildings & Structures
- Landscape & Place Generally
- Moveable Heritage
- Archaeology

Future Use & Development

- Activation
- New Structures
- Signage
- Services

Operations & Management

- Code & Statutory Compliance
- Access & Accessibility
- Condition & Care of Fabric
- Documents & Records
- Climate Change
- Interpretation
- Management
- Adoption, Implementation & Review
- Further Research

In the following discussion, issues and opportunities relating to the cultural significance of the building, structures, and machinery are grouped as they are inter-related. The discussion begins with the general and progresses to the specific parts and components of the place.

The policies that arise from the following discussion are included here in italics and are numbered. As their real intent may not be fully understood without reference to the accompanying discussion, they must not be separated from it or considered in isolation. In this policy section, the discussion begins with the general and progresses to the specific parts of the place. Discussion and policies relating to particular elements or issues may be found in more than one place in the CMP and therefore, no part of it should be considered in isolation from the whole. The "Tolerance for Change" and "Opportunities for Change" include specific guidance about managing change concerning details or components of each element. Refer to Section 6.3.3 – Tolerance & Opportunities for Change.

Policy 1.1 — Policy context and interdependence

Policies should only be considered with reference to the supporting discussion. They should not be considered in isolation from other related policies and are to be applied in an integrated manner. This CMP should not be used in an abridged format that misconstrues or distorts any meanings and contexts.

6.2 CLIENT'S REQUIREMENTS & USE (PMNSW)

This Conservation Management Plan has been commissioned by the owner of the site, Placemaking NSW. The purpose of the CMP is to guide future users and uses of the place with regard to conservation, adaptation, change and development to ensure that the significant values of the place are retained and respected. When conservation or new or adaptive work is being considered, reference must be made to this report, and its policies must be complied with.

Policy 2.1 — Decisions informed by the CMP

To retain and respect the culturally significant values of the White Bay Power Station, all decisions and considerations for change or development at the place are to be informed and guided by the findings and policies established in this CMP.

The White Bay Power Station has undergone extensive remediation and activation works from 2022–24, transforming it from a stagnant twentieth century industrial relic into a series of buildings and structures with great potential for interpretability and adaptive reuse. Potential future development is discussed in Sections 6.10–6.12 (Future Use & Development).

Policy 2.2 — Use, long-term planning and viability

The White Bay Power Station has considerable potential for interpretation and adaptive reuse. The structures, elements and values that form the cultural significance of the building and place must be maintained into the future.

To ensure the long-term viability of the White Bay Power Station, opportunities for activation and future use should continue to be explored, and some areas of the place may need to be altered or developed to support this goal. Such changes should only be considered within a framework that accords with this CMP.

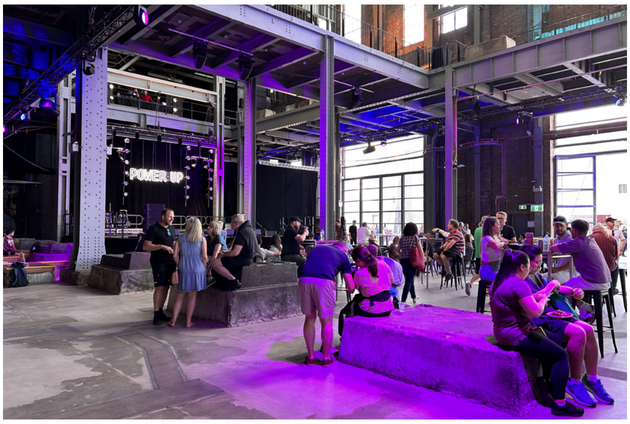


Figure 6.2.1 Boiler House during the Power Up Festival, 2024 (Design 5 – Architects).

6.3 CULTURAL SIGNIFICANCE

6.3.1 Generally

The White Bay Power Station is of exceptional significance to New South Wales and the Sydney region as a remarkably intact surviving urban power station from the twentieth century. This intactness is dependent upon the retention of the full suite of structures, spaces and machinery, which comprise the complete "slice" of the power generation process from coal handling to power reticulation. It contains structures, machinery, and spaces of exceptional significance, both internally and externally and has strong contextual associations with other former and current industrial and infrastructure sites in the area.

The White Bay Power Station is also a significant landmark in the area and to local communities, marking the border between the industrial waterfront areas to its east and the suburbs to its west and north. As part of the traditional Country of the Wanngal people and their saltwater (*gadhungal*) kin, the broader power station area also has ongoing significance to the descendants of these coastal Sydney clans.[160]

To retain and respect this cultural significance, the elements, qualities, and values that embody and support it must be retained and conserved. To achieve this, the findings and policies of this CMP should guide its ongoing care and management and any future development or change.

Policy 3.1 — Retain significant values

White Bay Power Station retains exceptional cultural significance for its historic, aesthetic, social, and technical values. The following key aspects of these values are integral to the significance of the White Bay Power Station. Some are intangible but are represented by the physical building fabric and machinery and may be strengthened by interpretation. These values and their representative elements should be managed, conserved, and not obscured in accordance with this CMP:

- *The historical significance of the place as the longest-serving power station in NSW that remains intact today (from 1917–1984 and until 1994 as a substation).*
- *Its impact as an immense contributor to the economic and social development of Sydney by powering the tram and rail network and later becoming a key power source for households in the broader surrounding region.*
- *The building as a singular representative of Balmain / Rozelle's industrial identity before rapid gentrification at the end of the twentieth century.*
- *The twentieth-century industrial architecture of the power station and the interdependence between its built form and function.*
- *The representative set of machinery retained in situ. These elements collectively embody the eight operational systems associated with early to mid-twentieth-century coal-fired power generation. The power station also represents the changes and developments in power generation technology during this period.*
- *The unique and rare components of the White Bay Power Station include extant machinery and elements of the building fabric, particularly the riveted steel chimney stacks (nationally, one of a kind) and the curtain walls of the Boiler House.*
- *The social significance of the White Bay Power Station for locals and former workers as a workplace and valued industrial landmark.*
- *The visual prominence of the White Bay Power Station as a massive industrial landmark forming the focal point of several key axial views. The sheer bulk of the building complex and the two iconic Chimney Stacks constitute a significant focus from Anzac Bridge, Glebe Point Road and Foreshore, Johnston Street (Annandale) and Foreshore, the City West Link, Victoria Road, Robert Street, and Mullens Street, as well as more generally from further locations across the Bays West and broader surrounding area.*

Policy 3.2 — Policies to remain applicable

The policies set out in this document should be applied irrespective of the use to which the place, or its parts, are put.

6.3.2 Gradings of Significance as a Guide for Management & Change

The White Bay Power Station and its curtilage contain elements and spaces of varying significance, ranging from Exceptional to Intrusive, all relative to the assessed exceptional significance of the place. These are listed in Section 4.2.1 Gradings of Significance and shown on plans in Section 4.2.2 Level of Significance Diagrams of this CMP. Note that the machinery elements in each space are assessed separately, and their grading of significance can be found in Volume 2 of this report. The significance of each machinery element must be respected and considered, regardless of the grading of its enclosing space.

The spaces/elements/features are graded according to their role in supporting cultural significance, degree of intactness, and ability to demonstrate significant values. Those spaces/elements/features graded 1 are of the highest significance (exceptional), and those graded 5 are of the lowest significance (intrusive).

A general policy relating to these significance levels is given below in Policy 3.3.

Policy 3.3 — Significance gradings

The following general policy statements have been formulated to guide changes and works at the White Bay Power Station. They are supplemented by more detailed policies for each space and the Tolerance for Change and Opportunities for Change tables in this CMP. As a general rule, elements shared with other spaces of higher significance should be treated in accordance with the higher ranking as it affects that higher ranked space.

Spaces/elements graded 1 – Exceptional
These spaces, structures or elements are of exceptional cultural significance. They play a crucial role in supporting the significance of the place and should be retained in their existing configuration.

- *They are essential to understanding the place's significance and demonstrating the power generation process.*
- *Surviving original machinery, fabric, and finishes should be conserved in situ, and the integrity of the spaces or elements should be retained and respected.*
- *The appreciation of the spatial quality and detail of these spaces should not be obscured or diminished.*
- *The design intent and integrity of the original work should be respected and not obscured.*
- *Any proposed use must focus on in situ preservation and interpretation as the primary objective.*

Spaces/elements graded 2 – High
These spaces, structures or elements are of high cultural significance and retain a high degree of significant fabric. They play an important role in strengthening and supporting the significance of the place, but less than that for Grade 1.

- *Where these spaces or elements form part of a space of higher significance or contain machinery or equipment elements of higher significance, any action must respect that higher significance.*
- *Retention of surviving significant fabric in situ is preferred to relocation or removal.*
- *Evidence of removed significant machinery should be retained in situ. Adapting these spaces or elements would be preferred to their loss or removal.*
- *Adaptation and alteration of these spaces and elements are possible. New elements may be introduced that alter them as long as the integrity of the spaces and fabric and their original design intent are respected and, if possible, strengthened.*

Spaces/elements graded 3 – Moderate
These spaces, structures or elements retain some integrity but are of lesser cultural significance. They play a moderate role in supporting the significance of the place.

- *The qualities and integrity of the spaces or elements should be maintained if possible. Where these spaces or elements form part of a space of higher significance, any action must respect that higher significance.*
- *Relocation or removal of evidence of removed machinery may be considered to allow adaptive reuse of the space. However, retention and adaptation would always be the preferred option.*
- *These spaces and elements can be adapted and changed for other uses and new openings made, but fabric or machinery of higher significance should be retained in situ in accordance with their ranking. Adapting these spaces or elements would be preferred to their loss or removal.*

Spaces/elements graded 4 – Little/neutral
These spaces, structures or elements retain only minor or neutral significance and may be retained or adapted substantially.

- *Elements or fabric of higher significance should be retained if possible.*
- *Adaptation is preferred to complete removal.*

Spaces/elements graded 5 – Intrusive
These spaces, structures or elements retain virtually no significance and, in some cases, may be considered intrusive.

- *They may be removed or altered substantially to reduce their negative impacts in accordance with considerations in the Tolerance for Change and Opportunities for Change tables in this policy section.*

6.3.3 Tolerance & Opportunities for Change

Each element or space of the White Bay Power Station comprises a number of component parts, which are articulated in the *Tolerance for Change* (TfC) tables.

'Tolerance for Change' is an assessment tool developed to assist in managing significant places. Compared to general policies, it provides a more detailed method of understanding how significant values are embodied and, thus, how change can be managed.

It is important to note that in relation to Tolerance for Change, the terms 'element' and 'component' are assigned specific meanings in this report.

Element means a major part or space of the whole building or place, such as the External Conveyor, the Entertainment Hall, or the Control Room Building.

Component means a part of an element, such as the corrugated steel cladding of the coal handling elements, the extant No. 1 Boiler, or individual spaces within an element group.

The Tolerance for Change tables list the component parts of each element and considers their role in supporting the element's significance. It then identifies the tolerance for change for each particular component in terms of its four main attributes:

- **Form** – includes design, configuration and details.
- **Fabric** – includes physical material and contents.
- **Function** – includes current uses, activities and practices (temporary or permanent).
- **Location** – includes physical and functional relationships, contexts and views.

Each attribute is considered for its role in supporting the significance of the larger element and the place. Following this, the tolerance of each attribute is determined by the degree of change acceptable to that attribute without adverse impact on the significance of the element or the place as a whole. Tolerance is ranked from 1 to 3, with grade 1 being the lowest tolerance and consequently having the least ability to change, and grade 3 being the highest tolerance and thus having the most ability to change. Generally, those attributes ranked 1 contribute most to the significant values of the element. The higher the significance or lower the tolerance for change, the greater the level of care and consideration required to determine any decision or action that may affect it.

Example and diagram: The corrugated galvanised steel cladding is part of the exceptionally significant Coal Handling Shed. However, while its original function and location are essential to the building (both ranked 1 in the Tolerance for Change table), its original form and fabric have changed. All cladding had been replaced during the 2022–24 remediation works. Therefore, its form and fabric could be altered to better support and reflect the significance of the whole building, but with any changes, the original location and function must be retained.

Having understood the relative significance of each element or space and the degree of change that would be acceptable to their component parts to avoid adverse impacts, a number of potentially positive changes can be identified.

Following each Tolerance for Change table is a second table with a list of Opportunities for Change (OfC). These have been identified from known issues, particularly in relation to ensuring the long-term sustainable use of the place while maintaining and respecting its cultural significance. Each opportunity should be considered as a potential means to strengthen and support these significant values.

The Tolerance for Change tables add guidance and detail for the implementation of the policies, but where there is a conflict, the individual policies take precedence over the Tolerance for Change tables. The Policy is the 'yes' or 'no'; the Tolerance for Change table gives the 'here's how' or 'how to manage or reduce impact'; and the Opportunities for Change table identifies where further change could be explored to strengthen significant values.

Items assessed as 'Intrusive' are included in the Tolerance for Change tables, with guidance on how each could be addressed. These intrusive items are also the most obvious opportunities for change.

Policy 3.4 — Significance, tolerance and opportunities for change

All elements of the White Bay Power Station are to be maintained, used and managed in accordance with their relative level of significance, as defined in Policy 3.3 and the identified tolerance and opportunities for change for their component parts. Tolerance and opportunities for change for building spaces have been provided in Volume 1, and for machinery and equipment in Volume 2.

1. Element

Coal Handling Shed

Significance ranking

Coal Handling Shed: Exceptional
Verandah Space: High

2. Components (including but not limited to)

Basement (general)

Transfer House

Roof

External Cladding

Machinery

3. Tolerance for Change

Selected Component: External Cladding

Tolerance Levels	FORM Design, Configuration, Detail	FABRIC Physical Material and Contents	FUNCTION Current Use / Role In Large Space / Element	LOCATION Physical And Functional Relationship Within Space
1. Low	1	1	1	1
2. Medium	2	2	2	2
3. High	3	3	3	3

Further Considerations

Any changes should improve amenity and quality of main space.

Figure 6.3.1 Tolerance for Change diagram (Design 5 – Architects).

6.4 CONSERVATION PRINCIPLES – AUSTRALIAN ICOMOS CHARTER FOR PLACES OF CULTURAL SIGNIFICANCE (THE BURRA CHARTER) 2013

The principal guiding document for the management and conservation of significant places in Australia is *The Australia ICOMOS Charter for Places of Cultural Significance 2013*, referred to as The Burra Charter. It is generally accepted, and in many cases mandatory, that all work on such places should be carried out in accordance with the principles and processes of The Burra Charter.

Policy 4.1 — The Burra Charter 2013

Any work to the White Bay Power Station should be carried out in accordance with the principles and processes set out in The Australia ICOMOS Charter for Places of Cultural Significance 2013 (The Burra Charter).

The Burra Charter emphasises a cautious approach to change, the need for appropriate skills and expertise and the safekeeping of records and reports. One of the fundamental principles of The Burra Charter is that when considering repair or change, one should aim to *"do as much as necessary but as little as possible."* This ensures the maximum retention of original fabric, one of the most important tangible supports for the significant values of the place.

Policy 4.2 — Cautious approach to change

A fundamental principle in any approach to change at the White Bay Power Station should be to change 'as much as necessary but as little as possible' (in the words of Article 3.1 of The Burra Charter). The conservation and adaptive reuse of the White Bay Power Station must be based on respect for the existing fabric, its past use, associations and meanings. This will ensure the maximum retention of significant fabric, spaces and values of the place.

All changes should be positive and supportive of the significance of the element or space and the place as a whole.

Figure 6.4.1 White Bay Power Station, 2024 (courtesy of Chris Bennett: Evolving Picture).

Figure 6.4.2 The Turbine Hall Ground Level under Level 1 void, 2024 (courtesy of Chris Bennett: Evolving Picture).

Figure 6.4.3 Transformer Alley, 2023 (courtesy of Chris Bennett: Evolving Picture).

THE PLACE & ITS FABRIC

6.5 CONTEXT & SETTING

6.5.1 Generally

The White Bay Power Station is significant for its visibility and prominence as a harbourside industrial landmark. Having defined the area as the focus of key views along major roads and public spaces, White Bay Power Station should not be substantially diminished or obscured by inappropriately placed or scaled development in its vicinity. Any development being proposed in the vicinity of the White Bay Power Station must carefully consider its bulk, scale, and placement in order to respect its landmark values. Refer to section 5.7 for further details on future development of the surrounding area in relation to the Bays West Masterplan.

Policy 5.1 — Presence in context and setting

Any development being proposed in the vicinity of the White Bay Power Station must carefully consider its bulk, scale and placement in order to respect the visibility and prominence of the power station as a harbourside industrial landmark.

The White Bay Power Station also currently has key visual and physical connections to nearby sites, including White Bay, the Silos, and the former Rozelle Rail Yards. These sites are associated with the operations of the White Bay Power Station during its active years and are of historical and technological significance. These visual and physical connections are expected to continue to change and develop with the implementation of the Bays West masterplan, and the existing connections should remain unobstructed and strengthened where possible. The following sections detail these visual and physical connections to the surrounding context and setting.

Policy 5.2 — Connection to context and setting

The connections of White Bay Power Station to the surrounding context and setting should be maintained. In particular, key visual and physical connections to industrial elements of historical and technological significance should remain legible and strengthened where possible.

6.5.2 Views of the Power Station

The White Bay Power Station is a significant landmark in the area and to local communities, marking the border between the industrial waterfront areas to its east and the suburbs to its west and north. Section 3.2.2 identifies and assesses views to, from, and within White Bay Power Station and indicates that its industrial landmark quality is a key aspect of its significance.

Major axial viewsheds and corridors to the White Bay Power Station have been identified in Section 3.2.2 and Figure 6.5.1 and include:

- View 1: Barangaroo, Observatory Hill and Harbour Bridge
- View 2: Anzac Bridge
- View 3: Glebe Point Road and Foreshore
- View 4: Johnston Street, Annandale and Foreshore
- View 5: Victoria Road
- View 6: Mullens Street
- View 7: Robert Street and White Bay

To maintain views, any new structures in the vicinity of the White Bay Power Station must not substantially mask the visibility of the power station or threaten its landmark qualities as the major focal element. Views can be framed with taller buildings in the vicinity, but major axis views should be respected.

Policy 5.3 — Maintain major axial views

Those views from major axial approaches such as Anzac Bridge, Johnston Street Annandale, Victoria Road (from the northwest), Mullens Street and Robert Street must be maintained. Any new structures in the vicinity of the White Bay Power Station must not substantially mask the visibility of the power station or threaten its landmark qualities as the major focal element in these views.

Policy 5.4 — Visual identity

There are structures within the place that are key to the visual identity of the power station. Views to the power station should consider retention of the following key identifiable attributes.

- *Chimney Stacks silhouetted by the sky*
- *Long-pitched roofs of the Boiler House, Turbine Hall, and Switch House*
- *Coal Handling Shed, External Conveyor and Transfer House*
- *Masonry walls of buildings*

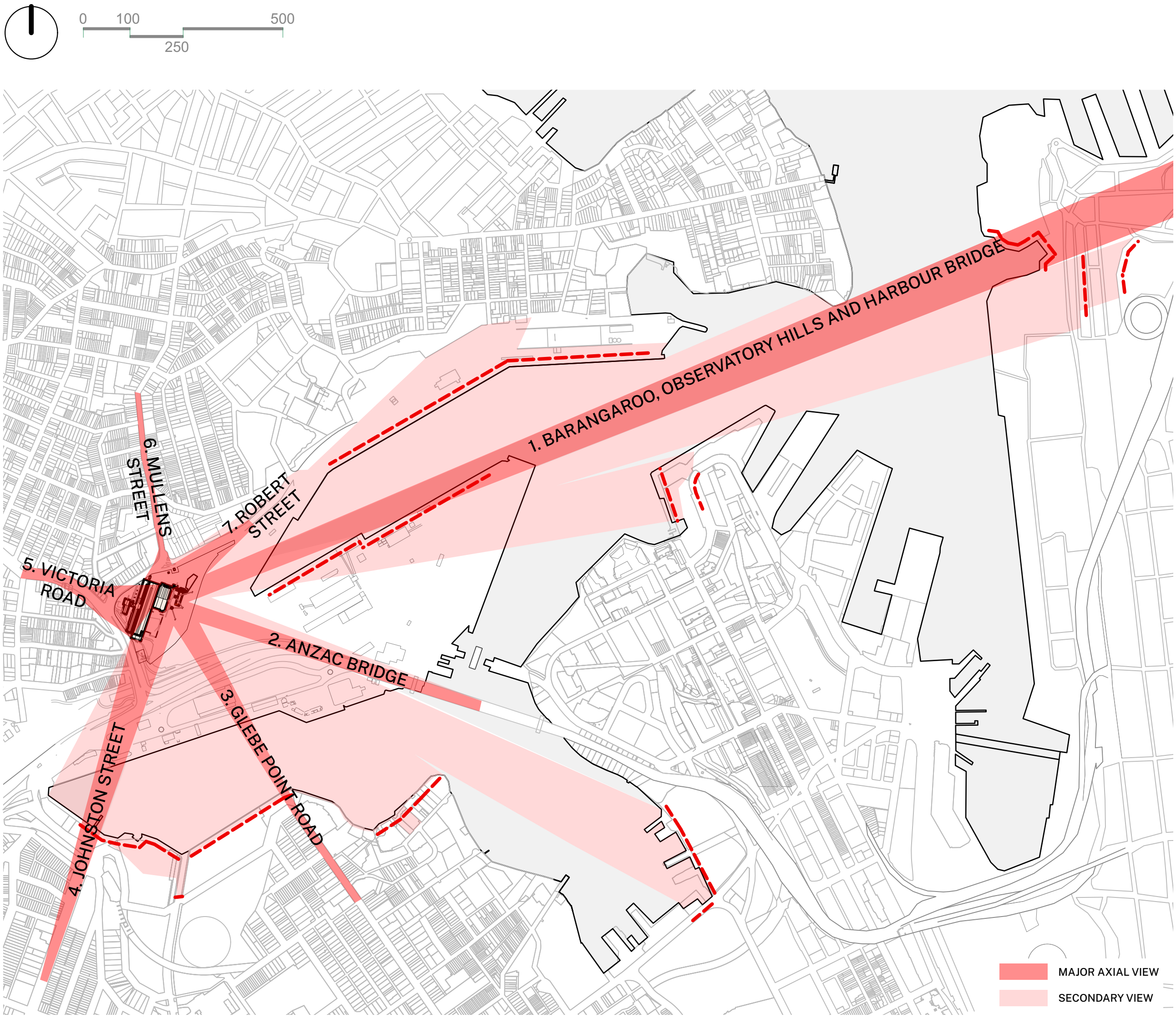


Figure 6.5.1 Views to the White Bay Power Station.

Secondary Views are defined in Section 3.2.2 and are shown in Figure 6.5.1 as light coloured. Secondary Views are experienced from many vantage points, and play a role in reaffirming the identity of White Bay Power Station as a harbourside industrial landmark. At many of these locations, the power station's visibility might be framed, obscured, or blocked, but it reappears in the visual field as one moves. Consistently, the chimney stacks and large masonry buildings maintain a visual connection. As such, the views may be transitory and are of lower significance than the main axial views due to their limited prominence and the availability of clear sightlines.

It is not feasible to preserve every incidental or transient view within the areas designated as Secondary Views. While new structures may partially block or obscure the power station, they should also consider the overall cumulative impact they might have. Developments within Secondary View areas should aim to retain partial or framed views. Developments that would significantly block large areas of visibility should be avoided.

Policy 5.5 — Managing secondary views

Secondary views towards White Bay Power Station play a role in reaffirming the identity of and the industrial landmark status of the White Bay Power Station. New development and / or new elements may occur within Secondary View zones, but they should aim to retain partial or framed views, and consider their overall cumulative impact.

The White Bay Power Station is a visual anchor in the Bays area and is prominent from distant views around the harbour. Each viewpoint has a different quality and character and must be maintained as follows.

Figure 6.5.2 View of the power station across Blackwattle Bay, 2015.

Figure 6.5.3 View of the power station from Pirrama Park, 2024.

6.5.2.1 View 1: Barangaroo, Observatory Hill and Harbour Bridge

The Bays West Stage 1 Master Plan envisages the north and east curtilage at the Bays West to be low height and parkland, which will not threaten distant views or views from the water. Development at the northern tip of Glebe Island has the potential to block distant views from Observatory Hill. The main threat from Observatory Hill may be to the north tip of Glebe Island, where any new structures could block or detract from the power station.

Policy 5.6 — Barangaroo, Observatory Hill, and Harbour Bridge

The view remains an important visual connection with the former working harbour industry. This is a city-wide view, with the twin chimneys as visible landmarks, silhouetted by the skyline and ridge beyond. As one approaches from the water, the character is a local view, and the main buildings become prominent and expansive. Restrictions on this view are:

- *Views of the two chimneys on the skyline uncrowded by new buildings from key public viewpoints.*
- *Reading of iconic building elements should be maintained.*

Figure 6.5.4 View of the power station from Barangaroo, 2024.

Figure 6.5.5 View of the power station from Observatory Hill, 2024.

6.5.2.2 View 2: ANZAC Bridge

Construction of the Sydney Metro West development will partially block the northern half of the Boiler House. Development directly in line with the Anzac Bridge and the Power Station should be restricted to maintain views of the Boiler House and Chimneys.

Policy 5.7 — ANZAC Bridge

The view from Anzac Bridge is a gateway view on the exit from the City to the west. The character of this view shifts in scale as one approaches it over the bridge. The chimneys are landmark anchors, with the east façade of the Boiler House visible above the Coal Handling Shed. Restrictions on this view are:

- *Views to the glass curtain wall of the 1958 Boiler House should not be substantially obscured.*
- *Low-level structures between the Anzac Bridge and the White Bay Power Station could be constructed as long as they do not substantially obscure the east front of the power station. Refer to Figures 6.5.5 and 6.5.6.*
- *The reading of two chimneys on the skyline must be maintained and uncrowded by new buildings.*
- *Reading of highlighted elements, such as the chimneys, must be maintained.*

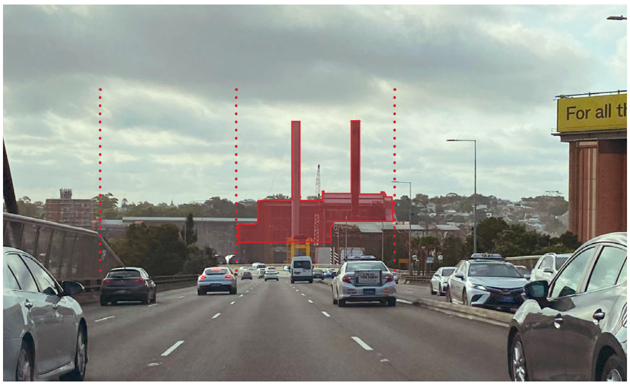


Figure 6.5.6 View of the power station approaching from the end of the pylons of ANZAC Bridge, 2023.

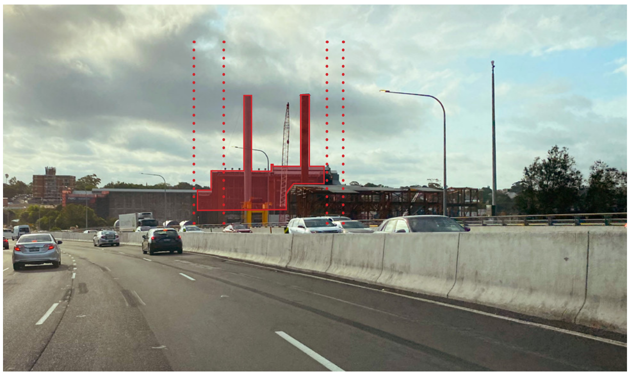


Figure 6.5.7 View of the power station close approach from ANZAC Bridge, 2023.

6.5.2.3 View 3: Glebe Point Road and Foreshore

Policy 5.8 — Glebe Point Road and Foreshore

Views from Glebe Point Road and Blackwattle Bay Park and Reserve have high to moderate significance. The main restrictions on this view are:

- *Reading of the two chimneys should remain visible from Glebe Point.*
- *From the foreshore, the view to the chimneys and power station may be threatened by nearby development, but glimpses of the chimneys can be retained within the context of a changing view as one moves along the foreshore.*
- *Reading of highlighted elements, such as the chimneys, must be maintained.*

Figure 6.5.8 View of the power station from Glebe Point Road, 2024.

Figure 6.5.9 View of the power station Chimney Stacks from the bottom of Glebe Point Road, 2024. The remainder of the power station is obscured by the Rozelle Boat Sheds and Metro development.

6.5.2.4 View 4: Johnston Street, Annandale and Foreshore

The character of this view is the landmark status of the chimneys on the axis with Johnston Street and silhouetted by the sky.

Policy 5.9 — Johnston Street, Annandale and Foreshore

The Johnston Street, Annnandale and Foreshore view is a significant view in approaching the power station from the Inner West. The main restrictions on this view are:

- *Reading of the two chimneys on the skyline must be retained, uncrowded by new structures.*
- *The south elevation of the Boiler House may be covered subject to compliance with the No. 2 Boiler House Policy 11.2.*
- *Reading of highlighted elements, such as the chimneys, must be maintained.*

Figure 6.5.10 Closer view of the power station from Johnston Street, 2024.

Figure 6.5.11 View of the power station from the north end of Johnston Street approaching The Crescent, 2024.

Figure 6.5.12 View of the power station from Federal Park, 2024.

6.5.2.5 View 5: Victoria Road

Policy 5.10 — Victoria Road

The Victoria Road approach is a significant gateway view of the approach to the City. The main restrictions on this view are:

- *Retain the western plaza as a terraced landscape with no structures that would otherwise block or detract from the White Bay Power Station.*
- *Legibility of layering and stepping of roof lines and parapets must be maintained.*
- *The two chimneys remain silhouetted against the sky and are not crowded by the proposed buildings.*
- *Reading of highlighted elements, such as the chimneys, must be maintained.*

Figure 6.5.13 View of the power station from near the Victoria Road intersection with Gordon Street, 2024.

Figure 6.5.14 View of the power station from the intersection of Victoria Road with Robert Street, 2024.

6.5.2.6 View 6: Mullens Street

Policy 5.11 — Mullens Street

The Mullens Street view is highly significant in viewing the iconic northern elevation of the power station and is important for the industrial identity of Rozelle and Balmain. The main restrictions on this view are:

- *Any new structures in the North Forecourt should remain low height so the entire vista of the power station's iconic north elevation remains open.*
- *Reading of all existing building elements highlighted must be maintained.*

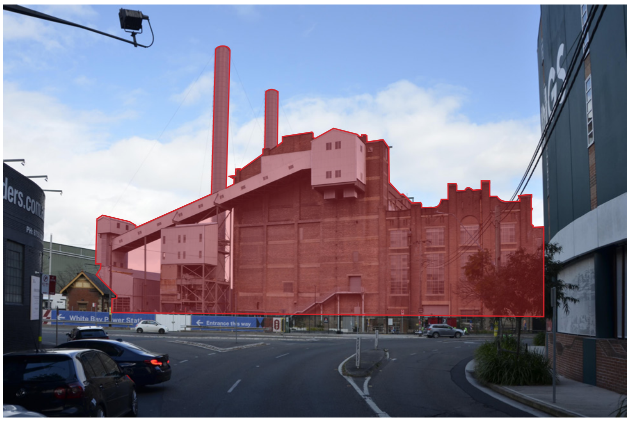


Figure 6.5.15 View of the power station opening up at the intersection of Mullens Street and Robert Street, 2024.

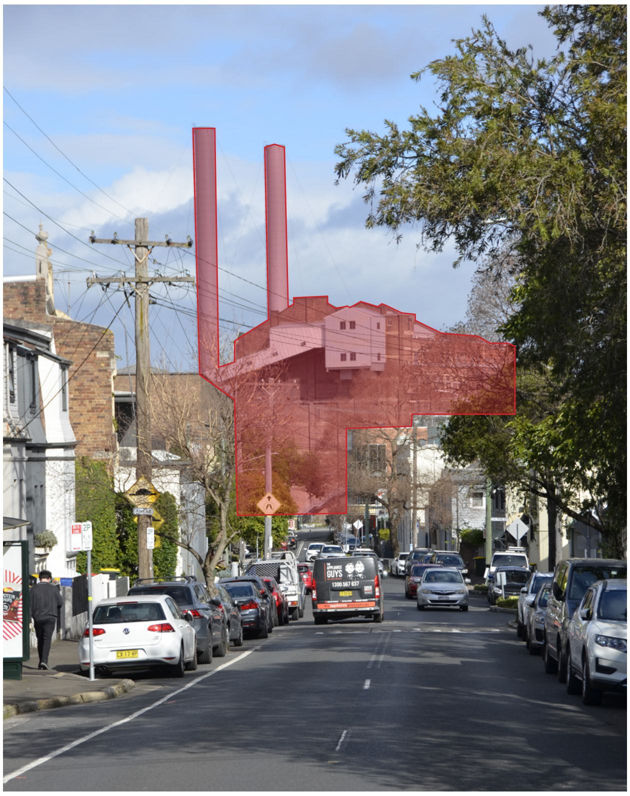


Figure 6.5.16 View of the power station from Mullens Street near Goodsir Street, 2024.

6.5.2.7 View 7: Robert Street and White Bay

Policy 5.12 — Robert Street

Robert Street is an axial view characterised by the vast scale of the east and north elevations within a retained light industrial and harbourside context. The main restrictions on this view are:

- *Axial views from along Robert Street should maintain a partial view of the top part of the Boiler House, the External Conveyor and both chimneys.*
- *Views from the Robert Street entry, near Mullens Street, remain unobstructed.*
- *Reading of highlighed elements, such as the chimneys, must be maintained.*

Figure 6.5.17 View of the power station from Robert Street with light industrial brick buildings on the right, 2024.

Figure 6.5.18 View of the power station from Robert Street nearing the intersection with Mullens Street, 2024.

6.5.3 Curtilage

According to Heritage NSW, heritage curtilage can be defined as the area surrounding an item of heritage significance that is essential for preserving and interpreting its heritage value. It may include land that is integral to the heritage significance or a precinct containing buildings, works, relics, trees, places, and their setting. When establishing the heritage curtilage of a place, relevant factors should be taken into consideration, including historical land subdivision patterns, archaeological features, and visual, physical, historical, and functional links with important features in the area; setting, views and landmark qualities. 'Setting' is the area around a place, which may include visual catchment. In defining the heritage curtilage, several questions need to be addressed. These questions are outlined in "Heritage Curtilages," prepared by the Department of Urban Affairs and Planning and the NSW Heritage Office (now Heritage NSW):

- *has the significance of the original relationship of the heritage item to its site and locality been conserved?*
- *has an adequate setting for the heritage item been provided, enabling its heritage significance to be maintained?*
- *have adequate visual catchments or corridors been provided to the heritage item from major viewing points and from the item to outside elements with which it has important visual or functional relationship?*
- *are buffer areas required to screen the heritage item from visually unsympathetic development or to provide protection from vibration, traffic noise, pollution or vandalism?*[161]

Although The Burra Charter does not use the term "curtilage," Article 8: Setting, states that:

> *Conservation requires the retention of an appropriate visual setting and other relationships that contribute to the cultural significance of the place. New construction, demolition, intrusions or other changes which would adversely affect the setting or relationship are not appropriate.*[162]

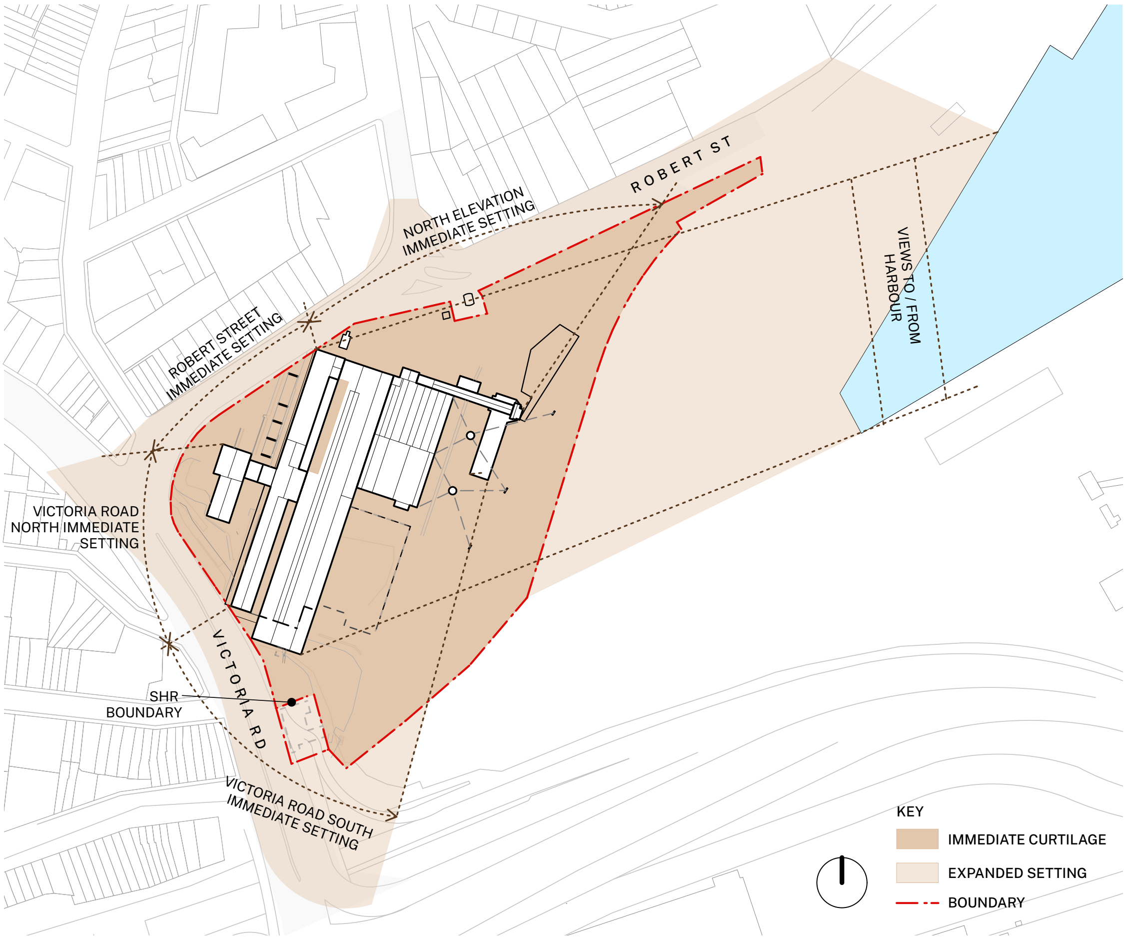


Figure 6.5.19 Plan of the White Bay Power Station site indicating the view curtilages.

6.5.3.1 *State Heritage Register Curtilage*

The curtilage of White Bay Power Station, as defined by the State Heritage Register, is the immediate area surrounding the property boundaries, including:

- The southwest boundary along Victoria Road extends as far south as the former White Bay Hotel
- The eastern boundary along Robert Street, extending as far north as the north penstock, but excluding the Sewage Pumping Station no. 7.
- The west boundary extends from the north penstock to the former rail cutting in the south. It also includes the area east of the former Coal Wash Pit and the former South and East Yards.

A large proportion of the open space in the immediate vicinity surrounding the White Bay Power Station is significant as part of the curtilage. The immediate curtilage is the area within the site boundaries, which includes the area already detailed in the SHR boundaries, with the addition of the former White Bay Hotel. The immediate curtilage and setting are closely related to historic use, current and demolished structures, transport, and railway links. The curtilage includes the North Forecourt, West Yards, former White Bay Hotel site, the Ash Handling Yard, East Yard, and various South Yards.

Much of the external spaces, such as the North Forecourt, have had lightweight and low-height structures removed, including workshops, offices, and workers' amenities. Other areas housed substantial structures, such as Ash Precipitators in the Ash Handling Yard, the dry coal store east of the Coal Handling Shed, and the large former Boiler House No. 2, which has now been demolished. Although some physical evidence has been lost and structures taken down, what remains are visual connections and landscape features. The demolished buildings now present the opportunity to rebuild new structures or to keep the open space and views created by their removal (refer to Section 6.11).

Policy 5.13 — Curtilage

A large proportion of the open space in the immediate vicinity surrounding the White Bay Power Station is significant as part of the curtilage. The curtilage of the power station and its integration into the public domain are significant to the character and identity of the place. Any new structures adjoining or in the vicinity of the power station must consider the scale, presence and curtilage of the White Bay Power Station as a landmark within the Bays Precinct.

6.5.3.2 *Expanded Setting*

The broader setting of the place includes areas beyond the site's boundaries, as well as views and vistas to and from the place and beyond. Heritage NSW's publication "Heritage Curtilages" outlines the following guidelines for defining an expanded heritage curtilage:

> *It is important to identify the prominent observation points from which the significant item can be viewed, interpreted and appreciated. Other factors to be considered are:*
>
> - *Views to and from the heritage item*
> - *The possible need for a buffer area between the curtilage and the adjoining land*
> - *The visual and historical relationship between the items and their environs.*[163]

Several significant views were identified in section 3.2.2, through which the importance of the place can be appreciated. These views are mainly defined within a regional context, as they extend beyond the immediate setting.

For the local area and its immediate surroundings, the visual setting includes views and historical links. The expanded setting assists with understanding how the place was used and why it was chosen for this location. For example, rock outcrops and cuttings at the southern end of the place provide key evidence of rail connections, how coal was delivered, and transport networks. The eastern end of the place offers visual links to the harbour, which is essential for cooling, and other industrial landmarks.

Historically, rail access and connection to the place are of exceptional significance. The rail infrastructure dating from the early to mid-twentieth century explains why the power station was built where it is, with its orientation aligned with the spur rail line. The rail network holds broader significance for the precinct, supporting industrial and maritime growth. It was the impetus for grain and coal exports, coal deliveries, wharf operations, and the mobilisation of military personnel and equipment during WWII. This rail network is significant as part of a wider, interconnected system that included other industrial centres, including the former Darling Harbour goods yard and the metropolitan goods line (now disused).

The tracks leading back to Rozelle Parklands (formerly the Rozelle marshalling yards) have been removed (refer to Figure 2.7.62). However, significant evidence of the railways still exist, including the rail tracks along the Ash Handling Yard, inside the Coal Handling Shed, and the rock cutting at the south end of the place, west of the former White Bay Hotel Site. Removed rail corridors include areas east of the Coal Handling Shed, which serviced the former Dry Coal Store and spur lines to the Coal Export terminal, White Bay, and the former Grain Silos.

Policy 5.14 — Former rail lines

The former railway lines make up important areas and curtilage around the power station that must be retained and interpreted. Former rail lines should inspire access points, circulation, and view connections, which should be maintained. Aside from minor public domain structures, the character of these spaces should remain largely undeveloped open space to enable appreciation of the power station and aid in its interpretation.

The White Bay Power Station is a prominent harbourside industrial landmark, and its proximity to the water is significant. Conversely, although it is situated near the harbour to access water for cooling in the condensers, it has never had any other water access. Its location offers an opportunity to develop and strengthen connections with the water and to create public spaces that provide physical links, supporting a revitalised public use. A meaningful connection with the harbour is consistent with the primary objective of the Bays West Place Strategy and Bays West Master Plan.

Policy 5.15 — Connection to water

Ensure the relationship to the harbour is established and maintained meaningfully, including access and sightlines between the north and south penstocks, representing the water cooling channel.

The aforementioned cooling channel runs between White Bay and Rozelle Bay, and pass through below the Turbine Hall, where they condensed steam back into feedwater for electricity generation. They are a major, subterranean element of the power station.

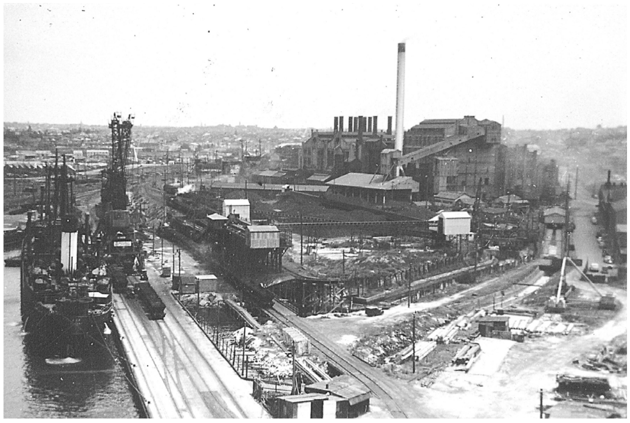


Figure 6.5.20 White Bay Power Station's railway network and longstanding connection to water, c.1950 (courtesy of City of Sydney Archives, Graeme Andrews Working Harbour Photograph Collection).

Policy 5.16 — Water cooling channel

The water cooling channel is an integral part of the historical operations of the power station. It should not be obscured and should be interpreted as part of future initiatives for the place.

6.5.3.3 Views within the place

Some views are important in the current curtilage and aid in the interpretation of the place and understanding its operation and meaning. They help place the power station within the context of the former maritime industrial precinct and setting:

Policy 5.17 — Views within the place

The principal views within the place should be retained to communicate the connections and processes of the power station operations and include:

1. The north elevation visible from the North Forecourt and Robert Street, including the Coal Handling Shed, External Conveyor, and Ash Handling Tower.

2. View north and south through the South and East Yard along the axis of the Ash Handling Yard between the Railway Cutting / South Penstock and terminating at the Ash Handling Tower. The Boiler House frames this view to the west and the Chimneys and Coal Handling Shed to the east.

3. East-west views south of the extant Boiler House, terminating on the Pump House east entry.

4. View of the east elevation of the Administration Building.

5. View of the historic main entry from Victoria Road, together with the south elevation of the Switch House.

6. View of the south elevation of the Administration Building from Victoria Road.

7. Views along Transformer Alley, including from Victoria Road and the access bridge.

8. View looking south along the west wall of Switch House looking toward the original lift/stair tower.

9. View looking south along the Transformer Yard toward the Control Room Bridge and on the axis with the rail tracks.

10. View looking north from the South West Yard towards the Control Room Bridge.

There is an opportunity to further modulate some of these vistas by inserting new structures that could add interest, colour, and texture, as well as announce a change in activity or a new entry point, as long as these do not confuse the significance of the place. Whenever possible, such new elements should aid in the interpretation of this significance.

See also Section 6.19 – Interpretation.

Policy 5.18 — Visual and physical links

Visual and physical links within and through the place should be respected and retained as per Policy 5.18 and may be enhanced by new structures and access ways.

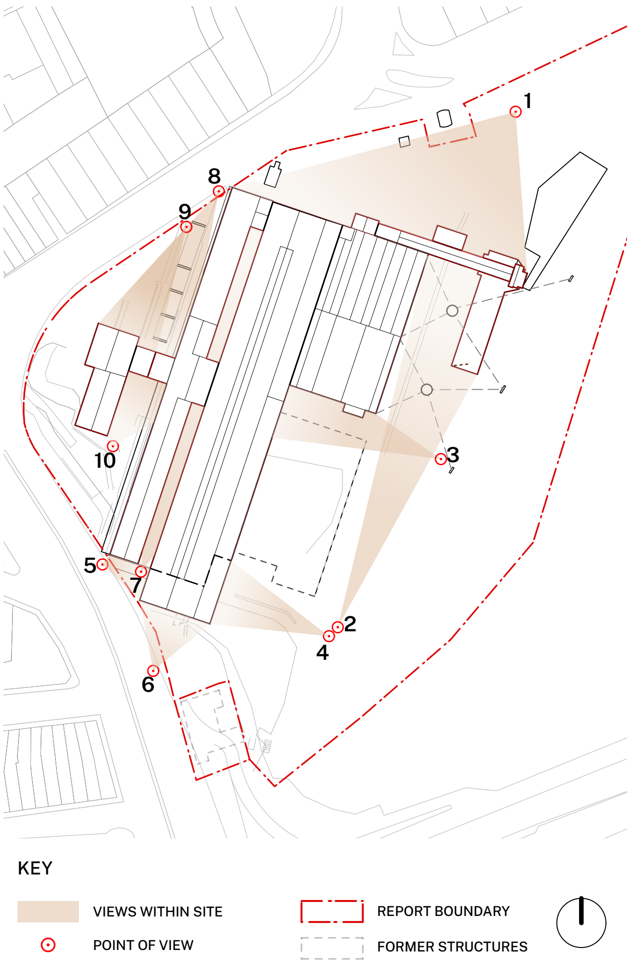


Figure 6.5.21 Diagram of internal views of White Bay Power Station (Design 5 – Architects).

Figure 6.5.22 North elevation of the White Bay Power Station as viewed from the North Forecourt, 2025 (Design 5 – Architects).

Figure 6.5.23 View looking north along axis of Ash Handling Yard, terminating at the Ash Handling Tower, 2024 (Design 5 – Architects).

Figure 6.5.24 View of historic main entry from Victoria Road, 2024 (courtesy of Chris Bennett, Evolving Picture).

Figure 6.5.25 View of east elevation of Administration and Staff Accommodation, 2024 (courtesy of Chris Bennett, Evolving Picture).

Figure 6.5.26 View looking south along Transformer Yard towards the Control Room Bridge, 2024 (courtesy of Chris Bennett: Evolving Picture).

Figure 6.5.27 View looking north from the South West Yard towards the Control Room Bridge, 2024 (courtesy of Chris Bennett: Evolving Picture).

6.6 BUILDINGS & STRUCTURES

6.6.1 Broad Framework / Building Fabric Generally

The White Bay Power Station is an exceptionally significant building complex representative of the twentieth-century industry and coal-fired steam raising technology. It has largely retained its original character and general building fabric, despite its decommissioning in 1984, and should continue to be retained and conserved.

In particular, the integrity of spaces and machinery comprising the representative “slice” of the power generation and reticulation process and embodying key significant values must be retained and respected.

Any form of reuse on the place should be inspired by and respond to the character and quality of the spaces and their significant elements, with the aim to inhabit the building while altering as little as possible (refer to Policy 4.2).

Policy 6.1 — Integrity of spaces

The integrity of spaces and machinery that comprise the representative “slice” of the power generation process must be retained and respected. Any form of reuse should be inspired by and respond to the character and quality of the spaces and their significant elements.

This section details the significance and key values of each building in the White Bay Power Station. It provides specific policies and Tolerance for Change and Opportunities for Change tables to guide any changes and management.

Figure 6.6.1 North Elevation of the White Bay Power Station, 2023 (courtesy of Toby Peet).

6.6.2 Exterior Generally

The White Bay Power Station is an industrial giant of steel, brick, glass, and concrete. Its bulk, form, and materiality are key aspects of the aesthetic significance and landmark qualities. The remediation and activation work in 2022–24 has renewed some of the building’s exterior, including new roofing and cladding and the conservation and repair of windows, masonry facades, and painted finishes. As part of activation works to the place, the existing vehicle Robert Street entry was formally established as the main public pedestrian and vehicle entry. The original “front of house” formal pedestrian entry from Victoria Road via the access bridge was altered and made accessible and compliant with DDA requirements.

Any future changes should improve the power station’s connection to significant nearby structures and maintain and strengthen its landmark presence. Future changes that obscure or detract from the original power station building complex should be discouraged.

Policy 6.2 — Exterior generally

The significant characteristics of the external form of the White Bay Power Station should be retained and conserved in accordance with relevant sections and policies in this CMP and the Tolerance for Change and Opportunities for Change tables. Any future changes should seek to maintain and strengthen the landmark presence of the power station and its connection to nearby significant structures and its developing surroundings, as identified in Section 6.5. Any future changes that obscure or detract from the original power station building complex should be discouraged.

Policy 6.3 — Building mass

Each elevation of the power station complex presents a different characteristic of the place and relates differently to its context – the east and north elevations are visible from a distance and are massive and dramatic in scale. In contrast, the south and west elevations are considerably less so. All elevations are equally important to the identity of the place and should be retained and respected.

6.6.2.1 Elevations

The elevations of the White Bay Power Station are key to the overall interpretability and scale of the power station. These elevations are significant and should be retained and conserved in accordance with policy 6.3.

East Elevation

The east elevation, particularly the Chimney Stacks and Boiler House east facade, is highly visible from the Anzac Bridge approach. While the marred wall of the Pump House where Boiler House No. 2 is less dominant in distant views, its scale remains impressive. The east elevation of the Boiler House, also best illustrates the change of ownership and building stages in 1953 and 1958.

> **Policy 6.4 — East elevation**
>
> *The marred east elevation of the Pump House is less dominant in distant views than the east elevation of the Boiler House, but it is still important. This elevation could be masked, potentially by a new building of a similar height to the Boiler House or left exposed and remediated as is.*

North Elevation

The north elevation forms the iconic silhouette of the power station. It is also significant for illustrating the process and movement of coal from delivery and handling to transportation to the Boiler House with the Steam Raising System to the generation, distribution, and control.

> **Policy 6.5 — North elevation**
>
> *The north elevation is significant for its silhouette, configuration, and interpretability of the movement of coal. The legibility of the sequence of operational systems in this elevation should be retained and its components respected.*

West Elevation

The west elevation is characterised by the layering and stepping of the roof lines and parapets. The foreground buildings appear to be two-storey high buildings due to the steep fall of the land and deep cutting that encloses the buildings. The elevation increases in scale to larger buildings starting with the Control Room Building, Switch House, Turbine Hall, Boiler House, and the chimneys behind silhouetted by the sky. Significant elements include the modulated Turbine Hall and Switch House parapets, with the roofs rising behind and the steel framed window openings. The Control Room Building is lower and less prominent in this view.

> **Policy 6.6 — West elevation**
>
> *The west elevation should maintain views of continuous wall lengths, parapets, and roofs. There is an opportunity to locate lower structures in the foreground of the Switch House that respond to the layered reading of the west elevation but do not obstruct the Switch House above ground level. The dominance of the chimneys in the background, silhouetted by the sky, should be retained and not crowded by new structures.*

South Elevation

The south elevation has a considerably reduced presence but also has a distinct configuration with the Chimney Stacks and External Conveyor in the background of the Boiler House and Turbine Hall facades. It has become more visible in views from the south after the demolition of the White Bay Hotel.

> **Policy 6.7 — South elevation**
>
> *The south elevation plays a lesser role in significant views of the power station and could be framed or partially screened. The configuration of the Boiler House, the axis of chimneys, and the External Conveyors from the south should be retained.*

Figure 6.6.2 The iconic north elevation of the White Bay Power Station, 2024 (courtesy of Chris Bennett: Evolving Picture).

6.6.3 Internal Spaces Generally

The internal environment and buildings that make up the White Bay Power Station vary in size, material, and character, resulting from the operational role and the machinery housed. The Pump House's east wall separates the power station's coal-burning and ash-handling functions from electricity-generating and distribution functions. Depending on what side of the Pump House wall, the spatial character, operational role, machinery, and types of trades needed to operate the machinery differ substantially.

The east side of the Pump House wall includes the Coal Handling Shed, Ash Handling Tower, and Boiler House functions. These are large spaces that house coal and ash handling activities, which were dirty and noisy. With some exceptions for control rooms and specialised spaces, the spaces in these buildings are characterised by large internal volumes of mostly unpainted surfaces, including brick, concrete and metal. They are industrially raw and gritty spaces of heavy industry.

West of the Pump House wall, the character is softer and pays more attention to cleanliness, detail, aesthetics and the pursuit of modernisation. The buildings contain large volumes and machines, including the Pump House and the Turbine Hall, but they also include many smaller and specialised buildings and spaces, including the Switch House, Control Room Building and the Administration and Staff Accommodation. As mentioned, the internal environments are characterised by softer materials, decorative features, painted surfaces, and, in some spaces, rendered and plastered walls, tiles and timber joinery.

Policy 6.8 — Character of internal spaces

The quality and character of spaces within the White Bay Power Station vary and are often a consequence of the operational role of electricity generation. New uses and fit-outs to internal spaces must respect each space's character, quality, and role and accord with Policy 3.1. Generally speaking, and with some exceptions, the spaces east of the Pump House should retain a raw, industrial character. Spaces west of the Pump House can have a more refined and finished character.

Figure 6.6.3 Coal Elevators in the Basement of the Coal Handling Shed, 2024 (courtesy of Toby Peet).

Figure 6.6.4 A meeting room on Level 3 of the Administration and Staff Accommodation with a window into the Turbine Hall, 2024 (courtesy of Chris Bennett: Evolving Picture).

Figure 6.6.5 The 1948 Control Room of the Control Room Building, 2024 (courtesy of Chris Bennett: Evolving Picture).

6.6.4 Heritage Machinery Generally

White Bay Power Station retains extant components of eight operational systems responsible for coal-fired power generation. These systems have been identified as having Exceptional significance and are composed of interdependent operations and elements. Except for the Switch House, they primarily occupy the northern section of the buildings in which they are housed. They are a representative sample of the original machinery that once filled White Bay Power Station and are described further and catalogued in Volume 2 of this CMP.

In most instances, there is a single extant item where multiple examples once existed. These now rare items are integral to the industrial qualities of the place and enhance the overall significance and interpretability of White Bay Power Station. They are able to extensively and uniquely contribute to an understanding of the historical development and function of the White Bay Power Station as an industrial site, which played a significant role in the generation of electrical power in Sydney and the expansion of its electric rail network. This must be interpreted to future users of the place and the visiting public. No item may be removed without depleting the integrity of the power station. They should be retained in situ and conserved, maintained, and interpreted as recommended in this report. They cannot be adapted for a new function.

The general policy regarding machinery is set out below.

Policy 6.9 — Extant operational systems

White Bay Power Station retains extant components of eight operational systems, which are representative samples of the original machinery at White Bay Power Station (as described in Section 3.4 of this volume of the report). In most instances, there is a single extant item where once there were multiple examples. These now rare items are integral to the significance of White Bay Power Station. No item may be removed without depleting the integrity of the power station. They must be retained in situ and conserved per the guidelines set out in the inventories in Volume 2. They cannot be adapted for a new function.

Whilst each inventory sheet (refer to Volume 2) provides records and context for each element of historic machinery, assessment by a materials conservator will be necessary to initiate detailed conservation and maintenance action. Refer to Section 6.16 for detailed policies.

6.6.4.1 Interpretation of Machinery

An Interpretation Plan and program for the eight operational systems and their associated machinery should be prepared as an essential contribution to understanding twentieth-century coal-fired power generation technology for the Sydney community. The significance of the White Bay Power Station would be enhanced by an interpretation of the technology and processes represented in the extant machinery at the place. It is not proposed that any machinery be re-activated in situ. Rather, interpretation triggers such as sound, light, and smell should be used, as well as text and photographic media.

All existing machinery has been catalogued in the inventory sheets of Volume 2 of this edition of the CMP, but regular updates will be required.

The 2022–24 works have stabilised the rusted and corroded machinery elements. Suitably qualified persons should continue to carry out the maintenance and upkeep. Refer to Section 6.16 for further policies on maintenance.

Policy 6.10 — Interpretation of machinery

The machinery and associated elements comprising the eight operational systems embodying the historical development and function of the White Bay Power Station must be interpreted to future users and the visiting public.

Policy 6.11 — Records of machinery

All existing machinery should continue to be catalogued in an organised and detailed inventory.

Figure 6.6.6 Motor Generator Room with a myriad of extant machinery and equipment, 2023 (courtesy of Chris Bennett: Evolving Picture).

6.6.4.2 *Smaller Machinery & Items*

Various disparate items are located throughout the place and include smaller elements (some classified as moveable heritage in Section 6.8) that may not have been specifically identified as associating with a particular operational system. Such items are notably found in the Boiler House, the Turbine Hall, and the Switch House and include:

- all signage, including labels and tags;
- switchboards and associated switches, etc.;
- power points and associated electrical equipment;
- meters and dials;
- cabling;
- valving; and
- evidence of workstations, workshops, tool racks, tables, tanks, and sinks.

These small – and sometimes nondescript – items contribute to understanding the significant values and role of the eight operational systems at White Bay Power Station. The issues and opportunities for these systems are discussed below in relation to their spatial environments.

Policy 6.12 — Isolated machinery and items

Smaller and isolated pieces of machinery should be retained and respected. Any removal, changes or relocation may be possible subject to the item's significance and within the context of the significance gradings of the space and tolerance for change tables and relevant heritage approvals. Any changes should consider the cumulative heritage impact on the White Bay Power Station and its interpretation.

Figure 6.6.7 Pipes and valving at the north end of the Turbine Hall, 2024 (courtesy of Chris Bennett: Evolving Picture).

Figure 6.6.8 Smaller miscellaneous machinery on Level 1 of the Boiler House, 2024 (courtesy of Chris Bennett: Evolving Picture).

Figure 6.6.9 Miscellaneous switch equipment with wiring along walls on Level 3 of the Switch House, 2024 (courtesy of Toby Peet).

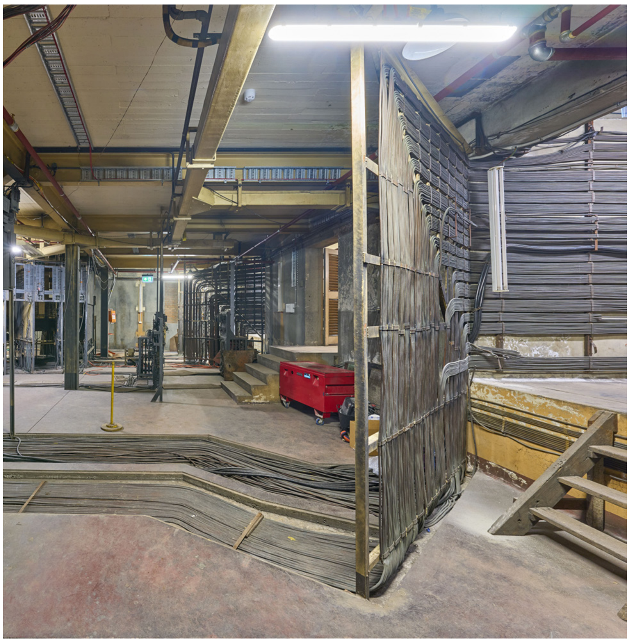


Figure 6.6.10 The extensive cabling in the Cable Room of the Control Room Building, 2023 (courtesy of Chris Bennett: Evolving Picture).

6.6.5 The Coal Handling Shed & External Conveyor

The Coal Handling Shed, completed in 1953, is integral to the architectural form and historical operations of the White Bay Power Station building complex. Alongside its associated elevators and External Conveyor connecting to the Transfer Shed of the Boiler House, these structures are an iconic aspect of the visual identity of the White Bay Power Station and key to the interpretation of coal handling operations.

The 2022–24 remediation works removed the heavily rusted cladding and replaced it with new galvanised cladding, giving these facades a closer semblance to their appearance during the power station's active years. The north and south ends of the Coal Handling Shed are cladded with clear corrugated polycarbonate for weather protection whilst maintaining an open visual connection once sustained by the rail corridor. The previously inundated basement has been drained, and the corroded machinery and equipment stabilised. Refer to Volume 2 – Heritage Inventory of the CMP for detailed descriptions and catalogues of the individual spaces, machinery, and moveable heritage catalogue.

Under Policy 6.1, any future uses or changes should seek to maintain and strengthen the significant aspects of these structures. Their character, configuration, form, texture, and distinctive corrugated galvanised steel surfaces should all be conserved.

Policy 6.13 — Coal Handling Shed and External Conveyor

The Coal Handling Shed, including the elevators and External Conveyor are iconic and are major structures in the White Bay Power Station complex. It must be retained and conserved in accordance with Policy 3.4 as evidence of one of the principal operating systems of the place. Any changes to the Coal Handling Shed and External Conveyor must retain and respect their defining elements, including:

- *the industrial "shed" character and external form*
- *the visual connection running on the north-south axis along the rail corridor*
- *the use of industrial material, including steel frame and corrugated galvanised steel cladding*
- *the visual and physical relationship with the Boiler House and its connection via the External Conveyor*
- *their interpretation as the major structures and components of the Coal Handling System*

Future adaptive reuse of the Coal Handling Shed is restricted by the location and configuration of extant equipment and machinery. This is particularly the case for the basement level, which contains fragile machinery and is susceptible to corrosion due to being inundated since the power station's closure. The machinery and elements were painted with a clear rust preserver in 2022/23 to retain evidence of its condition and decay.

Policy 6.14 — Coal Handling Shed Basement

The spatial quality, materials and contents in the basement are rare and intact and must not be altered or modified. This machinery and associated elements should be retained in a raw condition for interpretation. Any adaptive reuse of the basement must be constrained and may only be used for public tours and interpretation. The steel elements must be monitored and maintained with a clear rust preserver.

Figure 6.6.11 Coal Handling Shed looking south, 2024 (courtesy of Toby Peet).

Figure 6.6.12 Coal Handling Shed basement conveyors, 2024 (courtesy of Toby Peet).

The Bays West Stage 1 Master Plan envisages the Coal Handling Shed as highly visible and centrally located within the public domain near the Metro Station. As such, the Coal Handling Shed will have pressure for adaptive reuse that will support the future vision of the Bays and the adaptive reuse of the White Bay Power Station. On the ground level, there is further opportunity for the Coal Handling Shed to become a transitional space between the future Bays West Metro and the White Bay Power Station. New openings on the east and west elevations could facilitate adaptive reuse and enable a more open ground plane on the east-west axis. Additionally, new uses could be accommodated at the south end, retaining rail tracks and grating and not requiring partitions or linings to the existing structure.

In the original construction of the Coal Handling Shed, A Dry Coal Storage area was located on the east side of the building, consisting of a large steel truss with a lean-to roof. It spanned the entire building's length and was open on the north, south and east sides. The Dry Coal Store was demolished in the early 1980s. Still, evidence of its construction includes the remnant steel frame wall extending north, trusses cut off at a high level and an opening on the east elevation at the second-floor level (level +10). Re-purposing the Coal Handling Shed could accommodate an addition to the east that matches the footprint and lean-to form of the former Dry Coal Store. It should have a design and character that supports the significance of the Coal Handling Shed and recognises its current form.

Policy 6.15 — Coal Handling Shed cladding

The corrugated galvanised steel cladding is integral to the overall visual identity of the power station. It should be retained, and there are opportunities to introduce new openings along the east and west elevations for permeability and future use.

Policy 6.16 — Dry Coal Store

Re-purposing the Coal Handling Shed could accommodate an addition to the east that matches the footprint and lean-to form of the former Dry Coal Store. It should have a design and character that supports the significance of the Coal Handling Shed and be distinct from the existing structure. The use of this area within a central location of the precinct and adjacent to the Metro station, should inherently be public use.

The Coal Handling Shed houses machinery and equipment associated with the Coal Handling System. Most of the machinery and equipment is located at the northern end of the shed. All Coal Handling Shed machinery is exceptionally significant and integral to the power station. It should be retained and conserved in situ per Policy 6.9.

Figure 6.6.13 The tower of the Coal Handling Shed, the External Conveyor, and the Chimney Stacks, 2024 (courtesy of Toby Peet).

Figure 6.6.14 The coal grabber connected to the Gantry Crane, an integral part of the Coal Handling System, 2023 (courtesy of Toby Peet).

Figure 6.6.15 The Dry Coal Store, c.1950s (courtesy of the ECNSW Archives, extract from 00906).

6.6.5.1 Tolerance for Change

Building/Space: COAL HANDLING SHED AND EXTERNAL CONVEYOR	Tolerance for Change 1 = Low tolerance 2 = Moderate tolerance 3 = High tolerance				Further Considerations (to be read in conjunction with the relevant policy section for each element)
	Form	Fabric	Function	Location	
Basement (general)	1	1	1	1	The basement has a low tolerance to accommodate a reuse function and may only be suitable for heritage interpretation and guided tours.
Basement – stairs and handrails	1	2	1	1	They may undergo minor alteration for structural strengthening and safety.
Basement – walls	1	1	1	1	Concrete surfaces are to be left exposed and must not be painted. Fixtures, including lights, services, signage, etc., should not detract, and fixings are to be reversible.
Basement – pump-out pit and stormwater	3	3	1	2	Ensure the pumps are working and regularly maintained. The size and configuration of the pump-out pit may be altered if required.
Concrete floors and drainage channels	2	2	1	1	Existing drainage channels must be retained and maintained to manage water ingress and allow water to drain to the pump-out pit in the lower basement.
Existing signage	1	1	1	1	All existing signage or painted signs should be retained, preserved, and not covered.
Transfer House	1	1	1	1	The Transfer House has a low tolerance to accommodate reuse and may only be suitable for heritage interpretation and guided tours.
Coal Handling Shed – form	1	2	2	1	Additions are permitted to the east per conservation policy 6.16– *Dry Coal Store.*
External cladding	1	3	2	1	The external cladding can be retained or replaced, but the outer material must remain corrugated galvanised steel in short 3m lengths. The internal material should remain an expressive steel structure. Steel cladding should be monitored to ensure all fixings, flashings and cladding panels are stable and watertight. Any leaks should be investigated and treated as soon as possible using compatible materials.
West elevation	2	2	1	1	Additional openings at the ground floor level of CH G.1, south of the basement stairs, are permitted along the west elevation. Any openings should be no higher than 3m or the closest horizontal rail, be located between columns, and retain at least 50% cladding respecting the rhythm of the existing structural bays. Any new openings should not alter the reading of the existing window openings.
Existing entry	1	2	1	1	The existing entry and steel door on the east elevation, north of the basement stairs, must be retained and conserved.
North and south elevations	1	2	2	1	The existing large door on the south elevation may be altered or reconfigured but should not be made larger. The north elevation may be altered to include a door or opening similar to the south elevation. A north-south visual connection along the former rail corridor should be maintained.

Building/Space: **COAL HANDLING SHED AND EXTERNAL CONVEYOR**	Tolerance for Change 1 = Low tolerance 2 = Moderate tolerance 3 = High tolerance				Further Considerations (to be read in conjunction with the relevant policy section for each element)
	Form	Fabric	Function	Location	
East elevation	1	2	1	1	Openings are permitted through the concrete wall in CH G.1. Openings should not be full height, be located between columns, and respect the rhythm and strength of the existing structural bays.
Existing Windows (west elevation and Transfer House)	1	3	2	1	Existing polycarbonate window covers may be retained or replaced with timber framed windows (similar to the original). The openings should not be made larger.
Steel structure	1	2	1	1	Steel structures, including lattice columns, runway girders, beams and roof trusses, are significant and must not be altered. Secondary elements, including cladding rails, should be retained and visible unless openings with earlier guidelines. Column bases should be monitored to ensure they remain dry. Any leaks should be treated as soon as possible. Paint encapsulation of steel columns is permitted to provide a protective barrier from remnant lead paint.
Roof	1	2	1	1	The form of the existing roof should be retained. New skylights and solar panels in the plane of the existing roof slope are permitted. The roof should be monitored to ensure all fixings, flashings and cladding panels are stable and watertight. Any leaks should be investigated and treated as soon as possible using compatible materials.
Existing electrical conduits and services.	2	2	2	2	Evidence of the existing electrical reticulation, including conduits, circuit boards, and equipment, should be retained unless they prevent viable reuse. New electrical conduits should be grouped, surface mounted, and located in areas that are not prominent or detracting.
Existing light fittings	1	2	1	2	Existing light shades must be retained. The internal electrical fittings and globes may be replaced to make them operational. Any new light fittings should not be confused with the original fittings.
Staircase to Transfer House	1	2	2	1	Stairs and handrails may undergo minor alteration for structural strengthening or to improve safety. Upgrade to a deemed to satisfy standard under the BCA is not possible without substantial alteration or replacement. If required, the large opening in the cantilevered area of the staircase may be enclosed with permanent cladding subject to structural considerations and heritage impact minimised.
Machinery					
Basement Machinery (Hoppers and Pneumatic Feed Gates and Conveyors)	1	2	1	1	There may be the opportunity to restore one or more pneumatic feed gates in operating conditions for interpretation and learning purposes.
The Capstan	1	2	1	1	Retained and preferably displayed (interpreted) inside the CHS, including its relationship with the north pulley.

Building/Space: **COAL HANDLING SHED AND EXTERNAL CONVEYOR**	Tolerance for Change 1 = Low tolerance 2 = Moderate tolerance 3 = High tolerance				Further Considerations (to be read in conjunction with the relevant policy section for each element)
	Form	Fabric	Function	Location	
The Cranes and Associated Grabs	1	2	1	1	Opportunity to move cranes, make them operational or can be used to hang objects or moveable temporary partitions.
The Screens	2	2	2	1	Existing Screens stored along the east wall should be repaired and reinstated in any reuse works. The area for the Screens and Hoppers can be covered with new flooring as long as the cover is reversible, parts remain open, and the basement is interpreted.
Short Elevators and Motors	1	2	2	1	The Short Elevators have little tolerance for change. They should remain visible from within the CHS and be protected.
Coal Crushers	1	1	1	1	The Coal Crushers have little tolerance for change and should be interpreted. If required, clear covers may be used to cover the top.
The 90-Foot Elevators	1	2	2	1	Cladding may be replaced, but the external symmetrical form must be respected. Any change to expose or reconstruct the external elevators must consider their symmetrical relationship. Elevators should be monitored to ensure all components are stable and watertight. Any leaks should be investigated and treated using compatible materials.
Coal buckets removed from 90-foot Elevators (loose items)	2	2	1	2	Retained and preferably displayed (interpreted) inside the CHS.
Transfer Houses and Equipment	1	2	1	1	The Transfer House and Equipment has little tolerance for change.
External Conveyor	1	1	1	1	The External Conveyor has little tolerance to accommodate change. The space can be interpreted and would suit public guided tours subject to site inductions and appropriate safety protocol.
Coal Handling Control Room	1	1	1	1	The Coal Handling Control Room has little tolerance for change. It should preferably be displayed and interpreted.

6.6.5.2 Opportunities for Change

Explore Opportunities: **COAL HANDLING SHED AND EXTERNAL CONVEYOR**	**Comment**
Skylights in the roof to improve natural light into the ground floor space	Any additional roof lights should consider solar heat gain and glare/contrast from direct sunlight.
Reconstructing windows	There is opportunity to reconstruct the windows with timber frames.
Opening up or replacing cladding of south elevation	There is opportunity to open up or replace cladding of the south elevation to create a sense of openness and permeability.
Openings in east and west elevations to improve permeability	Any new openings must not be full height. They should be located between columns, and the rhythm of the existing structural bays should be respected. Changes should not detract from the significance of the space.
Reconstruct the removed portion of the south elevator and repair the north elevator	Reconstruction should complement the existing elevator and be interpreted as non-original fabric. There is also opportunity to interpret and/or display former coal elevator buckets removed from the south elevator.
Electrical cabling	The electrical cables installed on catenary lines in 2022–24 and associated lighting can be removed, and a new system should be introduced that is carefully placed so as not to detract from the quality and significance of the space.

6.6.6 The Chimney Stacks & Ash Handling Tower

The two extant chimney stacks are approximately 75m tall and are key landmark features that are integral to the industrial identity of the White Bay Power Station. These stacks and the Ash Handling Tower represent the waste elimination and Ash Handling System of electricity generation through coal firing and steam raising. While the intactness of this process has been significantly depleted by the removal of the precipitators and the induction fans as part of the decontamination process, the extant structures retain a high level of interpretability. Both structures underwent remediation in 2022/23, including structural inspections, repainting, and repairs. Under Policy 6.1 any future uses or changes should seek to maintain and strengthen the significant aspects of these structures. Their character, configuration, and form should all be conserved.

The Chimney Stacks and Ash Handling Tower are representative structures of the Ash Handling System. They are of exceptional significance, and their machinery and equipment components should be retained and conserved in situ in accordance with Policy 6.9.

The guidelines and policies below should be followed to retain and respect the significance of the Chimney Stacks and Ash Handling System while allowing its adaptive reuse.

Policy 6.17 — Chimney Stacks

The two extant chimney stacks are exceptionally rare and a key part of the landmark qualities of the White Bay Power Station. They must be retained and conserved in accordance with Policy 3.4. The Chimney Stacks should only be used for heritage interpretation. Any changes to the Chimney Stacks must retain and respect their defining elements, including:

- *the riveted steel structure of the stacks, which were constructed during the mid-twentieth century and are exceedingly rare nationally and even internationally*
- *the scale and salience of the stacks that are intrinsic to the landmark qualities of the power station and key views*
- *their interpretation as the major structures and components of the Ash Handling System*

Policy 6.18 — Chimney Stacks – guy ropes

Chimney guy ropes were added in 1967. They serve as a structural function and have aesthetic significance. Any new structure built near the Chimney Stacks must not crowd them or diminish their landmark status (refer to the discussion on viewsheds). Guy ropes to the chimneys should remain, but those ropes extending to proposed public roads could be relocated or incorporated into new structures. Any relocation of the guy ropes should be carefully considered and undertaken in consultation with a structural engineer.

Policy 6.19 — Ash Handling Tower

The Ash Handling Tower is a key structure of the White Bay Power Station that is integral to interpreting its operational systems. Its character, form, configuration, and quality must be retained and conserved in accordance with Policy 3.4. The Ash Handling Tower should only be used for heritage interpretation. Any changes to the Ash Handling Tower must retain and respect its defining elements, including:

- *its connection to the External Conveyor and framing of the north-south corridor between the Coal Handling Shed and the Boiler House*
- *its interpretation as a major structure of the Ash Handling System*

Future adaptive reuse of the Chimney Stacks should revolve around interpretation, which could be achieved through lighting, sound, and signage. Its landmark qualities could also be highlighted, e.g. the stacks could be illuminated to become a beacon-like landmark at night. There is potential to activate the surrounding space at ground level.

Future adaptive reuse of the Ash Handling Tower is considerably constrained given the form and configuration of spaces and accessibility compliance. Similar to the Chimney Stacks, its primary use should be interpretation. See also Section 6.19 – Interpretation.

Figure 6.6.16 Chimney Stacks located between the Coal Handling Shed and Boiler House, 2024 (courtesy of Toby Peet).

6.6.6.1 Tolerance for Change

Building/Space: ASH HANDLING TOWER	**Tolerance for Change 1 = Low tolerance 2 = Moderate tolerance 3 = High tolerance**				**Further Considerations** (to be read in conjunction with the relevant policy section for each element)
	Form	**Fabric**	**Function**	**Location**	
Steel structure	1	2	1	1	The steel skeletal structure consisting of columns, beams, and diagonal bracing will be retained as an exposed structure, and the spaces remain open.
Concrete floors	1	2	1	1	The concrete should be maintained and visually monitored for any spalling.
Stair on the western side	2	2	1	1	Minor safety upgrades are permissible without substantial alteration. Upgrade to BCA is not possible as this will result in substantial alteration or replacement.
External cladding	1	3	1	2	The external cladding can be retained or replaced, but the outer material must remain corrugated galvanised steel in a maximum of 3m lengths. It should be monitored to ensure all fixings, flashings, and cladding panels are stable and watertight. Any leaks should be treated using compatible materials. Bird entry should be monitored and possible openings sealed.
Existing light fittings	1	2	2	1	Existing light shades must be retained. The internal electrical fittings and globes may be replaced to make them operational. Any new light fittings should not be confused with the original fittings.
Timber windows (levels 3 and 4)	1	3	2	1	Existing polycarbonate window covers may be retained or replaced with timber framed windows (similar to the original). The openings should not be made larger.
Level 3 and 4 internal	2	2	2	2	The internal spaces have little tolerance to accommodate reuse due to access.
Level 4 external	2	1	1	1	Suspended pipework and external walkways should be maintained. The fixings and paint coatings should be regularly checked, and monitored for rust.
Concrete enclosure (former Oil Tank Chamber on levels 1 and 2)	1	1	2	1	Retain solid monolithic form in an unpainted off-form concrete. No additional openings are permitted on the east and north elevations.
Moveable heritage (levels 3 and 4)	3	2	2	3	Moveable heritage should be retained. Large pipes and cylindrical drums on level 4 can be retained or disposed of.
Chimney stack guy ropes	2	2	1	2	Chimney stack guy ropes were not original, but added in 1967. They have a structural function and aesthetic significance, and should be retained.
Machinery					
Kibble Crane	1	1	1	1	Retained and remain displayed with appropriate conservation and maintenance.
Ash Storage Tanks	1	1	1	1	Retain as exposed drums visible from all sides. Monitor protective paint coatings and check support brackets for corrosion. If required, a maintenance access hatch could be cut into the side walls from the grated mesh walkway on level 1 if required. The opening should not visually detract from the tanks.
Kibble Crane Cabin	2	1	1	1	Retain, protect, monitor for corrosion, and maintain birdproofing of the internal cabin area.

6.6.7 Boiler House

The Boiler House is a massive brick, steel and reinforced concrete structure comprising a dramatic and expansive internal space. It was built in two stages, 1953 and 1958. and is the third Boiler House at White Bay, which stands on the site of the first. The second one, formerly to the south, has been demolished. Adjacent to the Boiler House is a lower steel and concrete tower structure for handling the waste ash. The building retains one complete boiler at the north end, while the internal voids identify the location of the other three original boilers that have since been removed. It is representative of the evolution and changes in steam-raising technology and management over the operational years of the power station through its built structure, fabric, and signage.

Work undertaken at the Boiler House in 2022–24 included floor remediation, roof repair, structural strengthening, internal cleaning, and paint encapsulation. Like the Coal Handling Shed and External Conveyor, the Transfer House was re-clad with corrugated galvanised steel. Some curtain walls and other openings were covered with clear acrylic and polycarbonate for weatherproofing. Temporary timber seats were constructed over extant openings and concrete plinths once used to support machinery. The Boiler House was one of the key exhibition spaces for the 24th Biennale of Sydney in 2024. For detailed descriptions and catalogues of the individual spaces, machinery, and moveable heritage, refer to Volume 2 – Heritage Inventory of this CMP.

In accordance with Policy 6.1, any future uses or changes should seek to maintain and strengthen the significant aspects of the Boiler House. Its character, configuration, form, and texture should all be conserved.

The Boiler House accommodates various machinery and equipment primarily associated with the Steam Raising and Coal Handling Systems, much of which is located towards the northern end of the building and along the western side. All Boiler House machinery is of exceptional significance, is integral to the power station, and should be retained and conserved in situ in accordance with Policy 6.9.

The guidelines and policies below should be followed to retain and respect the significance of the Boiler House while allowing its adaptive reuse.

Policy 6.20 — Boiler House

The third Boiler House and its machinery are exceptionally significant. Its character, form, configuration and quality must be retained and conserved in accordance with Policy 3.4. Any changes to the Boiler House must retain and respect its defining elements, including:

- *the full height of the Boiler House space, and the views of the extant No. 1 Boiler*
- *the grated walkways and bridges surrounding the No. 1 Boiler*
- *the legibility of the Coal Hoppers as a large structure spanning the length of the Boiler House, including the existing void between Level 1 and the underside of the Coal Hoppers*
- *the Boiler House Control Room and associated elements relating to management and control of Boiler House operations*
- *the definition of the voids of the former Boilers No. 2, 3, and 4*
- *the steel-framed glazed curtain wall on the east façade of the Boiler House and the natural light it introduces into the space*
- *connections to other structures and operational systems, in particular, the External Conveyor and the equipment and machinery connecting to the Pump House*
- *its interpretation as a significant structure facilitating the Coal Handling and Steam Raising operational systems*

Figure 6.6.17 East facade of the Boiler House with iconic curtain wall on the left, 2023 (courtesy of Chris Bennett: Evolving Picture).

The magnitude of the main Boiler House internal space provides great potential for adaptive reuse (see Section 6.10 for general policies on activation and adaptive reuse). In accordance with Policy 10.4, any future use of the space should respect its key significant values and the associated elements.

In particular, the extant Babcock and Wilcox No. 1 Boiler is exceptionally significant as a key piece for understanding the Steam Raising System and one of the major elements in the Boiler House space. Though its integrity has been compromised by the removal of the iron sheet and asbestos cladding that enclosed the furnace, it reveals the internal composition and allows for a more vivid interpretation of the boiler's operations.

Policy 6.21 — No. 1 Boiler

The extant No. 1 Boiler should be retained in situ and respected as a focal component of the space. The Boiler should not be obscured or hidden from view, and the void at the location of the former No. 2 Boiler should be retained to maintain an understanding of the scale of the space.

The upper floors, which had originally consisted of metal open-grid flooring, have been removed except where these are associated with the extant boiler and the coal hoppers. The existing walkways along the western side of the Boiler House and surrounding the extant No. 1 Boiler are a remaining portion of the general quality of the main space of the Boiler House during the active years of the power station.

Policy 6.22 — Boiler House walkways

The Boiler House walkways are integral to understanding the operational systems in the space. Steel mesh walkways should be maintained in a safe condition to support pedestrian traffic.

The Coal Hoppers that run along the length of the west of the Boiler House above these walkways are a key contributor to the quality of the Boiler House space. They represent the transition from the Coal Handling System to the Steam Raising System.

Policy 6.23 — Boiler House Coal Hoppers

The Coal Hoppers run along the length of the west of the Boiler House and are of exceptional significance. Any permanent alterations or insertions into the space should not obstruct the visual clarity and legibility of this structure.

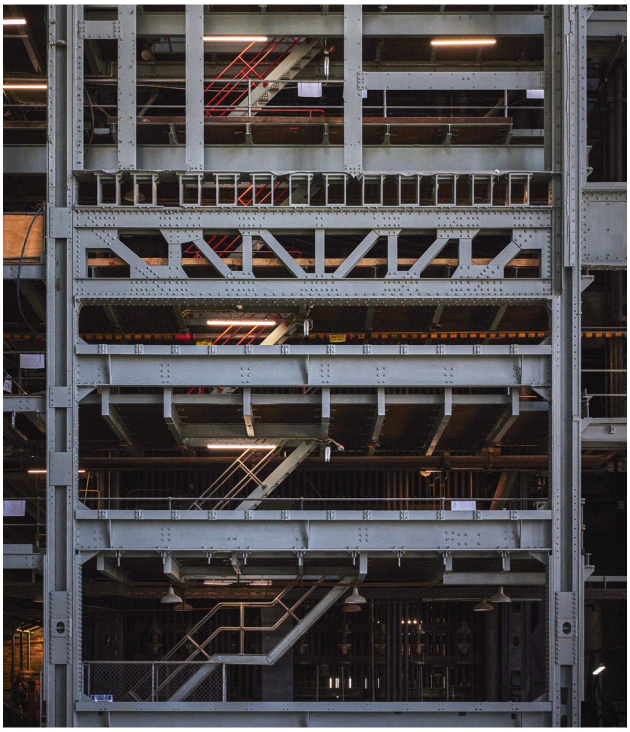


Figure 6.6.18 No. 1 Boiler and walkways, 2023 (courtesy of Toby Peet).

Figure 6.6.19 Inside of the extant Babcock and Wilcox No. 1 Boiler, 2023 (courtesy of Toby Peet).

Figure 6.6.20 Coal Hoppers along the west side of the Boiler House, 2023 (courtesy of Toby Peet).

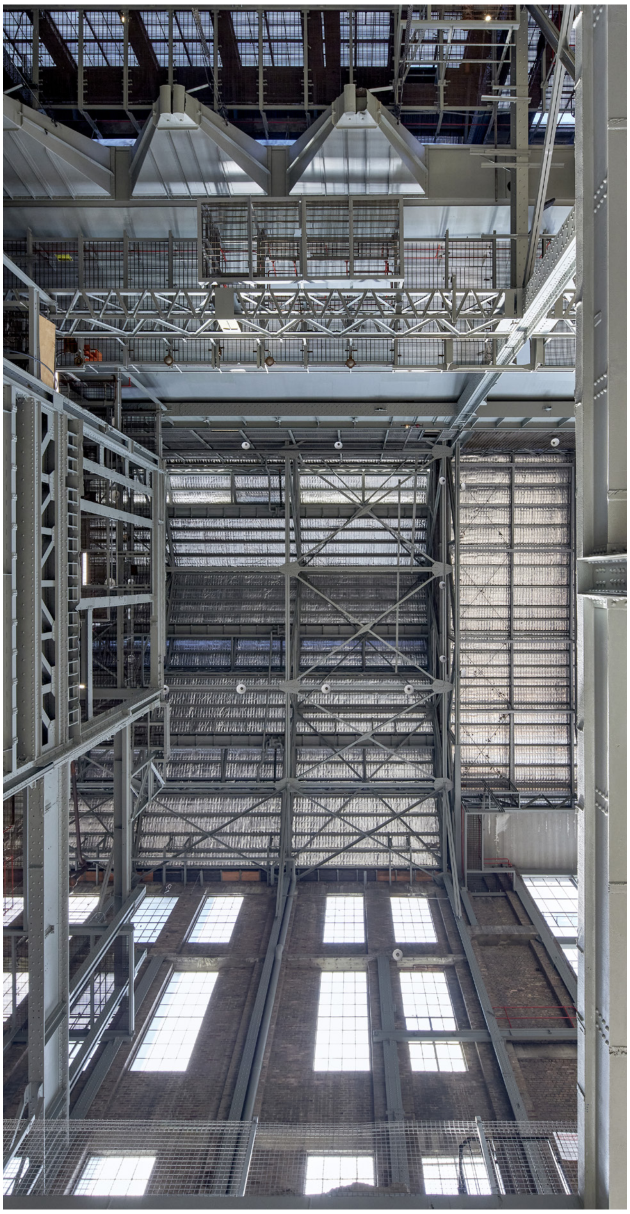


Figure 6.6.21 View of the underside of the Boiler House roof from the ground level through the void of the former Boiler No. 2, 2023 (courtesy of Toby Peet).

Figure 6.6.22 The Conveyor Level of the Boiler House, 2023 (courtesy of Toby Peet).

A visual and physical connection with the neighbouring Pump House is provided by the headers and piping against the west wall of the Boiler House, which carry the steam to the steam high pressure feedwater pumps and the next stage of the operation systems.

Except for the north end and west side of the Boiler House, the remainder of the space is expansive and empty. Before the boilers were removed, this vast space was full of machinery and open grid walkways. The significance of the space and the machinery could still be retained and respected if some of these voids were again filled with a machine-like structure.

To assist interpretation and respect the significant scale and rhythm of the place, these new structures should be of steel and glass with no masonry. Any new floor space or structures in these areas should interpret the mass and voids of the original boiler machinery and their vertical continuity from floor to roof.

The voids in the floors could be closed to create a floor space providing an opportunity for various uses. However, those void areas must be differentiated to indicate their locations. The original open grid upper floors could also be reconstructed or interpreted; however, this should be executed to allow for adequate physical and visual curtilage to appreciate the extant boiler and its interpretation.

Policy 6.24 — Boiler House voids

The void of the former Boiler No. 2 should be retained in order to appreciate the full height view of the extant No. 1 Boiler.

Any insertions into the former Boilers No. 3 and 4 voids should be non-monolithic and respectful of the existing building fabric. They should be read as two separate structures and not dominate the space.

6.6.7.1 Conveyor Level

The Conveyor Level and the Transfer House are much smaller and separate from the main Boiler House space. Much like the Coal Hoppers, they represent the transition from the Coal Handling System to the Steam-Raising System, receiving the coal from the External Conveyor. Given the size and configuration of the space, it is not suitable for use as anything other than a space for interpretation.

6.6.7.2 Tolerance for Change

Building/Space: BOILER HOUSE	**Tolerance for Change 1 = Low tolerance 2 = Moderate tolerance 3 = High tolerance**				**Further Considerations** (to be read in conjunction with the relevant policy section for each element)
	Form	**Fabric**	**Function**	**Location**	
Curtain walls	1	2	1	1	Retain the quality of natural light in the space. Up to 10% of the area of the glass curtain wall in the 1958 section can be glazed in clear glass. This 10% should be scattered in small areas and not exceed 3 panes contiguously. Any surviving obscure glass should be retained, and new matching glass should replace the missing panes. Any proposal for the wholesale replacement of the curtain walls must involve authority approval and assessment against the conservation policy.
Steel structure	1	2	1	1	The steel stucture and its fixings should have their paint coatings periodially reviewed, and spaces kept dry.
Void spaces	1	–	1	1	New structures within the space are subject to assessment against the conservation policy.
Grated walkways and bridges	1	3	2	2	Can be modified, and isolated sections can be replaced with like material for safety. Retain and respect their transparency, and quality of filtered light. Should be periodically reviewed for stability and tightness of clamps.
Boiler House walls	1	2	1	1	Unpainted masonry must not be painted, and retain all evidence of fixings and signage. Additional fixings and elements must respect the quality, character, and ability for interpretation.
Roofs	1	2	1	2	The form of the existing roof should be retained and monitored for leaks, corrosion and rust. Box gutter and sump flows should also be monitored. New skylights and solar panels in the plane of the existing roof slope are permitted. Retain former roof ventilators on the 1958 roof.
Roof louvres (1958 section)	2	3	2	2	Evidence of methods to deal with natural ventilation and the accumulation of heat. The louvres may be retained or replaced with similar louvres.
Concrete plinths (former machinery mounts)	2	2	3	1	Several redundant plinths were removed in 2023 for activation. Removal of further extant plinths is not possible without authority approval. Any removal should retain evidence for interpretation.
Voids of former Boilers no. 2, 3, and 4	1	2	1	1	Any new flooring should retain visually discerning evidence of the original location of the voids with a different material, e.g. steel plate or steel mesh. Original grated voids around boilers could be interpreted as steel grates, glass (clear or frosted), mesh, voids, etc.
Stair on the north elevation (2023)	3	3	2	3	It may be moved, modified, replaced, or demolished. Any replacement must consider the character, quality, and conservation policies.
The 2022–24 insertions, including internal stairs, balustrades and timber plinths	3	3	1	3	Internal stairs in void 4, balustrades and timber plinths may be modified, replaced, or demolished. Any replacement or modification must respect the character and quality of the space and the identity of White Bay Power Station.
Southeast lift shaft	1	3	2	3	Opportunity for use as a new passenger lift within the shaft (refer to opportunity for change).
Northwest lift shaft	1	2	2	2	Opportunity for use as a new passenger lift within the shaft (refer to opportunity for change). The existing lift and plant equipment may be recorded and demolished only if replaced with a new lift.

Building/Space: **BOILER HOUSE**	Tolerance for Change 1 = Low tolerance 2 = Moderate tolerance 3 = High tolerance				Further Considerations (to be read in conjunction with the relevant policy section for each element)
	Form	Fabric	Function	Location	
Southeast exiting stair	2	2	2	2	Handrails and nosings can modified for compliance. Stair configuration to retain. Tiles to be stabilised and reinstated.
Southeast bathroom	2	2	2	2	Bathroom may be retained or modified.
Ground floor rooms along the western wall (shared with Pump House)	2	2	2	2	Internal walls between rooms may be opened but retain interpretation of the original configuration. Original timber doors should be retained and, if necessary, adapted with compliant hardware.
Ash Kibble Truck Shed (north elevation)	2	2	2	2	It may be altered to provide appropriate weather protection, but the size, quality and character should be respected. The shed and its contents should be interpreted. Demolition is not possible without authority approval and appropriate storage of moveable heritage.
Machinery					
Coal Weigher	1	2	1	2	The Coal Weigher has little tolerance for change. It should be displayed and interpreted.
Coal Hoppers	1	2	2	1	Retain the visible void between Level 1 and the underside of the Coal Hoppers. Paint coatings should be periodically monitored.
Pulverising Mill	1	1	1	1	The Pulverising Mill has little tolerance for change. It should be displayed and interpreted. Pulverising mill balls (on the west wall) must be retained and interpreted.
Chutes from Hopper to Mill	1	2	2	2	The Chutes from the Hopper to Mills have little tolerance for change. They should be displayed and interpreted.
The Pulverised Fuel Feed Pipes	1	2	1	1	The Pulverising Fuel Feed Pipes have little tolerance for change. They should be displayed and interpreted.
The Boiler	1	2	1	1	The full-height view of the Boiler should be retained by retaining the void of the No. 2 Boiler.
Forced Draft Fans	1	2	1	1	The Forced Draft Fans have little tolerance for change. They should be displayed and interpreted.
The Headers	1	2	1	1	The Headers have little tolerance for change. They should be displayed and interpreted.
Oil Heater Pumps and Valves	1	2	2	1	The Oil Heater Pumps and Valves have little tolerance for change. They should be displayed and interpreted.
Soot Blower Cabinet	1	2	1	1	The Soot Blower Cabinet has little tolerance for change. It should be displayed and interpreted.
The Boiler House Control Room	1	2	1	1	The Boiler House Control Room has little tolerance for change. It should be displayed and interpreted. Access should be restricted due to fragile nature of contents.
Ash Kibble Sets	1	2	1	2	They should preferably remain in situ. They could be moved but should stay within the Boiler House and interpreted.
Ash Trucks	1	2	1	2	Refer to Opportunities for Change.
Selenium Rectifier for charging Ash Carts	1	1	1	1	The Selenium rectifiers have little tolerance for change. They should be displayed and interpreted.

6.6.7.3 Opportunities for Change

Explore Opportunities: BOILER HOUSE	**Comment**
New structures inserted into the voids of Boilers no. 3 and 4.	New structures to be of modern finishes that clearly distinguish them as an insertion or addition. They must not overpower the existing structures. They should have a sense and aesthetic of being a machine-like structure and can be of a similar scale to the Boilers. Any new structures should maintain a sense of openness and space between the voids of the former boilers: new structures should be offset at least one metre from the edge of the existing concrete cutout of voids, with a clear or grated void. There is potential to extend the floor plates beyond these void areas above Level 1 but without opaque partitions to retain transparency.
Ash Trucks	Opportunity to restore at least one of the three ash-trucks.
Lifts	The existing southeast and northwest lift shafts can be utilised for a new passenger lift including new motors, rails and lift cars.
Electrical cabling	The electrical cables installed on catenary lines in 2022–24 and associated lighting can be removed and a new system should be introduced that is carefully placed so as not to detract from the quality and significance of the space.
Windows	The use of transparent acrylic and polycarbonate is considered temporary and may need to be reviewed and replaced within 5-10 years. The long-term reuse of White Bay Power Station should seek to replace or refurbish the original window frames with glass.

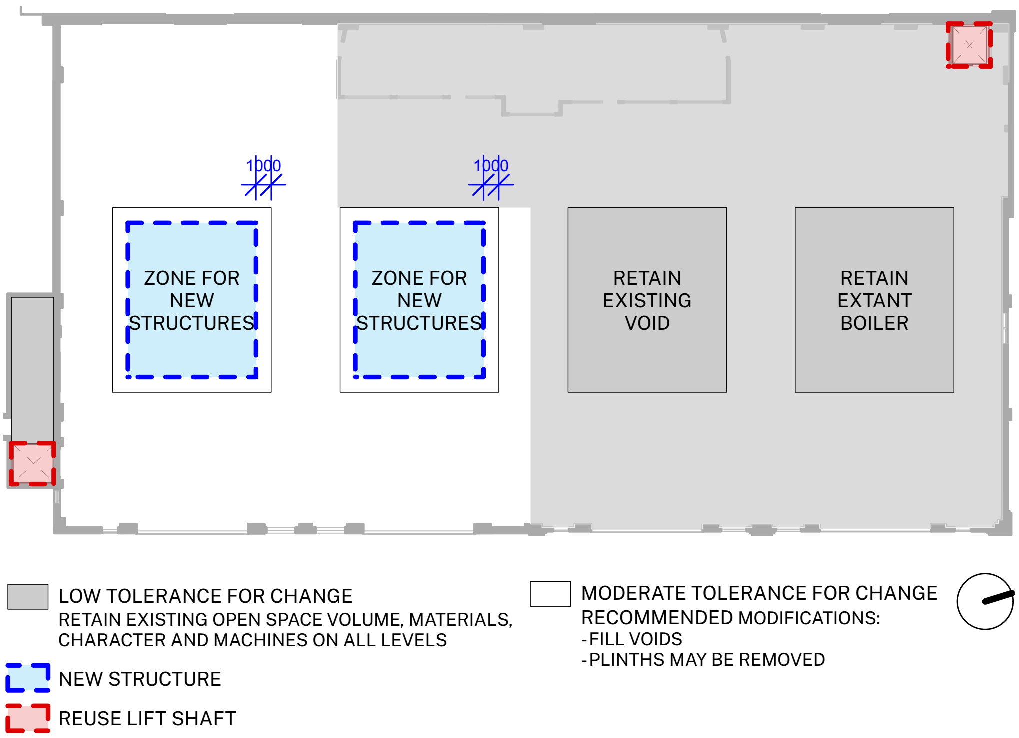


Figure 6.6.23 Boiler House diagram for potential new development (diagram represents all levels).

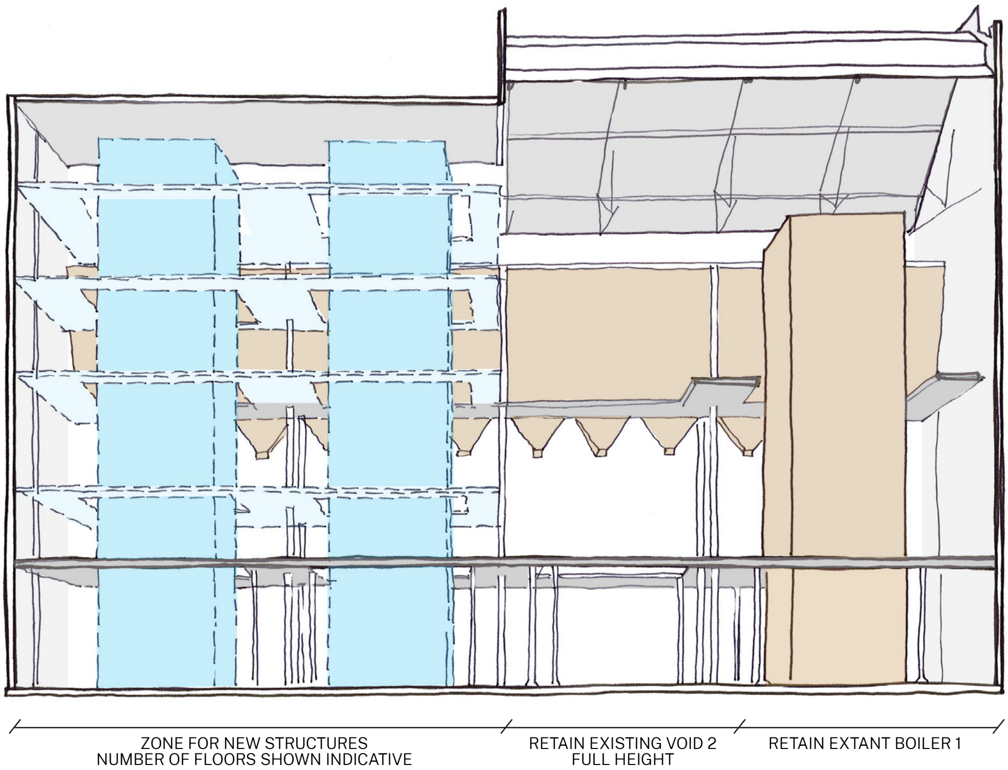


Figure 6.6.24 Boiler House diagram for potential new development (east looking west).

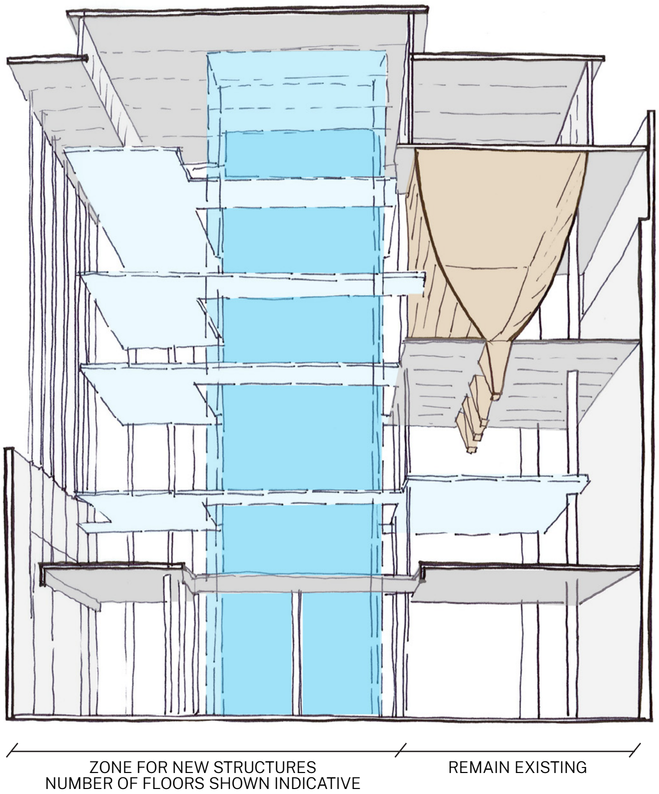


Figure 6.6.25 Boiler House diagram for potential new development (north looking south).

6.6.8 Pump House

The Pump House is a key space in the building complex of the power station. It is a tall, narrow space between the Boiler House and Turbine Hall.

The Pump House floor levels align with those of the Turbine Hall and the Boiler House. The Pump House is effectively two parts with different construction, character and contents. The northern half, aligning with the Boiler House, dates from the first construction phase, completed in 1917 and substantially altered in the 1950s. It is a brick structure with a concrete flat roof and three floors containing various pumps, controls and water tanks. The tall void above the main turbine floor is filled with pipework and large riveted iron water tanks supported on steel beams, associated platform areas, and catwalks that link with the Boiler House and provide access to the gantry cranes in the Turbine Hall.

The southern part was completed with the 1927 second phase, consisting of concrete block and reinforced concrete construction with two floors and a steel framed pitched roof. All the machinery has been removed from the southern half adjacent to the now demolished second Boiler House. This provides a narrow, soaring, high space, providing considerable opportunity for creative use and infill structure. Refer to Volume 2 – Heritage Inventory of the CMP for detailed descriptions and catalogues of the individual spaces, machinery, and moveable heritage catalogue.

The Pump House underwent remediation in 2022–24, including decontamination, lead paint encapsulation, and reparation.

In accordance with Policy 6.1, any future uses or changes should seek to maintain and strengthen the significant aspects of this building. Its character, configuration, and form should all be conserved.

Figure 6.6.26 North half of the Pump House, 2024 (courtesy of Chris Bennett: Evolving Picture).

The Pump House houses machinery and equipment associated with the Feedwater System. Most of the machinery and equipment is located in the northern half of the building. All Pump House machinery is of exceptional significance, is integral to the power station, and should be retained and conserved in situ in accordance with Policy 6.9.

Policy 6.25 — Pump House

The Pump House is part of the building that forms the largest bulk of the White Bay Power Station. Its character, form, configuration and quality should all be conserved in accordance with Policy 3.4. Any changes to the Pump House must retain and respect its defining elements, including:

- *the dense configuration of pipes, tanks and machinery in the northern half of the Pump House*
- *the narrow, longitudinal spatial quality*
- *the relationship and multiple connections to the adjacent Turbine Hall and Boiler House, and the south connection to the Administration and Staff Accommodation*
- *its interpretation as a major space facilitating the Feedwater System*

Given the narrow and linear quality of the building, the flexibility of adaptive reuse within the Pump House varies considerably from space to space depending on the density and configuration of equipment and machinery.

Key features of the northern half of the Pump House include:

- Significant machinery, tanks, pipework and components of the Feedwater System and access platforms in a dense configuration.
- Limited natural daylight except from the north wall and openings to Turbine Hall.
- The visual and physical relationship and connections with the Turbine Hall and Boiler House at each level.

This northern section retains such a dense configuration of significant machinery that a new use other than interpretation within this area would be difficult to accommodate.

Key features of the southern half of the Pump House include:

- Soaring void space with remnant steel beams traversing space at high levels.
- Visual connection along the north-south axis, particularly on the second floor level.
- Evidence of workshops on the second floor level.
- The visual and physical relationship and connections with the Turbine Hall, particularly at the second floor level.

Compared to the north end, the southern section of the Pump House is mainly devoid of machinery and pipework and, therefore, offers considerable opportunity for adaptive reuse. The ground floor southern section of the Pump House could be either retained as a single space with partial floors added within it or divided into separate levels and spaces. The extant workshop spaces could be repurposed into creative spaces.

Policy 6.26 — Pump House north

The northern section of the Pump House, with its dense configuration of significant machinery, should primarily be used for interpretation. However, access through the north end is possible at multiple points, and some minor use, such as a workshop or office activity, may be compatible as long as it fits in and around the machinery and does not obscure it or place it at risk.

Policy 6.27 — Pump House machinery configuration

The dense configuration of pipes and tanks in the northern half of the Pump House and their connections to the Boiler House should be maintained.

Policy 6.28 — Pump House south

Any additions should not detract from or obscure the sense of the Pump House as a long and narrow space on the upper floor. Visual connections on the second floor with the northern Pump House should be retained if possible. This section should not be divided into separate spaces.

Adaptive reuse policies for the White Bay Power Station (Section 6.10) allow for a new building to be constructed to reinstate the bulk, form, and scale of the second Boiler House (demolished in 1976). Existing blocked openings on the east wall of the Pump House provide key evidence for Boiler House No. 2's demolished levels within the Pump House. If a new building is built in place of the second Boiler House, it will need to connect with the east wall of the south Pump House with connections through the wall. Existing blocked openings can be reused or new openings created.

Policy 6.29 — Pump House openings

New openings on the east wall of the Pump House can be accommodated. Existing blocked openings can be reused or new openings created. New openings in the east wall of the south Pump House can be generously sized, but the east wall's strength, character and significance as a barrier between the Boiler House and the Pump House must be maintained.

Figure 6.6.27 Dense configuration of tanks and pipework on the north, mezzanine level of the Pump House, 2023 (courtesy of Chris Bennett: Evolving Picture).

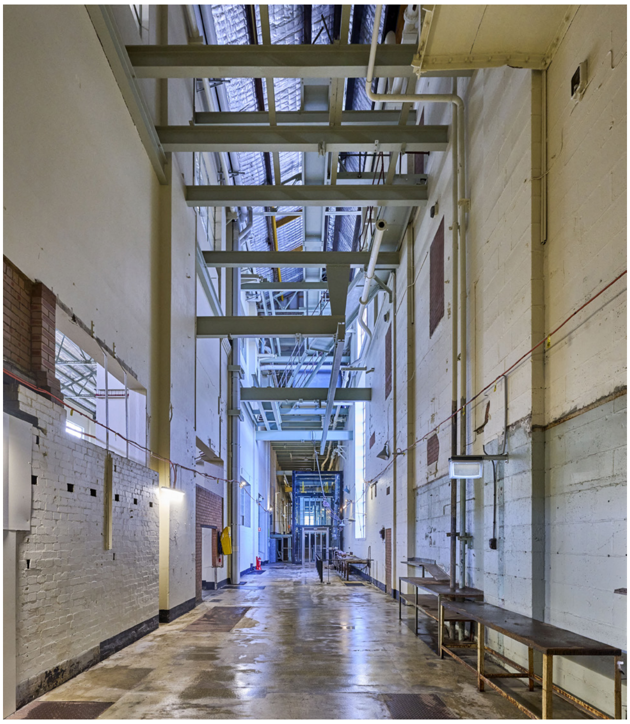


Figure 6.6.28 The south end of the Pump House with extant benches and catwalks above, 2023 (courtesy of Chris Bennett: Evolving Picture).

6.6.8.1 Tolerance for Change

Building/Space: PUMP HOUSE	**Tolerance for Change 1 = Low tolerance 2 = Moderate tolerance 3 = High tolerance**				**Further Considerations** (to be read in conjunction with the relevant policy section for each element)
	Form	**Fabric**	**Function**	**Location**	
Connections to Turbine Hall and Boiler House	2	3	2	2	In the early configuration of openings, their consistent size and consistent openings should remain in their present configuration. Limited new openings at the higher level of the Pump House's southern half could be made to connect to the Turbine Hall. Any new connections must respect the existing open spatial qualities.
Later, blocked openings to the Turbine Hall at the south end on level 2	3	3	3	3	Brickwork may be removed.
Access to Administration and Staff Accommodation	2	2	2	2	Retain access to the Administration and Staff Accommodation at the south. The visual relationship to the laboratory at the upper level should be retained and not obscured.
Pump House walls	1	2	2	1	Evidence of machinery and pipework on walls should be retained. Existing paint finishes should be retained, and failed paint touched up. Check for signs of dampness on walls (salt damage, mould, etc.) and report them without delay to allow diagnosis and maintenance. Visually check for falling debris and loose items and repair them as soon as possible.
East windows shared with Boiler House at the north end	1	2	1	1	Evidence of 1917 configuration with former Boiler House No. 1 and rare original steel framed windows. There is little tolerance for change, and it must be retained. Glazing can be inserted.
Gantry Crane north end	2	2	2	3	It must be retained but may be moved or put into working condition.
Ground floor south end	2	2	2	1	Manage the solution for water ingress as it occurs. Develop a permanent remediation plan, which may involve external sub-surface drainage and tanking of the wall.
Grated walkways and bridges	2	2	1	2	They can be modified, and sections can be replaced with similar materials for safety. Retain and respect the transparency and quality of the filtered light.
North window (north elevation)	1	2	2	1	There is little tolerance for change. The glazing may be replaced.
North Roof – Flat Concrete roof	2	3	1	1	Evidence of two phases of construction. Some tolerance for skylights could be added. The ventilators provide evidence of methods to deal with natural ventilation and heat accumulation. The vents should be retained for natural ventilation. Periodically check for leaks, corrosion, and rust, and treated to prevent premature decay of roof sheets. Box gutter and sump flow should also be periodically checked.
South Roof – Pitched steel-framed roof	2	2	2	2	Opportunity to reinstate the roof lantern for light and ventilation. Periodically check for leaks, corrosion, and rust, and treated to prevent premature decay of roof sheets. Box gutter and sump flow should also be periodically checked.
New lift	3	3	2	2	The lift is located to connect three levels and to minimise visual impact. Its construction involved permanent building changes; therefore, while the lift is not significant, its utility is needed and should be retained in this location, and periodic maintenance conducted.

Building/Space: PUMP HOUSE	Tolerance for Change 1 = Low tolerance 2 = Moderate tolerance 3 = High tolerance				Further Considerations (to be read in conjunction with the relevant policy section for each element)
	Form	Fabric	Function	Location	
New Stairs (south end) and balustrades	3	3	2	3	Stairs and balustrades may be modified, replaced, or demolished. Any replacement or modification must respect the character and quality of the space and the identity of White Bay Power Station.
East wall south end	2	3	2	2	New openings can be made subject to Policy 6.29. Until a permanent remediation solution is developed, a safety exclusion zone should be maintained in the immediate area outside the wall.
Bin Room and First Aid Room on Ground Floor	3	3	3	3	These spaces date from c.late-1970s brick partitions. They are of low significance and may be altered, modified or demolished.
Workshop benches, second floor	2	2	2	1	Evidence of working conditions and skills. There is little tolerance for change. Retain and preserve the fabric.
Machinery					
Electric High Pressure Feedwater Pumps	1	1	1	1	The Electric High Pressure Feedwater Pumps have little tolerance for change. It should be displayed and interpreted.
Steam High Pressure Feedwater Pumps	1	1	1	1	The Steam High Pressure Feedwater Pumps have little tolerance for change. It should be displayed and interpreted.
Monitor and Metering Cabinets	1	1	1	1	The Monitor and Metering Cabinets have little tolerance for change. It should be displayed and interpreted. The protective screens can be removed or replaced.
Feedwater and Condensate Tanks	1	2	1	1	The Feedwater and Condensate Tanks have little tolerance for change. It should be displayed and interpreted. Opportunity to light from beneath.
Oil Circuit Breakers	1	2	1	1	The Oil Circuit Breakers have little tolerance for change. It should be displayed and interpreted. Opportunity to light from beneath.

6.6.8.2 Opportunities for Change

Explore Opportunities: PUMP HOUSE	Comment
South Pump House roof lights	The roof lantern to the south Pump House roof is covered, which means this space has very little natural light. There is the opportunity to replace the solid cladding to the roof lanterns with transparent material for light.
Mezzanine floor (PHM.1)	The floor slab of the space should be repaired.

6.6.9 Turbine Hall

The Turbine Hall houses machinery and equipment associated with the Power Generating, Feedwater and Circulating Water Systems. Most of the machinery and equipment is located at the northern end of the building. All Turbine Hall machinery is of exceptional significance, is integral to the power station, and should be retained and conserved in situ in accordance with Policy 6.9. In accordance with Policy 6.1, any future uses or changes should seek to maintain and strengthen the significant aspects of this structure. Its character, configuration, and form should all be conserved.

The Turbine Hall's soaring, cathedral-like scale and proportions render it the largest building of the White Bay Power Station. It retains key representative machinery and equipment, including the "heart" of electricity generation operations, as the extant Turbo-Alternator Set. The configuration of the Turbine Hall consists of a series of partial or broken up floor spaces, some of which are mezzanines rather than complete floors, up to the main floor level of the extant Turbo-Alternator Set at the northern end of the building. The space above this main turbine platform is open to the roof, giving a uniquely large and long space of exceptional volume and aesthetic significance. The ceiling soars above, featuring rhythmic steel trusses, lights, lanterns, gantry beams, and three overhead gantry cranes.

Figure 6.6.29 North end of Turbine Hall with Overhead Cranes, 2024 (courtesy of Chris Bennett: Evolving Picture).

Together with the Pump House, which was constructed simultaneously and effectively as a single building, the building is built in two parts. The northern half dates from the first construction of the phase, completed in 1917 and consisted of brick outer walls. The floor plates, internal walls, and plinths are reinforced concrete, dating from the 1950s modernisation with new machinery. The southern half was completed in 1927 and consisted of a consistent design, albeit the walls are an early form of concrete block and reinforced concrete construction. The south section of the Turbine Hall was not part of the 1950s renewal, so the internal configuration, floor plates, plinths and voids are key evidence of the first generation of removed turbines and machinery.

A significant feature of the Turbine Hall is the water cooling channel that stretches the entire length of the Turbine Hall below ground level. The cooling channel connects Rozelle Bay (inlet) and White Bay (outlet). The inlet and outlet canals are separately listed on agency registers.

The guidelines and policies below should be followed to retain and respect the significance of the Turbine Hall and allow its adaptive reuse.

Policy 6.30 — Turbine Hall

The Turbine Hall is a major structure and the largest building in the White Bay Power Station building complex. Its character, form, configuration and quality must be retained and conserved in accordance with Policy 3.4. Any changes to the Turbine Hall must retain and respect its defining elements, including:

- *the No. 1 Turbo-Alternator as the extant "heart" of electricity generation*
- *the evidence of removed machinery and the industrial character of the space through the voids, platforms, and large plinth blocks*
- *the sheer scale and openness of the structure and the soaring height of the upper floors*
- *its interpretability as a major structure facilitating the Feedwater, Circulating Water, and Power Generation Systems*
- *its connections to Rozelle Bay and White Bay via the subsurface inlet and outlet canals*

The magnitude of the Turbine Hall internal space – particularly on the upper levels – provides enormous potential for compatible adaptive reuse of this structure (see Section 6.10 for general policies on activation and adaptive reuse). In accordance with policy 10.4, any future use of the space should respect its key significant values and the associated elements.

In particular, the extant Parsons Turbo-Alternator Set is a vital component of White Bay's power generating system and is the "heart" of electricity generation at the power station. The configuration of the floor spaces and voids is such that a relationship between the turbo-alternator set and the condensers below the ground floor may be readily interpreted, alongside their connections to the Steam Raising System.

> **Policy 6.31 — Parsons Turbo-Alternator Set**
>
> *The extant Parsons Turbo-Alternator Set should be conserved in situ and respected as a focal component of the space. The Turbo-Alternator Set should not be obscured or hidden from view.*

The Overhead Cranes are integral to maintaining the elements associated with the Power Generating System. They represent the ongoing process of upgrading systems and moving away from dependence on English equipment to locally made machinery. All three cranes must be retained and interpreted. At least one of the overhead gantry cranes should remain in the northern section so that the role in the maintenance regime of the machinery and equipment of the Turbine Hall may be readily understood and interpreted. Refer to the Tolerance for Change tables below for cranes.

The Turbine Hall also has several extant concrete plinths that once supported large machinery and other turbo-alternator sets.

Figure 6.6.30 North end of the Turbine Hall with the Parsons Turbo-Alternator Set and other machinery and equipment, 2024 (courtesy of Chris Bennett: Evolving Picture).

The voids to the north and east of the Turbo-Alternator Set enhance the interpretability of the operational systems. The relationship of these voids to the rest of the space is significant and should be maintained.

6.6.9.1 Turbine Hall Machinery

An interpretation of the Circulating Water System will not only contribute to an understanding of the processes of power generation at White Bay. Still, it will also provide an understanding of the relationship between the power station's operations and its broader environment. The water for the Feedwater System was drawn from White Bay and returned to Rozelle Bay after its use. The subsurface channels leading from the power station to and from White Bay provide a physical connection. There is potential for enhancing this direct link between the operational systems associated with steam and the inlet and outlet channels at Rozelle Bay and White Bay.

Audio and lighting could be used – particularly on the Ground Level in darker spaces – to enhance interpretability of machinery. See Section 6.19 for Interpretation.

Figure 6.6.31 Ground Level of the Turbine Hall, with plinths for former machinery, 2024 (courtesy of Chris Bennett: Evolving Picture).

Figure 6.6.32 Level 1 of the Turbine Hall looking north, with the Switch House observational bay windows on the left, 2024 (courtesy of Chris Bennett: Evolving Picture).

6.6.9.2 Tolerance for Change

Building/Space: TURBINE HALL	Tolerance for Change 1 = Low tolerance 2 = Moderate tolerance 3 = High tolerance				Further Considerations (to be read in conjunction with the relevant policy section for each element)
	Form	Fabric	Function	Location	
Turbine Hall walls	1	2	1	1	Maintain the significant character and rhythm of the piers and openings with a vertical expression and capped by the gantry beam. There is the potential for new openings as long as it does not alter the piers, the character and the rhythm. Painted walls match earlier paint schemes and should be maintained. Areas of original wall tiles must be maintained. Periodically check painted surfaces and touch up failed paint. Check signs of dampness on walls (salt damage, mould, etc.) and report them without delay to allow diagnosis and maintenance. Monitor and tap test sandstone of external walls. Visually check for falling debris and loose items and repair them as soon as possible.
Light fittings and fixtures	1	2	2	1	Early light fittings and other fixtures remain to be retained in situ.
Windows – Administration building	2	2	2	1	Retain window openings to the Administration and Staff Accommodation.
Three observation bay windows from the original Control Room	1	2	1	1	Prominence and visibility to be respected. They should be conserved and retained.
West elevation windows – north end	1	2	1	1	Original steel windows with early heat-resisting glass. These windows are substantially intact and should be repaired and restored rather than replaced.
West elevation windows – south end	2	3	1	1	The south windows are removed and may be replaced with modern window suites, preferably of a louvred style (framed or frameless) that respects the character of the original design.
Barriers	2	2	1	2	Additional barriers can be installed for compliance. Original handrail details should be retained and respected.
Turbine platform – level 1 and 2	2	2	2	1	No permanent partitions or platforms higher than 2200mm high will be placed on the existing platform levels. Where temporary structures are used, they are to be removable, and fixtures are not to damage existing building fabric.
Open volume above Turbine platform (level 1 and 2)	1	2	2	1	Maintain the quality and character of volume above the turbine platform level for the entire length of the space. Potential to construct higher level observation platforms along the east, south and west walls, as long as these are a discrete new element, attached to the wall, extend no further than 2m into the void and are below gantry crane level to allow their continued operation.
Ground and Mezzanine levels	2	1	2	2	Potential to insert new levels and enclosed spaces below the 1920s and 1950s turbine platform levels south of No. 1 Turbine machinery.
South Void (adjacent to the Administration Building)	2	2	2	2	The void must remain open. The mesh grating at the north end may be removed and the void filled with contrasting material, in line with adjacent railings, to create a trafficable area that overlooks the south void.
Middle Void (in line with high-level bay windows)	2	2	2	1	The void must remain open, including a visual connection to the bay windows and roof.
Removed 1950s Turbo-Alternator Platform (level 2)	2	2	2	2	The void may be filled with contrasting material to create trafficable areas. Infill material should allow light to filter to the ground level. Retain 1950s handrails to stairs along the west wall.

Building/Space: **TURBINE HALL**	Tolerance for Change 1 = Low tolerance 2 = Moderate tolerance 3 = High tolerance				Further Considerations (to be read in conjunction with the relevant policy section for each element)
	Form	Fabric	Function	Location	
North Void (north of no. 1 Turbo Alternator)	1	2	1	1	The void must remain open, including a visual connection to the crane and roof trusses at entry.
All other platform voids (not detailed above)	1	1	2	1	Evidence of removed turbines and machinery. Up to 50% of voids may be filled at any one time with contrasting material to create trafficable areas.
Concrete Plinth	2	3	2	2	Plinths for machinery and turbines on ground level more than 1m high to be retained. Smaller plinths may be removed and interpreted subject to approval.
Water channels	2	3	1	1	Opportunity to retain and interpret. Steel covers installed in 2022/23 for safety may be replaced, preferably with covers that allow vision through for interpretation. The water channel must remain open at both ends to prevent water stagnation.
Raised floor south end	2	3	2	2	The raised floor was added to create a safe and compliant trafficable space while preserving the original material underneath. The raised floor may be modified, repaired or replaced, but its function in preserving the original floor surfaces beneath must be retained.
Cable trenches	2	3	2	2	Cable trenches can be filled in with contrasting material. A representative few trenches should be kept open for interpretation.
White glazed wall tiles	2	1	2	1	Representative of the 1917 and 1928 phases. They have little tolerance for change and must be preserved and, preferably, not covered over.
Lower and Upper Control Room (TH 2.B.2 and TH 2.B.3)	1	1	1	2	The building must be retained and interpreted including walls, windows, configuration and stair. The internal cabinets and fitout are rare evidence of working conditions and should be retained.
Existing light fittings	1	2	1	1	Existing light shades must be retained. The internal electrical fittings and globes may be replaced to make them operational. Any new light fittings should not be confused with the original fittings. The fluorescent lights can be replaced with new ones.
Roof	1	3	1	1	The form of the existing roof should be retained. New skylights and solar panels in the plane of the existing roof slope are permitted. Roof should be periodically checked and monitored for corrosion, rust, and leaks.
New stairs and balustrades	3	3	1	3	Stairs and balustrades may be modified, replaced, or demolished. Any replacement or modification must respect the character and quality of the space and the identity of White Bay Power Station.
Steel platforms at the south end	2	3	2	2	Installed in 2023, they interpret earlier timber-framed platforms. They are not significant, but their function is important.

Building/Space: TURBINE HALL	Tolerance for Change 1 = Low tolerance 2 = Moderate tolerance 3 = High tolerance				Further Considerations (to be read in conjunction with the relevant policy section for each element)
	Form	Fabric	Function	Location	
Machinery					
Steam Control Valves	1	2	1	1	The Steam Control Valves have little tolerance for change. They should be displayed and interpreted.
The Turbo Alternator Set	1	2	1	1	The Turbo Alternator Set has little tolerance for change. It should be displayed and interpreted.
Cooling Fans	1	2	1	1	The Cooling Fans have little tolerance for change. They should be displayed and interpreted.
Overhead Cranes	1	1	1	1	At least one crane should remain in the northern section for interpretation. At least one, and preferably all three gantry cranes, can be made operable along the entire length of the hall for maintenance and adaptive use purposes.
The Condensate Pump	1	2	1	1	The Condensate Pumps have little tolerance for change. They should be displayed and interpreted.
The De-aerators	1	2	1	1	The De-aerators have little tolerance for change. They should be displayed and interpreted.
Sluice Gates and Motors	1	2	1	1	The Sluice Gates and Motors have little tolerance for change.They should be displayed and interpreted.
Circulating Water Pumps	1	2	1	1	The Circulating Water Pumps have little tolerance for change. They should be displayed and interpreted.
Condensers	1	2	1	1	The Condensers have little tolerance for change. They should be displayed and interpreted.

6.6.9.3 Opportunities for Change

Explore Opportunities: TURBINE HALL	**Comment**
Roof lanterns	The continuous roof lantern has been covered externally with a polycarbonate sheet. There is the opportunity to repair or install new glass louvres outside of the existing louvres for light and natural ventilation.
Window	The use of transparent acrylic and polycarbonate is considered temporary and may need to be reviewed and replaced within 5-10 years. The long-term use of White Bay Power Station should seek to replace or refurbish the original window frames and glass. Periodically, visually check that the polycarbonate and acrylic sheets are in good condition and not lifting or cracked. When necessary, replace broken or failed sheets.
Cranes	Opportunity to make one or all cranes operational to enable lifting, hanging or temporary partitioning of the Turbine Hall.
Divisions and Partitions	Potential to temporarily divide hall space using curtains or suspended screens that can be installed and removed as required. The cranes may be used for this purpose.
Underground channel	Opportunity to improve interpretation by enabling views into the channel e.g. mesh screens and lighting.
Access	Opportunity to increase the available areas for general access by making safe spaces that are currently restricted.
Electrical cabling	The electrical cables installed on catenary lines in 2022–24 and associated lighting can be removed and a new system introduced that is carefully placed so as not to detract from the quality and significance of the space.
Lighting and lamps	Early photographs of the Turbine Hall show bracketed lamps along both sides of the Turbine Hall. Some of these brackets remain along the east wall. These lamps could be reinstated based on the existing brackets and photographic evidence.
Clock	Reinstate the former clock visible in early photos of the Turbine Hall.

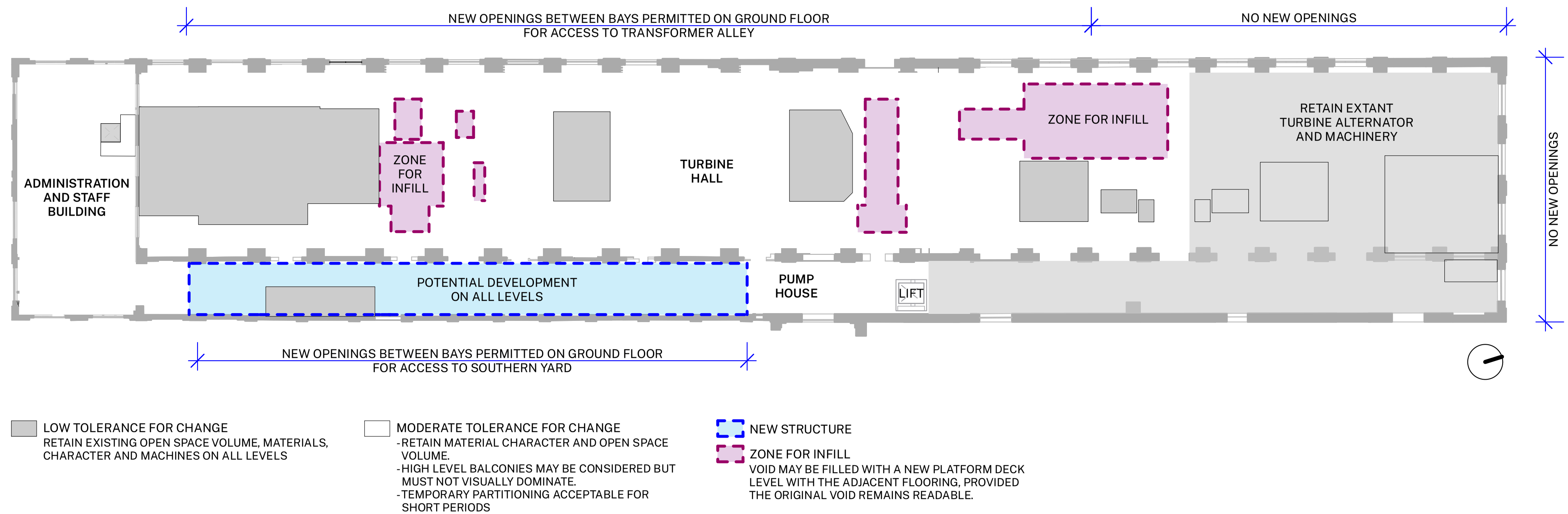


Figure 6.6.33 Turbine Hall and Pump House diagram for potential new development (diagram represents all levels) Note that zones for infill refer to voids on upper levels.

6.6.10 Administration & Staff Accommodation

The Administration and Staff Accommodation is integral to the White Bay Power Station. This area housed the administration and main staff facilities and was also the front of the house entrance for visitors to the power station via the Victoria Road Access Bridge.

Figure 6.6.34 East facade of the Administration and Staff Accommodation, 2024 (courtesy of Chris Bennett: Evolving Picture).

Figure 6.6.35 Level 2 stair lobby with window overlooking Turbine Hall (right), 2024 (courtesy of Christ Bennett: Evolving Picture).

Figure 6.6.36 Level 2 Locker Room with extant lockers, 2024 (courtesy of Chris Bennett: Evolving Picture).

The Administration and Staff Accommodation underwent remediation and activation works in 2022–24, including decontamination, repairs, repainting, and installing new services and amenities. Multiple rooms on Levels 3 and 4 are currently used as offices and meeting spaces, and areas of the Ground Level have been activated as flexible event spaces. Apart from moveable heritage elements, lunch tables, and the laboratories, very little significant fitout remains. Refer to Volume 2 – Heritage Inventory of the CMP for detailed descriptions and catalogues of the individual spaces and moveable heritage catalogue.

In accordance with Policy 6.1, any future uses or changes should seek to maintain and strengthen the significant aspects of the building. Its character, configuration, and form should all be conserved.

The guidelines and policies below should be followed to retain and respect the significance of the Administration and Staff Accommodation and allow its adaptive reuse.

Policy 6.32 — Administration and Staff Accommodation

The Administration and Staff Accommodation is a key part of the White Bay Power Station complex. This area contains some significant spaces and fitout elements, but generally, the spaces can be adapted for new uses. Nevertheless, its character, form, configuration, and quality must be retained and conserved in accordance with Policy 3.4. Any changes to the Administration and Staff Accommodation must retain and respect its defining elements, including:

- *its status as the front of house main entry with the lobby on Level 3 accessed via the Victoria Road Access Bridge*
- *extant fitout, equipment, furniture, signage, and fixtures evidencing original use of spaces for administration and amenities*
- *the laboratories on Level 4 as spaces integral to the testing and monitoring of efficiency and output of the power station*
- *its interpretability as a significant space facilitating the administrative aspect of the power station operations and social life*

It is essential to understand the whole White Bay Power Station story so that evidence of the use of these areas for administration and amenities is retained and respected. However, this can coexist with new use, as has already been achieved by the office fitouts and amenities completed in 2024 on Levels 3 and 4.

For the continued adaptive reuse of this building, the guidelines and policies below should be followed.

Policy 6.33 — Existing Administration and Staff Accommodation fitout

The existing floor, wall and ceiling materials and electrical fittings should remain exposed and functional wherever possible, particularly in public and circulation spaces where significant fitout survives. Where these materials require replacement or repair due to damage or decontamination, the existing patterns and jointing configurations should be retained and respected.

The Victoria Road Access Bridge was historically a key entry point onto the place. The bridge is integral to the front of the house and was remediated during the 2022–24 works. There is potentially the need to modify and make the entry gate interface with the Council bike path safer.

Policy 6.34 — Victoria Road Access Bridge and entrance

This original access bridge and entrance from Victoria Road should be retained as a significant administrative entry, noting that it is currently located beneath the 2024 access bridge (which is of little significance). Modification may include widening the sidewalk along Victoria Road to allow for improved safety measures and greater ease of access. Any modification must consider the heritage impacts of the access bridge and the ability to read and interpret the structure and entry experience.

The former kitchen for the Dining Room was formally housed in a timber structure attached to the south wall of the Administration and Staff Accommodation. It was demolished and archivally recorded in 2011 due to its condition and hazardous materials, but evidence remains in the form of the bricked-up passover window and external flashing.

Figure 6.6.37 Level 3 stairs of the Administration and Staff Accommodation with window to the Turbine Hall on the left, 2024 (courtesy of Chris Bennett: Evolving Picture).

Figure 6.6.38 The Victoria Road Access Bridge, 2024 (courtesy of Chris Bennett: Evolving Picture).

Figure 6.6.39 Laboratory on Level 4, 2024 (courtesy of Chris Bennett: Evolving Picture).

6.6.10.1 Tolerance for Change

Building/Space: ADMINISTRATION AND STAFF ACCOMMODATION	Tolerance for Change 1 = Low tolerance 2 = Moderate tolerance 3 = High tolerance				Further Considerations (to be read in conjunction with the relevant policy section for each element)
	Form	Fabric	Function	Location	
Flooring	1	2	1	1	The slip-resistant coating should be reviewed periodically. The long-term reuse of Level 4 should reinstate the timber floorboards or covered with lino sheets.
Kitchen and Dining Room	2	2	3	1	The former use as a dining room should be retained and interpreted. It includes retaining elements that interpret the former use, including the sink, oven, movie projector and pedestals. The blocked opening on the south wall was formerly a pass over for an external kiosk (now demolished), which can be interpreted.
Main Stair Level 1 to 4	1	2	1	1	The main stair is exceptionally significant and must be retained. New stair nosings or replaced/infilled balustrades are acceptable rather than replacement.
Stair – AS1.2	2	2	1	2	Stairs are of moderate significance. A performance solution for new stair nosings or replaced/infilled balustrade is acceptable rather than replacement.
Level 1 Space AS1.1	2	2	3	2	Space may be altered or subdivided. There is the opportunity to reinstate windows on the south and east elevations to enable natural light. The steel cage and shelving are of moderate significance and should remain, but they may be recorded and removed subject to a long-term holistic ruse.
Lighting	3	3	2	3	New light fittings should be simple, such as lineal surface-mounted fluorescents or shades. It is important not to “over-design” lighting or elevate spaces to a level of design that is higher than they ever were. Original fittings may be removed if required, but a representative few should be retained.
Level 2 Former Dining Room (AS2.6)	2	2	2	2	The room may be adapted for new uses, but evidence of the dining room (pedestals, sink benches, projector screen and the pie warmer) should be retained. The bricked-up wall on the south elevation (connecting the former canteen) may be converted to a window.
Level 2 bathrooms	2	3	2	2	The bathrooms are of low significance and may be retained, adapted or demolished.
Level 3 Entry	1	1	1	1	This space is of exceptional significance. Its material, character and window overlooking the Turbine Hall must be maintained and conserved.
Level 3 bathrooms	3	3	3	3	The accessible toilet was installed in 2023 and may be retained or removed. If removed, the door to AS3.5 should be repaired.
Level 3 former locker rooms (current offices)	2	3	2	2	Opportunity to use table pedestals for new tables. The plasterboard ceilings were installed in 2023 to encapsulate lead paint and can be removed and the original ceilings exposed.
Graffitied surfaces	2	2	2	2	Graffitied surfaces include rendered walls, tiles and lockers (currently stored on level 2). While most of it is in poor condition, the graffiti represents the period of decline between 1983 and 2022. The few samples of graffiti that are left should be retained.
Level 4 Former First Aid and Surgery rooms AS1.4 and AS1.5	1	2	1	2	Very little evidence remains of former first aid and surgery rooms. Spaces may be altered or reconfigured for new use.

Building/Space: ADMINISTRATION AND STAFF ACCOMMODATION	Tolerance for Change 1 = Low tolerance 2 = Moderate tolerance 3 = High tolerance				Further Considerations (to be read in conjunction with the relevant policy section for each element)
	Form	Fabric	Function	Location	
Level 4 Chief Engineers Office (AS4.4)	1	2	1	1	The high-level flat panelling on the east partition is added and may be hiding glazed partitions. This may be investigated and removed if desired. The power output indicators on the north wall are significant and must remain in situ. If there is sufficient evidence, the dial faces can be reinstated.
Passenger Lift	1	2	1	1	The lift shaft is highly significant. The timber panelling and woven wire shaft for levels 2, 3 and 4 should be retained. Subject to a suitable fire solution, the fire-resistant wall on levels 1 and 2 is intrusive and should be removed. A new lift can be accommodated, including rails, motor, etc., however, the original lift car should be reused, restored, or replicated to respect the style, material, and character.
Level 4 bathrooms	1	2	1	1	The bathrooms remain the most intact in the building and possibly the entire White Bay Power Station complex. They should carefully refurbish in a way that retains and respects their configuration and joinery while replacing necessary plumbing and fittings.
Level 4 Glazed Timber Partitions	1	1	1	1	1927 glazed timber partitions on Level 4 should be retained in situ.
Level 4 Laboratory Spaces (AS4.14 to 4.17)	1	1	2	1	Fixtures and fittings in the Laboratory should be retained for interpretation and may be available for some new and compatible use. The laboratories are in a poor state and should be carefully conserved.
Extant equipment, fittings, and fixtures, evidence of original use	1	1	1	1	Power output indicators remain of early phone systems, and any other surviving evidence and fittings should be retained in situ and exposed. Notwithstanding this, retention of these elements should not prevent viable and appropriate new uses.
Level 4 – Panelled ceiling	2	2	1	1	Original asbestos ceilings were replaced with fibre cement ceilings in 2023/24 to match the original configuration. The remaining asbestos and missing ceilings should be rebuilt to match the original.
Windows	2	2	1	1	The use of transparent acrylic and polycarbonate is considered temporary and may need to be reviewed and replaced within 5-10 years. The long term reuse of White Bay Power Station should seek to replace or refurbish the original window frames and glass. In particular, the visual relationship between the offices overlooking the Turbine Hall should be retained.
Walls	1	2	1	2	New wall openings can be made per the significance of each space. Regularly inspect painted surfaces and touch up any compromised paint. Check for signs of dampness on walls, such as salt damage or mould, and report them without delay to facilitate diagnosis and maintenance. Check visually for loose items and falling debris and address them as soon as possible.
Victoria Road Access Bridge	1	2	1	1	The access bridge should be retained as a key entry point into the White Bay Power Station. There is an opportunity to modify the pathway leading to the bridge to improve the entryway interface. Later balustrades and the DDA access ramp may be modified or replaced.

6.6.10.2 Opportunities for Change

Explore Opportunities: ADMINISTRATION AND STAFF ACCOMMODATION	**Comment**
Demolished former kitchen for the Dining Room	There is an opportunity to interpret this structure both internally and externally in relation to the Dining Room space.
Level 3 ceilings	The plasterboard ceilings were installed in 2023 to encapsulate lead paint. They may be removed, the original ceilings exposed, and the lead paint encapsulated.
Services	New services, including electrical and data, should be surface mounted neatly in conduits, painted with the walls, and located so they are not distracting. Except for level 4, where the air conditioning ductwork can be concealed within the ceiling space, any air conditioning ductwork must be suspended and exposed.
New Lifts	If a larger lift is required, an alternative location can be considered. Any new lift location must not substantially alter spaces or fabric graded as high or exceptional.

Figure 6.6.40 Administration and Staff Accommodation Building, Level 1, 2024 (courtesy of Chris Bennett: Evolving Picture).

Figure 6.6.41 Existing encased lift shaft on Level 1, 2024 (courtesy of Chris Bennett: Evolving Picture).

6.6.11 Switch House

The Switch House is a building integral to the power reticulation stages of electricity generation at the White Bay Power Station. Built in two stages, the first of brick in 1912–1917 and the second of reinforced concrete in 1927, it has been much altered and reconfigured over time. Major additions were made in the early 1950s, including battery and machinery rooms and the Entertainment Hall. The building's west and south elevations are one of the most visible elements of the power station from Victoria Road.

The Switch House retains many highly significant spaces, including the remains of the original 1917 Control Room overlooking the Turbine Hall through three sets of bay windows, the Cycle Switch House, the Motor Generator Room, and the Entertainment Hall. Refer to Volume 2 – Heritage Inventory of the CMP for detailed descriptions and catalogues of the individual spaces, machinery, and moveable heritage catalogue.

Figure 6.6.42 South end of Level 1 of the Switch House with the extant concrete cable runs, 2023 (courtesy of Chris Bennett: Evolving Picture).

In accordance with Policy 6.1, any future uses or changes should seek to maintain and strengthen the significant aspects of the Switch House. Its character, configuration and form should all be conserved.

The Switch House houses machinery and equipment associated with the Power Reticulation, Electrical Supply, and Auxiliary Power Supply Systems. All Switch House machinery and equipment are of exceptional significance, are integral to the power station, and should be retained and conserved in situ in accordance with Policy 6.9.

To retain the significant elements and values of the Switch House while allowing its adaptive reuse, the following guidelines and policies below should be followed.

Policy 6.35 — Switch House

The Switch House is a major structure in the White Bay Power Station building complex. Its character, form, configuration, and quality must be retained and conserved in accordance with Policy 3.4. Any changes to the Switch House must retain and respect its defining elements, including:

- *the Entertainment Hall as a space representative of social and recreational life at the power station*
- *the linearity and narrow space of the Transformer Alley*
- *its interpretation as a significant structure facilitating the Power Reticulation, Electrical Supply, and Auxiliary Power Supply Systems and being representative of the development of power reticulation technology during the 20th century*

Figure 6.6.43 South section of Level of the Switch House with the concrete housing for the cycle switches, 2023 (courtesy of Chris Bennett: Evolving Picture).

Figure 6.6.44 Motor Generator Room on Level 3 of the Switch House, 2023 (courtesy of Chris Bennett: Evolving Picture).

6.6.11.1 Entertainment Hall (Third Floor)

The 1952 Entertainment Hall on the top level is a unique space and offers interpretability regarding the social activities of the power station workers. The space, accessed only from the south end, off the original main access bridge, retains its original perimeter seating, painted murals, light fittings, pinball machine, stage and tearoom area. During the years after the power station's decommissioning, the deterioration of the building resulted in some leaking roof and gutter areas, as well as pigeon and pest damage. The space underwent repainting and repairs during the 2022–24 remediation works. The murals have also been conserved following review, assessment, and stabilisation by conservation specialists. Overall, the hall retains a remarkable intactness from the 1950s when it was regularly used for social activities.

Policy 6.36 — Entertainment Hall

The Switch House Entertainment Hall, including its furniture, murals, and configuration, is integral to the social significance of the power station and should be conserved and retained. Future uses should be related to arts, performance, and indoor recreational activities.

Windows may be double-glazed, and skylights may be added as long as the significant elements of the space are retained and respected. A discretely detailed door or doors connecting the side rooms to the stage with the battery room will enable secondary egress, and ancillary uses are allowed subject to the detail and per the Tolerance for Change tables. Some windows may be extended to the floor to access exits or balcony areas, but the painted murals between them and the wall seating should be retained.

The open truss ceiling should be retained, and the lightshades and other fittings, albeit refurbished with new luminaries, would be required. New services may also be added to enable viable new uses.

Policy 6.37 — Entertainment Hall murals

Full reinstatement of murals by painting new murals is discouraged, and minor retouching is preferred. Further creative interpretation, for example, by hanging an original photo or a fully restored impression in front of the murals, may also be considered. However, any form of creative interpretation is secondary to stabilisation.

6.6.11.2 Switch House Transformer Alley

Policy 6.38 — Switch House Transformer Alley

The Switch House Transformer Alley should be kept as a predominantly open space. The sightlines at ground level, north to south, and views from the Victoria Road Access Bridge should be maintained. Its sense of being an external space used to house transformers and mechanical equipment is to be respected. All accessways, stairs etc., should be retained and conserved per the Tolerance of Change tables.

Figure 6.6.45 Entertainment Hall Stage with painted mural, 2023 (courtesy of Chris Bennett: Evolving Picture).

Figure 6.6.46 Transformer Alley, 2024 (courtesy of Toby Peet).

6.6.11.3 Machinery

The House Electrical and Auxiliary Power Supply System and the Control Room for the Power Reticulation System are located within the Switch House. The Power Reticulation System is central to understanding the extent of the operational capacity of White Bay Power Station. At the same time, the House Electrical and Auxiliary Power Supply System retains elements from the earliest phase in the development of the power station.

The former Control Room overlooks the Turbine Hall through three floor-to-ceiling bay windows and, contains the Switch House Lighting Board and an early Motor Generator Set. The associated rooms are on either side of the former Control Room. The main room to the north had been a battery room, as evidenced by the imprints of the battery legs on the brick floor. Still, it became a store and workroom with shelving containing sundry dials, meters and associated equipment. The Motor Generator Room, Workshop, and Battery Room are to the south. The Battery Room retains the lead sheeting floor covering. Still, all machinery and equipment other than a single battery unit (containing batteries 51-56), a sink and a cupboard have been depleted. The workshop has also been depleted of all meaningful equipment besides a Pedestal Drill and the old No. 1 Battery Booster. The Motor Generator Room retains its total environment, including the Marble Switchboard, the motor generators No.s 3 and 4 and their associated switchboards.

The items and associated elements within the House Electrical and Auxiliary Power Supply System encompass a wide range of functions and fabrics in variable conditions. Items such as the sole extant battery in the Battery Room are in poor to moderate physical condition. In contrast, items such as the Air Compressor on the ground floor of the Switch House are in comparatively good condition. All items associated with these systems do, however, require cleaning and conservation to restore them to a readily interpretable state. Some items within these systems, such as the No. 1 Battery Booster in the Workshop, have been moved from their original positions and may need to be relocated, as appropriate, for interpretation purposes. Items such as the Air Compressor on the ground floor of the Switch House may be relocated to a more convenient location where the function may be more readily accessible for interpretation purposes.

Significant machinery and evidence survive at each level. They include the following:

- Level 1 – retains one surviving footing and enclosure for Reactor Tie and Tool Room area
- Level 2 – retains remaining BUS switches and enclosures; adapt other areas for new use
- Level 3 – retains the original Control Room, House Supply Switch Room and Battery Room. Other areas may be adapted.
- The Motor Generator Room on Level 3 (SH 3.14) will be retained in situ as a total environment. Other machines and associated equipment, as well as assorted dials, meters, etc., in the Switch House should be conserved in situ to enhance the interpretability in the context of the building's Electrical and Auxiliary Supply System.

Policy 6.39 — Switch House machinery

The depleted nature of the machinery and equipment scattered throughout the Switch House is such that some may be relocated in a manner that enables interpretation. The primary exception is the Motor Generator Room on Level 3, which is highly intact as a total, holistic environment clearly reflective of its original use. This room should remain intact and in situ.

Figure 6.6.47 The No. 1 Tie Bank on Level 2 of the Switch House, 2024 (courtesy of Toby Peet).

Figure 6.6.48 Extant 25 Cycle Switches on Level 2 of the Switch House, 2023 (courtesy of Chris Bennett: Evolving Picture).

6.6.11.4 Tolerance for Change

Building/Space: SWITCH HOUSE	Tolerance for Change 1 = Low tolerance 2 = Moderate tolerance 3 = High tolerance				Further Considerations (to be read in conjunction with the relevant policy section for each element)
	Form	Fabric	Function	Location	
Walls	1	2	1	1	Internal walls: reuse may require encapsulation of lead paint (subject to testing). Check for signs of dampness on walls and facilitate diagnosis and maintenance accordingly. External walls: periodically inspect external brickwork for cracking, vegetation, and defects. Maintain, test, and repair accordingly.
Roof	1	2	1	1	The roofs shouhld be monitored for leaks and corrosion, and box gutters and sumps should be regularly checked for flow. Roof access systems to be regularly checked and certified.
Windows	1	3	1	1	Periodically check visually that the polycarbonate and acrylic sheets are in good condition and not lifting or cracked. When necessary, replace broken or failed sheets.
Access to Transformer Alley	2	2	1	2	Direct access with added openings to the Transformer Alley is acceptable on the east, where it will not impact cross walls, machinery housings or high-voltage concrete cable risers.
Ground floor south space	1	2	2	2	The existing steel mezzanines should be retained but may be adapted or extended if integrated with a new use, provided the character of the space, including the single large volume, is retained. Any strengthening or added fabric must be identified as new work per Burra Charter principles. Partitions are acceptable temporarily. The concrete cable risers have little tolerance for change. Openings to upper floors may be blocked to enable fire separation.
Ground floor south space window openings	1	2	3	2	Windows may be unblocked to increase light and ventilation. Existing steel windows at the south end may be replaced.
Ground floor cable tunnel – west and south of the Switch House	1	2	2	2	There is little tolerance for change. Openings from the Switch House are acceptable if the openings do not impact cross walls, machinery housings or the concrete cable risers.
Ground floor north workshop	2	2	1	2	Interpretation of the space as a workshop is preferred. The tools and parts on the south wall should be reinstated and fixed for security. Other moveable heritage should be treated per the moveable heritage policy.
1950s north lift	1	3	2	3	Refer to opportunities for change.
1950s north stair	1	2	2	3	New work to meet compliance upgrades for handrails and nosings is acceptable. In the case of a major reuse, refer to opportunities for change.
1917 lift	1	1	1	1	The 1917 lift is a highly significant element. A new lift can be accommodated (including rails, motor, etc.), but the existing lift car should be reused, restored or, as a last resort, replicated to respect the style, material, and character.
1917 west stairwell	1	2	1	1	All old door plates, tiles, signs and display boxes in this area should be retained and conserved. The projecting cable trays at the lower level of the stairs may be cut back to enable compliant access, but evidence for their existence must be retained.

Building/Space: SWITCH HOUSE	Tolerance for Change 1 = Low tolerance 2 = Moderate tolerance 3 = High tolerance				Further Considerations (to be read in conjunction with the relevant policy section for each element)
	Form	Fabric	Function	Location	
1917 terracotta bricks used for high voltage cable risers on the ground and first floor	1	1	1	1	There is little tolerance for change. The paint on the terracotta bricks on the first floor should be stripped.
Level 1 Reactor Tie rooms and cages	2	2	1	2	The northernmost of these wire doors, concrete enclosures, and circle of support blocks should be retained. The remainder of the enclosures can be removed or reconfigured if they cannot be adapted. Earlier window openings could be reopened.
Level 1 South area	2	2	2	2	The southern section of this level comprises moderately significant spaces. At least one bay should be fully retained (preferably bay 1.6 in line with level 2 oil bath switches. The existing chain wire enclosures should be retained to the south and north of this intact space to maintain the sense of limited access. The tiled floor should be retained and conserved.
Transformer Alley	1	2	2	1	Clean regularly surface stormwater channels and subsurface stormwater and check they are free-flowing. Regularly remove weeds and any organic growth. Monitor, maintain, and repair walls accordingly.
Toilets overhanging Transformer Alley	2	3	2	2	The toilets may be archivally recorded and demolished for alternative uses.
Steel platforms and walkways overhanging Transformer Alley	1	2	1	1	There is little tolerance for change. The steel structure and supports may be strengthened if reused, and balustrades may be upgraded for compliance. The stairs should not be replaced. These should be regularly cleaned, checked for corrosion, and rust treatment reapplied if required.
Level 2 oil bath switches south of central 1917 stairs	1	1	2	1	There is little tolerance for change. Early switch gear (from the late 1920s) should be retained and interpreted in situ, complete with all its attendant cabling, timber and glass covers, etc.
Level 2 south area	1	2	1	1	The other elements in this southern second-floor section, which have the empty concrete enclosures for this switch gear, should, if possible, be retained and adapted for a new use in a creative manner that responds to their configuration. Their complete removal should only be considered as a last resort with one comple bay retained.
Level 2 north area	2	2	2	2	These spaces are primarily empty of machinery and have a greater tolerance for change. The individual rooms should be retained, but openings between rooms may be accommodated.
Level 2 Mezzanine (accessed from level 3)	2	3	2	2	This shallow space is a former cable room beneath the earlier Control Room and can be adapted for new uses and configured as required.
Level 3 former Control Room	2	2	1	1	It should remain a single space, and the windows and relationship to the Turbine Hall should be retained. The timber and glass partitions to the west should also be retained along with the associated fitout where possible.
Level 3 Motor Generator Room	1	1	1	1	This space has little tolerance for change and should be maintained and conserved.

Building/Space: SWITCH HOUSE	Tolerance for Change 1 = Low tolerance 2 = Moderate tolerance 3 = High tolerance				Further Considerations (to be read in conjunction with the relevant policy section for each element)
	Form	Fabric	Function	Location	
Level 3 North workshop	2	2	2	2	The timber block floor is evidence of its former use and should be retained but may be covered over.
Level 3 washroom north of the Control Room	2	2	2	2	It retains an intact WC and washroom, all dating from the first phase of the power station. If possible, this facility should remain intact and functioning, changing as little as possible.
House Power and switchboards (SH3.14)	1	1	1	1	The room retains intact machinery and a switchboard of exceptional significance. The room has little tolerance for change.
Workshop (SH3.15)	3	2	2	2	The area retains some significant elements (wall tiles, basin, pedestal drill press, motor generator, etc.). Still, it could be adapted to house reuse, preferably allowing the significant elements to remain in place.
Battery Room (SH3.16)	3	2	2	2	This space may be an ancillary to and connected with the Entertainment Hall. Still, careful design and consideration will be needed to retain the high significance of the grading of these spaces, including materials and machinery. Retain evidence that the wall separating SH3.15 and SH3.16 was the end of the building, including visibility to the windows and high-level round windows.
Machinery					
Motor-Driven Oil-bath Switches (SH2.3)	1	1	1	1	The motor-driven oil-bath switches have little tolerance for change. It should be conserved per the recommendations in the inventory and displayed and interpreted.
Disused No. 1 Battery Booster (SH3.12)	1	2	1	1	The Disused No. 1 Battery Booster has little tolerance for change. It should be conserved per the recommendations in the inventory and displayed and interpreted.
Motor-Generator No. 2 (SH3.13) Motor-Generator No. 2 Switchboards (SH3.13)	1	2	1	1	The machinery has little tolerance for change. They should be conserved per the recommendations in the inventory and displayed and interpreted.
Switch House Lighting Board (SH3.13)	1	1	1	1	This Switch House Lighting Board has little tolerance for change. It should be conserved per the recommendations in the inventory and displayed and interpreted. The temporary roof and gutter were installed during the period of decline and should be retained unless removal is required under a reuse proposal and is approved.
Motor-Generator No. 3 (SH3.14) Motor-Generator No. 4 (SH3.14) Battery Charger Unit (Mercury Arc Rectifier) (SH3.14) No. 1 Booster (SH3.14) Rectifier Sets 1 and 2 (SH3.14) Switchboard (marble) in Motor-Generator Room (SH3.14) Switchboard in Motor-Generator Room (SH3.14) Battery Charging Switchboard (SH3.14)	1	2	1	1	This machinery has little tolerance for change. They should be conserved per the recommendations in the inventory and displayed and interpreted.
Batteries (SH3.16)	1	2	1	1	The battery has little tolerance for change. It should be conserved per the recommendations in the inventory and displayed and interpreted.

Building/Space: **SWITCH HOUSE**	Tolerance for Change 1 = Low tolerance 2 = Moderate tolerance 3 = High tolerance				Further Considerations (to be read in conjunction with the relevant policy section for each element)
	Form	Fabric	Function	Location	
Pedestal Drill (SH3.15)	2	2	2	2	The Pedestal Drill has little tolerance for change. It should be conserved per the recommendations in the inventory and displayed and interpreted.
Air Compressor (SHG.5)	1	2	1	1	This Air Compressor has little tolerance for change. It should be conserved per the recommendations in the inventory and displayed and interpreted.
25 Cycle Switches (SHG2.6)	1	2	1	1	These 25 Cycle Switches from 1927 Stage 2 have little tolerance for change. They should be conserved per the recommendations in the inventory and displayed and interpreted.
Pyrotenax Cabling (throughout)	2	2	2	2	Early pyrotenax cabling is of outstanding quality and workmanship and represents power reticulation. It has little tolerance for change and should be retained. New services may be located in parallel if required.

6.6.11.5 Opportunities for Change

Explore Opportunities: **SWITCH HOUSE**	Comment
Lifts	As shown on the diagram, a new compliant external lift and fire stair may be located on the west elevation at the south end of the building.
1950s north lift	The north lift may be renewed entirely, including rail, motor and car. The lift may be extended to level 3, subject to design if required.
1950s north stair	The existing north stairs are too narrow for compliance. In the case of major reuse, widening the stair using space in the adjacent lift shaft could be considered, provided the character and vertical window opening is retained.
Level 3 Outdoor roof area (SH3.3)	Opportunity for reuse as a low-profile addition, such as a flat roof set back from the parapet. It should be carefully designed to be sympathetic to the west elevation visible from Victoria Road and Robert Street. Any addition should not alter the surrounding parapet wall.
Ground Floor North workshop	Potential to unblock or replace the windows on the north wall. The space may accommodate a new or upgraded electrical cupboard (due to its location close to the authority main switchboard) if the cabling is discrete and neatly reticulated. The space contains a subfloor area that is currently flooded and should be drained and remediated.
Electrical cabling	The electrical cables installed on catenary lines in 2022–24 and associated lighting can be removed and a new system introduced that is carefully placed so as not to detract from the quality and significance of the space.
Windows	The use of transparent acrylic and polycarbonate is considered temporary and may need to be reviewed and replaced within 5-10 years. The long-term reuse of White Bay Power Station should seek to replace or refurbish the original window frames and glass.

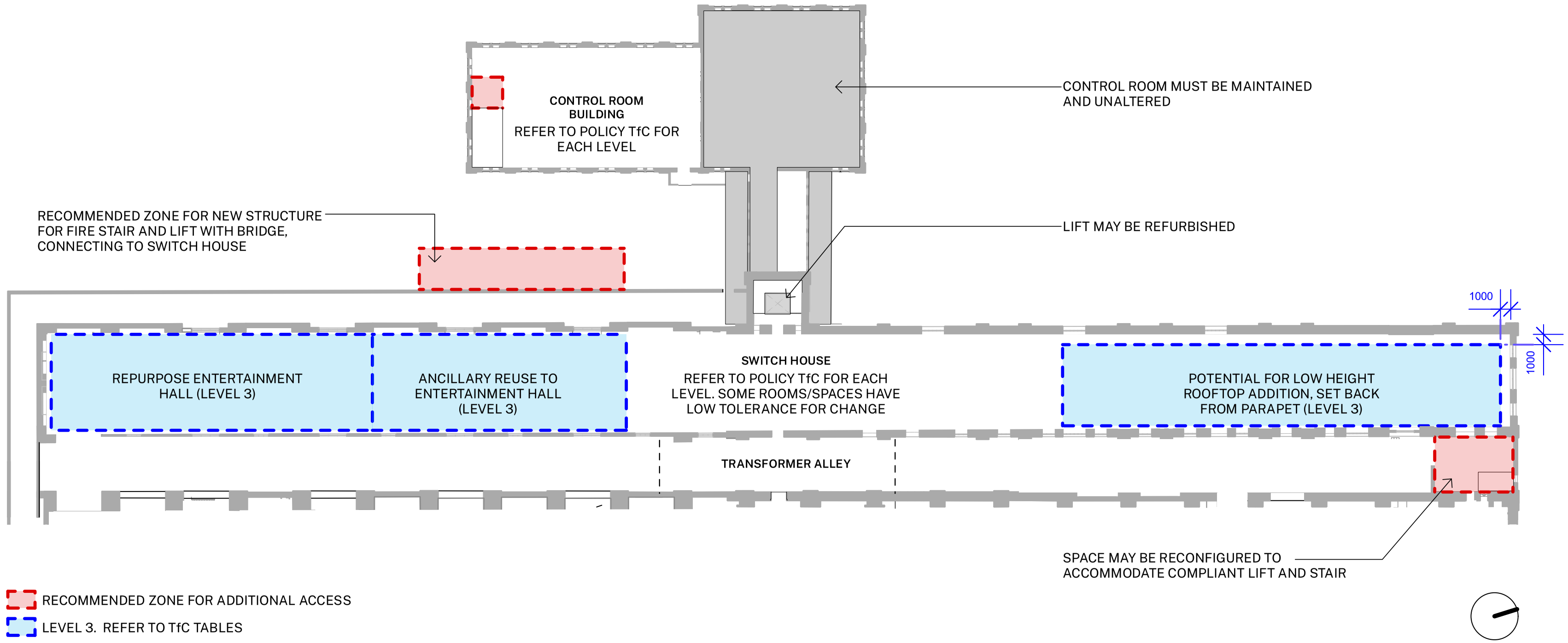


Figure 6.6.49 Switch House and Control Room Building diagram for potential new development (diagram represents all levels unless annotated otherwise).

6.6.12 Control Room Building

The Control Room Building is a brick annex built as part of the major upgrade in 1948–1950 alongside the installation of a new coal handling shed, boilers, pump equipment, turbines and switching gear. The Control Room survives with its original equipment and cabling room intact. However, the adjacent Switch House has had its associated machinery and equipment removed. All these spaces have undergone remediation works in 2022–24.

Several key spaces and their machinery, equipment, fittings, furniture, documents, and parts are highly evocative of the power reticulation aspect. Refer to Volume 2 – Heritage Inventory of the CMP for detailed descriptions and catalogues of the individual spaces, machinery, and moveable heritage catalogue.

In accordance with Policy 6.1, any future uses or changes should seek to maintain and strengthen the significant aspects of this building. Its character, configuration, and form should all be conserved.

The Control Room Building houses machinery and equipment associated with the Power Reticulation System and the House Electrical and Auxiliary Supply System. All Control Room Building machinery and equipment are of exceptional significance, integral to the power station, and should be retained and conserved in situ in accordance with Policy 6.9.

To retain the significance of the Control Room Building and at the same time allow its adaptive reuse, the guidelines and policies below should be followed.

Policy 6.40 — Control Room Building

The Control Room Building is a major structure in the White Bay Power Station building complex. Its character, form, configuration, and quality must be retained and conserved in accordance with Policy 3.4. Any changes to the Control Room Building must retain and respect its defining elements, including:

- *the Control Room space and all its machinery, fittings, furniture, documents, and parts*
- *the Cable Room, adjacent Cable Tunnels and their extensive pyrotenax cabling as spaces highly evocative of the original function of the building*
- *its interpretability as a significant structure facilitating the Power Reticulation and the House Electrical and Auxiliary Supply systems*

6.6.12.1 1948 Control Room

Although the integrity of the later Control Room has been depleted by removing several elements, both as part of the decommissioning process and through vandalism, the Control Room is functionally evocative. This space retains machinery, fittings, furniture, documents, parts, and finishes, all in situ and in context.

All documents should be copied, the place fully recorded photographically, and these copies and records securely archived as per Policy 17.1.

Elements such as indicator bulbs, knobs, handles etc. from the equipment in this space should also be returned or stored securely for later use.

Components that have been smashed or broken should be retained unless an appropriate replacement piece can be substituted.

Policy 6.41 — 1948 Control Room

The 1948 Control Room should be retained and conserved in its existing configuration with all machinery, fittings, furniture, documents, signage, tags, and finishes in situ. The Control Room space should only be used for heritage interpretation. Innovative interpretative devices such as soundscapes could highlight their significance and original use.

The existing configuration of openings should be retained, and no new openings should be made. However, additional glazing could be added to improve climate control and security.

Figure 6.6.50 The Control Panel of the 1948 Control Room, 2024 (courtesy of Toby Peet).

6.6.12.2 Cable Room and Tunnels

These spaces are an integral part of the Control Room above and retain the original and later cabling, which connects it to the rest of the power station. The design and workmanship of the very early pyrotenax type cabling are of outstanding quality and should be retained per the Tolerance of Change tables. No other use or function should be introduced unless it allows all existing elements to remain on site without risk of damage. Existing openings should remain unaltered (except to upgrade security), and no new openings should be made.

6.6.12.3 1948 Switch House – Ground Level

The electrical equipment at this level dates from the most recent power use of the place as a substation. The space is considered low heritage significance, and its spaces and equipment can be adapted per the Tolerance for Change tables.

Figure 6.6.51 Entrance to the Cable Tunnel from the Cable Room, 2024 (courtesy of Chris Bennett: Evolving Picture).

6.6.12.4 1948 Switch House – Level 1

While no significant equipment survives on this and the level above, the labyrinth and empty concrete enclosures for the former bus bars create visually exciting spaces that could and should inspire a creative approach to adaptive reuse in these areas. The spaces could be creatively reconfigured with selective retention of some of this original fabric. This would be preferred to its complete removal in accordance with the Tolerance for Change tables.

The cables have interpretation potential, which may prove difficult in such an isolated location. Nevertheless, a substantial section of these cables should be retained to interpret the place in a more accessible and appropriate location.

6.6.12.5 1948 Switch House – Level 2

Like the level below, this space retains the concrete enclosures for the bus bars, but all the equipment has been removed. This space could and should be adapted for creative reuse, preferably retaining some of these enclosures. The cable trays can be retained, reused, adapted, or filled as required.

Regarding a creative approach to reuse, it would be desirable to retain the stair and at least part of its heavy mesh enclosures at this and the level below.

The rhythm and location of window openings should be respected. Evidence of the original configuration should be retained. Access may be made to new balconies or adjacent structures as long as the highly significant Control Room fabric and spaces to the north are respected.

Figure 6.6.52 Level 1 concrete housing for the bus bars, 2023 (courtesy of Chris Bennett: Evolving Picture).

Figure 6.6.53 Level 2 of the 1948 Switch House, 2024 (courtesy of Toby Peet).

6.6.12.6 Transformer Yard

Rail tracks traverse this area for the movement of transformers and equipment, and these tracks should be retained.

Each transformer was separated by a large brick wall, most of which survived. They strongly define and articulate this area as an element in the landscape. These blades should be retained but could be used as the extremity of new building envelopes that fill the spaces between the walls. The blade walls should still dominate and project beyond the wall face or roof of new structures. These new structures should be lightweight, made of steel and glass, and machine-like in their character (refer to Section 6.11).

The floors of the existing transformer spaces may retain contaminated material, and adding a new structure over these may provide a solution.

The regular modular nature of the paving, such as trench and tunnel covers, should be retained and respected in any new work.

The linearity and order of this area should be respected in any new work, as well as the relationship of this area to the Switch Houses and Control Room, the distribution tunnels and surviving power poles.

6.6.12.7 Machinery

While they are of exceptional significance, the machinery and associated elements of the control systems are not conveniently located so that a representative slice may be readily identified for interpretation by elements retained in situ in close juxtaposition. Access to these spaces is presently circuitous; however, their configuration, scale and significance mean they cannot be relocated. The Control Room is located in a centrally placed square building attached to the west side of the Switch House by a connecting hallway, which also houses the Rheostats. However, the House's Electrical and Auxiliary Power Supply Systems are dispersed throughout the Switch House.

Figure 6.6.54 Transformer Yard looking south, 2024 (courtesy of Chris Bennett).

Figure 6.6.55 The Control Panel and desk in the 1948 Control Room, 2024 (courtesy of Toby Peet).

6.6.12.8 Tolerance for Change

Building/Space: CONTROL ROOM BUILDING	Tolerance for Change 1 = Low tolerance 2 = Moderate tolerance 3 = High tolerance				Further Considerations (to be read in conjunction with the relevant policy section for each element)
	Form	Fabric	Function	Location	
General: External openings	1	2	1	1	No additional windows to the west and north elevation should be permitted. The windows may be refurbished or replaced with new ones matching the configuration.
Walls	1	2	1	2	Generally, regularly inspect painted surfaces and touch up any compromised paint. Check for signs of dampness on walls, and undertake diagnosis and maintenance accordingly. Check visually for loose items and falling debris and address accordingly.
Roof	1	2	1	1	Regularly inspect for leaks or signs of corrosion and rusting. Box gutters and sump flow should also be periodically inspected and cleaned. Roof access systems to be regularly checked and certified.
Clear span between the Control Room and the Switch House	1	–	2	1	The clear span “bridge” between the Switch House and the Control Room must not be infilled or interrupted at ground level.
General: Stair in the south end	2	2	1	1	The stair and mesh screen must be retained. Compliance upgrades are acceptable, including replacing the handrail and balustrade and adding stair nosings.
Ground level space generally	2	2	2	2	The space is of low significance and can be repurposed and modified. It may be repainted or reconfigured. The sinks and fit outs are of low significance.
Ground level space underneath the bridge	2	3	2	2	The connecting “bridge” span between the Control Room Building and the Switch House should be maintained and not filled in on ground level.
Ground level equipment (CSG.2B)	2	2	2	2	Moderate significance dates from the most recent power use of the place as a substation. It could be retained to assist in interpreting this last phase of use.
Ground Floor: Subfloor space (CSG.1)	3	3	3	3	The subfloor space is of low significance and can be adapted or changed (including removing the former hydrant equipment), provided that any work does not threaten the higher significant spaces above.
Ground level – telephone in stair space	2	2	1	2	Should be retained and, if necessary, relocated to a position that will allow it to assist and strengthen the interpretation of more significant spaces.
Level 1: Cable tunnel rooms	1	1	2	1	These spaces are integral part of the control room that retain the original cabling, equipment, fittings and furniture. No other use or function should be introduced unless it allows all existing elements to remain without the risk of damage. No new openings should be made.
Level 1: Rheostat Room	1	1	2	1	The quality and character of this space should be maintained. The room has had original colour schemes repainted. The former small MDF room (east of the Rheostat room) has been repurposed for hydrant control gear, but the communications equipment should remain.
Level 1 and 2: Switch House	1	2	2	2	The spaces and external elevations should be retained in accordance with Policy 6.41. Openings on the east elevation may be altered or new openings made so long as they respect and are compatible with the architectural rhythm and character of the building.

Building/Space: **CONTROL ROOM BUILDING**	Tolerance for Change 1 = Low tolerance 2 = Moderate tolerance 3 = High tolerance				Further Considerations (to be read in conjunction with the relevant policy section for each element)
	Form	Fabric	Function	Location	
Level 1 and 2: Switch House concrete enclosures	1	2	2	2	The former bus bars' concrete enclosures create visually exciting spaces. They should be retained and adapted for a new use in a creative manner. Their complete removal should only be considered as a last resort on condition that tat least one bay is maintained and their removal is interpreted.
Level 2 Bathroom facilities	3	3	3	2	The bathroom facilities have been upgraded since they were built, and their present configuration and fabric are not significant. They may be reconfigured or repurposed.
Level 2: Corridor (CS2.3)	1	2	1	1	The role of the main corridor (linking the Control Room with the earlier Switch House) must be retained and respected.
Level 2: Control Room (CS2.1)	1	1	1	1	This room is of exceptional significance and has little tolerance for change. Refer to the guiding policy.
Transformer Yard	2	3	2	2	New work should integrate and interpret the concrete hardstand and blast walls. New work or structures are to comply with Section 6.11.
Machinery					
Control Room (a, b, and c) Rheostats	1	1	1	1	The Control Room has little tolerance for change. It should be conserved per the recommendations in the inventory and displayed and interpreted. The floor should be monitored for any loose tiles, which should be re-adhered if necessary.
Rheostats	1	1	1	1	The Rheostats have little tolerance for change. They should be conserved per the recommendations in the inventory and displayed and interpreted.
Cables and Chasers	1	2	2	2	The Cable Chasers and pyrotenax cabling are of outstanding quality and workmanship and represent power reticulation. They have little tolerance for change and should be retained. New services may be installed adjacent and parallel to them in a way that distinguishes new work.

6.6.12.9 Opportunities for Change

Explore Opportunities: **CONTROL ROOM BUILDING**	Comment
Lifts (vertical transport)	A new internal lift is possible at the southern end of the Cycle Switch House west of the existing stairs. Lifts should be avoided in the main Control Room corridor or interrupt the clear span "bridge" on ground level between the Switch House and the Control Room Building.
Windows	The use of transparent acrylic is considered temporary and may need to be reviewed and replaced within 5-10 years. The long-term reuse of White Bay Power Station should seek to replace or refurbish the original window frames and glass. Periodically visually check that the acrylic sheets are in good condition and not lifting or cracked. When necessary, replace broken or failed sheets.

6.6.13 White Bay Hotel Site

The White Bay Hotel was closely associated with developing the adjacent White Bay Power Station and other local industries. It was built on top of an elevated platform formed by a retaining wall on the north, east and south sides. The former hotel was a prominent feature on Victoria Road and an important part of the White Bay Power Station identity. It addressed Victoria Road as its main frontage and had aesthetic merit as an example of the Edwardian Freestyle adapted to an early twentieth-century hotel. The hotel was the last remaining building in Rozelle on Victoria Road, approaching the city, and signalled the junction with the City West Link, which immediately followed.

The section of Victoria Road fronting the former hotel is used as a thoroughfare for pedestrians and bicycles and a bus stop. It includes a cantilevered bridge that encroaches over the cutting adjacent to the southern edge of the Administration and Staff Accommodation and near the former Hotel site.

There is an opportunity for a new structure on the site with a similar scale to the former hotel in a way that interprets the role it played in the approach sequence to the city. This does not mean it should necessarily be a reconstruction of what has been lost. Still, a creative approach to interpretation that creatively responds to its context (including the power station) would be appropriate. Any new use for the site should relate to the White Bay Power Station and Victoria Road and not turn its back to it.

The site has dominant views to the north and east towards the power station, Glebe Island, and the city beyond. The site may be suitable for the following uses:

- A landmark, pedestrian access to future proposed transport nodes or as an entry to the White Bay Power Station site and Bays Precinct.
- A base for interpretation of the site/ precinct or as a public viewing platform for the broader Bays Precinct.
- A use that relates meaningfully to the use of the White Bay Power Station, preferably with public access to the place.

6.6.13.1 Archaeology of the former White Bay Hotel

Little is known about the internal configuration of the former hotel, and minimal recording of the building had been undertaken before the fire that destroyed it. The site was modified with the construction with road network and little is known if any archaeology of the former hotel survive. It may still house retaining walls on the north, east and south sides that provide a level platform on which the Hotel was built and should be treated as archaeologically sensitive.

Figure 6.6.56 White Bay Hotel, date unknown (Noel Butlin Archives Centre, N417-656-147).

6.7 LANDSCAPING & PLACE GENERALLY

6.7.1 Landscape

The power station site is generally a rough, industrial landscape with numerous remnants of earlier site sheds and other structures. While in operation, the only area with soft landscape elements would have been northwest of the Control Room Building and its adjacent Transformer Yards. This area was the 'front garden' of the Power Station and was planted with various fruit trees and shrubs. All other areas were hard industrial surfaces and service and storage areas.

As part of the 2024 activation works for the 24th Biennale of Sydney, the North Forecourt was developed into a temporary public transport bay and outdoor seating area.

When undergoing adaptive reuse, many industrial sites suffer from a process of well-meaning domestication or 'greening'. While this may be appropriate in some areas, the strength and clarity of the industrial identity of the White Bay Power Station must not be diminished or lost. The guidelines and policies below should be followed to retain and respect the significance of the place and allow its adaptive reuse.

Policy 7.1 — Landscaping and place generally

Any changes to the landscape and overall site of the White Bay Power Station should ensure that its key characteristics and significant values are retained and not obscured, namely:

- *the industrial character of the White Bay Power Station, as indicated by its extensive hard landscaping of distinct forecourts and yards*
- *extant industrial elements and other features in the landscape e.g. rail tracks and plinths for removed machinery*

Policy 7.2 — Hard landscaping

Those areas of the place that originally acted as or housed storage or industry-related facilities should remain predominantly as hard landscape areas. Soft landscaping should be confined to landscaped areas, i.e., north and west of the Control Room Building and their attendant transformer yards and some areas in the North Forecourt.

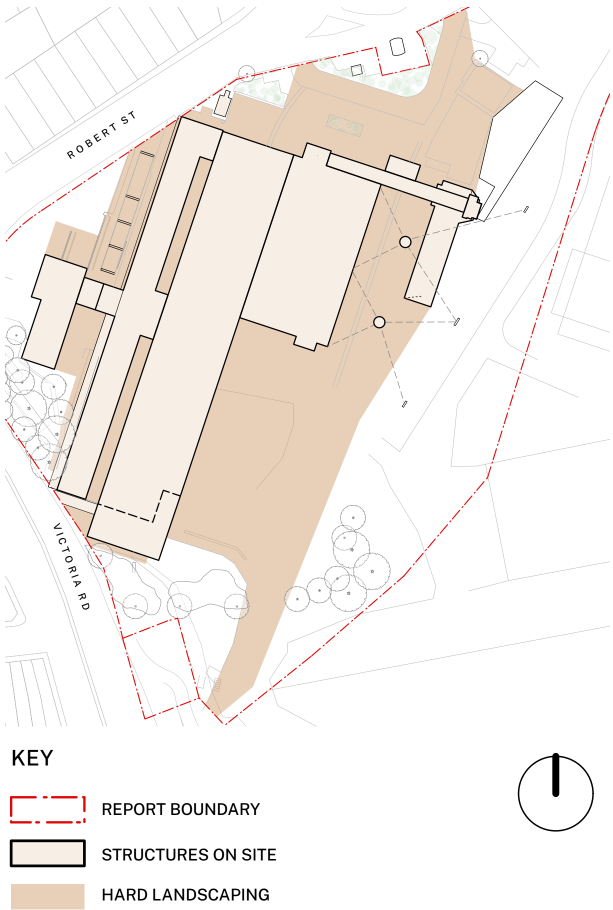


Figure 6.7.1 Hard landscaping diagram of the White Bay Power Station (Design 5 – Architects).

New work should also strengthen connections and links within and through the place (refer to Section 6.5.3.3 for views within the place). The strength and clarity of the industrial identity of the White Bay Power Station must not be diminished or lost by new landscaping.

Policy 7.3 — New landscaping

New landscaping should be inspired by and respond to the place and incorporate interpretation of remnant building elements and removed structures. Adverse impacts to archaeological elements or significant existing structures should be avoided.

Policy 7.4 — Temporary site sheds and amenities

The temporary site sheds on the North Forecourt and the temporary amenities building next to the Turbine Hall may need to remain for the foreseeable future. The Master Plan proposes them to be removed as part of the long term vision for the place. Any new site sheds and amenities should respect the key characters of the space, and key views to the power station.

Policy 7.5 — Perimeter fencing

The perimeter fencing around the entire site may need to be retained for the foreseeable future for safety and security. Depending on the future use or uses, the long term goal should be to remove the perimeter fencing to as much of the site as possible.

The Power Station contained many buildings and elements containing asbestos that were demolished during the decommissioning in the 1970s and 1980s. When doing any work with landscape and forecourt areas, there is the risk that the ground may contain remnant asbestos and hazardous materials.

Policy 7.6 — Hazardous materials

Before any work to soft landscaped areas, a hazardous materials check should be undertaken and appropriate remediation undertaken to remove hazardous materials.

6.7.1.1 North Forecourt

The north forecourt is an exceptionally significant space currently used as the "front door" to the power station. Until the 1970s, the area housed small, light-weight structures, including worker amenities and workshops. At the east end is the concrete retaining wall, the plinth for the rail line from the Coal Handling Shed. Archaeology for the former buildings has been removed but retains other significant elements, including the water cooling channel and rail lines. The space houses significant structures including the former amenities block at the western end and the Sewage Pumping Station, which is outside the White Bay Power Station site boundary and is listed separately as a heritage protected item.

The area was recently remodelled to accommodate bus and rideshare layovers and an open gathering space using predominantly concrete hard pavement with some soft landscape. The Master plan proposes remodelling of the North Forecourt to accommodate a culvert from the Beattie Street stormwater canal.

Policy 7.7 — North Forecourt

The north forecourt should be maintained as an open space and industrial character as a public entrance of the White Bay Power Station. Significant structures, including the Amenities Block should be retained, but can be adaptively reused and modified internally.

Figure 6.7.2 North Forecourt during the Power Up Festival, 2024 (Design 5 - Architects).

6.7.1.2 *West & South West Yards*

The area is mainly sloping terrain with various hardstands, gravel, soft landscape, retaining walls and rock outcrops. Some of the space, particularly the southern half, is heavily overgrown with self-seeding plants and is therefore, difficult to access. The 1953 plan shows various lightweight structures that accord with many of the retained concrete hardstands. Oral evidence is that some of the West and South West Yards were used as gardens by the workers who maintained fruit trees, including mulberry and paw paw. At least two loquat trees are located along the Robert Street boundary on the West and South West Yards, likely seeded by workers' lunches.

Policy 7.8 — West and South West Yards

Former garden areas west and southwest of the Control Room Building should remain as a garden setting to the Power Station.

The landscape should retain, integrate and interpret the concrete hardstand and concrete stairs along the north boundary. The landscape could interpret worker gardens and feature fruit trees including mulberries, paw paws, cumquats and loquats.

Figure 6.7.3 West Yard, 2024 (courtesy of Chris Bennett: Evolving Picture).

6.7.1.3 *Mid & Upper South Yards*

Historically, these yards housed a range of lightweight timber and iron buildings related to the power station usage, which have since been cleared. At the very top, the former White Bay Hotel occupied the site, which was destroyed in fire in 2008. The place has since been further altered by the recent construction of Victoria Road and the Bicycle network. The area has the potential to be a public entry to the place and to Bays West generally.

Policy 7.9 — Mid and Upper South Yards

The area can accommodate new buildings and structures per Policy 11.1, or it can be left open and terraced with landscape. The terraced landform is a significant quality of these yards and interpretation of this should be considered as part of any changes to the area. There is further opportunity to reveal and interpret the archaeology of the spaces.

6.8 MOVEABLE HERITAGE

Moveable heritage generally refers to any object that is not fixed but has heritage significance as belonging to the Power Station and aids in understanding it with regard to its history, operations, working conditions and daily routines. Moveable heritage in this section relates to objects known to be located within the place and not objects that may belong to White Bay elsewhere.

Moveable heritage is disbursed throughout the White Bay Power Station and is integral to the power station's significance. It has been partially catalogued in the inventory sheets in Volume 2 of this CMP and includes loose building fabric, machinery parts, tools and furniture, and storage as follows:

- **Furniture:** These items show working conditions, generally where workers gather or perform administrative tasks. It includes timber desks, tables, lockers, fridges, ovens, stools, shelving systems, etc. It also has a bar billiard table and table tennis tables in the Entertainment Hall.
- **Specialist equipment:** Includes machinery, machine parts, shrouds, gaskets, belts, cogs, high voltage insulators, pumps, fans, etc. The types of specialist equipment typically vary depending on the location and building.
- **Tools:** Tools are often stored in secure cages or rooms, but many have since been disbursed. These items include hand tools, pulleys, chains, ropes, winches, step ladders, and moveable timber platforms (often on wheels). They are significant in revealing the types of operations and maintenance required at each electricity generation stage.
- **Building Components:** These include removed building fabric, demolished, and stored as part of the 2022–24 remediation due to deteriorating conditions, structural issues, risk of falling, and noncompliance with BCA. The main items include the coal elevator buckets from the coal handling shed, window frames, chimney ladder and removed steel cladding. It also consists of the demolished office from level 3 of the Pump House to make way for the new passenger lift, including walls and steel windows. It also contains repetitive items, including pipes, valves, lights, light shades, salvaged bricks, joinery, and cast iron floor grates.
- **Administration:** This includes administrative paper files, including plans, files, and log books, which are currently stored in various buildings but are mainly located in the Control Room building. They provide evidence of operations and working conditions.

Figure 6.8.1 Bar billiard table and table tennis tables in the Entertainment Hall, 2023 (courtesy of Chris Bennett: Evolving Picture).

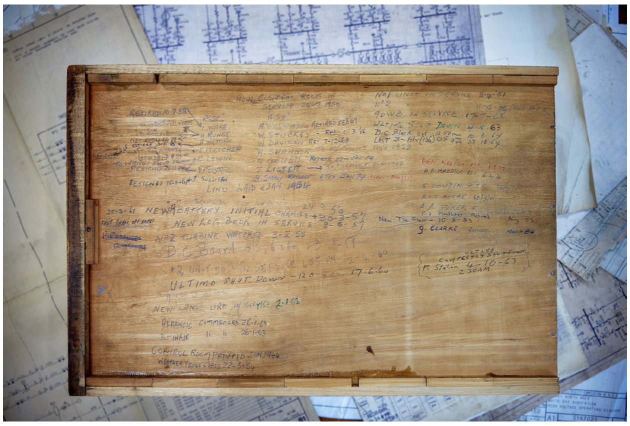


Figure 6.8.2 Underside of a drawer from the Control Room, with dates and events as recorded by the workers at the White Bay Power Station, 2024 (courtesy of Toby Peet).

Figure 6.8.3 Tools hanging on the east wall of the Boiler House Control Room, 2024 (courtesy of Toby Peet).

Policy 8.1 — Moveable heritage generally

Original or early elements stored within the place must be retained on site. They must be kept in safe and secure storage on site or returned to their original locations.

Items identified as important to the significant values of the White Bay Power Station may be used for interpretation, activation, and adaptive reuse in appropriate locations.

Disposal of moveable heritage is not permitted without heritage approval by appropriate authorities.

Policy 8.2 — Removed building elements

Removed building elements from 2022–24 (mainly stored on the ground floor of the Switch House) may be relocated should the space be required. Any alternative space should be safe and secure, and similar components should be retained together. The following additional policy may apply to demolished elements:

- *Removed corrugated steel cladding: opportunity for creative repurposing. It may be disposed of as a last resort.*
- *Coal Handling Shed's Coal Buckets: must be retained. An opportunity for interpretation, creative repurpose or reinstated as part of a reconstructed coal elevator.*
- *Heavy duty cast iron floor grates: removed from the Boiler House ground floor due to non-compliance with the BCA code. They must be retained.*
- *Original ladder: must be retained.*
- *Demolished office from level 3 of the Pump House: must be retained and stored. It may be reconstructed if the opportunity exists.*
- *Loose timbers (sleepers, beams, etc): may be disposed of after investigation of significance.*

Figure 6.8.4 Moveable heritage machinery parts and corrugated galvanised steel cladding located at the south end of the Switch House ground level, 2023 (courtesy of Chris Bennett: Evolving Picture).

6.9 ARCHAEOLOGY

6.9.1 Aboriginal Archaeology

Given the extensive level of construction and evolution of building fabric throughout the active years of the White Bay Power Station, it is unlikely that any new Aboriginal remains would be uncovered within the place.

However, an area of "Potential Archaeological Deposit" that extends partly into the White Bay Power Station area was registered in 2020 on AHIMS (#45-6-3826; The Bays PAD 01). Archaeological test excavation of this area was recommended to determine whether the original soils of this foreshore are actually present and if so, whether they contain any Aboriginal archaeological remains.[164] Buried sites such as these can also provide evidence of former environmental conditions through the retrieval of pollen, revealing former flora evidence.[165]

Policy 9.1 — Aboriginal archaeology

If any Aboriginal archaeological evidence or remains are uncovered, they should be managed in accordance with the NSW National Parks and Wildlife Act and relevant statutory guidelines.

Policy 9.2 — Aboriginal archaeological potential

Any proposed ground disturbance to areas indicated as having potential archaeological deposits should take into account the possibility of encountering cultural material associated with Aboriginal occupation.

6.9.2 Power Station Archaeology

A relic is defined in the NSW Heritage Act 1977 as being a "deposit, object or material evidence, not relating to an Aboriginal settlement, which is more than 50 years old." It could be concluded that some authors of this CMP may, therefore, be protected under this Act.

Where proposed development to a State Heritage Register site involves excavation with the potential to expose, move, damage, or destroy a relic, an excavation permit is required from the Heritage Council under Section 60 of the Heritage Act unless the proposed work satisfies Standard Exemption No. 8: Excavation.

Refer to Section 2.2.10 for information on the known archaeological evidence and subterranean elements located at White Bay Power Station. This section details the corresponding policies regarding these elements. Similarly, should any further archaeological evidence be found within the place, the following policies should be applied and followed.

Policy 9.3 — Power Station Archaeology

Any evidence of removed structures beneath the existing structures should be recorded and, where possible, retained in situ. Archaeological remains should preferably not be exposed or removed from the place.

Policy 9.4 — Archaeological investigation and recording

Investigation and recording should be undertaken by a qualified archaeologist. Such investigation should only be undertaken in areas where the survival of evidence is under threat, about to be lost, made inaccessible or about to be covered. Archaeological evidence should carefully assessed for retention or interpreted through new constructions on these sites.

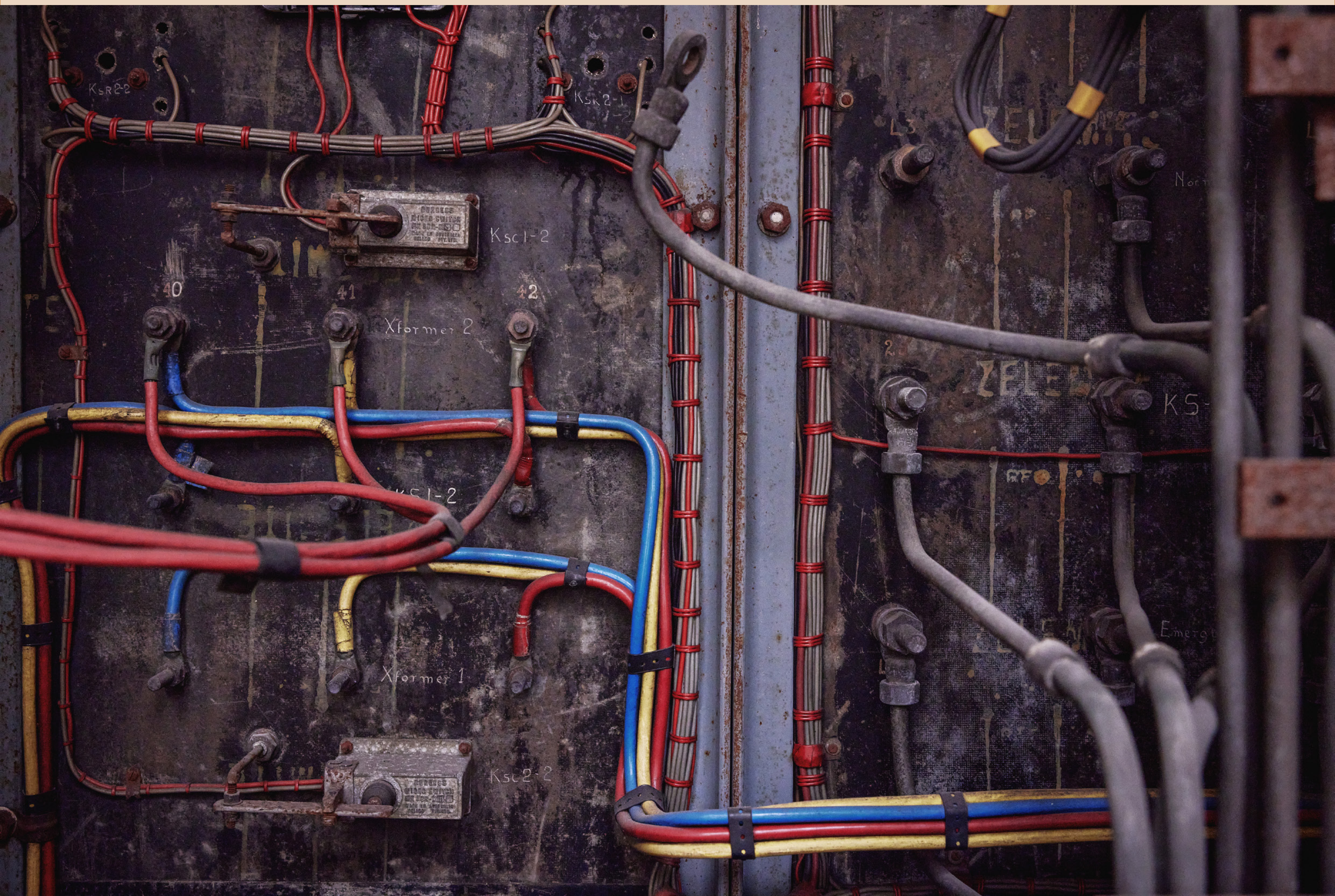
Policy 9.5 — Interpretation of archaeology

Interpretation of significant archaeological findings should be integrated into proposals for new development or activation within the place.

Numerous cable and service tunnels traverse the site and link to areas beyond the place. These should be identified, plotted and assessed for condition and conserved. These should be interpreted in some way. However, security, access, and contamination issues must also be considered and addressed. These tunnels may be adapted and re-used for any new use as long as their significance and role in White Bay Power Station are respected.

Figure 6.9.1 Cable laying at the White Bay Power Station, 1926 (courtesy of NSW State Archives, NRS-17420-2-4-363/061).

Figure 6.9.2 (right) wiring in the Switch House, 2024 (courtesy of Toby Peet).


Ksc1-2
40
41
42
Xformer 2
Xformer 1
Ksc2-2

FUTURE USE & DEVELOPMENT

6.10 ACTIVATION

6.10.1 Generally

As outlined in Section 5, the White Bay Power Station is central to the Bays West Stage 1 Master Plan prepared by the NSW Department of Planning, Industry, and Environment to revitalise, activate and connect the precinct. As part of this process in 2023, the White Bay Power Station site was re-zoned as SP1 – Special Activities. The zoning enables commercial premises, community facilities, creative industry, educational establishments, entertainment facilities and hotels. Under the rezoning proposal, the White Bay Power Station is anticipated to have public-inspired uses.

A range of uses can be accommodated in the power station that supports and aligns with the significance of the place and is inspired by it. The Boiler House and Turbine Hall will be suitable for large open event spaces, while the Administration Building and Switch House are suitable for intimate needs, including meetings, offices, studios, and galleries. It is essential that any new work respects and strengthens the significance of the place to assist interpretation, understanding and appreciation of significance. In short, new uses need to be compatible with the building. This places a responsibility on new uses to be inspired by and adapt to the space rather than altering the space to suit the use. The spaces, particularly the machinery, must be regarded as a backdrop and identity for any new use or structure.

The White Bay Power Station is a highly significant place with great potential for activation and adaptive reuse. Continued use of the spaces would allow for long-term viability in accordance with Policy 2.2 and support an appreciation and potential further development of the cultural significance of the place. As detailed in Section 6.6, due to varying configurations and arrangements of spaces and extant equipment and machinery, some spaces may be more suited to accommodate activation, while others may only be suited for interpretation. Refer also to Section 6.19 – Interpretation.

Policy 10.1 — Activation generally

Activation should respect the building fabric, quality of space, and extant machinery and elements. It should aim to enhance interpretation and understanding of the place and not detract from the significance of the place.

Policy 10.2 — Adaptation generally

New work should be honest in its design, materials, and details. While it can create its own identity, it must respect the character and cultural significance of the place. For internal changes, new work should inhabit the space in a way that keeps the power station as the central focus. Works should demonstrate awareness of surroundings and the role the space plays in the power station and power production.

Policy 10.3 — Reversibility

New work should be designed for reversibility, meaning it can be removed or altered without damaging the original structure. This approach respects the integrity of the heritage fabric and allows for future changes if needed.

Figure 6.10.1 Activation of the Boiler House space during the Power Up Festival, 2024 (Design 5 – Architects).

Figure 6.10.2 New stairs constructed on the north end of the Boiler House as part of the 2022–24 works, 2024 (Design 5 – Architects).

6.10.2 Future Use

The State Environmental Planning Policy (Precincts – Eastern Harbour City) 2021 classifies the White Bay Power Station site as SP1 – Special Activities. It declares that development must allow for at least 50% of the GFA to be used for one or more of the following categories of use:

- **Community facilities:** *means a building or place owned or controlled by the Council, a public authority or a religious organisation, or a body of persons associated with the physical, social, cultural, economic, intellectual or spiritual welfare of the community and used for a community purpose or the purposes of the organisation concerned. This may include (but is not limited to) educational facilities, libraries, youth centres, halls, and function/event spaces for use by various community groups.*
- **Creative industries:** *means a building or place, the principal purpose is to produce or demonstrate arts, crafts, design or other creative products, and includes artists, studios, recording studios, and set design and production facilities. Creative industries may, therefore, include workshop spaces, galleries, exhibition spaces, creators' markets, theatre and film location use, and spaces for cultural programs.*
- **Entertainment facilities**: *means a theatre, cinema music, music hall, concert hall, dance hall and the like, but does not include a pub or registered club. Entertainment facilities may also include auditoriums.*
- **Food and drink premises**: *means premises that are used for the preparation and retail sale of food or drink (or both) for immediate consumption on or off the premises and includes any of the following– (a) A restaurant or café, (b) Take away food and drink premises, (c) A pub, (d) a small bar.*

The White Bay Power Station has many spaces suitable for adaptive reuse and temporary activation, as outlined above. Following its decommissioning and closure, the place has been used for photography and filming on multiple occasions, primarily for its worn, twentieth-century industrial aesthetic. This includes serving as a filming venue for the Australian television show Patrol Boat, and for photography for various magazines. There is an opportunity to strengthen the interpretive aspect of creative industries by complementing the original use of the space e.g., creative workshops within the workshop spaces of the Switch House or Pump House.

Following activation in 2024, the place has been used for large-scale entertainment events, including music concerts and art festivals, which draw people in and foster a deeper connection to the place. These events have also required temporary pavilions and pop-up stalls that have activated parts of the place. The place has generally inspired these events, utilising the indoor and outdoor spaces to accommodate large groups. Areas of food and drink premises would likely complement other simultaneous uses of the power station. In accordance with the relevant codes and policies, they may be readily incorporated into different spaces throughout the power station.

Although some infrastructure, including electricity, water, sewer services, bin room, first aid room, toilets, and administrative facilities, is already in place to support these uses, enhancements or improvements may be needed over time. There also remain opportunities to expand in some spaces that are not currently used, including the Switch House, Coal Handling Shed and the former Entertainment Hall.

Policy 10.4 — Future uses

A range of future uses may be considered appropriate for White Bay Power Station to activate its spaces. These include:

- *community facilities;*
- *creative industries;*
- *entertainment facilities; and*
- *food and drink premises.*

These uses may be considered singly or in combination with other uses. While the impact of each use will require careful consideration and management, any use must respect the significance of White Bay Power Station and the requirement that its significant machinery and associated spaces be available for interpretation.

Policy 10.5 — Preferred uses

Those uses with the least impact on the significance of the place are preferred to those with a large impact or involve considerable change. Those uses that are inspired by and support the significance of the place are preferred to those that are not.

Policy 10.6 — Interpretation with new use

For any future use, the heritage values of White Bay Power Station must be interpreted. White Bay Power Station must retain a use or uses that allow reasonable public access to and interpretation of those significant spaces, elements and machinery that represent the component parts of the power generation process. Public access should not place significant fabric or qualities of these areas at risk of alteration, damage or removal. Uses should maintain and enhance the interpretation of the place as a former major power station.

Policy 10.7 — Uses

Due to the form, configuration and placement of significant extant machinery, many spaces within the power station are unsuitable for any use other than interpretation e.g. the 1948 Control Room, the Coal Handling Shed Basement, etc. Museum use may be incorporated at a relatively permanent level in these spaces. In other spaces with a different primary use, interpretation may be integrated at a more secondary level.

Policy 10.8 — No residential use

A residential use would generally require a very high level of change as well as privatising and compartmentalising spaces. A residential use for any part of the buildings of the White Bay Power Station is not appropriate. It is also not permitted under the Planning Instruments.

6.10.3 Public Access

Public access is a key aspect of activation for the long-term viability of the power station. Enhancing opportunities for a broader understanding, interpretation, and appreciation of the White Bay Power Station's significant values is essential.

Policy 10.9 — Public access

The White Bay Power Station must maintain uses that allow reasonable public access and interpretation of its significant spaces, elements, and machinery that represent the power generation process. Notably, the North Forecourt, Ash Handling Yard, Mid and Upper South Yards, and the main halls of the Boiler House, Pump House, and Turbine Hall should be accessible to the public. Public access should be provided to exceptionally and highly significant spaces and machinery without placing the significant fabric or qualities of these areas at risk of alteration, damage, or removal.

Due to current conditions regarding NCC and DDA compliance, there is limited access to the Coal Handling Shed, the Ash Handling Tower, the Administration and Staff Accommodation, the Switch House, and the Control Room Building. This will likely change with ongoing plans for increased activation and use of the place.

Consistent with the Bays West Stage 1 Master Plan and Urban Design Framework (UDF), the appropriate level of public access in and around the White Bay Power Station will support and enhance the developing heritage and culture of the precinct. The UDF identifies the White Bay Power Station as part of a reinforced "heritage and cultural spine". As a significant landmark in the area, public domain spaces in and around the Power Station should be activated and integrated as welcoming spaces that facilitate engagement and enrich the cultural experience.

Policy 10.10 — Guided public access

Publicly accessible guided tours should be offered for all major White Bay Power Station zones. Tours should work alongside interpretation measures to increase understanding and appreciation of the power station's history and operations.

Policy 10.11 — Entry to the White Bay Power Station

When improving and increasing public accessibility, existing entrances and openings to White Bay Power Station should be used first rather than creating new openings. The original key entry points onto the place, namely at the North Forecourt and via the Victoria Road Access Bridge, should be retained. Where possible, access to the place should be integrated with interpretation measures.

Policy 10.12 — Public access entry points

All access points should preferably use historical or significant entry points. New entry points should be positioned to enhance, rather than confuse, the understanding of the place's significance. The design and configuration of any future access points should align with the former industrial use and be clearly marked, ensuring they do not compete with or obscure the character and significance of the place.

6.10.4 Temporary Events & Structures

In the short time that White Bay Power Station has been open to the public, it has already hosted several events, including an Arts Festival, concerts, community festivals and trade shows. Temporary events can serve to activate and showcase the spaces for various uses and enhance the power station's appreciation, interpretation, and long-term viability. Associated infrastructure and temporary structures may include site sheds, amenities, stages, viewing platforms, specialist installations (displays and artworks of varying mediums), visitor services (lavatories, food trucks, refreshment drinks), lighting, signage, acoustic panels, etc.

Temporary structures may be installed and used as part of the activation of the power station. Still, they need to be carefully managed in terms of their location and duration to minimise impacts and maintain the overarching significance and role of the spaces.

Policy 10.13 — Temporary activation and structures

Temporary activation and events should not threaten or damage building fabric or extant machinery. The addition of any temporary structures, including fixings, must be reversible, and permanent alterations to the building fabric should not be made. They should use existing facilities and infrastructure as much as possible and not detract from or obscure exceptional or highly significant spaces and machinery. They should respect the space's overall character, quality, and configuration.

Policy 10.14 — Temporary partitioning of spaces

Unless explicitly disallowed by specific building and fabric policies in Section 6.6, temporary partitioning of spaces may be considered in relation to the policies for each space. Partitioning of exceptional and highly significant spaces should only be for exceptional reasons, reversible, and for a minimal period. Fire Engineer advice should also be sought for any temporary partitioning of spaces.

Any events held at White Bay Power Station must be managed to safeguard heritage fabric. Detailed guidelines for temporary events should be detailed in separate guidelines that can provide specific details but are in line with overarching CMP policies.

Policy 10.15 — Detailed guidelines for events and temporary uses

Detailed guidelines for events and temporary uses should be developed and implemented for temporary activation and use. It should provide specific details to guide services and accessibility, as well as types of use, placement, scale, and design of event infrastructure and temporary installations. Any detailed guidelines for events and temporary uses must be consistent with the Statement of Significance and the overarching policies in the CMP.

Figure 6.10.3 Temporary stage in the Boiler House during the Power Up Festival, 2024 (Design 5 – Architects).

6.10.5 Permanent Changes

Permanent changes to the building fabric of the White Bay Power Station are generally not recommended. Still, they may be necessary to achieve code compliance for the activation of spaces for public use and the long-term viability of the power station in accordance with policy 2.2. This has been evidenced by the recent major works to the place, namely to the Boiler House and Turbine Hall for activation as a major exhibition and events venue. If possible, permanent changes should also be considered with respect to Policy 10.3 – Reversibility.

Policy 10.16 — Permanent changes

For temporary activation, permanent changes to the building fabric for activation should be avoided. Where permanent changes are necessary, they must consider the place's holistic, long-term reuse cumulative heritage impacts and be consistent with the Conservation Management Plan.

Policy 10.17 — New permanent structures and insertions

New permanent structures and insertions should utilise distinctly contemporary materials but complement the existing building fabric of the spaces they are situated in. They should be visually modest and not dominate nor alter the quality or character of the space.

Any new permanent works should be code compliant and assessed by a building certifier and fire safety engineer.

Figure 6.10.4 Corrugated steel roofs that were replaced as part of the 2022–24 remediation works, 2024 (courtesy of Toby Peet).

Figure 6.10.5 Timber seating on Level 1 of the Boiler House added during 2022–24 works, 2024 (Design 5 – Architects).

Figure 6.10.6 New stairs installed in the Turbine Hall during the 2022–24 works. The floor has also undergone remediation, 2024 (courtesy of Chris Bennett: Evolving Picture).

Figure 6.10.7 Administration and Staff Accommodation with new walkway from Turbine Hall and gate, 2024 (courtesy of Chris Bennett: Evolving Picture).

6.11 NEW STRUCTURES

Given the cultural significance of the White Bay Power Station, its distinctive architectural style and its iconic landmark qualities, any proposals for new structures must be carefully considered. In summary, the following guidelines should be followed. Generally, these are shown in diagrammatic form for the site in Figure 1.4.1. For guidelines for new structures and adaptation within existing buildings, refer to Section 6.10.

Policy 11.1 — New structures

New proposed buildings attached to or near White Bay Power Station must carefully balance innovation and preservation. New development should:

- *Respect the significant views and vistas to and from the White Bay Power Station and within the place.*
- *Respect and complement the existing character, ensuring they do not overpower or detract from the heritage buildings.*
- *Retain dominance of the chimneys.*
- *Retain dominance of the Boiler House.*
- *New buildings in the immediate vicinity should align with the height, massing, and overall scale the existing buildings to ensure visual harmony.*
- *New work should be honest in its design, reflecting contemporary architectural practices. This means avoiding pastiche or imitation and creating designs of their time.*
- *Materials should be sympathetic to the original structures to create a cohesive aesthetic.*
- *Where a new building is attached to the White Bay Power Station, consideration should be given to the connection and the act of transitioning from an old building to a new one.*
- *Any new structures should demonstrate exceptional design quality, innovation, and design excellence.*
- *The potential new structures shown in Figure 6.11.6 show their maximum footprint size. New building masses must be balanced with open space.*

The No. 2 Boiler House was completed in c.1928 and was demolished in the late 1970s. At the time, it was a matching pair with the original 1917 No. 1 Boiler House (demolished and replaced with the No. 3 Boiler House). The building was designed in with prominent gables in a classical industrial style but had similar form, mass and scale as the current Boiler House.

Policy 11.2 — New structure – No. 2 Boiler House

There is potential to construct a new building similar in height and scale of the current Boiler House on the site of the demolished No. 2 Boiler House. The building should retain daylight for the laboratory in the Administration wing. The new structure may interconnect into the Pump House via new openings. This volume should respect and restore the formal massing and balance as a pair with the existing Boiler House.

The Coal handling Shed was originally constructed with a large lean-to open roof area attached to the east used for coal storage. Evidence of the building is available on photographs and on the structure itself, with cut steelwork for trusses and walkways. If required, a new building with the similar bulk, scale and form could be constructed attached to the east of the Coal Handling Shed.

Figure 6.11.1 Boiler House No. 2 under construction, c.1920s (courtesy of State Rail Authority records, State Archives Collection, 0363-011).

Figure 6.11.2 Boiler House No. 1 (right) and Boiler House No. 2 (left), 1927 (courtesy of ECNSW Archives, 0363-065).

Policy 11.3 — New structure – Dry Coal Store

A new building with the similar bulk, scale and form of the demolished Dry Coal Store, could be constructed attached to the east of the Coal Handling Shed. Any new building form should complement the existing Coal Handling Shed and not dominate its existing form.

The south terrace, formerly accommodating the White Bay Hotel, has potential for new structures in a similar form and scale of the former hotel building. There is further opportunity for an additional structure to the south of the former White Bay Hotel site provided that any new structure does not extend higher than road level and the railway cutting is retained (also refer to Policy 5.16).

Policy 11.4 — Upper South Yard and White Bay Hotel

A new building with the similar height, form and scale of the former White Bay Hotel may be constructed in the location of the demolished building. The new built form must be of similar mass and scale to the pub in terms of its relationship to Victoria Road and should respect the existing Administration Building and Staff Accommodation facade and views.

There is further opportunity for an additional or integrated structure below the former White Bay Hotel site provided that any new structure does not extend higher than road level and is in compliance with other policies of this CMP.

The Transformer Yard has the potential for new low height structures between blast walls.

Policy 11.5 — Transformer Yard

Potential to construct infill buildings between and around blade walls in the transformer yards while respecting the scale and dominance of these walls.

Figure 6.11.3 Dry Coal Store building on the left of the Coal Handling Shed, c.1950 (courtesy of ECNSW Photo Collection, 00906).

Figure 6.11.4 Approximate former site of the White Bay Hotel with White Bay Power Station in the background, 2024 (Design 5 – Architects).

Figure 6.11.5 Transformer Yard, 2024 (courtesy of Chris Bennett: Evolving Picture).

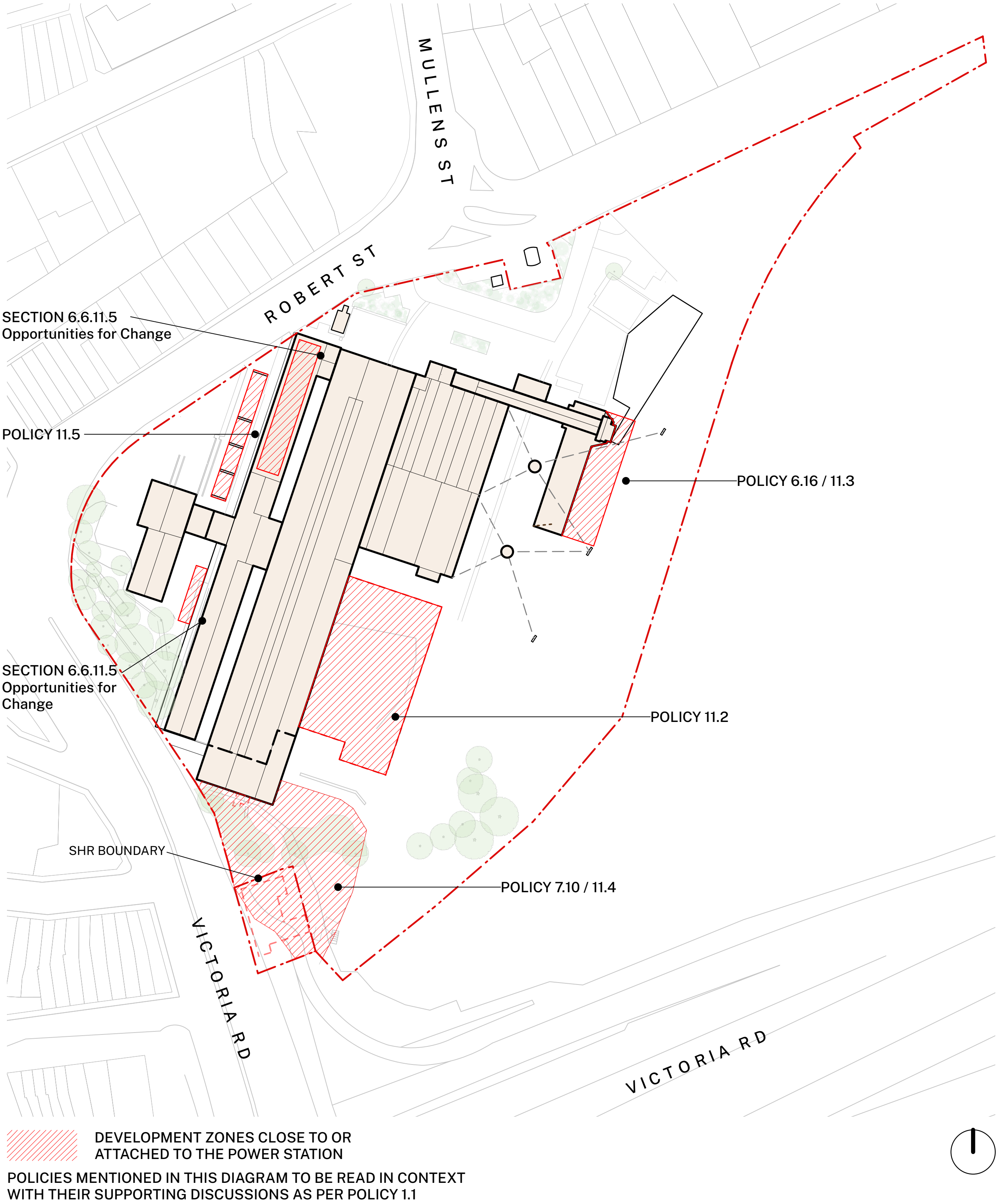


Figure 6.11.6 Plan of the White Bay Power Station site indicating the location of former structures where potential new structures could be built.

6.12 SIGNAGE

6.12.1 Generally

As an industrial site, signage has been integral to the operations at the White Bay Power Station during its active years as an integral and necessary component of spaces, equipment, and machinery. Extant heritage signage is also located in the northwest corner of the streetscape. Signage is expected to be key to future activation and uses of the power station in the form of wayfinding, statutory/safety, and interpretation signage. All signage should accord with the policies of this section.

Policy 12.1 — Signage generally

All signage should be consistent with the policies in the CMP and should not detract from the significant values of the power station. To ensure signage is considered holistically, a signage strategy is to be prepared to and provide the following:

- *Define the acceptable size and location of permanent signage. Any permanent fixings required for signage must be informed by the signage strategy rather than ad-hoc.*
- *Define acceptable use of temporary signage and the method of fixing for temporary signage. Temporary signage for merchandise or sales has the potential to clutter and detract, so it must be kept to a minimum.*
- *Guidance on design and artwork of signage that ensures high-quality outcomes which are compatible with the significant characteristics of the place.*

The chimneys are highly prominent and iconic landmarks that provide an opportunity for community celebration by accommodating art, lighting and fireworks. In the past two years, the chimneys have also been used to accommodate one-off decorative features. The continued use of the chimneys for community benefit is supported but should be approached with caution. Use of the chimneys should be tasteful and benefit the community rather than serve commercial or political interests which have the potential to damage or cheapen the White Bay Power Station's brand and its image.

Policy 12.2 — Use of chimneys for decorative purposes

The use of the chimneys for the display of art is acceptable as long as these are for exceptional occasions, non-commercial, infrequent and for a limited period of time. The use of architectural or artistic lighting is encouraged to strengthen the visibility and connection of the chimneys to the broader context and in key views. Refer to policies in Section 6.13.4 for lighting.

Any equipment or installation required should be erected and completely removed without damage to the fabric.

The existing billboard to the northwest corner was replaced in the early 2010s. Before this date, it consisted of three separate billboards, occupying this site for approximately 50 years. While billboards are often loathed as disfiguring elements and are out of scale and character with their context, the current one is appropriate in scale, and its location is consistent with similar items on similar sites. It sits comfortably in their industrial Victoria Road context and does not distract from the White Bay Power Station. Consideration could be made for using the billboard to provide information for upcoming events at the place or for interpretation.

Policy 12.3 — Existing heritage signage

Any painted or handwritten signage dating from the power station era is important evidence of processes and practices and must be retained, conserved and not painted over.

Figure 6.12.1 Painted signage from the power station era, 2023 (Design 5 – Architects).

6.12.2 Statutory & Safety Signage

Statutory signs are signs that are required under the Building Code of Australia and generally refer to life safety, including exits, fire extinguishers and safety. Additional signs may be required that are specific to the building or to protect machinery and where barriers are not possible, e.g. “keep off” signs.

Policy 12.4 — Statutory and safety signage

While there may be minimal flexibility with statutory signs, the location, use of material, and fixings should be carefully considered and not unreasonably detract from the character and quality of each space. Fixings should be made reversible.

6.12.3 Wayfinding Signage

Wayfinding signage will be necessary for future use and activation for navigation by tenants and the general public. They should be readily visible and legible but not jarring and must be considered a consistent and cohesive family of signs. The wayfinding signage should respect the industrial character of the place, including its design, size, location, and material, but not be confused with any original signage.

Policy 12.5 — Wayfinding signage

Wayfinding signage should respect the industrial character of the place, including its design, size, location, and material. It should be considered as a consistent family of signs that can be read cohesively and not be confused with extant original signage.

Figure 6.12.2 Wayfinding and interpretation signage in the Boiler House, 2024 (Design 5 – Architects).

6.12.4 Interpretation Signage

Interpretation signage is expected to be a key component of any interpretation initiatives within the place and should adhere to policies regarding interpretation in Section 6.19.

Policy 12.6 — Interpretation signage

All interpretation signage should comply with the policies in Section 6.19 on interpretation.

A further billboard type of sign may be allowed on Robert Street opposite Mullens Street for interpretation only and should not detract from any views of the Power Station.

6.12.5 Large Format Signage

Large format signage may be utilised for interpretation. Careful consideration must be given to its placement and design, and all large format signage should accord with the policy below.

Policy 12.7 — Large format signage

Large format external signs are acceptable provided the design, size, and location are compatible and complement the quality and character of the White Bay Power Station. Large format signage must not overwhelm the building or be jarring, clash, or cover over significant fabric or machinery.

Policy 12.8 — Use of large format signs

External signs should only be used for purposes that relate to the White Bay Power Station. External signs may include advertising for current or upcoming events at the power station or heritage-related purposes. Unless for exceptional community interest, it should not be used for general advertising or purposes unrelated to White Bay Power Station.

Policy 12.9 — Building profile

New signs must not break the skyline profile of the building, nor should they detract from or overwhelm the façade of the building.

6.13 SERVICES

6.13.1 Generally

The following general policies relate to the installation of building services.

Policy 13.1 — Minimise adverse impacts

The repair, maintenance and upgrading of services must be carefully considered and executed to minimise adverse impacts in significant areas. Upgrading work should be used to improve the impact these fixtures and fittings may have and to minimise any adverse effect on the visual appreciation of significant areas.

Policy 13.2 — Holistic approach

Proposals for new or upgraded services should be developed as a 'whole of building' approach rather than ad-hoc or piecemeal.

Policy 13.3 — Services reticulation

All new fixings and service penetrations must be carefully planned and executed to minimise damage to the original fabric. Where possible, group multiple services and use existing service paths and penetrations. The location of new cabling or conduit routes should be:

- *confined to areas already containing services and*
- *located in areas of lesser significance.*

Policy 13.4 — Experience

Where work is proposed in significant areas, these must be approved and supervised by suitably qualified and experienced specialist professionals and carried out by appropriately experienced tradespeople familiar with sensitive heritage environments.

6.13.2 Mechanical Services

Air conditioning may be compatible with some buildings, including the Administration Building, Entertainment Hall, and the Control Room. Where possible, any proposed ductwork should be concealed within ceiling spaces (top floor of the Administration Building) or exposed neatly.

Careful consideration will be required for mechanical ventilation in proposed toilets, plant rooms, and store rooms. No stair pressurisation to fire stairs or smoke exhaust systems currently exists.

The location of any proposed mechanical plant equipment must be carefully considered so that it is not visible from public vantage points. The location of plant equipment should avoid spaces of moderate, high or exceptional significance. Roof-mounted plant equipment is acceptable, including the flat roof over the Pump House or the "V" between the Pump House and Turbine Hall roof (subject to structural considerations).

Policy 13.5 — Mechanical plant equipment and substations

The location of any proposed mechanical plant equipment or substations must be carefully considered so that it is visually recessive and has minimal impact on the significant values and key characteristics of the space. The selected location should not be intrusive or obstruct elements key to the significance of the space.

6.13.3 Electrical & Communication Services

The Main Switch Board (MSB) is located adjacent to Robert Street in the North Forecourt. At the time of writing, the main power is limited, and temporary supplementary power, such as portable generators, is needed for special events. Subject to the electrical authority, any major enhancement or new power supply may require a new substation on the site.

Policy 13.6 — Substation kiosk

If a new substation is needed, a new dedicated kiosk within the former Transformer Bays in the West Yard would be the most practical and least intrusive for heritage. However, other locations may also be considered.

The main sub-board is located on the north ground floor of the Switch House, the former workshop. The sub-board could remain in this room, provided that a fire rating of the room is not required and the workshop can remain unaltered. Alternatively, if the room must be upgraded to accommodate the sub-board, a new room of lesser significance should be considered to house the main sub-board.

At present, the electrical distribution relies on temporary sub-boards, coloured bright orange, distributed throughout the power station. These sub-boards are left over from the 2022–24 construction phase.

Policy 13.7 — Subboards and reticulation

The temporary electrical boards should removed, and permanent locations should be found. This will also remove the intrusive catenary electrical wires and replacement with a permanent electrical cabling system that is concealed and integrated.

6.13.4 Lighting

The White Bay Power Station forecourt, yards, and interiors will need adequate lighting for compliance and safety as part of any activation or future use. Lighting may also be used as an interpretive device in conjunction with other features, e.g. sound and signage, to accent and feature industrial processes, particularly machinery in dark spaces.

Policy 13.8 — Lighting generally

Lighting may be used for compliance, safety, interpretability, and temporary features. The design, placement, and lighting fixtures should be carefully considered. There is the opportunity to repurpose existing light shades with modern fittings, e.g. the pendant dish lights throughout the power station.

Policy 13.9 — Feature lighting

Feature lighting can highlight or emphasise building fabric or machinery elements, such as illuminating the Chimney Stacks. It should be well-designed and support the significance of the place and its former use. Feature lighting should also be bright and distinctive but not create glare or interfere with views of the power station.

Policy 13.10 — Temporary lighting

Temporary lighting, including projections of signage and / or imagery onto key features of White Bay Power Station is acceptable.However, it must only be displayed for limited periods during an event, must not dominate key views of the power station, and not contain commercial advertising or branding. Temporary lighting should avoid obstructing or detracting from significant elements in spaces when in use. It should be erected and removed without damaging the building fabric or machinery in accordance with earlier policies. Where projections are used as signage, refer to Policies 12.7 and 12.8 on large format signage.

Figure 6.13.1 Temporary lighting projections during the opening of the 24th Biennale of Sydney, 2024 (Design 5 – Architects).

Figure 6.13.2 Interpretative lighting on the inside of the No. 1 Boiler, 2024 (Design 5 – Architects).

6.13.5 Vertical Transport

Lifts are discussed in the Tolerance for Change for each building. In summary, the building has five lift shafts, four formerly operating lifts dating from the operating phase of the power station:

- Boiler House (1958): South end containing a lift shaft only with no lift equipment or car. Low Significance.
- Boiler House (1953): Northwest corner containing shaft, car and equipment. Moderate Significance.
- Transformer Alley (1950s): North end containing shaft, car and equipment. Moderate Significance.
- Switch House (1917): Original shaft, car and equipment. Exceptional Significance.
- Administration Building (1928): Original shaft, car and equipment. Exceptional Significance.

In addition, a contemporary steel framed and glazed lift was installed in the Pump House in 2024 for the activation.

Depending on future proposals and alterations, the complex will require additional vertical transport options to comply with the Access and Accessibility requirements detailed in Section 5. The Tolerance of Change allows for the two existing lift shafts in the Boiler House and the single lift shaft at the north end of the Transformer Alley to be modified and replaced with new lifts. The existing lifts in the Switch House and Administration Building are highly significant and should retained and if possible, refurbished (refer to the Tolerance for Change).

Additional lifts may be possible for the Administration Building, Switch House and the Control Room, as shown in the individual policies for those buildings, without having a significant heritage impact. Any alteration in the lift configuration will require careful thought.

Policy 13.11 — Existing lift shafts

The two existing lift shafts in the Boiler House and the single lift shaft at the north end of the Transformer Alley may be modified and replaced with new lifts. The existing lifts in the Switch House and Administration and Staff Accommodation are highly significant and should retained and if possible, refurbished.

Policy 13.12 — New vertical transport

Additional lifts may be possible for the Administration and Staff Accommodation, Switch House, and the Control Room Building, as shown in the individual policies for these buildings.

6.13.6 Hydraulic Services

Generally, reusing existing bathrooms is preferred to create new wet areas as long as such uses are in accordance with the Tolerance for Change Tables. Reticulation of new hydraulic services must be carefully planned and executed to minimise damage to the original fabric.

Policy 13.13 — Bathrooms and wet areas

Reusing and refurbishing existing bathrooms is preferred over creating new wet areas as long as such use is in accordance with the Tolerance for Change tables.

6.13.7 Fire Services

No Fire Control Room currently exists within the building. If one is required, we understand it may be possible to negotiate with the authorities for an alternative location on the ground floor due to the heritage nature of this ground floor area.

A fire hydrant and fire hose reel system is provided to some buildings. Portable Fire Extinguishers are supplied throughout the publically accessible buildings, including the Boiler House, Pump House, Turbine Hall, Administration building and the Control Room. An EWIS system is installed in the building. An automatic Fire Sprinkler System is installed in the Entertainment Hall and the Control Room Building.

Policy 13.14 — Fire

The existing fire detection and suppression systems installed in 2022–24 must be maintained. These systems can be altered or reconfigured if required, but the extent of their utility should not be diminished. Fire suppression, including sprinklers and hydrants, can be extended to more buildings and spaces subject to BCA requirements and risk assessment. Any extension of fire suppression systems should be carefully designed and implemented to minimise heritage impact.

6.13.8 Security

Security measures are required given the scale of the White Bay Power Station, its multiple entry points (both onto the site and into buildings), and the significant extant machinery and equipment located throughout the spaces. Security measures can ensure that significant spaces and components are protected and unauthorised entry is prohibited.

Policy 13.15 — Security

All buildings should be secure from unauthorised entry, and strong security should be maintained throughout the place.

Figure 6.13.3 Extant Transformer in the Transformer Alley, 2024 (courtesy of Toby Peet).

OPERATIONS & MANAGEMENT

6.14 CODE & STATUTORY COMPLIANCE

6.14.1 Heritage listings

Listing on heritage registers is generally regarded as an indication of an item's heritage or cultural significance. Section 1.3 details the listing for the White Bay Power Station and statutory obligations arising from these listings are discussed in Section 5. Inventory sheets for each item are included in Volume 3 of the Appendices.

Policy 14.1 — Heritage listings

Any authority or organisations whose listing includes the White Bay Power Station, must be consulted prior to any major works. These include:

- *Heritage Council*
- *Placemaking NSW*
- *National Trust*
- *Australian Institute of Architects (AIA)*
- *Port Authority of NSW (for cooling water inlet and outlet)*

Figure 6.14.1 White Bay Power Station, 2023 (courtesy of Toby Peet).

6.14.2 Environmental Planning and Assessment Act – Environmental Planning Instruments

The White Bay Power Station is a major part of the Bays West Stage 1 Precinct detailed in the SEPP (Precincts – East Harbour City) 2021. It is a distinct site situated on the boundary of the Bays Precinct, adjoining land under the jurisdiction of the Inner West Council. The SEPP 2021 highlights key objectives and uses for the White Bay Power Station, including heritage conservation, role and land use/zoning, requirements for design excellence and relation to broader context/master planning. These objectives and controls must be considered when making proposals for the place.

Policy 14.2 — Objectives of SEPP 2021

Any proposal to adaptively re-use the White Bay Power Station must consider the objectives contained in SEPP 2021. It includes adherence to the Special Activities (SP1) zoning defined in SEPP 2021 and the requirements for any development proposed for Site C (the White Bay Power Station site).

Figure 6.14.2 Transformer Alley, 2024 (courtesy of Toby Peet).

Figure 6.14.3 Ash Handling Tower, 2024 (courtesy of Toby Peet).

6.14.3 Heritage Act, 1977 (NSW)

Refer to Section 5.6 for details in relation to the Heritage Act 1977 (NSW).

The White Bay Power Station is listed on the State Heritage Register as SHR Item No. 01015 and is of State Significance. It is, therefore, subject to the provisions of the Heritage Act 1977 (New South Wales). It is also noted that the Southern penstock and the water cooling channel are located outside the boundary of the current listing. The penstocks and the associated channel are integral to the operations of the White Bay Power Station as they provided cooling water to the turbine generators.

Policy 14.3 — SHR listing

If the opportunity exists, the SHR listing for the White Bay Power Station should be extended to include the south penstock, the inlet and outlet canals (currently listed separately), and the associated underground water channel.

Policy 14.4 — Work generally

All work to the place, whether they fall within the Heritage Council's Standard Exemptions or not, should retain and respect the cultural significance of the place in accordance with the overarching Policy 3.1. The Conservation Management Plan for the White Bay Power Station should accompany any application for approval so that the information and policies in the CMP are considered when assessing the application.

Policy 14.5 — Site-specific exemptions

Site-specific exemptions should be developed for the White Bay Power Station. The Conservation Management Plan for the White Bay Power Station should be referred to as a basis for developing these site-specific exemptions.

Policy 14.6 — Delegated authority

Any proposed works to the White Bay Power Station must be assessed against the Heritage NSW Material Threshold Policy. Where the item is likely to 'materially affect' significance, approval from the Heritage Council of NSW is required to assess the change.

Policy 14.7 — Minimum standards of maintenance and repair

All parts of the Power Station must be maintained and protected in accordance with minimum standards of maintenance and repair as outlined in Section 118 of the Heritage Act 1977 and Part 3, Division 1 of the Heritage Regulations 2012.

6.14.4 National Construction Code 2022 (NCC)

As detailed in Section 5, The National Construction Code (NCC) (2022) is a performance-based code that provides the minimum requirements for the safety, health, amenity, accessibility, and sustainability of certain buildings. It primarily applies to the design and construction of new buildings and may also apply to structures associated with buildings and new building work in existing buildings. The NCC does not apply retrospectively to existing buildings.

In 2022–24 works, some systems were installed in the White Bay Power Station to deal with life safety and fire suppression. These include fire hydrants to external areas and inside some buildings, sprinkler systems to the Control Room and Entertainment Room, fire detection and alarms, improved exits, improved signage and improved fire compartments. The existing systems may need to evolve to accommodate increasing uses and improve safety. Existing systems can be augmented, extended or new systems added to ensure the building remains usable and adaptable. Where DtS solutions are incompatible or will result in a high level of heritage impact, alternative Performance Solutions should be used to minimise heritage impact.

Policy 14.8 — NCC compliance

Any strategies or solutions to make the place comply with the NCC / BCA requirements should be governed by the cultural significance of the White Bay Power Station. Where necessary, performance solutions should be pursued so that the requirements of the code are met without adversely impacting culturally significant fabric or significant values. The chosen solution must be carefully considered and strive for design excellence in relation to the significant values of the place.

Policy 14.9 — Professional advice

To understand compliance issues and find solutions that do not diminish the values of the place or disfigure its fabric, professional assessment and advice should be sought from suitably qualified and experienced consultants. The aim should be to meet the objectives of the standard or code whilst respecting the significant values and fabric of the White Bay Power Station.

6.15 ACCESS & ACCESSIBILITY

6.15.1 Generally

As detailed in Section 5 of the CMP, the Disability Discrimination Act 1992 (DDA) deems it unlawful to discriminate against differently-abled persons in providing access to building premises. The *Disability (Access to Premises – Buildings) Standards 2010* set performance requirements and give references to technical specifications (including the NCC and relevant Australian Standards) to ensure dignified and equitable access to and use of buildings for differently abled people.

Access for all has broader equity issues. The challenges are providing access and access to spaces with dignity and inclusivity. In addition to people with disabilities, access extends to users, including older people, strollers, couriers, and furniture movers. Accessibility throughout the White Bay Power Station site is essential to any potential future access or use to provide an equitable experience of this rare and exceptionally significant place.

As an industrial site constructed in the twentieth century, the White Bay Power Station was not designed for equitable access nor held to the standards that the DDA and NCC currently set. With the White Bay Power Station now pivoting from a derelict landmark to a culture, arts, and community capstone in a revitalised Bays West precinct, equitable access and accessibility are essential for any future uses and activation of the power station. Access should be considered in terms of physical access to the place and access to information about the place.

For the 2022–24 activation works, the White Bay Power Station presented significant challenges. For the Boiler House, Pump House and Turbine Hall spaces, accessibility measures included floor remediation, ramps, and the installation of a lift in the Pump House. Despite this work, some spaces remained challenging to access. Section 5.11 of the CMP details several exemptions and concessions provided in the Premises Standards, which relate to unjustifiable hardship and the loss of heritage significance.

Policy 15.1 — Improving accessibility

Where possible, equitable access and facilities should be located and provided in a manner that seeks to minimise adverse impacts on the significant values of the place, including exceptional or highly significant fabric and spaces.

Policy 15.2 — Performance-based solution

Preparation and implementation of performance based solutions for equitable access may need to be considered, as the construction of new structures or facilities will result in adverse impacts that threaten the significant values and fabric of the place.

Policy 15.3 — Access Strategy plan and seek specialist advice

Equitable access and facilities should be designed holistically across the place through development of an Access Strategy.

An Access Strategy should be developed to plan for and provide equitable access, facilities, and support. This requires the input of specialist accessibility consultants and should be undertaken in collaboration with a conservation architect.

Policy 15.4 — Hearing and vision support

Hearing and vision support should avoid adverse impacts on space or fabric and should aim to enrich the experience of the hearing and vision impaired. They should also be an integrated aspect of any interpretation within the space, physical or otherwise.

Policy 15.5 — Professional advice

Works proposed in relation to accessibility should seek professional assessment and advice from suitably qualified access and heritage consultants.

6.16 CONDITION & CARE OF FABRIC

6.16.1 Maintenance Generally

The power station was initially designed for industrial use, with the facility to handle and store large quantities of coal and safely and reliably reticulate water, steam, and electricity. Consequently, construction is robust, and many components could be expected to have extensive reserve capacity for adaptive reuse.

In addition, the building complex is well-built and is now maintained. Significant conservation and remediation works were carried out in 2022–24, which addressed over four decades of maintenance and deterioration (detailed in Volume 2). Many of these conditions and maintenance issues included leaking roofs and cladding, structural deficiencies, hazardous materials, deteriorated paint, pigeon infestation, security and unsafe conditions. As a result, the general health and condition of the White Bay Power Station are currently considered stable.

Still, ongoing maintenance will be required to retain and maintain the power station into the future and to prevent major catch-up maintenance in the future. As a SHR listed item, the owner and manager of such buildings are required to achieve minimum standards of maintenance and repair (refer to Section 5 Minimum Standards under the Heritage Act 1977 (NSW) and Policy 14.7).

Policy 16.1 — Maintenance

General work and upkeep should be maintained through a comprehensive monitoring, conservation, and maintenance strategy, which must be implemented to ensure the survival and structural integrity of White Bay Power Station. A maintenance plan should include:

- *Cleaning and housekeeping (e.g. box gutter and rainwater head inspections and cleaning, cleaning stormwater lines).*
- *Preventative maintenance, repair, and timely remediation*
- *Site and building security and safety e.g. stability and slip-resistant coatings*
- *Fire detection and strategies for suppression*
- *Structural monitoring and repairs*
- *Weatherproofing, weather resistance, and birdproofing*
- *Regular repainting and corrosion treatment and protection to previously painted elements, particularly to fabric.*

Any temporary work undertaken should be in line with the principles and policies of this CMP.

Policy 16.2 — Dormant power station

If any part of the place is to remain dormant for an extended period, thus without viable reuse or investment, works of a temporary and cost-effective nature should be carried out to ensure minimum maintenance standards are withheld and to ensure no further damage or deterioration of fabric or machinery occur.

In addition to the above, all work, including regular maintenance, carried out on significant fabric of the place should be done by suitably qualified tradespeople and contractors experienced in conservation work in accordance with Policy 20.3 – Appropriate expertise and experience. Furthermore, they should be made familiar with the history, significance and issues concerning the element to be worked on.

Figure 6.16.1 Currently inactive room on Level 3 of the Switch House, 2024 (courtesy of Toby Peet).

Figure 6.16.2 Corrugated clear polycarbonate coverings to Turbine Hall window openings, 2024 (courtesy of Chris Bennett: Evolving Picture).

6.16.2 Significant Fabric

As an integral part of any use, new fitout elements and services as well as repairs and maintenance of existing fabric, will be required. All new elements will need to be fixed, possibly to existing fabric. Where this significant fabric is easily marked or damaged, special care will need to be exercised in selecting the location and type of fixing as well as in carrying out the work itself. Traditional methods of repair and fixing will ensure the survival of significant fabric and thus the place as a whole.

Policy 16.3 — Existing fabric generally

As a set of guidelines for the repair and maintenance of existing fabric and the fixing of new elements, the following principles should be followed:

• Fixing method should be reversible, allowing for later removal, repair or refixing of the element without risk of damage to ether itself or the surrounding and/or significant material.

• A principle of all connections in material is that the new connecting material should be weaker than the material it is joining. This will allow the stresses to be accommodated within the joint, which should be designed to take them, rather than transferring stresses to the body of the material and causing it to fail. Thus, epoxy may only be an appropriate solution where it is used to reinstate the damaged portion of a single structural element, which is not exposed to other factors which may lead to its deterioration or failure.

• Fixing method and materials used must be chemically and mechanically compatible with both substrate and element to be fixed. There must be no risk of corrosion, staining, damage or other adverse effect.

• Traditional fixing methods and materials are to be used in preference to modern techniques unless these have been proven in similar situations and have been widely accepted as appropriate by conservation specialists.

• When choosing fixing locations, use earlier fixing points wherever possible in preference to creating new ones.

• Do not fix in locations which will place significant fabric at risk of fracture, damage or failure.

• All fixing methods should be tested first in a discrete out of the way location, to ensure that it will be appropriate and can be relocated if required with minimal negative impact.

• Prior to fixing any elements to any existing surface, the hazardous materials register should be reviewed, as areas of encapsulated contamination remain throughout the building.

6.16.3 Timber Joinery

Traditional timber joinery refers to early doors, skirtings, architraves and windows. It is mainly found in the Administration Building, particularly the original level 3 entrance and the executive offices and laboratory on level 4, as well as the Control Room Building. Other minor joinery items, are found throughout including the Boiler House and the Turbine Hall.

Policy 16.4 — Timber joinery

The following principles apply to timber joinery:

• Where two structural elements have been traditionally joined with glue (e.g. the stile and rail of a door leaf of a window sash), a traditionally weaker glue such as P.V.A. should be employed, to allow the joint to fail before the element, and for future repairs.

• Where two structural elements have been traditionally joined without glue (e.g. a head and jamb lining of a door or window, or a traditionally nailed, wedged or pegged joint in timber framing), glues should not be introduced as this will place undue stress on the surrounding fabric and may lead to its failure.

• Glue nails and concealed screws should be avoided for similar reasons. Architraves, skirtings and other joinery elements often need to be removed for repair or to access services and elements behind them. If they are fixed with irreversible fixings or concealed self-tapping screws, their removal will almost certainly damage or destroy them. Nails or traditional screws on the other hand, are easily withdrawn with minimal damage. The ability to take the assembly apart without destroying it is fundamental for its continued survival. It is also sound conservation practice as well as being environmentally responsible.

Figure 6.16.3 Queensland Maple joinery of elevator in the Administration and Staff Accommodation, 2024 (courtesy of Chris Bennett: Evolving Picture).

6.16.4 Painting & Paint Colours

Internal paint colours employed at White Bay Power Station generally reflect the importance of the space, the style in which they were painted, and the functions. Spaces east of the Pump House typically have minimal paint, except for bathrooms and control rooms. The steelwork was painted a blue/grey colour and has an external quality, but most materials show evidence of not being painted and have a rough, unadorned external quality. There are many different colour schemes west of the Pump House, and most variation in colour and finesse was reserved for the Administration Building, the Switch House and the Control Room Building. The Entertainment Hall deserves special mention for the paint colours and murals painted by Andrew Lomnici, which are addressed in a specific policy under Switch House (Policy 6.37).

The 2022–24 works required repainting previously painted surfaces to all the spaces that made up the 2024 activation. This was due to the high level of failed and flaking paint and to encapsulate lead paint. Some spaces within White Bay Power Station have evidence of multiple paint colour schemes, but repainting should match the previously painted colour. An example is the main 1948 Control Room in the Control Room Building, originally painted in a two-colour system of brown and sienna separated by a red stripe. The last colour painted for the Control Room was light green, used to repaint this space in 2022–24.

Where lead paint is a concern, lead paint can be made safe using encapsulation methods rather than removal. Reference is made to the Australian Standards Handbook AS/NZS 4361.2:2017 Guide to Hazardous paint management, Part 2: Lead paint in residential, public and commercial buildings.

Policy 16.5 — Painting generally

Internal spaces and materials without evidence of ever being painted should remain unpainted. The previously painted surface should remain painted.

Policy 16.6 — Paint colours

Compatible paint colour schemes for spaces should be adopted based on research and a strong understanding of the use, period and architectural style of each affected space. Paint colours can comprise an earlier paint colour scheme, or a compatible contemporary scheme that does not detract from the key characteristics of the space.

Figure 6.16.4 Painted structure and machinery of the Boiler House, 2024 (courtesy of Toby Peet).

Figure 6.16.5 The 1948 Control Room, painted green during 2022–24, 2023 (courtesy of Chris Bennett: Evolving Picture).

Figure 6.16.6 Basement of the Coal Handling Shed with lead encapsulated machinery, 2023 (courtesy of Chris Bennett: Evolving Picture).

Policy 16.7 — Treatment of existing paint

In accordance with Burra Charter Principles, original paint coatings should be retained behind new paint layers. Removal and paint stripping is not preferred due to the removal of evidence. Old or degraded paint finishes should only be removed where this is necessary for the repair or ongoing maintenance of the particular element. As a first coat for such surfaces, a binder/conditioner/primer, should be applied to strengthen and bind the old paint.

Where lead paint is a concern, lead paint can be made safe using encapsulation methods rather than removal.

Policy 16.8 — Painting machinery

Painting machinery should only be carried out if all evidence of original paint colours has been thoroughly investigated. Colour matching and machinery painting should only be carried out by qualified conservators.

Policy 16.9 — Paint type and application

For paint and floor finishes the following additional principles apply:

- *Low and non-VOC (Volatile Organic Compound) paints and finishes should be used.*
- *In some cases, paint should only be applied by brush rather than roller to avoid paint build-up and the 'orange-peel' effect. This is particularly important on timber joinery (previously painted) and steel windows where rollers should never be used.*
- *External carpentry and joinery should never be painted with acrylic paint, particularly externally or in exposed locations, as it has too much build-up and effectively creates a plastic film which sits on the surface. If the finish is then damaged in any way or the surface remains relatively damp (acrylic will allow a small amount of moisture to penetrate) the moisture will be trapped behind the film and may result in fungal attack and failure of the timber element.*
- *For timber flooring, natural oil finishes should be used, preferably those without added synthetic additives which may cause build-up. These can be repaired or re-applied without the need for sanding. Polyurethane or other synthetic finishes should not be used on timber floors, as they require sanding, and thus the removal of timber in order to achieve a repaired surface finish.*
- *For external rendered surfaces, traditional lime washes or mineral silicate paints are preferred based on a thorough understanding of the surface, and previous paint coatings.*

Figure 6.16.7 Repainted Turbine Hall Level 2 as part of 2022–24 remediation works, 2024 (courtesy of Chris Bennett: Evolving Picture).

Figure 6.16.8 Repainted room on Level 4 of the Administration and Staff Accommodation as part of 2022–24 remediation works, 2024 (courtesy of Chris Bennett: Evolving Picture).

6.16.5 Facades

6.16.5.1 Face Brickwork & Stone

In 2022–24, work was carried out on stone elements on the Turbine Hall and Switch House, including removal of projecting cornices, redress of stone capitals, lintels and sills. Generally, this work was carried out with the priority of safety and practicability but has left diminished the quality and integrity of the façade. Reinstatement of stone elements should be a goal for façade restoration when the opportunity presents.

Policy 16.10 — Face brickwork and stone

Unpainted stone and face-brickwork should be maintained and must not be painted.

Policy 16.11 — Stone cornices and capitals

Reinstatement of stone cornices and repair of stone lintels, capitals and sills should be a goal for façade restoration when the opportunity presents.

6.16.5.2 External Render

Buildings constructed as part of the second stage (1927), including the Turbine Hall south, the Administration Building and the Switch House south, were constructed of concrete blocks and insitu reinforced concrete and finished with cement render. Window openings are formed using steel lintels embedded in concrete and rendered over. The external render was originally painted in a limewash or mineral silicate based paint. The paint has since washed off and the facades are now a distinctive raw grey render.

Ongoing maintenance issues include delamination of the thin surface render and corrosion of embedded ferrous metals, including lintels and thin reinforcement used in the construction of the concrete blocks.

Policy 16.12 — External render and brickwork

External facade render to the Administration and Staff Accommodation, the Turbine Hall and the Switch House must be maintained as part of a regular maintenance schedule. This includes treatment of delaminated render and treatment of corroded steel. External render may be left unpainted or they can be repainted. Any repaint must be based on evidence with regard to type and colour as per Policy 16.9 – Paint type and application.

6.16.5.3 External Metal Cladding

External metal cladding to the Coal Handling Shed, Inclined Conveyor, Transfer Shed and the Ash Handling Shed are exceptionally significant and iconic as part of the industrial quality of the place. The cladding dates from 2022–24 remediation, replacing the original 1950s cladding. The cladding is unpainted corrugated galvanised steel in a Z600 zinc coating. The fixings were originally predrilled threaded rods with lead washers and nuts but were replaced with contemporary fixings, class 4 hex-head screws with neoprene washers. While the option was available to use full lengths sheets, the cladding used three metre (3m) short lengths consistent with traditional practices.

Policy 16.13 — External metal cladding

External metal cladding and flashing must be maintained as a highest priority for the protection of structure, and significant interiors and contents. Any replacement of cladding must match, using unpainted corrugated galvanised steel sheet, in 3m lengths. However, this must appear as new fabric and not aim to replicate the patina of the rusted cladding.

The cladding must be fit for purpose for high wind areas, and have a zinc coating equal to or better than Z600.

Figure 6.16.9 The External Conveyor, Transfer House and brickwork of the north facade of the Boiler House, 2024 (courtesy of Toby Peet).

6.16.6 Windows

The type, configuration and materials for windows vary greatly across the place as well as their significance. The 1917 and 1928 buildings, including the Turbine Hall, Administration Building, and Switch House use large format steel framed louvre windows. The Control Room Building is also steel framed louvre windows but they are smaller frames. The 1953 Boiler House uses large aluminium framed windows, while the 1958 east and south elevations use aluminium framed curtain walls and concrete encased glass bricks for the south stairs. The Coal Handling Shed, Coal Conveyor and the Ash Handling Shed, were originally timber framed windows which have since been removed. Windows to the Administration Building were replaced in 2022–24 with steel framed windows in a similar configuration and appearance as the original. In addition, many of the original windows contain early wired glass, which is also significant as a form of impact resistant and heat resistant glazing.

Due to the extent of rust and distortion, many of the steel framed windows in exposed locations on the place are beyond repair. There are some locations, including the Transformer Alley, which have been protected, and the possibility for repair and remediation may still be possible. Any future reuse of the power station will likely involve the replacement of many of the external windows, but repair should be prioritised over replacement. In this context, prototyping of repair is recommended to test the viability and success of repairs prior to any decisions to simply replace full areas. Even if full replacement is found to be the only option for large parts, effort should be made to retain a and repair representative sample of original steel frames.

Policy 16.14 — Window repair and replacement

Repair of windows is preferred over full replacement as per the discussion. Any replacement of windows should only be considered in the context of a reuse so that other factors can be considered, including but not limited to, BCA, environmental, acoustic and appearance. Replacement of steel framed windows should be steel framed.

Policy 16.15 — Window replacement generally

Any replacement of windows must be consistent and holistic to ensure the building and its exceptionally significant facades retain their singular identity and industrial aesthetic.

Policy 16.16 — Use of polycarbonate and acrylic

Currently, clear polycarbonate and acrylic sheeting is fixed to timber frames over existing windows and is an acceptable conservation approach for a temporary period of time. The polycarbonate enables for natural light while protecting and preserving existing windows from further deterioration. However, polycarbonate and acrylic sheet have a limited lifespan, a higher fire risk rating, and should be replaced with permanent windows when possible.

Policy 16.17 — Curtain walls

The glass curtain walls of the south and east elevation of the Boiler House are distinctive and exceptionally significant. They should be retained and respected. Any proposal for replacement should refer to Tolerance for Change for guidance.

A survey of hazardous materials for the 2022–24 window caulking to many areas contains nonfriable asbestos. While the 2022–24 remediation work aimed to encapsulate the windows, they will remain a WHS risk. Replacing window caulking would be a highly complex and risky process that could damage frames and glass. In addition, there will be complexities around modern glazing standards, safety and other factors may pose constraints on reusing the original glass panes. The removal of window caulking may be counter-productive in the short term but may be considered long term depending on reuse and adaptation of the power station.

Policy 16.18 — Hazardous material

Unless major change is proposed, original caulking containing asbestos should be encapsulated and the risk managed. Removal of window caulking may be considered long term based on an understanding of risks and heritage impacts.

Figure 6.16.10 Windows of the Boiler House east facade, 2024 (courtesy of Chris Bennett: Evolving Picture).

6.16.7 Roofs

6.16.7.1 Corrugated Metal Roofs

The corrugated metal roofs at White Bay Power Station are visually prominent and distinctive. They are important as part of the industrial character and assemblage of materials that make up the exceptionally significant as elevations particularly from the western approaches. Traditionally, the metal roofing would have been unpainted galvanised steel in a traditional corrugated profile (the external wall cladding remain as galvanised steel).

In 2014, the roof sheeting over the Turbine Hall, Pump House and part of the Boiler House were replaced. In 2022–24 roof replacement included the Coal Handling Shed, the Coal Conveyor, the South Boiler House and the Control Room. In addition, almost all box gutters across the building were replaced. The material for the roof sheeting is corrugated Colorbond "Windspray," which proved to be the closest match to the colour of traditional galvanised steel. While the original roof sheets would have used 3m short sheets, the re-roofing used long sheets spanning the entire roof pitch for durability.

Policy 16.19 — Roofing

Adequate waterproofing of the roof should be considered with the highest priority for the protection of structure, and significant interiors and contents.

Replacement of roof sheets should be treated on a case by case basis but consistency of material must be used across the entire place to maintain the singular identity of the complex.

Policy 16.20 — Box gutters

Box gutters should be regularly checked, cleaned and replaced as required to ensure adequate protection.

The Boiler House, Turbine Hall and Pump House use roof lanterns for ventilation and light. While the ventilation was important due to the machinery that was accommodated (boilers and turbines), the roof lanterns now offer opportunity for passive design ventilation. The roof lanterns for the Turbine Hall used a sophisticated system of louvres that were held on a moveable track that were opened and closed to control the amount of ventilation.

Policy 16.21 — Roof lanterns

The Boiler House, Turbine Hall and Pump House contain roof lanterns for ventilation and light. Reuse should seek to re-open and utilise the roof lanterns for light and ventilation in lieu of creating new openings or resorting to non-passive forms of ventilation.

6.16.7.2 Concrete Flat Roofs

The 1950s modifications and new buildings employed concrete flat roofs on various buildings. The construction of these roofs vary, but in most cases, they are made up of concrete pavers or a concrete topping slab laid over a waterproof membrane over a structural concrete slab supported by steel or concrete beams or trusses. The pitch of many of the flat roofs is minimal and in many cases, concealed behind parapet walls and other obstructions, meaning they are not visible elements from public vantage points from the ground. Prior to the 2022 works, the waterproof barrier and sealant between the concrete pavers had failed. Works in 2022–24 relined most with a new torch on membrane. In some instances, including the Switch House roof, the waterproof membrane is ventilated to account for trapped moisture.

Policy 16.22 — Concrete flat roofs

Waterproof membranes are not significant but provide a vital role in keeping the building fabric and interiors dry and protected. They should be regularly checked as part of a maintenance plan. If required, they can be replaced as long as part of the ongoing maintenance.

Figure 6.16.11 The corrugated steel and concrete rooftops of the White Bay Power Station, 2024 (courtesy of Chris Bennett: Evolving Picture).

6.17 DOCUMENTS & RECORDS

The White Bay Power Station has an extensive collection of documents that cover information regarding its construction during and before the active years of White Bay Power Station. The records include large numbers of archival hardcopy drawings, photos, and other documents. Additionally, the Sydney Harbour Foreshore Authority commissioned an oral histories research project in 2002, as detailed in Section 2.6 and 2.7. The as-built documentation of works from 2024 will be stored and made available for future works to the power station.

Policy 17.1 — White Bay Power Station documents and records

The White Bay Power Station documents and records should continue to be carefully catalogued and updated to maintain a holistic record of the place. These collections should be made accessible to those working on the power station to ensure a clear understanding of the history of the place and its evolution over time.

Records of maintenance, works, or development at the White Bay Power Station site should continue to be maintained and made available for future works.

Policy 17.2 — Oral histories

The 2002 Oral History Project should be read in conjunction with this Conservation Management Plan and used to inform and be part of an Interpretation Strategy.

Policy 17.3 — New evidence

Should previously unknown significant fabric or evidence not already considered by this CMP be uncovered, it should be recorded and added to the existing White Bay Power Station archive, incorporated into a report, or as a supplement to this CMP, as appropriate. The analysis and policy sections of this CMP should also be revised or updated if necessary.

Policy 17.4 — Archival recording

Spaces of exceptional, high, and moderate significance at White Bay Power Station must be photographically recorded for archival purposes before any intervention or works commence. Those spaces ranked as having only little significance require a general photograph only for archival purposes (refer to Heritage NSW "Guidelines for preparing archival recordings of heritage items as a condition of consent).

Figure 6.17.1 Operation diagrams and documents from the Control Room, 2024 (courtesy of Toby Peet).

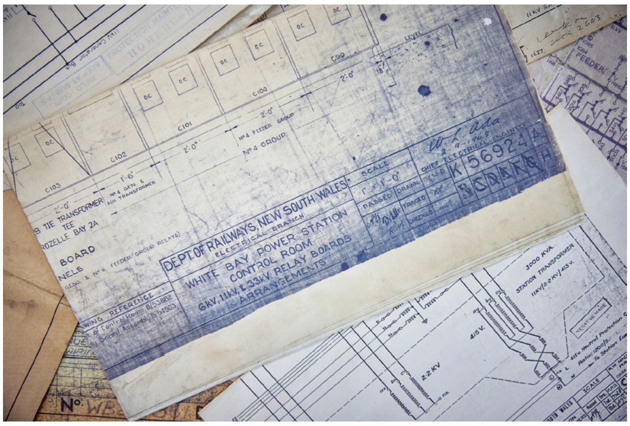


Figure 6.17.2 Operation diagrams and documents from the Control Room, 2024 (courtesy of Toby Peet).

6.18 CLIMATE CHANGE & SUSTAINABILITY

6.18.1 Climate Change

The White Bay Power Station is a historic contributor to climate change with its extensive output of greenhouse gases during its active years of operation. As a symbol of twentieth-century industrial activity in the Rozelle / Balmain area, it was criticised in the later years of its operations amidst a shift in public perception and understanding of the impacts of pollution.

Assessment of flooding issues has been conducted as part of the Review of Environmental Factors (refer to Section 5.9) and opportunities relating to ecology and drainage are denoted in the Stage 1 Draft Master Plan. However, a comprehensive assessment of the implications and risks of climate change on the place has yet to be undertaken.

> **Policy 18.1 — Climate change**
>
> *An assessment of the implications and risks of climate change for the White Bay Power Station should be undertaken. Expert advice should be sought from appropriate professionals as to how the impacts of climate change can be planned for and mitigated at the White Bay Power Station.*
>
> *Any mitigation, future changes, or upgrades to the White Bay Power Station should seek to minimise carbon footprint and environmental impacts while protecting, retaining, and respecting the significant values of the place.*

6.18.2 Flooding & Weatherproofing

The White Bay Power Station site is prone to flooding due to its low elevation, terrain and existing stormwater drainage conditions. With the onset of major effects of climate change, a predicted rise in sea levels and increased frequency and intensity of storms will increase the likelihood of flooding the site from the Beattie Street Catchment and Canal No. 15.

Several buildings on the site were also not designed to be weatherproof, given their original industrial use, which could impede their use in the case of inundation from weather events. While existing stormwater systems were upgraded, repaired, and improved as part of the 2022–24 remediation works, there continue to be multiple stormwater inundation points: the Review of Environmental Factors report notes that following the activation of the place for the 24th Biennale of Sydney, several weather events had to be managed.

The Bays West Stage 1 Draft Master Plan and Urban Design Framework identifies opportunities for overland flow to White Bay, which could form meaningful connections to water while mitigating flooding issues: notably, a channel to redirect Beattie Street stormwater drainage to White Bay via the power station's North Forecourt. This opportunity would have to be developed with expert advice from appropriate professionals.

> **Policy 18.2 — Flooding and connections to water**
>
> *Solutions to mitigate flooding and improve weatherproofing with minimal impact to the cultural values of the place should be explored. Where possible, these solutions could consider both appropriate methods to strengthen connections to water as well as existing systems of the power station that could support efforts to manage water e.g. the water cooling channel.*

6.18.3 Energy Efficiency

As the White Bay Power Station becomes activated for future adaptive reuse, energy efficiency solutions must be explored, developed, and implemented. With increasingly prolonged periods of hot or extreme weather, some building elements, including glazing and roofing, may require strengthening or upgrading against long-term exposure to harsher conditions for durability and user comfort. Further, landscape elements may be particularly vulnerable to climate change and need expert advice to address and provide suitable planning and mitigation solutions.

Regular monitoring, inspection, and maintenance should adequately measure exposure, temperature rise, and weatherproofing. However, long-term solutions for more overarching risks of climate change that may result in more significant changes to significant building fabric will need to be developed following further research and assessment.

> **Policy 18.3 — Energy efficiency and renewable energy**
>
> *Power generation and solar panels on roofs are acceptable to improve energy efficiency and enable the ongoing use and adaptive reuse. These elements should not interrupt the silhouette of the building nor alter its presence as an industrial landmark in accordance with Policy 5.1.*
>
> *The suitability and location of solar panels will need to minimise and mitigate any heritage impacts related to structural strengthening and maintenance access.*

6.18.4 Sustainability

Successful improvements and retrofits to heritage buildings begin with a thorough understanding of a building's construction method, cultural significance, previous modifications to the building, the environmental context and planned future use. Decisions about retrofit should start with this understanding, with heritage conservation acting as a frame through which to improve environmental performance with thoughtful intervention. A balanced approach maintains cultural significance while optimising environmental performance, reducing energy and emissions, improving resilience and providing cost savings for building owners and managers while improving liveability for occupants and users.

PMNSW is committed to reducing greenhouse emissions and have in place an endorsed target of Net Zero by 2035. Heritage buildings play a crucial role in the journey to achieving this target by becoming energy efficient and reducing reliance on coal fired power and other fossil fuels.

The *Better Placed Design Guide for Heritage*, a collaboration between the Government Architect NSW and the Heritage Council, extends *The Burra Charter* principles of "retention and adaptation" as positively to contributing to Environmentally Sustainable Development (ESD). ESD also includes concepts to repair, reuse and upcycling, retrofitting for sustainability; retaining embodied energy of heritage buildings; and the durable nature of heritage buildings.

The *Sustainable Heritage Buildings Guide (2024)* is a recent collaboration between Transport for NSW and the Heritage Council that provides policy and practical guidance intended to encourage progress towards achieving more sustainable heritage buildings. It outlines a range of interventions, from simple to more complex, that can support and enhance heritage buildings while reducing their environmental footprint. It provides policy and practical guidance to improve performance and reduce environmental footprint. This guide should be used by lessees, occupiers, architects, specialist and anyone who maintains or operates White Bay Power Station.

Policy 18.4 — Review of environmental sustainability

The place should be reviewed for application of environmental sustainability, upgrading of energy performance and user comfort, with respect for maintaining the heritage cultural values of the building.

Policy 18.5 — Performance solutions

Upgrades to improve the performance and operations must be sensitively designed by experienced heritage architects and engineers; performance solutions should be explored as a means to improving environmental performance with minimal heritage impact.

Policy 18.6 — Sustainability in resources and materials

As part of the circular economy for sustainable heritage management, works must support and prioritise the use of local and traditional resources and materials, as well as sustainable and responsibly sourced materials. Opportunities for adaptive reuse in repairing, reusing, and upcycling should be considered as part of the design process.

Policy 18.7 — Environmental impacts of fitouts and events

All new fitouts and temporary event installations are to be designed for deconstruction and reuse, either onsite or offsite. Waste must be minimised during both construction and event activities.

Event proponents must ensure that all fitouts are designed with a clear strategy for deconstruction and removal. Defits must be managed to minimise waste and landfill. No materials are to be left onsite following the completion of an event; all materials are to be removed for reuse, recycling, or responsible disposal.

Policy 18.8 — Passive environmental solutions of the power station

Responses to improve sustainability should first review the inherent, passive abilities of the architecture of the place relevant to its historic use as a power station. This includes design for dissipating excess heat, and promoting natural light and ventilation. Where appropriate to the cultural values and key characteristics of the place, these passive abilities and their climate response should be strengthened.

The introduction of any services must consider and minimise impacts to the significant fabric of the place. Similarly, reliance on mechanical services should be generally minimised.

6.19 INTERPRETATION

> "***Interpretation** means all the ways of presenting the significance of an item. Interpretation may be a combination of the treatment and fabric of the item; the use of the item; the use of interpretive media, such as events, activities, signs and publications, or activities, but is not limited to these."*[166]

Section 4.1, Statement of Cultural Significance, highlights that the White Bay Power Station is of exceptional state significance. As such, interpretation should be implemented and incorporated into any future activation and use to enhance legibility and understanding of the significant values of the White Bay Power Station. Interpretation may include signage, interactive elements, sound, lighting, etc. These on-site elements should be implemented with interpretation initiatives and activities such as public tours and events and digital interpretation, e.g., websites, social media, videos, documentaries, etc.

Policy 19.1 — Interpretation

Interpretation of the significant aspects and values of the White Bay Power Station should be integral to any future uses and activation. Interpretation should be integrated, cohesive, and coordinated. It should comprise a diverse combination of on-site and off-site elements, mediums, and interpretation initiatives.

There is a myriad of evidence relating to the history of the White Bay Power Station. As discussed in sections 2.6 and 2.7, an Oral History project was undertaken in 2002 featuring interviews with former employees of the power station. Plans and photographs spanning the power station's history and its different evolutions can be found across a repository of sources, including but not limited to the Powerhouse Collection, the State Archive of NSW, the State Library of NSW, and the City of Sydney Archives. Further, considerable amounts of building and machinery plans and archival photographs have been uncovered or made accessible off-site since the writing of the 3rd edition of the CMP, and more of such evidence may come to light over time. Records of these archives should be maintained and updated under policies 17.1 and 17.4. These resources should also be referenced and incorporated into future interpretation plans.

As part of the Bays West Rezoning proposal, an Interpretation Strategy was prepared for the White Bay Power Station (and Metro) sub-Precinct in February 2022. An outline of the Interpretation themes and stories are detailed in Section 5.8.2. Following the Heritage Interpretation Strategy, the place has had major public events including temporary interpretation signage, detailing the history and significance of many of the spaces and machinery.

Policy 19.2 — Implementation of Heritage Interpretation Plan

Existing interpretation should be assessed, and information gathered in conjunction with the Heritage Interpretation Strategy. A detailed Heritage Interpretation Plan must be commissioned and implemented as an integrated aspect of the continued development and conservation of the White Bay Power Station.

The Interpretation Plan should provide recommendations ranging from the interpretive design of any new structures within the existing buildings to elements such as lighting, sound, signage, and interactive elements that will assist visitors and users of the spaces in understanding the significant values of the place.

Figure 6.19.1 Switch House Cycle Switches, 2024 (courtesy of Toby Peet).

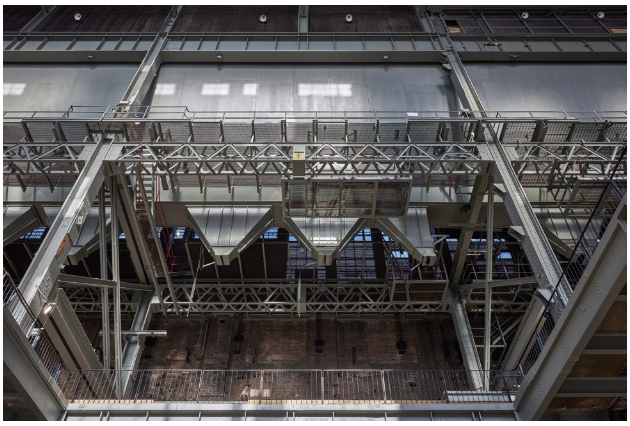


Figure 6.19.2 Boiler House Coal Hoppers, 2024 (courtesy of Toby Peet).

6.20 MANAGEMENT

The management and maintenance of the significant parts of White Bay Power Station is a substantial undertaking. It is paramount that the Cultural Significance of the White Bay Power Station be conserved for the enjoyment, edification, and enrichment of future generations.

Day-to-day management of the place will be the responsibility of the owners/occupiers, who will be given copies of this plan.

Policy 20.1 — Management generally

The place should be managed and maintained as a single entity. Parts of the place should not be alienated, and if there are multiple users the ongoing maintenance should be managed as a whole. Proposals for change should be subject to an established decision-making process incorporating relevant advice.

All persons involved with the management, maintenance, and proposals for change at the White Bay Power Station should be made familiar with the contents of this CMP to ensure that the findings, policies, and guidelines are adhered to and the cultural significance of the place is retained and respected.

Policy 20.2 — Management of works at the White Bay Power Station

All works to the White Bay Power Station must be directed, supervised and carried out by persons with appropriate knowledge, skills and experience in conserving and adapting such elements (Article 30 of The Burra Charter). They should also ensure that competent direction and supervision are maintained at all project stages.

Policy 20.3 — Appropriate expertise and experience

All management, maintenance, and work to the place should be carried out by licensed tradespeople with proven expertise and experience in conservation work on heritage buildings/structures and with advice from a heritage consultant. There should be a continuity of relevant and experienced conservation advice for all White Bay Power Station changes.

Figure 6.20.1 Storage room in Switch House, 2024 (courtesy of Toby Peet).

Figure 6.20.2 Dense configuration of machinery at the north end of the Turbine Hall Ground Level, 2024 (courtesy of Toby Peet).

Figure 6.20.3 Pulverising Mill balls stored at north end of the Boiler House, 2023 (courtesy of Toby Peet).

6.21 ADOPTION, IMPLEMENTATION, & REVIEW

This revised 3rd edition of the CMP must be adopted by any management bodies concerned with the White Bay Power Station. In addition to Placemaking NSW, these bodies include:

- Placemaking NSW
- The Heritage Council of NSW
- NSW Department of Planning & Environment

Following adoption, all volumes of this edition of the CMP should form part of any tender documents prepared for seeking expressions of interest for White Bay Power Station before any works to the place to assist the consent authority's assessment of the proposal. Similarly, master plan design proposals or any plans that set the framework for the future of White Bay Power Station should be developed in conjunction with appropriate conservation advice and the policies in this CMP.

During its adoption and implementation, the CMP should not be used in an abridged format in accordance with Policy 1.1.

Policy 21.1 — Adoption of and adherence to the CMP

The adopted CMP should be adopted by all authorities and bodies involved in planning and approval processes for the White Bay Power Station and used as a basis for assessment of any proposal for change and to guide all work at the place until reviewed.

Policy 21.2 — Implementation of the CMP

This Conservation Management Plan should be referred to the appropriate consent authority and Heritage NSW as part of any tender documents or application for change or development. It should be accompanied by a Heritage Impact Statement, which assesses the proposal.

Policy 21.3 — Publication and availability

Placemaking NSW should make this CMP publicly available. At a minimum, copies must be lodged with Heritage NSW, Inner West Council, City of Sydney Council and the State Library of New South Wales.
A copy of this report and all reports and records, photographic or otherwise, relating to White Bay Power Station should be placed in a permanent archive and be available for public inspection.

Policy 21.4 — CMP review

This Conservation Management Plan should be reviewed every ten years or sooner if:

- *the management structure of the place changes;*
- *adaptive re-use and development has been undertaken per the policies in this CMP; or*
- *new physical or documentary evidence changes the known significance of the place.*

The review should be undertaken by a heritage specialist with extensive knowledge and understanding of the White Bay Power Station and its significant values.

Figure 6.21.1 Chimney Stack of the White Bay Power Station, 2023 (courtesy of Toby Peet).

6.22 FURTHER RESEARCH

Any findings during further research should be recorded and managed in accordance with the policies in Section 6.17– Documents and Records.

6.22.1 Aboriginal History[167]

A *Bays West Connecting with Country Strategy* was prepared in 2025 and highlights the Aboriginal vision, values, stories, and identities pertinent to Country in the Bays West area, encompassing White Bay. Limited Aboriginal history research specific to White Bay has been carried out for the purposes of this CMP. Further research, particularly involving Aboriginal community members with kinship connections to the area, as well as those with family members who worked at the power station and other local industries, would assist in a fuller understanding of these aspects but would not alter the significance of the extant structure. As discussed in Section 6.9, it is unlikely that any artefacts would be found, given that the place has been substantially reconfigured and is partially on reclaimed land. The reconfigured areas were comprehensively disturbed during building works, both before and during the erection of the power station. However, research may reveal areas of occupation or use by the Aboriginal people, adding to our knowledge of the place.

Policy 22.1 — Aboriginal history

Any future revision of the CMP should include research on the place's Aboriginal and early European occupation to comprehensively understand its historical context.

6.22.2 Archival Research

As noted in the report and in further detail in the "Baseline Archaeological Assessment of White Bay Power Station," evidence of the temporary power station that existed between 1912–17 may possibly be found in plans in the NSW Archives, and would be subject to further research.[168]

Policy 22.2 — Archival research

Where feasible, archival research to further understand the history of the White Bay Power Station should be pursued to enhance an understanding of the place.

Figure 6.22.1 (overleaf) Turbine Hall Ground Level, 2024 (courtesy of Toby Peet).

ENDNOTES

1 Paul Irish and Rowena Welsh-Jarrett, “White Bay Power Station CMP: Revised Aboriginal heritage and history content,” December 2025.

2 Text for this section provided by Dr Paul Irish of Coast History in consultation with Rowena Welsh-Jarrett of Wadjiid without alteration. Irish, Welsh-Jarrett, “White Bay Power Station CMP: Revised Aboriginal heritage and history content.”

3 ‘The Progress of Pyrmont’, *Australian Town and Country Journal*, 13/10/1900, p. 30; ‘News of the Day’, *Sydney Monitor* 27/1/1840, p. 2.

4 Irish, Welsh-Jarrett, “White Bay Power Station CMP: Revised Aboriginal heritage and history content,” 17.

5 *The Connecting with Country Framework*, 2021, prepared by Bangawarra, is superseded by the *Bays West Connecting with Country Strategy*, 2025.

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7 Placemaking NSW with Page, A., Welsh-Jarrett, R. and McDaniel, E. 2025. *Bays West Connecting with Country Strategy*.

8 Palimpsest Consultant 2025. DRAFT *Aboriginal Cultural Heritage Assessment Report. Transport Oriented Development rezoning proposal – Stages 1 and 2, Bays West Precinct, Lilyfield and Rozelle NSW* (Report to NSW State Government).

9 Irish, Welsh-Jarrett, “White Bay Power Station CMP: Revised Aboriginal heritage and history content,” 17.

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

11 “Electric Light and Power Supply Corporation,” Dictionary of Sydney, https://dictionaryofsydney.org/organisation/electric_light_and_power_supply_corporation.

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13 Dr Wayne Johnson, “Baseline Archaeological Assessment of White Bay Power Station: Identification of Map, Plan and Image Resources,” February 2026.

14 Irish, Welsh-Jarrett, “White Bay Power Station CMP: Revised Aboriginal heritage and history content,” 17.

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17 Artefact, “Metro West – The Bays Archaeological Research Design and Excavation Methodology,” 2021, 218.

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20 Text for this section provided by Dr Paul Irish of Coast History in consultation with Rowena Welsh-Jarrett of Wadjiid without alteration. Irish, Welsh-Jarrett, “White Bay Power Station CMP: Revised Aboriginal heritage and history content,” 9–10.

21 Attenbrow, V. 2010. *Sydney’s Aboriginal Past: Investigating the archaeological and historical records* (Sydney, UNSW Press), p. 38. Archaeological sites show that Aboriginal people had already been in Sydney for thousands of years before this time. E.g. Stockton, E, 2009. ‘Archaeology of the Blue Mountains’, in E Stockton & J Merriman (eds) *Blue Mountains Dreaming: the Aboriginal heritage*, 2nd edn, (Sydney, Blue Mountains Education & Research Trust), pp. 41-72; Attenbrow 2010, *Sydney’s Aboriginal Past*, pp. 18-21; Williams A.N. et al. 2014, ‘A glacial cryptic refuge in south-east Australia: human occupation and mobility from 36 000 years ago in the Sydney Basin, New South Wales’, *Journal of Quaternary Science* vol. 29, no. 8.

22 “The Progress of Pyrmont,” *Australian Town and Country Journal*, 13/10/1900, p. 30; “News of the Day,” *Sydney Monitor* 27/1/1840, p. 2.

23 Text in above section provided without alteration from original report. Irish, Welsh-Jarrett, “White Bay Power Station CMP: Revised Aboriginal heritage and history content,” 7–8.

24 “Balmain,” Historical Encounters, https://www.historicalencounters.org/he/balmain/.

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26 Rozelle,” The Dictionary of Sydney.

27 “The Alston Soap and Candle Manufacturing Company, Limited.,” *Australian Town and Country Journal*, 1902, 36.

28 John Williams, “Rozelle,” *Sydney Journal* 3, no. 1 (2010): 38.

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31 Paragraph text provided without alteration from original report. Irish, Welsh-Jarrett, “White Bay Power Station CMP: Revised Aboriginal heritage and history content,” 8.

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33 Paul Agnew, *White Bay Power Station & Rozelle Marshalling Yards Oral History Project*, SHFA: GS08 Side A – 13:39.

34 Agnew, SHFA: GS08 Side A – 17:45.

35 Pole, SHFA: FH05 Side A – 25:50.

36 George Perin, interview by Frank Heimans, *White Bay Power Station & Rozelle Marshalling Yards Oral History Project*, SHFA: FH12 Side B – 36:52.

37 Alvils Paupe, interview by Graham Shirley, *White Bay Power Station & Rozelle Marshalling Yards Oral History Project*, SHFA: GS15 Side A -16:08.

38 Bolliger, George, SHFA: FH03&4 Side B – 36:02.

39 Dennis Thompson, interview by Graham Shirley, *White Bay Power Station & Rozelle Marshalling Yards Oral History Project*, SHFA: GS19 Side A -24:14.

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45 Agnew, SHFA: GS08 Side B – 32:10.

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51 Doug Mayger, interview by Frank Heimans, *White Bay Power Station & Rozelle Marshalling Yards Oral History Project*, SHFA: FH16 Side A – 21:45.

52 Jim Henderson, interview by Frank Heimans, *White Bay Power Station & Rozelle Marshalling Yards Oral History Project*, SHFA: FH10 Side A -18:52–23:06.

53 Henderson, SHFA: FH10 Side B -52:01–53:15.

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55 Steve Rickard, interview by Frank Heimans, *White Bay Power Station & Rozelle Marshalling Yards Oral History Project*, SHFA: FH09 Side A -07:43.

56 Thompson, SHFA: GS19 Side A -27:36.

57 David Logie, interview by Graham Shirley, *White Bay Power Station & Rozelle Marshalling Yards Oral History Project*, SHFA: GS04 Side B – 57:01.

58 Camilleri, SHFA: GS01 Side B – 41:58.

59 Agnew, SHFA: GS09 Side B – 29:45.

60 Agnew, SHFA: GS09 Side A – 20:32.

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72 See Edna Poles, SHFA: FH05 Side A -18:58; and Eric Partland SHFA: FH15 Side A -10:04, interviews by Frank Heimans, *White Bay Power Station & Rozelle Marshalling Yards Oral History Project*.

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75 Chris Lovett, interview by Graham Shirley, *White Bay Power Station & Rozelle Marshalling Yards Oral History Project*, SHFA: GS11 Side B -31:35.

76 Camilleri, SHFA: GS02 Side A -09:20.

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81 Partland, SHFA: FH15 Side A -01:32.

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Figure 6.22.2 (overleaf) Boiler House Roff with Chimney Stacks from south, 2024 (courtesy of Toby Peet).