

Heritage Impact Statement Harbourside Redevelopment



Prepared for Mirvac by Curio Projects
September 2016

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EXECUTIVE SUMMARY

Curio Projects Pty Ltd have been engaged by Mirvac Projects Pty Ltd to prepare a Heritage Impact Statement (HIS) to support a State Significant Development Application (SSDA) submitted to the Minister for Planning and Infrastructure pursuant to Part 4 of the Environmental Planning and Assessment Act 1979 (EP&A Act).

Mirvac Projects Pty Ltd (Mircvac) is seeking to secure approval to establish concept proposal details for the redevelopment of the Harbourside Shopping Centre (Harbourside), including a new retail shopping centre, residential apartment tower and substantial public domain improvements.

The project supports the realisation of the NSW State Government's vision for an expanded 'cultural ribbon' spanning from Barangaroo, around to Darling Harbour and Pyrmont. The project importantly will add further renewed diversity in tourism and entertainment facilities to reinforce Sydney's CBD being Australia's pre-eminent tourist destination.

The proposal relates to a staged development application and seeks to establish concept proposal details for the renewal and re-imagining of Harbourside. The concept proposal establishes the vision and planning and development framework which will be the basis for the consent authority to assess future detailed development proposals. The Harbourside site is to be developed for a mix of non-residential and residential uses, including retail and restaurants, residential apartments, and open space.

The Concept Proposal seeks approval for the following key components and development parameters:

- Demolition of existing site improvements, including the Harbourside Shopping Centre, pedestrian bridge links across Darling Drive, obsolete monorail infrastructure, and associated tree removal;
- A network of open space areas and links generally as shown within the Public Domain Concept Proposal, to facilitate re-integration of the site into the wider urban context;
- Building envelopes;
- Land uses across the site, non-residential and residential uses;
- A maximum total Gross Floor Area (GFA) across the Harbourside site of 87,000m² for mixed use development (non-residential and residential development);
- Basement parking;
- Car parking rates to be utilised in subsequent detailed (Stage 2) Development Applications);
- Urban Design and Public Realm Guidelines to guide future development and the public domain; and
- Strategies for utilities and services provision, drainage and flooding, and ecological sustainable development.

This report assesses all known and potential built heritage impacts and archaeological impacts associated with the proposed development of the site.

The Heritage Impact Statement concludes that whilst the proposed redevelopment of the site will have a visual impact on the immediate setting of the Pyrmont Bridge and its surrounds, it is not dissimilar to the setting which already exists on the opposite, eastern side of the bridge – where the bridge is surrounded by office towers, yet still readily understood and appreciated within its setting. It is considered that the scaling of the retail podium and setback of 10 metres will allow for the approach to Pyrmont Bridge to be read more readily in the round. Currently, the Harbourside Shopping Centre abuts the bridge and does not provide a buffer to the curtilage of the bridge.

The tower will have only a minor-moderate impact on the backdrop to the Pyrmont Conservation Area and local items within the vicinity of the site when viewed from Pyrmont, as currently, the views to and from the bridge and Pyrmont are already

obstructed by the existing hotels and residential developments, with the new development proposed to cause a similar level of visual impact.

The Water Cooling System and Manifold are known to exist below the southern end of the site. Therefore, it is intended to avoid major excavation impacts, where possible, with an exception for footings and other necessary services, where an alternative has been sought and is unable to be utilised.

The development is likely to impact on historical archaeological resources, which are proposed to be recorded and removed as part of an overall archaeological excavation program. It is not considered likely that any Aboriginal cultural objects will be disturbed or discovered during the works program.

The redevelopment will have a minor impact on non-original fabric of the Pymont Bridge, as part of the proposed provision of direct pedestrian and disabled access to the bridge, but as a part of offsetting these impacts, it is intended to 'make good' the surfaces of the Pymont approach to the bridge (western side) and improve the readability of the bridge approaches, trusses and undercarriages from the nearby public domain spaces. The demolition of the remnant monorail infrastructure, the stairwell adjacent to the bridge and set back of the new shopping centre at least 10 metres from the bridge, at the podium level and 50 metres from the tower side will have a far more positive impact on the ability to be able to read the bridge and its approaches, than the current intrusive and negative relationship between the Harbourside Shopping Centre and the bridge.

The design of the new Harbourside Shopping Centre will open up previously unavailable viewpoints to the bridge and the surrounding areas – including views of the former Darling Harbour Rail Corridor, the Darling Harbour Water Feature and the historic precinct of Pymont. This will be further enhanced by the consolidation of the pedestrian access to the site via a Bunn Street pedestrian bridge linking Pymont to Darling Harbour.

The redevelopment of the site provides a new opportunity to interpret the significant former history of the site within the public areas of the site. When the industrial heritage of the site was demolished to create a place for the people in the 1980s, the site's highly significant history was also removed. This new redevelopment provides an opportunity to reestablish the importance of the site, with the Pymont Bridge proposed to be highlighted and celebrated as one of the few tangible reminders of the site's significant history.

1.0 INTRODUCTION

1.1 The Purpose of this Report

Curio Projects Pty Ltd have been engaged by Mirvac Projects Pty Ltd to prepare a Heritage Impact Statement (HIS) to support a State Significant Development Application (SSDA) submitted to the Minister for Planning and Infrastructure pursuant to Part 4 of the Environmental Planning and Assessment Act 1979 (EP&A Act).

Mirvac Projects Pty Ltd (Mirvac) is seeking to secure to establish concept proposal details for the redevelopment of the Harbourside Shopping Centre (Harbourside), including a new retail shopping centre, residential apartment tower and substantial public domain improvements.

The project supports the realisation of the NSW State Government's vision for an expanded 'cultural ribbon' spanning from Barangaroo, around to Darling Harbour and Pyrmont. The project importantly will add further renewed diversity in tourism and entertainment facilities to reinforce Sydney's CBD being Australia's pre-eminent tourist destination.

This report assesses all known and potential built heritage impacts and archaeological impacts associated with the proposed development of the site and has been prepared with reference to following guideline documents:

- Australia ICOMOS Charter for Places of Cultural Significance, The Burra Charter, 2013 (Burra Charter);
- Assessing significance for archaeological sites and 'relics', Heritage Branch 2009.
- *Heritage Curtilages* Heritage Council Guideline, Heritage Office, Dept. of Urban Affairs & Planning, 1996
- Design in Context – guidelines for infill development in the Historic Environment, Heritage Office/RAIA, 2005.

Curio Projects has also prepared this HIS with regard to documentation provided by Mirvac Projects Pty Ltd, including:

- Plan no. SSDA1-100, SSDA1-101, SSDA1-102, SSDA1-103, SSDA1-104, SSDA1-105, and REP SSDA.9 issued by FJMT, 14 September, 2016;
- A preliminary geotechnical report, titled *Mirvac Harbourside Darling Harbour Preliminary Geotechnical Assessment Report*, prepared by Coffey for Mirvac, 19 February 2016; and
- Secretary's Environmental Assessment Requirements (Application Number SSD 7874) for Harbourside Shopping Centre, Darling Harbour dated 30 August 2016

Specifically, the HIS assesses the proposed development's impact on:

- the overall significance of Darling Harbour, within its broader setting;
- significant built heritage items, including the Pyrmont Bridge;
- archaeological resources- including both Aboriginal and historical; and
- any other relevant related heritage risks, as identified.

In addition, the HIS has considered the impacts of the proposed development in accordance with other relevant NSW Heritage Division guidelines, City of Sydney LEP and DCP heritage requirements, and the OEH Aboriginal Cultural Heritage guidelines.

This report also identifies the key strategies implemented for the management and mitigation of the heritage impacts identified during this assessment. Several site visits have been undertaken by Curio Projects, and its' specialist staff in order to accurately assess the impacts of the proposed redevelopment of the site.

1.2 Background

Mirvac acquired Harbourside, a key location within the Darling Harbour precinct, in November 2013. Harbourside, which was opened in 1988 as part of the Bicentennial Program, has played a key role to the success of Darling Harbour as Australia's premier gathering and entertainment precinct.

Despite its success, with an annual pedestrian visitation of around 13 million people, Harbourside is now outdated and in decline. The building lacks a quality interface to the Darling Harbour public domain and Cockle Bay and does not integrate well with the major transformation projects underway and planned for across Darling Harbour.

Harbourside is at risk of being left behind and undermining the significant investment being made in Darling Harbour that will see it return to the world stage as a destination for events and entertainment. Accordingly, Mirvac are taking a carefully considered and staged approach to the complete revitalisation of the site and its surrounds.

1.3 Site Description

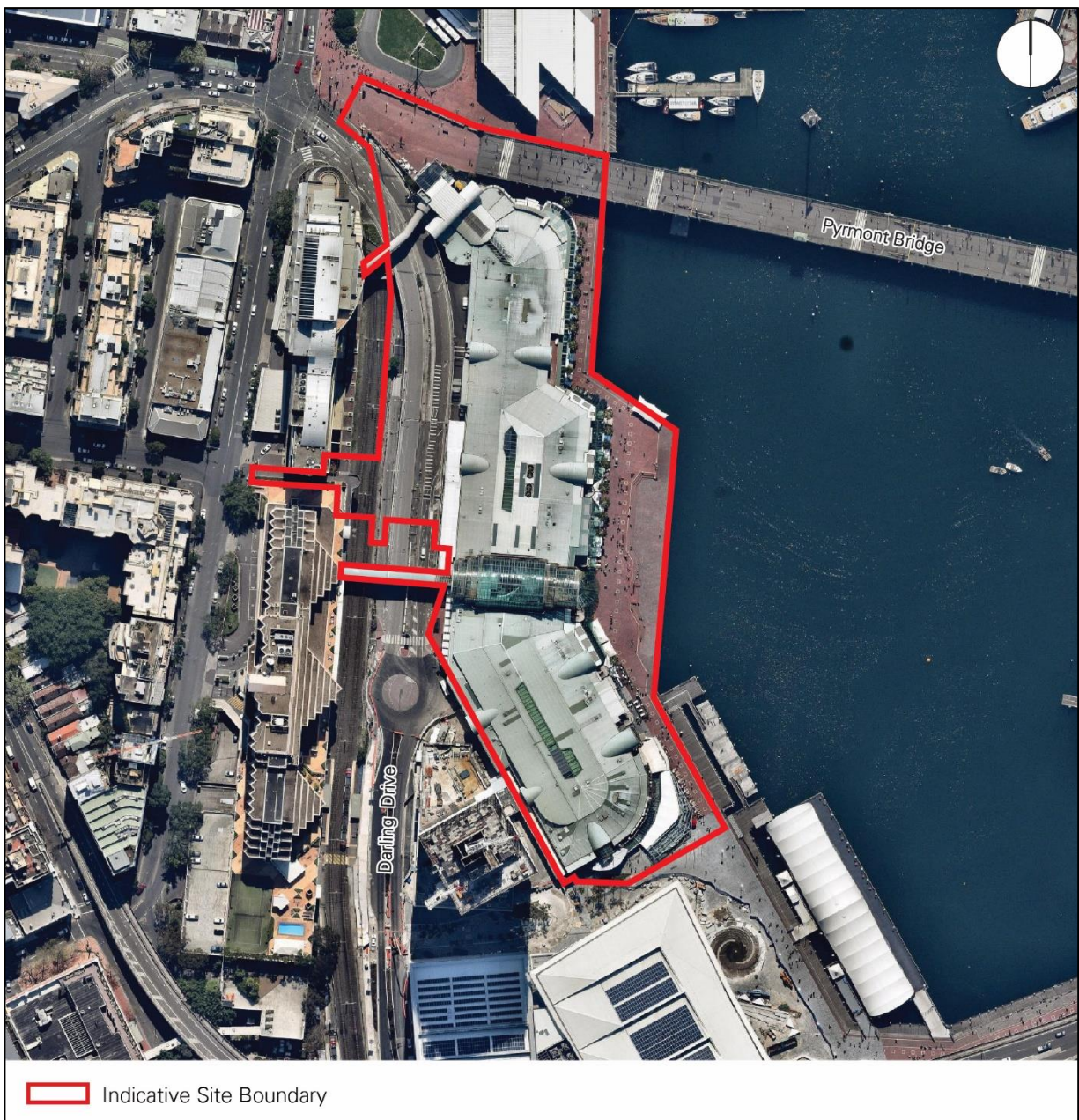
The Site is located within Darling Harbour. Darling Harbour is a 60 hectare waterfront precinct on the south-western edge of the Sydney Central Business District that provides a mix of functions including recreational, tourist, entertainment and business.

The study area is bounded by Pyrmont Bridge to the north, the Sydney International Convention, Exhibition and Entertainment Precinct (SICEEP) to the south (including the ICC Sydney Hotel immediately adjacent to the southwestern boundary of the study area), Darling Drive and the alignment of the Light Rail to the west, and Cockle Bay to the east. A locational context area plan and location plan are provided at Figures 1 and 2 on the following page.

The Darling Harbour precinct is undergoing significant redevelopment as part of the SICEEP, Darling Square, and IMAX renewal projects. The urban, built form and public transport / pedestrian context for Harbourside will fundamentally change as these developments are progressively completed.



**FIGURE 1: STUDY AREA (OUTLINED IN RED), IN ITS WIDER CONTEXT.
SOURCE: GOOGLE EARTH PRO, WITH CURIO PROJECTS ADDITIONS, 2016.**



**FIGURE 2: STUDY AREA (OUTLINED IN RED) IN IMMEDIATE LOCAL CONTEXT.
SOURCE: JBA.**

1.4 Overview of Proposed Development

The proposal relates to a staged development application and seeks to establish concept proposal details for the renewal and re-imagining of Harbourside. The concept proposal establishes the vision and planning and development framework which will be the basis for the consent authority to assess future detailed development proposals. The Harbourside site is to be developed for a mix of non-residential and residential uses, including retail and restaurants, residential apartments, and open space.

The Concept Proposal seeks approval for the following key components and development parameters:

- Demolition of existing site improvements, including the Harbourside Shopping Centre, pedestrian bridge links across Darling Drive, obsolete monorail infrastructure, and associated tree removal;

- A network of open space areas and links generally as shown within the Public Domain Concept Proposal, to facilitate re-integration of the site into the wider urban context;
- Building envelopes;
- Land uses across the site, non-residential and residential uses;
- A maximum total Gross Floor Area (GFA) across the Harbourside site of 87,000m² for mixed use development (non-residential and residential development);
- Basement car parking;
- Car parking rates to be utilised in subsequent detailed (Stage 2) Development Applications);
- Urban Design and Public Realm Guidelines to guide future development and the public domain; and
- Strategies for utilities and services provision, drainage and flooding, and ecological sustainable development.

A more detailed and comprehensive description of the proposal is contained in the Environmental Impact Statement (EIS) prepared by JBA.

1.5 Heritage Conservation Documents

Whilst the existing Harbourside Shopping Centre itself, is not listed on any heritage registers, the proposal must include an assessment of the potential impacts to the State Heritage listed Pyrmont Bridge and other items within close vicinity of the proposed development.

The *Pyrmont Bridge, Darling Harbour, Sydney Conservation Management Plan* prepared for the Sydney Harbour Foreshore Authority by Otto Cserhami & Partners – Architects (June 2006) form the specific conservation management policies and guidelines for the Pyrmont Bridge that provide the baseline for assessing the acceptability or otherwise of the impacts of the proposed works.

1.6 Limitations

The report includes an assessment of the potential for the site to impact on Aboriginal archaeological objects and/or places but does not include an assessment of the potential Aboriginal Cultural Heritage significance (intangible values) of the site.

1.7 Authorship

This report has been prepared by Natalie Vinton, Heritage Specialist and Director, Curio Projects Pty Ltd. The summary history contained in this report has been drawn from the full history *Historical Assessment: Darling Harbour Railway and Goods Yard in the context of the history of the western side of Darling Harbour, Ultimo and Pyrmont*, prepared by Patricia Hale – Historian, for Curio Projects in January 2016 (Appendix 1) and other key sources, including the *Pyrmont Bridge, Sydney –Conservation Management Plan* prepared by Otto Cserhami Pty Ltd (2006).

The Aboriginal assessment sections of this report have been drawn from the full *Redevelopment of Harbourside Shopping Centre: Aboriginal Heritage Due Diligence Assessment Report*, prepared by Sam Cooling, Senior Archaeologist – Aboriginal Archaeology, Curio Projects in September 2016 (Appendix 2).

The historical archaeological assessment sections of this report have been drawn from the full *Harbourside Shopping Centre Historical Archaeological Assessment*, prepared by Sally MacLennan – Heritage Specialist – Historical Archaeology, Curio Projects in September 2016 (Appendix 3).

2.0 STATUTORY CONTEXT FOR THE SITE

2.1 Planning Framework

2.1.1. Environmental Planning and Assessment Act 1979

The EP&A Act is an 'Act to institute a system of environmental planning and assessment for the state of NSW' (EP&A Act)¹. Dependent upon which Part of the EP&A Act a project is to be assessed under, differing requirements and protocols for the assessment of heritage may apply.

Part 4, Division 4.1 of the EP&A Act identifies and defines State Significant Development projects (SSD) as those declared under Section 89C of the EP&A Act. SSD and State Significant Infrastructure projects (SSI), replace 'Concept Plan' project approvals, in accordance with Part 3A of this Act, which was repealed in 2011.

The Site is located within the Darling Harbour precinct, which is identified as a State Significant Site in Schedule 2 of *State Environmental Planning Policy (State and Regional Development) 2011*. As the proposed development will have a capital investment exceeding \$10 million, it is declared to be State Significant Development (SSD) for the purposes of the *Environmental Planning and Assessment Act 1979* (EP&A Act), with the Minister for Planning the consent authority for the project.

The State Significant Development Application (DA) for Harbourside is a staged development application made under Section 83B of the EP&A Act. It seeks approval for the concept proposal for the entire site and its surrounds. (SSD Application Number 7874).

As part of the SSD approvals process, applicants are not required to obtain separate heritage statutory approvals, including built heritage and historical archaeology approvals under Section 60 of the NSW Heritage Act (1977) or Aboriginal Heritage Impact Permits (AHIPs) under Section 90 of the National Parks and Wildlife Act, 1974.

However, in order to identify the potential for the development to impact on archaeological resources, an Aboriginal Heritage Due Diligence and Historical Archaeological Assessment have been prepared as part of this Stage 1 SSD process². These documents have been prepared in accordance with the appropriate DoPE, OEH and Heritage Division guidelines to ensure that as part of the redevelopment of the site, any potential archaeological resources proposed to be disturbed, will be appropriately investigated, recorded and removed.

It is intended that any disturbance of archaeological resources will be undertaken in accordance with a detailed Archaeological Research Design that will be prepared by a suitably qualified archaeologist and submitted as part of a Stage 2 Development Application. Where excavation is required for the carpark, it is not possible to retain archaeological resources insitu. It is intended to excavate, investigate and interpret within public spaces of the development. Should any archaeological relics, suitable for interpretation, be found then they would be included within the overall public heritage interpretation proposed for the redeveloped site.

Following the issuing of final Notice of Determination (approval), the statutory provisions of the NSW Heritage Act and the National Parks and Wildlife Act will only apply again, if —once development commences—an unexpected discovery of historical archaeological relics or Aboriginal objects and/or Aboriginal places are made during the works program.

Should an unexpected archaeological resource be found, then there is a requirement to cease works in the immediate area and report the discovery of the unexpected archaeological find —to the relevant authority (NSW Heritage Division or OEH). This is the only statutory process not over-ridden by the SSD process. Should any archaeological remains identified in the assessments submitted with the EIS be found, these are not considered to be 'unexpected finds'.

¹ http://www.austlii.edu.au/au/legis/nsw/consol_act/epaaa1979389/longtitle.html

² See Attachment 2 and Attachment 3 of this report

2.1.2 Requirements of the SEARS

On 30 August 2015, the Secretary's General Assessment Requirements (SEARS) were issued to Mirvac for the Redevelopment of Harbourside Shopping Centre, Darling Harbour (Application no. SSD7874). The specific requirements for the EIS – with respect to heritage matters were identified in the following relevant sub-sections as follows:

The EIS shall address the relevant planning provisions, goals and strategic planning objectives in the following:

Heritage Council Guidelines Assessing the Significance of Archaeological Sites and Relics;

Heritage Council Guideline on Heritage Curtilages, 1996, and

Heritage Council Guideline Design in Context – guidelines for infill development in the Historic Environment, 2005

4. Heritage and Historical Archaeology

The EIS shall:

Provide a detailed heritage impact statement (HIS) that identifies and addresses the impacts of the proposal:

on the heritage significance of the site and adjacent area, including any built and landscape heritage items, conservation areas, views or settings, and in particular the impact on the State heritage listed Pyrmont Bridge;

on places, items or relics of significance to Aboriginal and non-Aboriginal people

against any endorsed conservation management plans for heritage items in the vicinity of the site

provide a historical archaeological assessment to inform the HIS and identify any archaeology protected under the Heritage Act 1977; and

address opportunities for heritage interpretation within the public domain

This report has been prepared to meet with the requirements of the SEARS with respect to heritage matters, including an assessment of the potential for the proposed redevelopment to impact on built heritage items, and potential Aboriginal and historical archaeological resources.

2.2 Heritage Framework

2.2.1 Statutory Heritage Listings

The subject site is not listed as a heritage item on the City of Sydney LEP 2012 or on the NSW State Heritage Register.

The Pyrmont Bridge, located directly to the north of the site, is listed on the NSW State Heritage Register, as SHR Item no. 01618. Figure 3 (on the following page) shows the SHR curtilage for Pyrmont Bridge ³.

³ Pyrmont Bridge State Heritage Inventory Card
<http://www.environment.nsw.gov.au/heritageapp/ViewHeritageItemDetails.aspx?ID=5053337>

The Darling Harbour Woodward Water Feature⁴, located on the harbour promenade, to the south of the site, as shown in Figure 4 is identified as an item of State Heritage Significance on the NSW State Heritage Register – Item no. 01933. It was recently listed (June 2014).

There are two items within the vicinity of the site that are listed on the Sydney Harbour Foreshore's S170 Register. They include the Darling Harbour Rail Corridor, which runs parallel to the western side of the subject site. The S170 Register listing does not provide a curtilage map for the Darling Harbour Rail Corridor, only a reference point, and describes the boundary for the site as *'located between George Street (Broadway), Pyrmont Street, Harris Street, and Merino Boulevard, on the former railway reserve for the Darling Harbour goods line. The limit of this listing includes the Casino site as its northern boundary.'*⁵ The item is described as being 'free from development', apart from the sections currently being used for the light rail. Whilst adjacent to the site, it does not form part of the curtilage of the site.

The second item is the Water Cooling System and Manifold⁶, which was an integral part of the operating system of the Power Station. The system consists of underground conduits possibly built of sandstone taking cool water to the Powerhouse from Darling Harbour waters edge and hot water from the Powerhouse to the waters edge.

Partial remains of the engineering equipment/manifold of this cooling system are located in the carpark of the Novotel, accessed from Murray Street and below the southern end of the Harbourside Shopping Centre. Up until c1990 the system was used by the Water Police as a training area for scuba diving in restricted areas. At that date the system was in good condition and substantially intact. It is noted in the *Sydney International Convention Centre, Exhibition and Entertainment Precinct (SICEEP) International Convention Centre (ICC) Hotel Darling Harbour: Statement of Heritage Impact* prepared by Tanner, Kibble, Denton Architects Pty Ltd (August 2013) that sections of the Water Cooling System and Manifold were located below-ground in their development site⁷. The conduits run underneath the southern end of the Harbourside Shopping centre, spanning from west to east from Murray Street to the harbour, below the existing Harbourside development. As the item has structural integrity (i.e. underground tunnel structure) it is not technically defined as an archaeological 'relic' but as a work. Nevertheless, given that any proposed deep excavation in this area would have the potential to disturb the conduits, it would be managed as part of the archaeological methodology for the site.

The subject site is also included within the 'Pyrmont and Ultimo Heritage Study' Area⁸, however no conservation areas, archaeological sites, or items of heritage significance are identified through the course of the study as being located within the curtilage of the current subject site.

⁴ Darling Harbour Woodward Water Feature State Heritage Inventory Card

<http://www.environment.nsw.gov.au/heritageapp/ViewHeritageItemDetails.aspx?ID=5061721>

⁵ Darling Harbour Rail Corridor State Heritage Inventory Card

<http://www.environment.nsw.gov.au/heritageapp/ViewHeritageItemDetails.aspx?ID=4500465>

⁶ <http://www.environment.nsw.gov.au/heritageapp/ViewHeritageItemDetails.aspx?ID=4500471>

⁷ *Sydney International Convention Centre, Exhibition and Entertainment Precinct (SICEEP) International Convention Centre (ICC) Hotel Darling Harbour: Statement of Heritage Impact* prepared by Tanner, Kibble, Denton Architects Pty Ltd, August 2013:22.

⁸ Anglin Associates 1990, *Pyrmont and Ultimo Heritage Study*

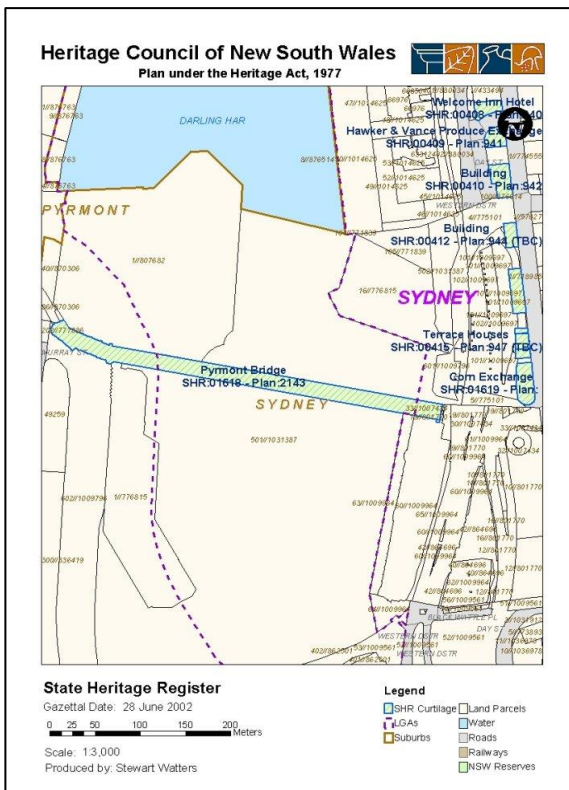


FIGURE 3: SHR CURTILAGE MAP FOR PYRMONT BRIDGE. SOURCE:
[HTTP://WWW.ENVIRONMENT.NSW.GOV.AU/HERITAGEAPP/VIEWHERITAGEITEMDETAILS.ASPX?ID=5061721](http://www.environment.nsw.gov.au/heritageapp/viewHeritageItemDetails.aspx?id=5061721)

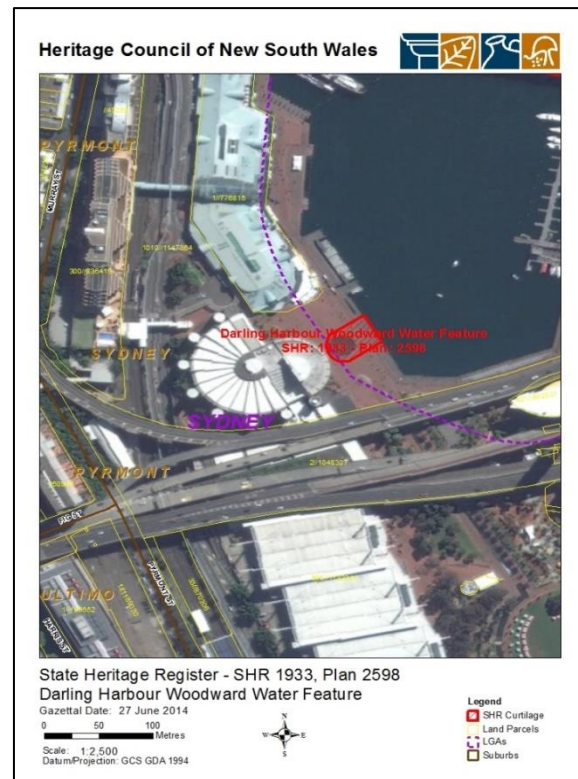


FIGURE 4: SHR CURTILAGE MAP FOR THE DARLING HARBOUR WOODWARD WATER FEATURE. SOURCE:
[HTTP://WWW.ENVIRONMENT.NSW.GOV.AU/HERITAGEAPP/HERITAGEITEMIMAGE.ASPX?ID=5061721#AD-IMAGE-0](http://www.environment.nsw.gov.au/heritageapp/heritageitemimage.aspx?id=5061721#AD-IMAGE-0)

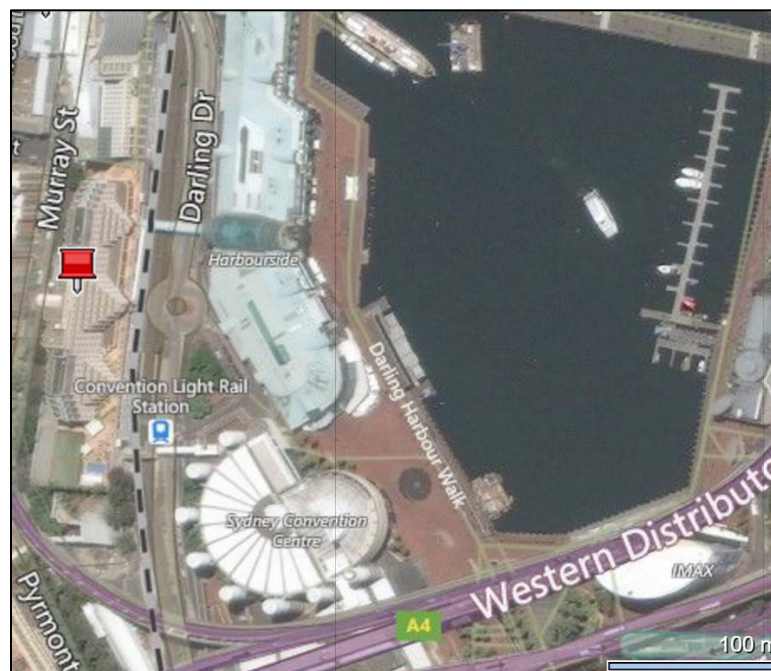


FIGURE 5: APPROXIMATE LOCATION OF THE WATER COOLING MANIFOLD SHOWN IN RED. SOURCE: SHFA
[HTTP://WWW.SHFA.NSW.GOV.AU/SYDNEY-ABOUT US-HERITAGE ROLE-HERITAGE AND CONSERVATION REGISTER.HTM](http://www.shfa.nsw.gov.au/sydney-about-us-heritage-role-heritage-and-conservation-register.htm)

There are twelve items of local heritage significance and one heritage conservation area within the general vicinity of the site, as shown in Sydney LEP 2012 Heritage Map Sheets 007 and 008 below. They are identified as:

- The Woolbroker's Arms Hotel, 22 Allen Street (Item no. I1206)
- The Corner Shop and Terrace Group, 224-302 Harris Street (Item no. I1233)
- Retail Premises – Harris Street Group, 304-308 Harris Street (Item no. I1234)
- Former Warehouse 'Harry Lesnie Pty Ltd', 47-49 Murray Street (Item no. I1244)
- Former Warehouse 'HS Bird & Co, 51-53 Murray Street (Item no. I1245)
- Pyrmont and Murray Street Residential Group, 142-168 Pyrmont Street (Item no. I1246)
- Pyrmont Bridge Road Hotel, 11 Pyrmont Road (Item no. I1255)
- John Taylor Woolstore, 137 Pyrmont Street (Item no. I1263)
- Clarence Bonded and Free Stores, 139 Murray Street (Item no. I1264)
- Pyrmont Fire Station, 147 Pyrmont Street (Item no. I1265)
- Pyrmont Terrace Group, 86-92 Pyrmont Street (Item no. I1276)
- Pyrmont Bridge Hotel, 94-96 Pyrmont Street (Item no. I1277)
- Pyrmont Conservation Area (Item no. C52)

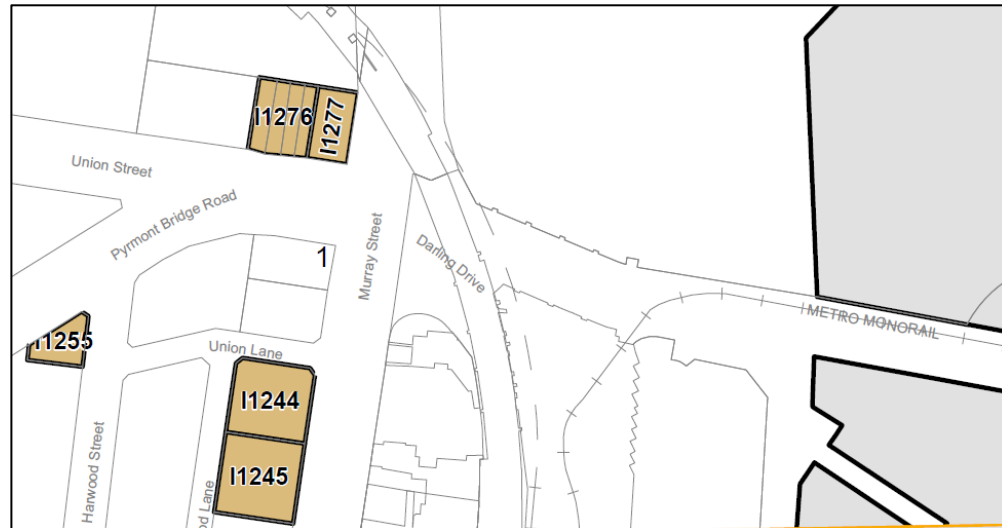
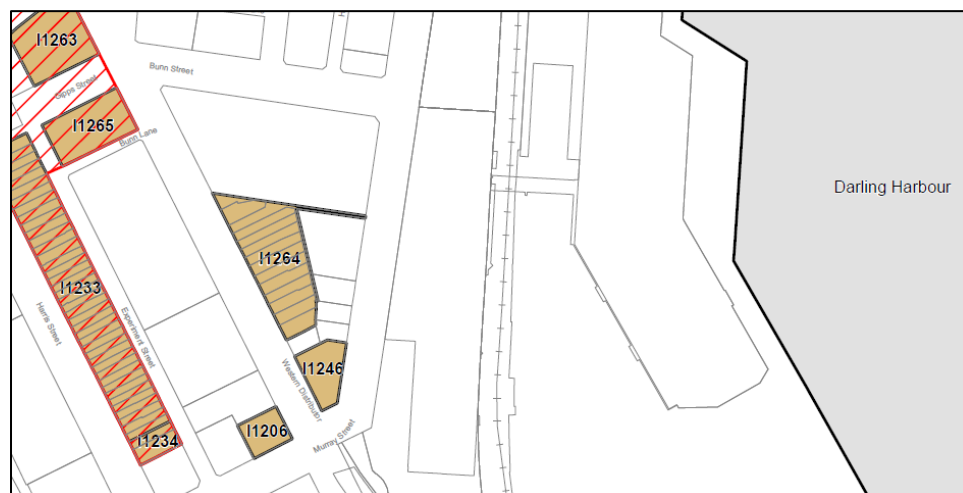


FIGURE 6: SYDNEY LEP LOCALLY LISTED HERITAGE ITEMS IN THE GENERAL VICINITY OF THE SITE, HIGHLIGHTED IN BROWN: SOURCE: SYDNEY LEP 2012 HERITAGE MAP -SHEET HER_007



**FIGURE 7: SYDNEY LEP LOCALLY LISTED HERITAGE ITEMS, HIGHLIGHTED IN BROWN AND CONSERVATION AREA HIGHLIGHTED IN RED:
SOURCE: SYDNEY LEP 2012 HERITAGE MAP - SHEET 008**

3.0 HISTORICAL ANALYSIS

3.1 Introduction

This section presents a summary of the site history as detailed in the Historical Assessment of Darling Harbour Railway and Goods Harbour in the Context of the history of the western side of Darling Harbour, Ultimo and Pyrmont prepared in February 2016 by Patricia Hale for Curio Projects. This summary also draws on other sources such as Transformations: Ecology of Pyrmont Peninsula 1788–2008 by James Broadbent and the Pyrmont Bridge, Sydney Conservation Management Plan, prepared by Otto Cserhami.⁹

3.2. Pre-European Environment

Prior to European settlement and subsequent land clearing, the vegetation of the Pyrmont Peninsula would have generally comprised of low, dry sclerophyll open-woodland along ridges and upper slopes, with species commonly present including Red Bloodwood *Eucalyptus gummifera*, Scribbly Gum *Eucalyptus haemastoma*, Brown Stringybark *Eucalyptus capitellata* and Old Man Banksia *Banksia serrata*. More sheltered slopes would have commonly supported Black Ash *Eucalyptus sieberi*, Sydney Peppermint *Eucalyptus piperita* and Sydney Red Gum *Angophora costata*. The understorey of these plant communities would have consisted of a variety of native shrubs¹⁰. However, the nature of the sandstone peninsula, water availability and drainage would have affected the growth of these various floral species.

While the diversity of flora on the peninsula would have supported a variety of fauna such as kangaroo, wallaby, wombat, echidna, flying fox, emus, quolls, various native rats and mice, snakes and lizards, this would also have been limited by the extent of the vegetation growth on the sandstone peninsula¹¹. Marine faunal resources would have also been easily accessed from the study area, both from the fresh water and estuarine environment of the Tank Stream, as well as from nearby Sydney Cove.

The Pyrmont peninsula would definitely have been a focus for Aboriginal occupation. The *Pyrmont Bridge Conservation Management Plan* notes that:

Several distinct indigenous groups occupied the Sydney Basin in 1788. The traditional owners of the Sydney City area are the Cadigal clan.

The Cadigal clan used the foreshore of Port Jackson for hunting and gathering, for shelter and for ceremonial purposes. Though the Cadigal clan have had a long presence in the Sydney Harbour region, information in regards to their history pre European arrival in 1788 is largely reliant on physical traces of their activities and documentation made by early European colonists. Other sources include the oral tradition handed down through Aboriginal elders and by modern archaeological investigation. Evidence of the pattern of use of the harbour does survive, primarily in the areas that now form the Sydney Harbour National Park.

*A variety of food resources were available to the Aboriginal people of the Sydney harbour area, as evidenced in shell middens excavated at Balmoral Beach and Cammeray. Analysis of the shell species found has revealed that the Aboriginal people ate Rock Oysters (*Saccostrea glomerata*), Hairy Mussels (*Trichomya hirsuta*), Sydney Cockles (*Anadara trapezia*). Mud Oysters (*Ostrea angasi*) and Hercules Club (Whelks *Pyrazus ebeninus*).¹²*

3.3 Post-Contact Aboriginal History

European settlement devastated the lives and activities of Aboriginal people of the Sydney Harbour area, by restricting access to areas traditionally used for hunting and gathering, shelter and for ceremonial purposes. With colonisation came

⁹ Cserhami, O. 2006. *Pyrmont Bridge Sydney – Conservation Management Plan*; prepared for the Sydney Harbour Foreshore Authority.

¹⁰ Chapman and Murphy, 1989.

¹¹ Tench W. 1789, *A Narrative of the Expedition to Botany Bay*, pp13–84. In Flannery, T (ed.) 2012, *Watkin Tench: 1788*, The Text Publishing Company, Melbourne

¹² Cserhami, O. 2006:34-35

diseases such as smallpox and during the first decade of European settlement at least two serious outbreaks of disease greatly reduced the Aboriginal population of the Sydney Harbour area.

By 1850 the Aboriginal people were virtually dispossessed from their traditional lands within the Sydney region and much of the physical evidence of the traditional way of life of the Cadigal speaking people was heavily disturbed by ongoing development.

During the earliest years of colonisation, shells were collected from beaches and mined from Aboriginal middens for burning in kilns to produce lime for the lime mortar used in all the civic city buildings. Cockle appears to be a colloquial name for shellfish in Sydney in the eighteenth and nineteenth century.

In England, cockles were collected from the tidal mudflats. Darling Harbour was generally known as Cockle Bay until the 1830s. The name is a vernacular one after the name 'Long Cove' given in 1788 did not take. It is one of a series of bays surrounding the harbour that reflect the establishment of the settlement at Sydney Cove. Rushcutters Bay and Farm Cove likewise reflect a very early pattern of use. The name Cockle Bay is through to reflect the collection of shellfish by the convict women, for food and for lime production.

Archaeological sites and the composition of early mortar has revealed that the shells are generally small bivalves, pippies, mud oysters and rock oysters.¹³

3.3.1. Phase 1: European Settlement and the Ultimo Estate (1788–1874)

Early plans of Sydney city indicate that while development was well established in eastern Darling Harbour from the early 1800s, the western side of Darling Harbour remained relatively undeveloped until the 1840s. An exception was the construction of Newstead House (also known as Bunn's Cottage) in c1832, on present day Murray Street, near Bunn Street (approximately 100m west of the study area).

Subsequent development on the Pyrmont Peninsula itself from the 1840s and 1850s was related to industries such as shipbuilding (Shipbuilders Chowne and Russell), and corresponding roughly built sandstone block cottages for working class residents of the area. This initial development was focused on the northeast point of the Pyrmont Peninsula (Figure 2.2). Additional development on the Pyrmont Peninsula included the operation of the Australian Steam Navigation Company on Darling Island from 1851, the subsequent major reclamation of Darling Island in 1870 to join it to the mainland, and the establishment of the Saunders sandstone quarry on the north-western corner of the peninsula in 1853.

Construction of railways lines in the 1850s, and the Pyrmont Bridge, which opened in 1857 (and was replaced in 1902 with the current iteration of the bridge, constructed of steel, timber and stone), saw the Pyrmont peninsula begin its development into a main industrial port and functional centre of Sydney. In addition, in 1874, the head of Cockle Bay was reclaimed as far as Liverpool Street, and the Iron Wharf was constructed on the western side of Darling Harbour. The Iron Wharf was the first wharf in the world to be constructed wholly of iron, and was considered to be a major engineering feat of the time. The history of this phase is summarised as:

- **1803–1840s**—John Harris acquired successive grants between 1803 and 1818 to create his 233-acre Ultimo Estate. Harris used his Ultimo Estate as his parkland country retreat, farming only a few acres. Land clearing occurred progressively through to the 1840s as the area was used for grazing and as a deer park.¹⁴ After John Harris' death, legal issues prevented subdivision until after 1859, meaning little to no urban development occurred in the vicinity of the subject site during this period.
- **1810s–1820s**—Shell middens on western side of Darling Harbour utilised as a source of lime, particularly during Governor Macquarie's campaign of civic improvement. Unclear if any are within the study area.
- **c1832—In 1828** John Harris gifted 1.5 acres to Anne Murray on her marriage to Captain George Bunn. Newstead House (also referred to as Bunn's Cottage or Bunn's House) was constructed in c1832. The house stood until at

¹³ Cserhalmi, O. 2006:35

¹⁴ Broadbent, J. 2010. *Transformations: Ecology of Pyrmont Peninsula*, prepared for the City of Sydney, pp 393-394. Available online at: http://www.cityofsydney.nsw.gov.au/data/assets/pdf_file/0018/228033/Transformations-of-Pyrmont-Peninsula-17882008.pdf

least 1889, and appears to be located to the west of the study area (between Murray Street and Darling Drive). Some physical developments and modifications are evident within the study area between Newstead House and the waterfront:

- A plan from 1844 (Figure 3) indicates a small brick/stone and wooden structure of unknown function was constructed close to the foreshore. It is unclear if it is associated with Newstead House or not.
- An access way is also illustrated on the 1844 plan (Figure 3) had been constructed between the Bunn's house and the waterfront, although its function is unclear. It is possible that it is some sort of slipway and/or haulage track associated with the goods coming in by sea. This feature appears to utilise existing topography, however may also be associated with localised land reclamation to enhance this feature. This feature is also evident in the 1860s and 1870s (Figures 5–8).
- The 1865 Trig survey (Figure 5) indicates the small structure at the waterfront shown in 1844 is still standing. A second small wooden L-shaped building of unknown function is also evident to the south of the original small building (Figures 5 and 6). Both structures have associated outbuildings behind them, likely to be an outdoor privy.
- Substantial, potentially masonry, fencing or a retaining wall between Newstead House and the smaller unknown structures is possibly evident in both the 1865 Trig Survey (Figure 5), and the 1873 panoramas (Figure 7). This division is also approximately at the point where the level changes significantly from the rise at Newstead House to the water's edge, evident in the panorama. Quarrying may have been undertaken in this area.
- In the 1873 and 1875 panoramas (Figures 7 and 8) additional structures between the rise and the water's edge appear to be present to the south of those indicated on the 1865 Trig survey, suggesting additional structures were constructed close to the water in the intervening years. The quality of the image does not allow for detailed analysis of their form or function. The area to the north still appears undeveloped and unmodified aside from clearing, with natural sandstone outcrops evident (see also Figure 9).
- Mature cultural plantings, including a Moreton Bay Fig and Norfolk Pine, are evident in the garden of Newstead House in the 1873 panorama. Additional landscaping elements not visible in this image may be present within the grounds of Newstead House.
- **c1873**—Photograph panoramas (Figures 7, 8 and 10) indicate that additional unidentified structures may be present to the south of Bunn's cottage. A jetty appears in Figures 8 and 10 immediately south of the slipway/track from Newstead House. The function of other structures in this foreshore area is unclear, but may relate to commercial or industrial activities.

3.3.2 Phase 2: Growth and Expansion of the Darling Harbour Railway Goods Yard (1874–1960s)

In collaboration with this development boom in the area, the initial stage of development of the Darling Harbour Railway Goods Yard was undertaken in 1874-88, and continued to grow and develop into the 1920s. The Goods Yard would have been located immediately west of the current study area, with the railway lines themselves running to the east.

Cockle Bay was further reclaimed in 1918, as waters south of Pyrmont Bridge became too shallow for large vessels to traverse. This also resulted in the demolition of the Iron Wharf in 1926, which was then partially dumped into the reclaimed harbour. The Darling Harbour Goods Yard became a crucial intersection between rail and shipping in Sydney, and remained so up until the 1960s post-war economic boom that was driven by overseas demand for Australian wool and wheat.

The collapse of the economic boom by the early 1970s, signaled the end for the Darling Harbour Railway and Goods Yard. Industrial and transport systems restructured and relocated to other parts of Sydney, and by 1971, the City of Sydney Strategic Plan was considering the redevelopment of Darling Harbour. Work commenced in 1976-77 on the Western Distributor, which allowed traffic to bypass Darling Harbour and the Pyrmont Bridge. The Darling Harbour Goods Yard was closed from 1982, with the last goods train running in 1984. Plans to redevelop Darling Harbour into a recreational, entertainment and public precinct was announced by the NSW Government in 1984, with the aim of completion to coincide with the state's 1988 Bicentennial celebrations. The remaining 19th century industrial heritage buildings at Darling Harbour

were generally demolished (with the exception of Pyrmont Bridge, the Hydraulic Pumping Station and several other items). Construction of the Harbourside Festival Marketplace (the current Harbourside Shopping Centre of the current study area), commenced in 1986 and was completed in time for the Bicentennial celebrations on 26th January, 1988.

- **1878**—By this time the Atlas Engineering Works were functioning out of premises on the Darling Harbour waterfront immediately east of Bunn’s Cottage. In 1878 these are shown as a relatively small shed/warehouse complex, which may have served its shipbuilding function. The company was also awarded a contract in the same year to build railway vehicles, including engines, passenger vehicles and goods rolling stock.¹⁵
- **1884–1888**—Darling Harbour Goods Line railway expanded north to Pyrmont Bridge through subject site. Atlas Engineering Works premises were resumed and appear to have relocated to a series of parallel sheds to the west of the railway line, beyond the subject site. The waterfront appears to have undergone some land reclamation and levelling to facilitate railway construction. Additional lines were added on reclaimed land to the east by 1903. Associated infrastructure, such as possible signal boxes, were present within the subject site close to Pyrmont Bridge.
- **1891**—Construction of Outward Goods Shed (C&D Shed), equipped with hydraulic cranes. The shed was of iron and steel construction with a wooden truss roof with lantern. The shed had a central roadway with two platforms, each with a hydraulic crane and two sidings. The shed has a capacity of 97 goods wagons.
- **1902**—Construction of second Outwards Goods Shed (A&B Shed), immediately east of the 1891 goods shed (i.e. on the waterfront). The shed contained a central roadway with a platform and siding on either side. The shed was constructed with cast iron circular columns and walls manufactured by ‘Barmer & Son Globe Foundry Sydney’. The iron columns supported the steel beams and trusses of the corrugated fibro roof. A clock was set in the building’s northern gable, and the shed was equipped with hydraulic cranes and loading facilities that were later removed. Further land reclamation appears to have occurred by this time and allowed this shed to be built right on the waterfront.
- **1902**—The Goods Shed Offices/Forwarding Station was a two-storey brick and sandstone building with a timber-framed iron covered hipped roof and pressed metal ceilings. Windows facing Pyrmont had semicircular arches with a stone keystone and decorative stone sills. The building was constructed close to the corner of Murray Street, at the north-western corner of the 1891 Outwards (South) Goods Shed (C&D). The building was converted for amenities during the twentieth century, and had several ablutions fittings on the first floor. The ground floor was used as office space.
- **1920s**—a two-storey structure was constructed on the eastern side of the Outwards Good Shed (A&B Shed). Possibly connected with the 1895 construction for transferring frozen meat across the harbour from the Meat Market to the NSW Pastoralists Association works at North Sydney. May have remained in place following the closure of the Meat Market in 1914 until the reclamation of Darling Harbour was completed in 1926. Its site may have been reused for the coal wharf that by 1984 appears to have also supported a helipad.
- **1918–1928**—land reclamation proceeded in stages along the head of Darling Harbour and along its western shore. Some of the reclamation fill originated from the spoil excavated from the City Circle train line, as well as from the 926 demolition of the Iron Wharf (south of subject site). Some of this reclamation is likely to have extended into the subject site. Additional wharves (Wharves 37 and 38) were built along the newly reclaimed area beyond the study area by 1928. A jetty constructed during this phase of work appears to fall partially within the study area.

3.3.3. Phase 3—Decline, Closure and Redevelopment of the Darling Harbour Goods Yard (1960s–Present)

- **1982–1984**—closure of the Darling Harbour Goods Yard.
- **1986**—The ‘Harbourside Festival Marketplace’ is constructed from 1986. It was one of the first projects to commence as part of the Darling Harbour redevelopment for the Bicentennial celebrations. Harbourside is based

¹⁵ SHFA S170 listing for Darling Harbour Goods Line <http://www.shfa.nsw.gov.au/sydney-About-us-Our-heritage-role-Heritage-and-Conservation-Register.htm&objectid=173>

on a design from Baltimore, USA and was completed in time for the Bicentennial celebrations on 26 January 1988. Harbourside is still standing and in active use at the time of this report.

3.4 Brief History of Pyrmont Bridge

The brief summary of the history of Pyrmont Bridge has been drawn directly from the endorsed *Pyrmont Bridge Conservation Management Plan*.¹⁶

3.4.1. First Pyrmont Bridge (1855-1890)

A private act (19 Vic) was enacted in 1855 to enable the formation of the Pyrmont Bridge Company. In 1857 this company erected the first Pyrmont Bridge, a toll bridge, that linked the Pyrmont and Sydney shores of Darling Harbour. Union and Market streets formed the approaches. The central span of this timber bridge opened to allow shipping to reach the wharves at the southern end of the harbour. Tolls were charged until 1884 when, following many complaints at the cost of the tolls, the Government purchased the bridge.

The Pyrmont Bridge was not constructed in isolation, rather it was part of a scheme by the Pyrmont Bridge Company proposed to create a more direct link from Parramatta Road via Pyrmont Bridge Road across the Blackwattle Swamp. The Pyrmont Bridge Road and Bridge Road follow this route today. The southern section or headwaters of Blackwattle Swamp, south of the road, was reclaimed by the late 1870s. The route, including the bridges, was designed by an Engineer who was later to join the Harbours and Rivers Department of the Department of Public Works, Edward Orpen Moriarty. The proposal was described in the Empire on 16 December 1853.

It appears that a Company is about to be formed to erect a bridge across Darling Harbour to Pyrmont and also a causeway and a Bridge over the Black Wattle Swamp to the Glebe. The passage across from Sydney to Pyrmont and vice versa, being much impeded and delayed by the present mode of conveyance over by the ferries, and the access to and from the Glebe and the city, being greatly retarded by the existing circuitous route, the erection of the bridges and the causeway referred to, would not only add greatly to the comfort of the residents, but very much increase the value of the property.

The original Pyrmont Bridge was designed to admit ships to the head of Darling Harbour, however, almost immediately there were criticisms that the bridge opening was too small and inhibited access. Moriarty, the designer of bridge, believed by 1881, that it had outlasted its useful life. (HTL Pyrmont Bridge, a History, Section 2.1). There were problems with white ants that were eating the timbers above the water line and cobra or marine borer that were causing the deterioration of the timbers below the water line.

3.4.2. Design and Construction of the Second Pyrmont Bridge (1891-1902)

In 1891 the Minister for Public Works announced that there would be an international competition for a new bridge. Three winning entries were selected, two of which were London based firms, the third a Sydney based firm. The Department of Public Works made its own estimates of the cost of the winning design, arriving at a figure of 295,710 pounds. (HTL Pyrmont Bridge, a History, Section 2.1). The depression of the early 1890s contributed to this proposal, and many other proposed public works, not being built.

In 1894, when economic conditions improved, a Parliamentary Standing Committee discussed the matter, seeking the opinion of the wharf owners, shipping captains, railway commissioners and Pyrmont landowners.

The first prize of 700 pounds was awarded to A. C. Pain & J. R. Lilljequist of London, the second prize of 300 pounds was won by John J. Webster also of London, the third prize of 200 pounds went to A. M. [Alfred Montgomery] Howarth and Carl Daffard of the PWD in Sydney (DPWS Heritage Group, Glebe Island CMP p. 21)

It took from 1891 when the competition was held until the end of 1899 when the foundation stone was laid to determine an appropriate design for the Pyrmont Bridge.

¹⁶ Cserhalmi, O. 2006.

In 1894 the Roads and Bridges branch of the Department [of Public Works] lead by Robert Hickson, its Commissioner and Engineer in Chief, began preparing three schemes for a Darling Harbour crossing. The first was for an iron bridge of the type specified in the winning designs of the 1891 competition, at a cost of 220,000 pounds to be placed on or near the site of the existing bridge. The second as to fill Darling Harbour from Market Street to the inner reaches of the harbour, reclaiming an area of about 38 3/4 acres and erect an over-bridge or viaduct over this. The third, and that recommended by the Department, was to fill up Darling Harbour from Bathurst Street (14 1/2 acres) and build an over-bridge or viaduct....

...In the end the Committee decided that the Departmental Proposal should not be carried out, but that when necessary the present bridge should be replaced by a timber bridge of approved design, with a swing span of 70 ft....

However soon after the enquiry was over, the Parliament dissolved suddenly, and the new Government referred the matter once more to a second committee this time chaired by Varney Parkes on 27 September 1894...

... Varney Parkes, the Chairman, called independent engineers to give evidence at the inquiry, on the different methods that could be used to cross the harbour, and at a cheaper cost than the Department's estimates. While Parkes managed to find engineers who would offer to build a bridge from 90,000 to 130,000 pounds cheaper, he could not persuade the committee to accept their tenders. He also attacked Hickson at the hearings, claiming that he had ignored the independent designs and made unfair estimates of the private schemes submitted. ...

...Towards the end of the questioning of Hickson, which lasted 2 days, the Chairman established that the Department could build a timber bridge, with an iron swing span, for 88,000 pounds, while an iron bridge as part of the Bathurst Street reclamation scheme could not be done for less than 2200, 000 pounds. The swing span of this design was reduced from 70 feet to 60 feet to effect a saving of 6,000 pounds; however, it was later changed back by the Department Engineers....

Parkes was not happy with the decision to use a public works scheme and attacked the Department further in parliament. (HTL Pymont Bridge A History, Section 2.4)

The construction of the bridge was documented by Percy Allan in a series of more than 100 photographs. The set of photographs were mounted in an Albu that is still held by the Department of Public Works (now the Department of Commerce) in their Library. A copy set is held by the Heritage Design Services of the Department of Commerce.

The first of the series of recorded photographs of the Pymont Bridge were taken on the 14th of November 1899. Work had yet to start on the Market Street approach. Excavation for the foundations at the Pymont End had commenced.

The official opening of the Pymont Bridge in June 1902, which was photographed by Allan, was chaotic. Newspapers of the day recorded the fiasco.

Sunday. A disgraceful scene took place yesterday at the official opening of the New Pymont Bridge. Some thousands of the general public congregated on the approach to the bridge to witness the ceremony. The crowd was altogether too big for the force of police on duty, and, unfortunately, no adequate provision was made for the invited guests, who had to scramble for a foothold. Sir Harry Rawson, the State Governor, and Lady Rawson each had a hand in the ceremony, and the Minister for Works, Mr. E.W. O'Sullivan, was commanding in chief for the occasion. The whole crowd of visitors adjourned to the central swing span, where a sort of grandstand had been erected for the State Governor's party, and the general public, despite the efforts of the police, crowded along with them. They were no sooner on the swing than it became necessary to order a few hundred off, as the swing could not be properly managed with the big crowd on board. At the required signal it swung open and then back, while the bulk of the visitors stood at either end of the fixed portion. Then there was a rush for chairs and the stand. The Civil Service Corps, which constituted a kind of guard of honor, wedged its way through the mass.

Mr. O'Sullivan, in asking Lady Rawson to cut a band of light blue ribbon which stretched across the roadway, remarked that in 50 years' time this ribbon would be worth [5 a yard, and without thinking of the consequences he suggested that the crowd should rush for it immediately it had been cut. Almost before he had finished speaking a score of grimy hands had grabbed the article in question.

The guard of honor, police, workmen and others were mixed up in a general scramble. Sir Harry Rawson waited for some time before order could be restored, and then he declared the bridge open, and read a short statement outlining the history of the old structure and the steps which had led to the construction of the new one. Cheers were then given for the King and Queen. Sir George Dibbs, amid cheers, presented to Lady Rawson a handsomely mounted cup, which he had turned on his own lathe out of an old pile which had done duty for 50 years in the discarded bridge, and another larger one to Mr. O'Sullivan. (Age, June 30, 1902).

It is not known if the cup presented to Lady Rawson survives. The Annual report of the Public Works Department records the completion and opening of the bridge.

Forty-six new bridges, including the Pyrmont Bridge, were completed and opened for traffic during the year. Of these, sixteen were erected to replace decayed structure, and the number of bridges now in the state is 3,008 with a length of fifty-eight miles. At the end of the year there were twenty-seven bridges (incl. the Glebe Island Second Bridge) in course was two miles, fifty-three chains. The most important of those completed are the following: -

Pyrmont Bridge - This bridge was opened for traffic by the State Governor on the 27th June, 1902, or only twenty-one months after the foundation stone was laid. The whole length of the bridge is 1,758 feet, and it forms a connection from Pyrmont to Sydney across an arm of the harbour. A noteworthy feature of the design is the swing span of 223 feet in length and 54 feet wide, weighing 800 tons. This is operated by two fifty horsepower electric motors, which can open or close the span in forty-four seconds at a cost of £100,000. Those who are acquainted with the inconvenience and delay which occurred at the old bridge will appreciate the advantages of the new structure. Separate contracts were let for abutments, side spans, and swing span, and the contractors all carried out their work faithfully and satisfactorily.

Although intended for horse drawn traffic the Pyrmont Bridge came to be largely used by motor vehicles. Cazeneaux's evocative photograph of the bridge shows draft horses on the bridge, the distinctive stonework and arc lights. Like its predecessor it was also an important pedestrian route, two well-dressed ladies can be seen to the far right of the image above.

The goods line had originally terminated at Pyrmont Bridge, however the replacement bridge was designed so that the lines could pass under the bridge to the Darling Island where the Naval Victualling yards were constructed between 1902 and 1909. Plans for alterations to the Pyrmont approach to the bridge were drawn up in 1909. After World War 1 a new goods link via Glebe and Lilyfield was constructed, thus providing two rail routes into Darling Harbour. This goods line, which passes under the western approach, is now used by the light rail. The paving level of the bridge was altered during these works.

In 1904 the streets of Sydney were lit by gas. Individual buildings had their own electricity generators. The first Pyrmont Bridge was also lit by gas. It would not be until the opening of the new Pyrmont Bridge that Sydneysiders would see electric street lights.

3.4.3. Alterations and additions to the bridge (1920 – present)

The first major alteration to the structure occurred in the 1920s, with the installation of the concrete shoes to the piles that survive today. The control of the structure passed to the Department of Main Roads (the DMR) established in 1932, replacing the earlier Main Roads Board. This agency continued to maintain the bridge, although little maintenance occurred post 1969. The DMR no longer exists, it was one of the agencies combined to form the Roads and Traffic Authority (RTA) in 1989. The RTA maintain control of the Glebe Island Bridge but not the Pyrmont Bridge.

Pymont Bridge was one of the locations studied in a 1934 study of traffic conditions in Sydney. The traffic on the bridge was photographed in the morning and the afternoon. There is considerable amount of traffic on the recently opened Sydney Harbour Bridge. These photographs also show the detail of the arc lights to the Pymont Bridge. The substantial stone piers can clearly be seen in each photograph, marking the start of the approaches and the start of the bridge deck.

As part of a major post-war reconstruction program by the Department of Main Roads road and bridge building re-commenced in 1946. This work was hampered by shortages of construction materials. In 1947 the DMR undertook major works to the Pymont Bridge.

...the DMR removed the coke concrete deck and replaced it with a new deck of re-inforced concrete. This modification increased the weight of the swing span by 170 tonnes or 21%. (Trueman 1990)

This modification, designed to take heavier traffic, has caused a number of technical problems, which are outlined in the paper given by Harry Trueman on the conservation works during the Bicentennial. Photos of the extent of work undertaken survive in the GPO collection.

The Pymont Bridge was permanently closed to traffic on 7 August 1981. Harry Trueman notes that:

...the bridge was closed to traffic following the building of new concrete crossings over Darling Harbour. It was intended to demolish Pymont Bridge to provide expanded wharfage in upper Darling Harbour. Fortunately, at this time people became aware of the significance of the bridge as part of our heritage and as a communication link for pedestrians between the City and Pymont. Led by the Lord Mayor of Sydney, Alderman Sutherland, and supported by many public organisations and professional bodies, including the Institute of Engineers, Australia, sufficient pressure was brought on the Government of NSW to preserve the bridge. Fortunately, the Government proposed the redevelopment of Darling Harbour as a major Bicentennial project, and the old bridge was seen as a necessary link in the circulation into and around this project. During the design stage it was also decided that the bridge should carry the monorail across Darling Harbour, rather than having a separate structure for this purpose adjacent to Pymont Bridge. This was considered a better solution from the aesthetic viewpoint, whilst adaptive re-use of the existing structure satisfied one of the criteria for conservation of the historic structure.

Despite a conservation study having been undertaken that identified the structures as being significant, the substantial railway workshops in Darling Harbour were demolished as part of the Bicentennial works which commenced in 1987. Plans were also afoot to remove the eastern approaches to the Pymont Bridge to enable the construction of the Western Distributor.

In the early 1980s the state decided to develop Darling Harbour as a major recreation and convention centre with a linked monorail. These had to be built in time for the 1988 Bicentennial Year but the requirement to conduct an environmental impact assessment created an obstacle in this tight timetable. So the state passed a special act of Parliament giving planning powers to a new Darling Harbour Authority that would not be subject to council controls or new planning laws. When professional and community opposition developed over the proposed monorail this was given the same treatment. (Thornley, Alan of the London School of Economics, Urban Planning and Competitive Advantage: London, Sydney & Singapore, p. 10)

Harry Trueman's paper on the conservation of the Pymont Bridge presented to the Fourth National Conference on Engineering Heritage held in Sydney in December 1988 talks more about the proposals and why the bridge was spared the fate of the remainder of the railway yards. It also describes the testing of the structure that was undertaken in detail.

With the establishment of the Darling Harbour Authority work commenced on the bridge restoration. The bridge had been unused for more than six years and unmaintained for even longer. Considerable argument had taken place as to the state of deterioration of the bridge, particularly of the piles, and the cost of repair.

The construction of the monorail required extensive upgrade and repairs works to the bridge to allow the bridge to be able to support the monorail infrastructure. There was extensive pressure exerted to ensure that the monorail was completed in time for the Bicentennial Celebrations of 1988.

Since the completion of the major conservation works the bridge has been under the control of the Darling Harbour Authority, a role now being undertaken by the Sydney Harbour Foreshore Authority.

4.0 PHYSICAL ANALYSIS

4.1 Site Context

Site inspections were undertaken in January and February 2016 to understand the site context, as well as identify evidence of existing archaeological features or evidence of ground disturbance that may inform the assessment of archaeological potential.

The Harbourside Shopping Centre is located on the western foreshore of Darling Harbour. The Harbourside Shopping Centre consists of a three-storey building and does not have a basement.

The subject site extends from Pyrmont Bridge in the north to the International Convention Centre site currently under redevelopment to the south (Figure 8). On the west the site is bounded by Darling Drive (Figure 9), and extends east to the public SHFA-owned promenade on the Darling Harbour foreshore (Figure 10). The northern boundary of the site abuts the south-western end of Pyrmont Bridge. In several locations the existing shopping centre complex has a direct physical or visual interface with Pyrmont Bridge (Figures 11-14).

The former monorail station is located above the northern end of the Harbourside Shopping Centre complex (Figure 12). A set of stairs provides access from Harbourside up to Pyrmont Bridge and the former monorail station (Figure 14). A pedestrian footbridge connects the former monorail station, Pyrmont Bridge and the northern end of Harbourside to the multistorey parking station and hotel on the western side of Darling Drive (Figure 15).

A second pedestrian bridge connects the upper level of Harbourside to the multistorey parking station and hotel on the western side of Darling Drive (Figure 9).

The external areas within the subject site adjacent to the waterfront promenade are paved in red brick, and are consistent with the rest of the public promenade, western approach to Pyrmont Bridge, Australian National Maritime Museum forecourt (Figures 10,11, 12 and 14).

A footpath and driveway to a loading dock provide access to the north-western side of the site. The Darling Drive ramp is located immediately west (Figure 16).

The nearby route of the light rail runs along a section of the path of the former Darling Harbour Goods Line, and is located to the west of the site. The rail line sits at a similar level to Harbourside. Darling Drive rises up from this level via a ramp (and not natural topography or an extant historical feature) to meet the higher level of Murray Street (Figure 16).

Evidence of subsurface services were observed across the site, including stormwater drainage (Figure 17).



FIGURE 8: THE HARBOURSIDE SHOPPING CENTRE, VIEWED FROM THE EASTERN SHORE OF DARLING HARBOUR



FIGURE 9: WESTERN BOUNDARY OF THE SUBJECT SITE, VIEW FACING SOUTH. DARLING DRIVE. THE LIGHT RAIL LINE TO THE WEST OF DARLING DRIVE FOLLOWS A ROUTE OF THE ORIGINAL DARLING HARBOUR GOODS LINE.

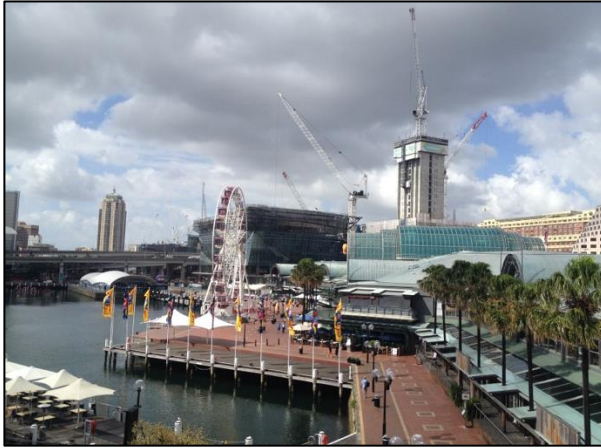


FIGURE 10: EASTERN BOUNDARY OF THE HARBOURSIDE SITE, SHOWING INTERFACE WITH THE PUBLIC PROMENADE ON THE WATERFRONT



FIGURE 11: WESTERN APPROACH TO PYRMONT BRIDGE, SHOWING ENTRANCE TO HARBOURSIDE



FIGURE 12: INTERFACE BETWEEN HARBOURSIDE (LEFT) AND PYRMONT BRIDGE (RIGHT), VIEW FACING WEST. THE FORMER MONORAIL STATION IS VISIBLE IN THE CENTRE OF THE IMAGE.



FIGURE 13: PHYSICAL INTERFACE WITH PYRMONT BRIDGE

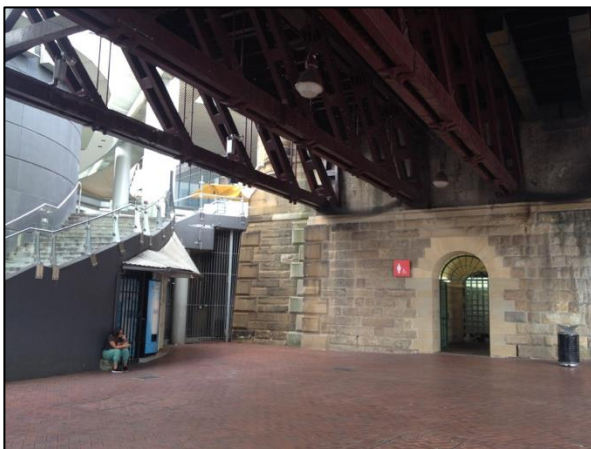


FIGURE 14: NORTHERN BOUNDARY OF HARBOURSIDE AND THE SANDSTONE FOUNDATION OF PYRMONT BRIDGE, SHOWING GATED ENTRANCE TO LOADING



FIGURE 15: PEDESTRIAN FOOTBRIDGE BEYOND THE NORTHERN BOUNDARY OF THE SUBJECT SITE, SHOWING FORMER MONORAIL STATION AND HARBOURSIDE SHOPPING CENTRE.



FIGURE 16: LOADING DOCK ENTRANCE ON WESTERN SIDE OF HARBOURSIDE. DARLING DRIVE RISES ON THE LEFT HAND SIDE.



FIGURE 17:EXAMPLE OF SUBSURFACE SERVICES ON THE WESTERN SIDE OF HARBOURSIDE SHOPPING CENTRE

4.2 Pyrmont Bridge – Context

The context for the Pyrmont Bridge has been drawn from the endorsed CMP and has been amended to account for the more recent removal of the monorail.

The Pyrmont Bridge is clearly visible for all foreshore areas around Darling Harbour, Cockle Bay and King Street Wharf. Surrounding Pyrmont Bridge is Pyrmont and Darling Harbour to the west, Cockle Bay and the city to the east, Imax Theatre, Chinese Garden and the Convention Centre to the South and Sydney Harbour and the Balmain peninsular to the North.

The Pyrmont Bridge is currently a major pedestrian thoroughfare between Pyrmont and the city. Bicycle traffic also uses the bridge, which is closed to vehicular traffic. The southern section of Darling Harbour contains a marina and is also used for a variety of events, for which a floating stage is used. These vessels pass under the bridge, and navigational beacons are mounted on the structure. A number of the timber piers of the protecting platform remain however the decking of this structure, built to prevent vessels from hitting the pivot pier, has been demolished.

The bridge itself is a 14 span structure and is 369m in length, with an electrically operated steel swing span. The bridge decking is supported on a series of piers and Allan trusses, both constructed of hardwood. When in its closed position the central pivot section rests on two piers known as rest piers. The moveable section is supported on a circular pier known as the pivot pier. Both the central pivot pier and the two rest piers are faced with Sydney sandstone. The abutments are likewise faced with sandstone.

The Pyrmont approach is directly from street level, as originally constructed. The goods line (now the light rail) passes beneath the roadway adjacent to the Western approach. The Sydney city or eastern approach has been largely removed. A single pier of the original abutment, including the light fitting, survives adjacent to the former Corn Exchange. Stone elements from the removed approaches have been used in Pyrmont as landscaping. Modern flyovers provide pedestrian access to the bridge and to the adjacent Cockle Bay wharf. A combined cycle-way and pedestrian bridge provides a link to King Street. Toilet blocks have been constructed within the abutments.

Associated with the bridge is the Ultimo Power House, which is now the Power House Museum, located only a short distance from Darling Harbour in Ultimo. The direct current (DC) power supply for the bridge was supplied by the Power House, which also powered the cities trams. The power supply is still DC. A rectifier is located at the western end of the bridge, within the Harbourside complex, which converts AC to DC.¹⁷

¹⁷ Cserhalmi, O. 2006:11

4.3 Description of Physical Fabric – The Pymont End

4.3.1 Approaches

The Pymont Approach was designed to allow rail lines to pass under the bridge and continue to serve the wharves in Jones Bay and the Naval victualling station on Darling Island. This configuration survives, although the rails have been removed and pedestrians now solely use this area. The Pymont approach was modified shortly after construction to allow for additional rail lines to pass beneath the approach. A goods line still exists in this location, now the line of the light rail.

The northern alignment of the Pymont approach remains unaltered, and the ramp beside it leading down to the foreshore was the route to the earlier bridge that remained in operation during most of the construction. Of the site this is the area which has some archaeological potential. A full assessment of archaeological potential has not been undertaken as it is outside the scope of this report.

The carved stonework retains its original form that has been recreated with the use of epoxy patching. The stonework is discussed in a later section. The large arc light standards survive, the smaller standards to the smaller piers have been removed. The brick paving to the approach is not original and the fall has been altered. Brick paving is not a material traditionally used in bridge construction and there is no precedent for its use here. The original paving was composed of woodblocks that were later replaced by asphalt.

The position of the southern balustrade has been altered to provide pedestrian access to the Harbourside complex and to the monorail station. This balustrade is no longer continuous in leading onto the bridge.¹⁸

Alterations to the layout of the approaches have occurred at both ends. The alterations at the Pymont End included relocating the stone balustrade to provide access to the staircase into the Festival Market Place.

At the eastern end a combined cycle and pedestrian way connects into King Street. The ramps from Market Street have been replaced with higher level ramps that pass over the roadway.

4.3.2. Decking

The type and structure of the decking has been altered more than once, and no trace of the original wood blocking, or the kerbing and guttering survives. The coke breeze substrate has also been replaced. The bridge decking no longer has a separate raised pavement along either side for pedestrians and the position of the drains has been altered. The removal of the kerb and gutter and the associated drains, and the alteration of the camber of the surface of the former roadway has created a flatter surface that is prone to ponding.

Photographs and the surviving drawings provide a great deal of detail regarding the original woodblock surface. Woodblocks were a surface designed to wear, as the discussion regarding their use that followed Allan's paper given in London shows. Woodblocks were softer on the horse's feet but were slippery, hence the use of cobbles at intersections. The changes to the surface made by the DMR reflect the change from horse drawn traffic to motors. Wood blocks, a unit paver, could cope with the expansion and contraction of the bridge.

The current asphalt paving of the bridge has not been designed with expansion joints and the uneven series of cracks has been patched. A similar unsightly patching occurs around the fixing of the street furniture on the bridge. The irregular construction joints in the concrete slab create this irregular pattern of movement joints in the wearing course.

4.3.3. The Balustrade

A similar detail of balustrade is employed on the fixed and the swing span sections of the bridge. The original balustrade was wrought iron and had deteriorated to such an extent that it could not be conserved as a functioning balustrade. The current balustrade, installed during the 1987-88 works has copied the detail of the metal work of the original, however steel has been used. The concrete kerb is not part of the original design and is very evident in current views of the bridge. The arc lights that were originally fixed to the outside of the balustrade

¹⁸ Cserhalmi, O. 2006:33

were not replaced and a series of removable flagpoles have been inserted. Flagpoles were also not part of the original design.

The colour scheme of the balustrade is not the original colour scheme. The patriotic colours chosen are a reminder of the bicentennial celebrations held in 1988. The original colour scheme was far more utilitarian and one more traditionally associated with bridge metal work.

4.3.4. The Piles

The configuration of the potted piles has been altered by the addition of concrete shoes. The sequence of surviving drawing shows that repairs to the piles were necessary shortly after the bridge was constructed. An investigation of the condition of the piles was undertaken by the PWD in the early 1890s and a copy of this report is held by the Heritage Design Services, Government Architects Branch, Department of Commerce.

With the exception of the concrete shoes which protect the piles at their most vulnerable point, the intertidal zone, the piles largely remain in their original configuration. It is the nature of this type of construction that deteriorated piles be replaced when the need arises.¹⁹

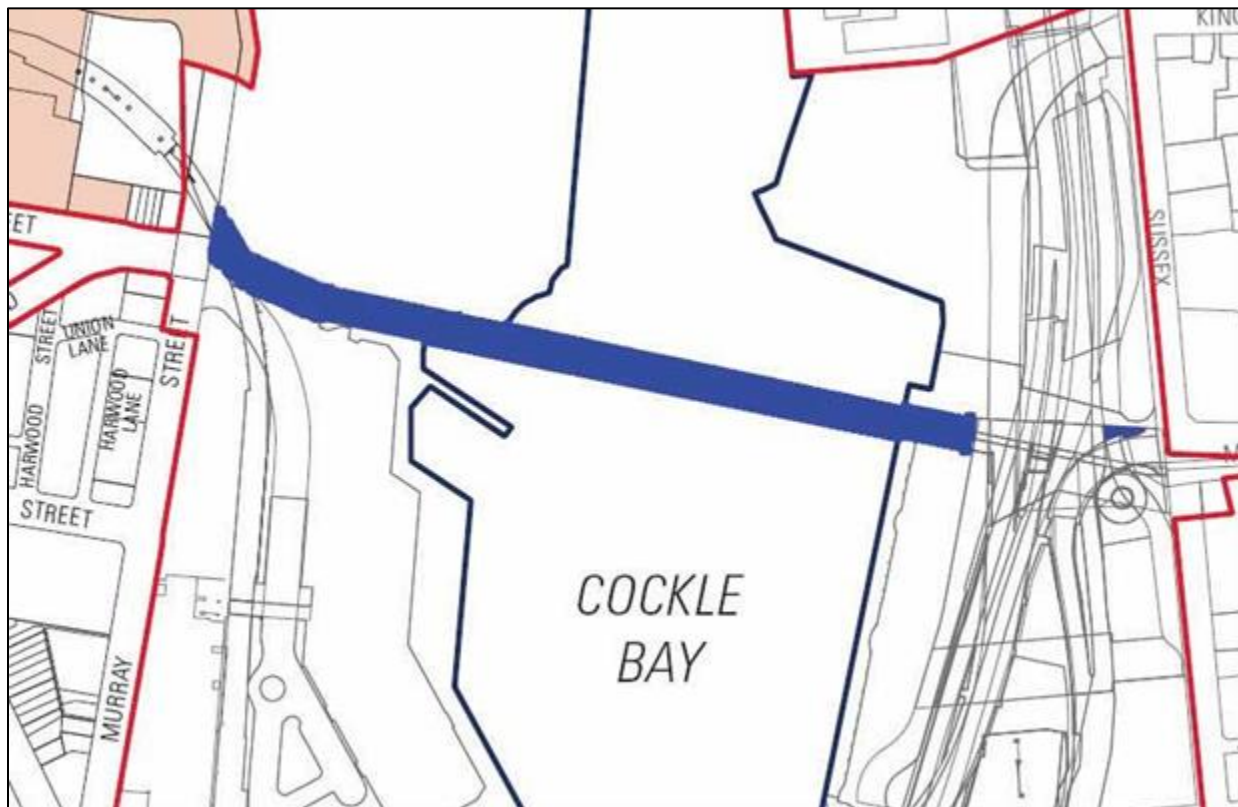


FIGURE 18: SURVIVING SECTIONS OF THE BRIDGE. SOURCE: PYRMONT BRIDGE CMP 2006:186.

¹⁹ Cserhalmi, O. 2006:37-38

5.0 SIGNIFICANCE ASSESSMENT

The following statements of significance have generally been drawn from the NSW State Heritage Inventory datasheet 'Summary statements of the significance' for the key heritage items that are considered to be most relevant to this HIS. Whilst twelve items of local significance exist within the general vicinity of the site and have been identified earlier in this report, it is only those items which are in 'close' vicinity to the site that have been included in this summary sub-section of the report.

5.1 Pyrmont Bridge

The summary statement of significance for Pyrmont Bridge has been drawn directly from the endorsed CMP.

Statement of significance.

The Pyrmont Bridge is potentially of national significance as a technologically innovative swing span bridge, the design of which combined recent American technology: the central pivot span, electricity and the d/c tram motor, with European steelwork and the locally developed Allan Truss bridge, an improvement made by Allan in 1894 to the American Howe Truss.

It is an early example of a swing span bridge powered by electricity, marking the transfer in Sydney from steam or hydraulic power to direct current electricity, which powered the swing span and the arc lights to the decking and the navigational lights, predating the use of electricity for street lighting in Sydney by 2 years. Its sister the Glebe Island bridge likewise predated electric street lighting. No other pair of similar electrically operated swing bridges have been located in Australia or worldwide.

The Pyrmont Bridge, and the now demolished bridge across Blackwattle Bay, provided a direct link to the city's produce markets, located in the vicinity of Market Street, from the western suburbs, the abattoirs on Glebe Island and the inland market gardens and orchards. The current and former Pyrmont Bridges both facilitated supplying the city with goods intended for sale in Sydney and for export. The Pyrmont Bridge has continued to be used, by pedestrians, for over a century, continuing a route that has existed since the 1850s.²⁰

Believed by many to be the finest of the 583 bridges in NSW designed by Percy Allan, the PWD Engineer-in-Chief of Bridge Design. The elegant steelwork to the swing span and the carved stone detailing to the Sydney sandstone piers and balustrade to the approaches are combined with utilitarian timberwork to the piles and Allan Trusses, employed below the deck, a rare if not unique application of the Allan Truss.

The first of a series of major design competitions for a NSW public work held during the 1890s, reflecting lobbying that major designs should be undertaken by the private sector rather than by the PWD. When compared to the competition designs, the high standard of the design, at an international level, produced by Allan and his associates is testament to the very high degree of both design excellence and technical knowledge maintained by the Department. The success of PWD staff in the initial competition is further testament to this standard.

The design continued the high standard of civil engineering works undertaken by the NSW Department of Public Works since its formation in 1857; engineering works that were both a source of pride to Australians and innovative at an international level. Allan, a cadet of the PWD, was one of three prominent Australian born engineers involved with the design of the bridge, including John Bradfield and Gordon Edgell.

Despite the removal of the eastern approach the essence of the original design remains evident as does the original fabric of one of the approaches, both side spans and the central swing span. With the exception of the Arc Lighting the technological advances remain intact, particularly the original GE

²⁰ Cserhami, O. Pyrmont Bridge, Sydney Conservation Management Plan 1996:151-153.

tram motors. The removal of the eastern approach has not impacted on the ability of the Pyrmont Bridge to be a fine example of its type, one of the world's first electrically operated swing span bridge.

Considerable research potential exists into the pioneering use of structural steel by the Department of Public Works in NSW and the prefabrication, in Belgium, of the steel and wrought iron of the swing span and the construction of the bridge involved the use of divers in sinking the permanent wrought iron caisson and pouring concrete under water.

For its time the steelwork to the swing span is potentially one of the largest steel spans in Australia. The design, and surviving structure, provides evidence of the transfer from the use of wrought and cast iron to steel, contains surviving examples of each: the wrought iron caisson; the ornate cast iron work to the control cabinet and the steelwork that supports the decking of the swing span. The use of steel indicates the extent to which the NSW Department of Public Works was keeping up with international developments in USA, England and Europe.

Demonstrating the widespread use of Australian hardwoods in building and bridge construction in NSW prior to World War 1, reflecting a deliberate decision by the Public Works Department to use locally produced materials in bridge construction, implementing the bridge testing methods developed by Professor Warren.

An example of the careful application of the Burra Charter principles to an Engineering structure, conserving the surviving original fabric, including the associated machinery, whilst also maintaining the use.²¹

5.2 Darling Harbour Water Feature

The Darling Harbour Woodward Water Feature is of state significance as it demonstrates aesthetic significance at the state level as a spectacular fountain and an outstanding work of modern movement design in water and stone located in an uninterrupted plane of the west Darling Harbour promenade. Completed in 1988, the fountain design was acknowledged as one of exemplary architectural design for its period, winning several awards including the Walter Burley Griffin Award of the Royal Australian Institute of Architects and the NSW Chapter Civic Design Award in 1991 and the Australian Institute of Landscape Architects National Civic Design Award in 1992.

The Darling Harbour water feature is of state significance as it has special associations with its designer Robert Raymond Woodward AM (1923-2010), a notable architect and a World War II Veteran whose career as a fountain designer was of national and international prominence. Together with other iconic buildings at the Darling Harbour it is associated with the historically significant 1988 NSW Bicentennial celebrations.²²

5.3 Darling Harbour Rail Corridor

The Darling Harbour goods line was part of the first railway opened in New South Wales in 1855, the current corridor corresponds with that purchased from the Harris family in 1853 for this purpose. It therefore has a high degree of significance as a place. The Ultimo Road Bridge is believed to be constructed in the 1850s, and is therefore one of the only remaining features of the original railway which joined Darling Harbour and Granville (Parramatta Junction) in 1855. The siting of the railway along what was the edge of Darling Harbour strongly influenced the development of Pyrmont and Ultimo. Because of it, wool stores, engineering works and other industries were built here after the 1870s, giving this part of Ultimo its industrial, rather than residential, flavour. The site also contains two railway bridges. The Railway Square road overbridge (outside the curtilage of this listing) built in 1855 is historically significant as the oldest railway bridge to be constructed and still in use in New South Wales. It is a strong connection to the first railway construction and the original Redfern (Sydney) Station. The Ultimo railway

²¹ Cserhalmi, O. 2006:156

²² SHR Inventory Datasheet <http://www.environment.nsw.gov.au/heritageapp/viewheritageitemdetails.aspx?id=5061721>

underbridge is a mid 19th century construction with classic revival inspired cast iron columns and mid 19th century sandstock brick abutments. Both items are assessed individually as historically rare, scientifically rare, archaeologically rare and socially rare²³.

5.4 Pyrmont Conservation Area

The area dates from one of the key period of layers for the development of Pyrmont as a direct result of subdivision of the Harris and Macarthur Estates. It is a good example of a mid to late Victorian working class community consisting of both residential and commercial buildings which are largely intact and make a positive contribution to the streetscape²⁴.

²³ SHI Inventory Datasheet http://www.shfa.nsw.gov.au/sydney-About_us-Our_heritage_role-Heritage_and_Conservation_Register.htm&objectid=173

²⁴ SHI Inventory Datasheet <http://www.environment.nsw.gov.au/heritageapp/ViewHeritageItemDetails.aspx?ID=2424801>

6.0 KEY CONSERVATION POLICIES FOR PYRMONT BRIDGE

The CMP contains the framework for managing ongoing conservation and change to the Pyrmont Bridge. Key policies that are relevant to the proposed redevelopment of the site have been summarised below.

6.1 Conservation Philosophy

Policy 5.0-Continue to preserve and maintain the Pyrmont Bridge, in accordance with the definitions, principles and policies contained within, and set out in the guidelines to, the Australian ICOMOS Burra Charter (1999).

6.2 Views and Vistas

Policy 5.4- Ensure that an appropriate visual setting is maintained for the Pyrmont Bridge, and that the bridge itself contributes to the character of Darling Harbour as a whole.

Policy 6.0 Maintain an appropriate visual setting for the Pyrmont Bridge, ensuring that views of the bridge and the swing span, when in operation, can be gained from the pedestrian areas along the foreshore of Darling Harbour.

Policy 6.4-Seek to remove elements that were not part of the original design that obstruct views to and from the Bridge.

Policy 6.5-Ensure that views of the operable swing span can be gained from the walkway around Darling Harbour.

Policy 6.6-Larger scale vessels should not be permanently moored closed to the bridge, to ensure that views of the operable swing span are not blocked.

6.3 Conserving the surviving fabric

Policy 4.2- Further truncation of the approaches or structure of the bridge should not be permitted. Adjacent transport routes should be designed to fit around the surviving bridge components thus retaining an appropriate visual setting for the Bridge and for Darling Harbour as a whole.

Policy 6.2- Additional connections to the bridge should connect into the modern fabric of the approaches. Further alteration, or relocation of, the historic fabric should not be undertaken as it detracts from the simplicity and elegance of the original design.

Policy 7.0 Seek to conserve and maintain the surviving original fabric of the Pyrmont Bridge.

Policy 7.3- Seek to remove the non-essential items such as flagpoles and sign boards that relate to the wider use of Darling Harbour from the bridge, confining information about current events to new, purpose designed structures within the modern areas of the precinct.

Policy 8. 14- In the longer term seek to re-instate the lamp standards in their original location, to the outer face of the balustrade and to the newels. Supplement this light level with lighting that highlights the structure and lighting for security purposes.

6.4 Suitable Uses

Policy 4.3-Continue to use the Pyrmont Bridge for pedestrians and cyclists.

Policy 4.4-Continue the use of the rail tunnel beneath the Pyrmont Approach as a rail tunnel.

Policy 4.5-Encourage the use of the Pyrmont Bridge as part of pedestrian and cycle routes along the waterfront of Sydney Harbour.

Policy 7.1-Ensure that future proposals should be designed to enhance the original intention of the design, as an operable swing span bridge, that linked Sydney city with Pyrmont.

6.5 Interpretation

Policy 9.0 Seek to interpret the history, construction and cultural significance of the Pyrmont Bridge.

Policy 9.2- Seek to interpret the history, construction and cultural significance of the Pyrmont Bridge to Sydneysiders and visitors to the state.

6.6 New Works

Policy 8.9 -Further alterations to the detail of the bridge, that involve the alteration of the original detail and the use of concrete, is not appropriate.

Policy 8.11-In the longer term consider the use of a more appropriate material for the Pyrmont approach than the current brick paving, which is not a traditional material for bridge paving.

Policy 8.15 -Modern light fittings should be carefully designed or selected to be of an appropriate scale and unobtrusive character, complementing the industrial nature of the structure.

Policy 10.0 Ensure that new works do not

- detract visually from the bridge or its harbour setting;*
- hasten the deterioration of the surviving fabric;*
- result in irreversible alteration to significant fabric.*

Policy 10.4- New works should be designed to enhance, and not impinge on, the functioning of the bridge. Although complementing the original engineering and architectural design, new work should be obviously of its time.



FIGURE 19: PYMONT BRIDGE LOOKING TOWARDS DARLING HARBOUR (WESTERN SIDE)

7.0 POTENTIAL ARCHAEOLOGICAL RESOURCES

Curio Projects have prepared two stand-alone archaeological assessments for the site in order to assess the Aboriginal archaeological potential of the site (Appendix 2) and the historical archaeological potential of the site (Appendix 3).

This HIS contains only brief summaries of the outcomes of both archaeological assessments - in order to provide a context for the assessment of potential impacts. As a result, this sub-section of the report should be read in conjunction with both archaeological assessments in order to gain a full understanding of how the potential and significance of the archaeological resources was assessed and determined.

7.1 Aboriginal Archaeological Potential

The site, and its surrounding inner-city suburbs have an important and strong legacy of Aboriginal connections to the region. A NSW Office of Environment and Heritage (OEH) Aboriginal Heritage Information Management System (AHIMS) search undertaken by Curio Projects on the 8 February 2016 showed that no registered sites were located within the study area. The search did, however, return 20 results within approximately 2km of the study area. The extensive AHIMS search is attached as an appendix to the Aboriginal Assessment report contained in Appendix 2.

This section of report contains a summary of the potential for intact Aboriginal archaeological deposits to be present at the Harbourside site, with specific reference to the current proposed development.

7.1.1 Assessment of AHIMS Search

The general distribution of sites from the AHIMS search around the study area is visible in Figure 14 (on the following page). While this is simply a representation of the archaeological work that has been undertaken across the Sydney CBD and surround, it also appears, visually, to be relatively evenly dispersed across the general Sydney CBD area. This is, therefore, also suggestive of the actual nature of the distribution of Aboriginal archaeological sites in the area which is that Aboriginal archaeological sites may exist across the entire CBD area, wherever conditions allow them to survive (i.e. incomplete levels of ground disturbance, along the edge of the original sandstone outcrops and geology, along water sources, and where natural soil profiles are still present).

Only one site has previously been registered on the Pyrmont Peninsula/on the western side of Darling Harbour (#45-6-2960). However, this is likely a reflection of the lack of previous Aboriginal archaeological work undertaken in this area as opposed to a direct reflection of the actual Aboriginal archaeological potential of the peninsula.

7.1.2 Summary of Aboriginal Archaeological and Environmental Context

The study area is located on the south-eastern edge of the Pyrmont peninsula, directly along the western shoreline of Darling Harbour. Named by European settlers as Cackle Bay, while the area was not developed extensively until the late 1800s, early historical accounts provide evidence that extensive use was made of the shell middens that lined the bay to provide mortar in lime kilns for civic development programs for the early colony.

While the Pyrmont peninsula would definitely have been a focus for Aboriginal occupation and habitation prior to 1788, the study area itself is located across the boundary between the original shoreline and reclaimed land (part of extensive land reclamation processes that were undertaken across the Sydney estuary in the 1800s to enable development of harbours, wharfage and associated industries). In addition, the study area (both the area that may have been across the original shoreline of the bay, as well as across the areas of reclaimed land), was subject to extensive industrial use from the 1850s following the construction of rail lines into Pyrmont, and the development of the Darling Harbour Railway Goods Yard, rail tracks and neighbouring industrial services and yards.

While the Darling Quarter site was, similarly located to the current study area, along the original shoreline of Cackle Bay (excavation of which recovered an Aboriginal shell midden site with Aboriginal stone artefacts), the Darling Quarter site lay closer to the head of the cove, along the eastern side of the bay, and immediately adjacent to a documented, relatively undisturbed area of the Gynea soil profile. Conversely, the current study area is located along the western shoreline of Darling Harbour, adjacent to the sandstone peninsula of Pyrmont, and in conjunction with mapped disturbed soil profiles (associated with land reclamation).

Therefore, while the study area is likely located right at the edge of what once would have been the original shoreline, land reclamation processes would have removed, covered or disturbed all Aboriginal cultural deposits, were they once present at this location. In addition, it is likely that the majority of the study area, overlapping the mapped area of original shoreline of Darling Harbour, would have been a swamp and estuarine environment that would not have been suitable for human occupation.

Aboriginal archaeological deposits, should they be present within the vicinity of the study area, would most likely be either stone artefact sites, shell middens, or a combination of both. In order for these archaeological deposits to be present in situ, they would require the retention of natural soil profiles in the area that would be extant from 1788. The historical development at the study area including the large area of land reclamation within the study area itself, as well as the use of the area and surrounds for railway lines and the Darling Harbour Railway Goods Yards, indicates that there is low to nil potential for natural intact soil profiles to be retained in this area. The soil landscape mapping of the region is consistent with this assessment, as the study area is mapped to lie within 'Disturbed Terrain'. It should be noted that the study area boundary is immediately adjacent to a mapped area of the 'Deep Creek' soil profile, however it is also highly unlikely that any natural soil profiles are retained in this location due to the nature of the industrial development along the western shoreline of Darling Harbour from the 1850s to the 1970s.

Therefore, assessment of the environmental and archaeological context of the study area has determined that there is low to no potential for in situ Aboriginal archaeological deposits to be present within the study area.



FIGURE 20 : AHIMS SITES. CURRENT SITE AREA IS SHOWN IN RED.

SOURCE:GOOGLE EARTH PRO WITH CURIO PROJECTS ADDITIONS, 2016

7.1.3 Potential for Aboriginal Archaeological Deposits—Conclusions

Based on the above assessment of environmental and archaeological context, as well as in consideration of the historical background for the site, previous land use and disturbance, and in the current statutory context (SSD development application), the following conclusions are made with respect to potential Aboriginal archaeology within the curtilage of the Harbourside redevelopment:

- The study area does not contain any previously registered sites.
- The study area is located predominantly on reclaimed land along the western shoreline of Darling Harbour/Cockle Bay.
- The study area and surrounds were historically an integral part of the industrial use of Darling Harbour from the 1850s through to the 1970s, and were part of/adjacent to the Darling Harbour Railway Goods Yard and Railway tracks.
- The study area is located wholly across the soil profile of 'Disturbed Terrain', associated with the extensive land reclamation of the area in the 1870s and 1910s, and no natural soil profiles are likely to have been retained in this area.
- There is low to no potential for in situ Aboriginal archaeological deposits to be present within the study area.
- There is a low potential for Aboriginal archaeological deposits such as stone artefacts or shell middens to be located at the study area in a disturbed context.

7.2 Potential Historical Archaeological Resources

7.2.1. Summary of Historical Archaeological Potential

Archaeological remains of some activities and features dating to Phase 1 (1788–1874) have nil-low potential to survive at the subject site. Evidence of early historical activities undertaken on the original sandstone rise above the foreshore, including land clearing, grazing and the original garden of Newstead House would likely have been primarily ephemeral, and is most likely to have been destroyed by the successive phases of quarrying that brought the entire subject site down close to sea level. Levelling and quarrying at the site would also have highly disturbed physical remains of the slipway constructed between the waterfront and Newstead House, and it thus there is nil-low potential for archaeological remains of this feature to survive at the western area site. Closer to the original foreshore where structural remains or early land reclamation deposits associated with its construction may have been capped land reclamation activities from the late nineteenth century, there is moderate potential for archaeological evidence of this feature to survive.

Physical evidence of the early uses of the natural foreshore zone during Phase 1 (1788–1874) has varying potential to survive at the subject site. The primarily ephemeral evidence of shell collection as part of the lime production process (1810s–1820s) has nil–low potential to survive, primarily due to the impacts that later use of the foreshore would have had on this resource.²⁵ There is low potential for evidence indicating other unrecorded uses of the foreshore areas, for example for early maritime commercial or industrial activities, to be present.

Occupation and likely commercial/industrial use of the foreshore had commenced by 1844 and intensified over the period to 1878. Archaeological evidence of this use—including structural remains, deeper subsurface features (privies, wells, drains), rubbish pits, artefact scatters, timber posts of jetties, timber/stone slipways, yard and work surfaces—has moderate potential to survive. It is likely to have been subject to moderate disturbance associated with the development of the Darling Harbour Goods Yard and Goods Line through the subject site, and the construction of the existing Harbourside Shopping Centre. Other site formation processes, such as land reclamation (particularly in the late nineteenth and early twentieth centuries) and the formation of hard surfaces within the Goods Yard may have capped, and thus preserved, any remaining archaeological deposits associated with these activities.

Archaeological evidence dating to Phase 2 (1874–1960s) would primarily relate to the development and operation of the Darling Harbour Goods Line and Goods Yard. For a brief period (c.1878–1884), the Atlas Engineering Works operated from premises on the foreshore within the subject site. Depending on the extent of landscape levelling and quarrying undertaken

²⁵ This does not preclude the survival of shell material within the subject site (either natural accumulations or midden formations), but primarily focuses on the potential of any extent resource to bear evidence as a component of the lime production process. A separate Aboriginal heritage due diligence report (Curio Projects, February 2016) has been prepared to assess the potential for Aboriginal archaeological evidence to survive within the subject site.

to construct and operate these premises, archaeological evidence of this activity—including structural remains, manufacturing areas, slipways, rubbish pits and other deeper subsurface features—has moderate potential to survive.

There is high potential for physical evidence of landscape reclamation activities undertaken during Phase 2 (1874–1960s) to survive within the subject site (Figures 21 and 22). Land reclamation fills, as well as sea walls constructed to retain these fills, of different dates are highly likely to have survived at the site as the subject site's footprint extends across these areas reclaimed as early as the 1880s. There may be localised disturbance to fills or sea walls as a result of construction and other developments during Phase 2 (1874–1960s) and Phase 3 (1960s–present).

There is moderate potential for archaeological evidence of the development and operation of the Darling Harbour Goods Line and Goods Yard to survive within the study area (Figure 22). Evidence of these site uses is likely to include remains of the rail line (tracks, sleepers, ballast, track slab), concrete base slab, foundations and postholes or bases of iron columns of the Goods Sheds (especially of Sheds A&B, which are the main sheds within the subject site), foundations of other structures such as the 1902 Goods Shed Offices/Forwarding Station, or timber posts of the c1926 jetty. In addition to robust structural remains, archaeological evidence may also include deeper subsurface features such as privies, drains or other services, rubbish pits or other incidental remains of unrecorded activities. These remains are likely to have been disturbed to an extent by the decommission and demolition of the Goods Yard and Goods Line, and the construction of the Harbourside Shopping Centre, however as the existing shopping complex does not have a basement there is likely to be areas where physical remains of the Goods Yard/Goods Line survive.

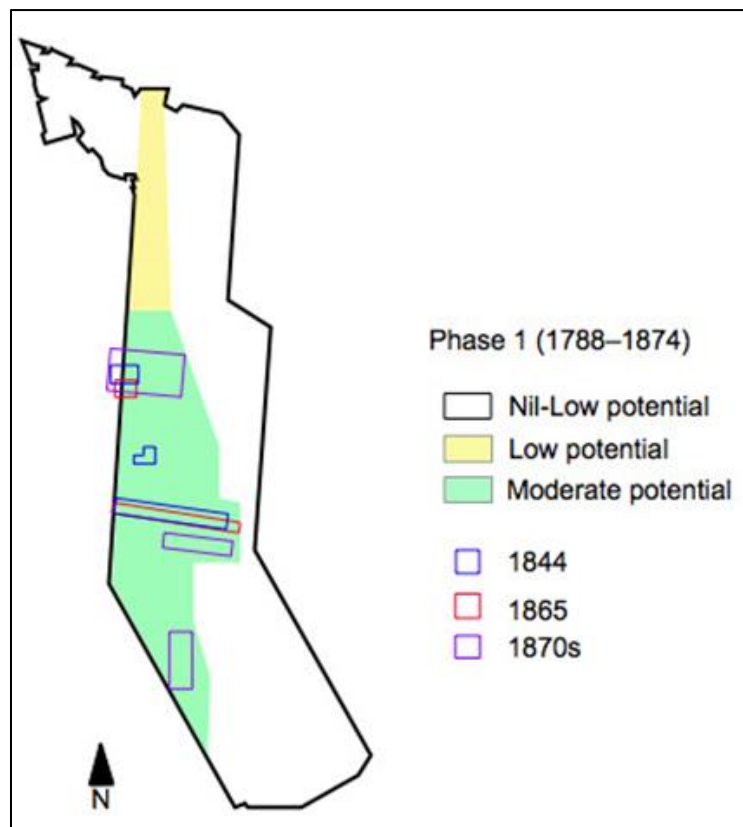


FIGURE 21: HISTORICAL ARCHAEOLOGICAL POTENTIAL RELATING TO PHASE 1, SHOWING PROBABLY LOCATIONS OF STRUCTURES SHOWN ON MAPS AND PHOTOGRAPHS.

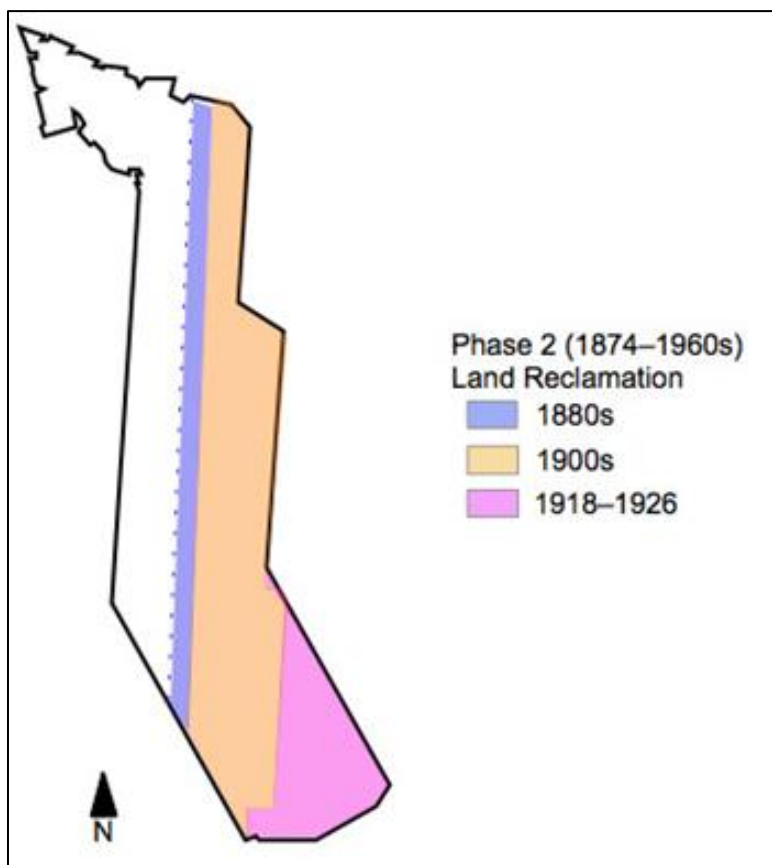


FIGURE 22: AREAS OF LAND RECLAMATION UNDERTAKEN IN PHASE 2. EVIDENCE OF LAND RECLAMATION HAS HIGH POTENTIAL TO SURVIVE.

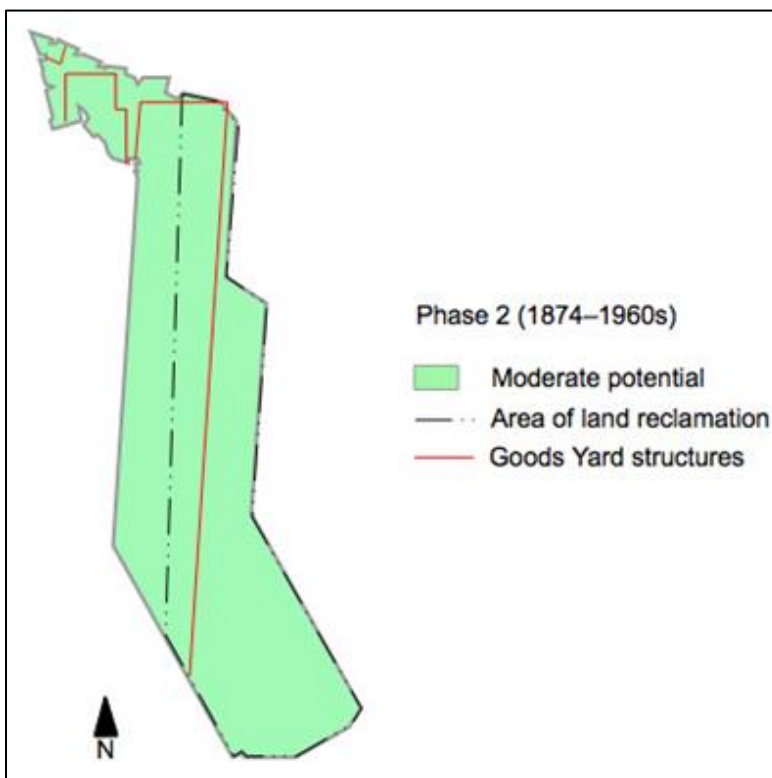


FIGURE 23: HISTORICAL ARCHAEOLOGICAL POTENTIAL RELATING TO PHASE 2. THE AREA OF PHASE 2 LAND RECLAMATION IS INDICATED BY A DOTTED LINE. THESE REMAINS HAVE HIGH POTENTIAL TO SURVIVE. THE PROBABLE LOCATION OF GOODS YARD STRUCTURES AS SHOWN ON MAPS IS INDICATED IN RED.

7.2.2. Potential Historical Archaeological Significance

If surviving, historical archaeological remains of the site dating to Phase 1 (1788–1874) may be of local or State significance, depending on their nature, extent and integrity. These archaeological remains may be varied in nature, relating to potentially diverse uses of the site including domestic occupation, commercial enterprises and industrial activities. Although there is low potential for archaeological evidence of early unrecorded enterprises to be present, if identified at the site this resource may be of State significance, primarily due to their research potential and ability to demonstrate an early historical period of commercial development in the colony. This evidence may contribute important information to our understanding of early commercial operations, and reveal the site's role in the development of Darling Harbour as an industrial and commercial centre.

There is moderate potential for evidence of the post-1844 use of the site's foreshore zone to survive at the site. This evidence may be able to demonstrate the development of local economies and the evolution of Darling Harbour's western shore as part of the broader industrial and commercial focus in Ultimo and Pyrmont. The archaeological record may be comparable to similar archaeological sites at and in the vicinity of Darling Harbour. As a resource that may demonstrate the history of the site itself, as well as contribute to our understanding of the use of intertidal foreshore locations in Sydney through the mid nineteenth century, archaeological remains from this phase are likely to have high research potential at a local level.

The evolution of the Darling Harbour Goods Yard is clearly an important phase both in the site's history as well as in the history of Darling Harbour and New South Wales more generally as it contributed to the flow of goods across the state. The majority of the anticipated archaeological resource associated with the Phase 2 (1874–1960s) development of the Darling Harbour Goods Yard and Goods Line through to its closure and demolition in 1980s is likely to be limited to building foundations and possibly rail lines and be disturbed to an extent by the construction of the Harbourside Shopping Centre in the 1980s. A resource of this nature would be unlikely to contribute important information to our understanding of the Goods Yard beyond information that is not readily available in existing documentary records. The anticipated archaeological resource associated with these activities is not considered to reach the threshold of local significance, and is unlikely to be considered a relic.

Archaeological evidence of landscape modification processes, including reclamation fills and sea walls, may be of local significance for their representative value as evidence of the continual reclamation of land in the harbour for the Goods Yard.

7.2.3. Historical Archaeology Conclusions

The Harbourside Shopping Centre site has been subject to three primary phases of historical development:

- Phase 1 (1788–1874)—relating to the early European occupation of the site, and is characterised by the intensification of the use of the natural foreshore for a range of purposes that is likely to include domestic occupation, commercial enterprise and industrial activities.
- Phase 2 (1874–1960s)—relating to the development and operation of the Darling Harbour Goods Yard, including successive stages of land reclamation, construction of goods sheds, jetties and associated infrastructure.
- Phase 3 (1960s–present)—relating to the closure of the Darling Harbour Goods Yard, including the demolition of the Goods Yards and construction of the extant Harbourside Shopping Centre.

There is moderate potential for archaeological resources associated with the Phase 1 occupation and commercial/industrial use of the original intertidal zone, particularly activities that postdate the 1840s. This archaeological evidence is likely to primarily be of local significance, depending on its nature, extent and integrity. Whilst there is nil-low potential for pre-1844 archaeological evidence to exist on site - if present, archaeological evidence of the early (pre-1844) use of the site's foreshore zone may be of State significance.

There is high potential for physical evidence of land reclamation undertaken to expand the Goods Yard during Phase 2 to survive at the site, including reclamation deposits and sea walls. Archaeological evidence of these features is likely to be of local significance.

There is moderate potential for archaeological remains of the Goods Yard to survive. This physical evidence is likely to be limited to some structural remains including foundations of sheds and other structures, and footings of other infrastructural elements. This evidence would be unlikely to meet the threshold of local significance, and would be unlikely to be considered relics.

8.0 ASSESSMENT OF HERITAGE IMPACTS

This report assesses the potential heritage impacts based on the concept design plans prepared by FJMT (August 2016). As a result, information regarding the final detailed design of the development (including final subsurface impacts), and the scope of site works, including construction methodologies, were not available for consideration as part of this impact assessment. This heritage impact statement should be updated as part of any Stage 2 development application – once the detailed design of the proposed redevelopment has been determined.

This HIS assesses the potential impact of the proposed development on heritage items within the vicinity of the site -namely Pyrmont Bridge, the Darling Harbour Rail Corridor and the Water Cooling System and Manifold, as well as any potential archaeological resources, including Aboriginal and historical archaeological resources.

All major changes to the cultural landscape within the Harbourside site and public domain have been the subject of careful consideration as part of the design process undertaken by Mirvac and architectural firm FJMT, in terms of the visual, physical and public domain impacts of the proposed development within the site itself, and within the context of the heritage-listed Pyrmont Bridge. In particular, the placement of the proposed tower, to ensure that it has the least impact on the significance of the bridge, has been the subject of numerous different options. A detailed assessment of the impacts is provided in the sub-sections below.

8.1 Visual Impacts

8.1.1 Tower Location

The final location for the placement of the tower was determined following extensive consideration of which location and setback would have the least impact on existing views to Pyrmont Bridge, Darling Harbour and the city from the buildings adjacent to the western and south-western boundaries of the site (including the Novotel Hotel, the Murray Street Residences and Hotel Ibis), and with respect to the need to protect key views and vistas to and from the International Convention Centre (ICC) Hotel, currently under construction.

The placement of the tower adjacent to the Pyrmont Bridge approach, at the Pyrmont end of the bridge, was determined to be the most appropriate location in terms of creating direct pedestrian access to the bridge and in ensuring that when the bridge is viewed from the city, Barangaroo, King Street Wharf and other key locations, that the placement of the tower is located within an area that currently already has an existing backdrop of high-density hotel and residential development (refer to Figure 25). Importantly, the setback of the tower (c50m from Pyrmont Bridge) would continue to protect key public views of the bridge as its span across the harbour from east to west.

Currently when Pyrmont Bridge is viewed from the Darling Harbour Promenade the city end of the bridge is surrounded by city office towers, yet the bridge itself is still readily distinguishable as a significant, historic feature within the Darling Harbour setting (refer to Figures 23 and 24). The scale, materials and height of the city buildings actually create a clear distinction between the low scale of the bridge within its harbour setting, against the backdrop of a modern city. There is a clear visual distinction between the industrial design, historic fabric, size and scale of the bridge compared to the modern fabric, design, scale and form of the office towers that surround it, with the two complimenting one another and drawing out the differences.

It is considered that the placement of the tower adjacent to the western approach of the bridge will change the aesthetic of the existing modern backdrop to Pyrmont Bridge, but will not detract from the actual reading of the bridge in its harbour setting when viewed from key public spaces in and around the harbour (Figures 23 – 26 show current views of the bridge),

In addition, it was important to create a balanced relationship between the ICC Hotel Tower and the proposed new tower, so that, together the towers compliment, rather than compete, with the visual significance of the bridge. It was considered that the towers should have enough separation to balance each other out within the Darling Harbour environs, and to ensure maximum views and vistas to the Pyrmont Bridge could be retained.



FIGURE 24: VIEW OF PYRMONT BRIDGE LOOKING NORTH- EAST TOWARDS THE CITY FROM DARLING HARBOUR. SOURCE: WALLPAPERRS.COM



FIGURE 25: VIEW OF THE CITY (TO THE EAST) FROM THE BRIDGE DECK



FIGURE 26: CURRENT HIGH-DENSITY DEVELOPMENT ADJACENT TO PYRMONT BRIDGE, DARLING HARBOUR. SOURCE: FJMT



FIGURE 27: PYRMONT BRIDGE LOOKING WEST TOWARDS PYRMONT SOURCE: FJMT

8.1.2 Harbourside Shopping Centre and Tower

The introduction of a new Harbourside shopping complex and residential tower (comprising 35,000sqm GFA), into the landscape at Darling Harbour, will have various differing impacts on views and vistas to the Pyrmont Bridge and other heritage items in the vicinity of the site, with the introduction of the tower within the landscape proposed to be minimised through various design features, including setbacks and terraced public spaces throughout the proposed development.

The introduction of a tower adjacent to the Pyrmont Bridge will visually impact, in terms of increasing the obstruction of direct views to the bridge from the western boundary of the site, some south-west locations within the site and other surrounding areas.

However, the partial obstruction of current views and vistas to Pyrmont bridge from within the immediate western and south-western areas of the Darling Harbour Precinct has been minimised as much as possible by the introduction of a 50 metre setback between the bridge and the proposed tower, and the proposed buffer of a 10 metre setback between the podium of the tower and Pyrmont Bridge (refer to Figure 28), and the angling of the tower to increase views from directly behind the proposed tower locations.

The setback of the tower, combined with the podium setback helps to soften the overall visual impact of the proposed development on the readability of the bridge by creating a clear separation between the bridge and the surrounding development at the approaches to the bridge, and will help to provide a transition between the scale of the bridge, the new shopping complex and the tower.



**FIGURE 28: PROPOSED REDEVELOPMENT, SHOWING TOWER AND HARBOURSIDE SHOPPING CENTRE SETBACK FROM THE BRIDGE.
N.B. CONCEPT IMAGE ONLY, SUBJECT TO CHANGE LATER IN STAGE 2 DA DETAILED DESIGN. (SOURCE: FJMT 2016)**

In terms of visually engaging with the bridge from the ground level, the existing Harbourside Shopping Centre abuts the bridge and does not provide the opportunity for the bridge and its approaches to be adequately viewed and appreciated. The highly negative visual impact of adhoc development too close to the bridge is most evident at the bridge approaches where there are little to no setbacks between the existing built structures associated with the shopping centre, the remnant fabric of the monorail -and the fabric of the bridge itself- (refer to Figures 29-32).



FIGURE 29: REMNANT MONORAIL FABRIC ABUTS THE BRIDGE AND OBSCURES THE SANDSTONE BRIDGE APPROACHES.



FIGURE 30: LACK OF SEPARATION BETWEEN EXISTING BUILDINGS AND SIGNIFICANT HERITAGE FABRIC OF THE BRIDGE.



FIGURE 31: BUILDING COLUMNS AND POORLY LOCATED SHOPS HAVE A MAJOR IMPACT ON THE VISIBILITY OF THE BRIDGE.

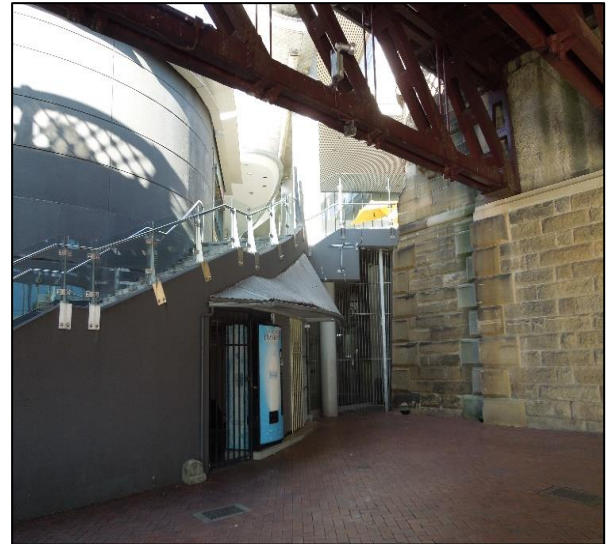


FIGURE 32: CURRENTLY, THERE IS NO SEPARATION EITHER VISUALLY OR PHYSICALLY BETWEEN THE HISTORIC FABRIC OF THE BRIDGE AND THE MODERN ADDITIONS.

In the proposed redevelopment, the setback of the podium and the bridge will provide the much needed buffer between the heritage fabric of the bridge and the Harbourside Shopping Complex. In particular, the removal of remnant fabric associated with the monorail access point, and the modern fabric that abuts and obstructs views to the bridge (as shown in Figures 28 - 37) will have a positive impact because the removal of intrusive modern elements will recover significant views and vistas to the bridge from within its immediate surrounds.

Figures 33-40 clearly show that the current relationship between the shopping centre and the bridge has a negative impact on the aesthetic values of the bridge due to the loss of sight lines to the bridge and the lack of setback between the bridge approaches and the shopping centre.

In particular, the positioning of the South Steyne and the fixed umbrella shade areas leading up to the bridge approach from the south, along with the lack of separation between the Harbourside Shopping Complex, the remnant monorail fabric and other outdoor elements, create an environment in which the approaches to the Pyrmont end of the Pyrmont Bridge, and the bridge trusses are completely obscured and unable to be appreciated.



FIGURE 33: THE VISUAL IMPACT OF THE EXISTING SHOPPING CENTRE AND MONORAIL FABRIC ON THE SIGNIFICANCE OF THE BRIDGE, LOOKING TOWARDS THE CITY.



FIGURE 34: THE EXISTING HARBOURSIDE SHOPPING COMPLEX HAS A MAJOR NEGATIVE VISUAL IMPACT ON THE PYRMONT BRIDGE.



FIGURE 35: THE FIXED UMBRELLAS, WHILST PROVIDING MUCH NEEDED SHADE, OBSTRUCT VIEWS TO THE BRIDGE AND BRIDGE APPROACHES



FIGURE 36: THE SITING OF THE EXISTING SHOPPING COMPLEX TOO CLOSE TO THE BRIDGE COMPLETELY OBSCURES THE SIGNIFICANT BRIDGE APPROACHES.

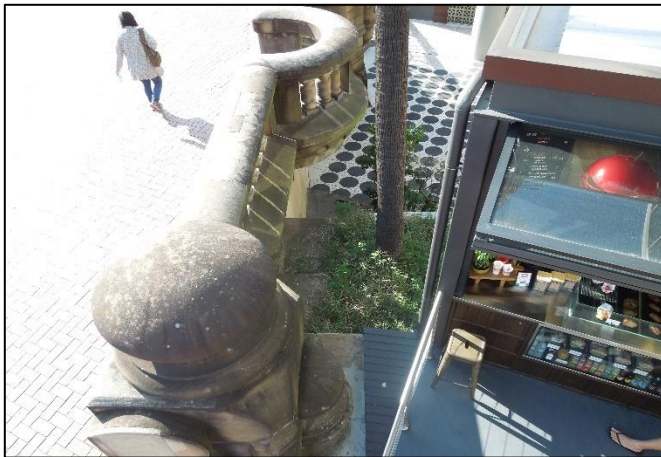


FIGURE 37: THE EXISTING MODERN STRUCTURES DO NOT RESPECT THE SIGNIFICANT FABRIC OF THE BRIDGE.



FIGURE 38: THE STAIR HAS BEEN CONSTRUCTED TO ABUT THE BRIDGE.



FIGURE 39: THE SOUTH STEYNE FLOATING RESTUARANT AND FIXED HARBOURSIDE UMBRELLAS OBSTRUCT VIEWS TO THE BRIDGE.



FIGURE 40: THE IMPACT OF THE SOUTH STEYNE FLOATING RESTAURANT (FOREGROUND), AND BARANGAROO (TO THE NORTH) DETRACT FROM THE BRIDGE.

The proposal to ‘make good’ the Pyrmont approaches and surfaces of the the Pyrmont Bridge in accordance with CMP policies, will also improve the visual qualities of the bridge and will allow the significance heritage fabric of the bridge to be clearly articulated and interpreted.

The proposed 10 metre setback of the tower podium from the the bridge, 50 metre setback of the tower from the bridge (as shown in Figure 41) and creation of an open, terraced public domain space around the bridge and its approaches will to allow for the removal of many of the key intrusive elements from within the viewsapes to and from the bridge and its approaches.

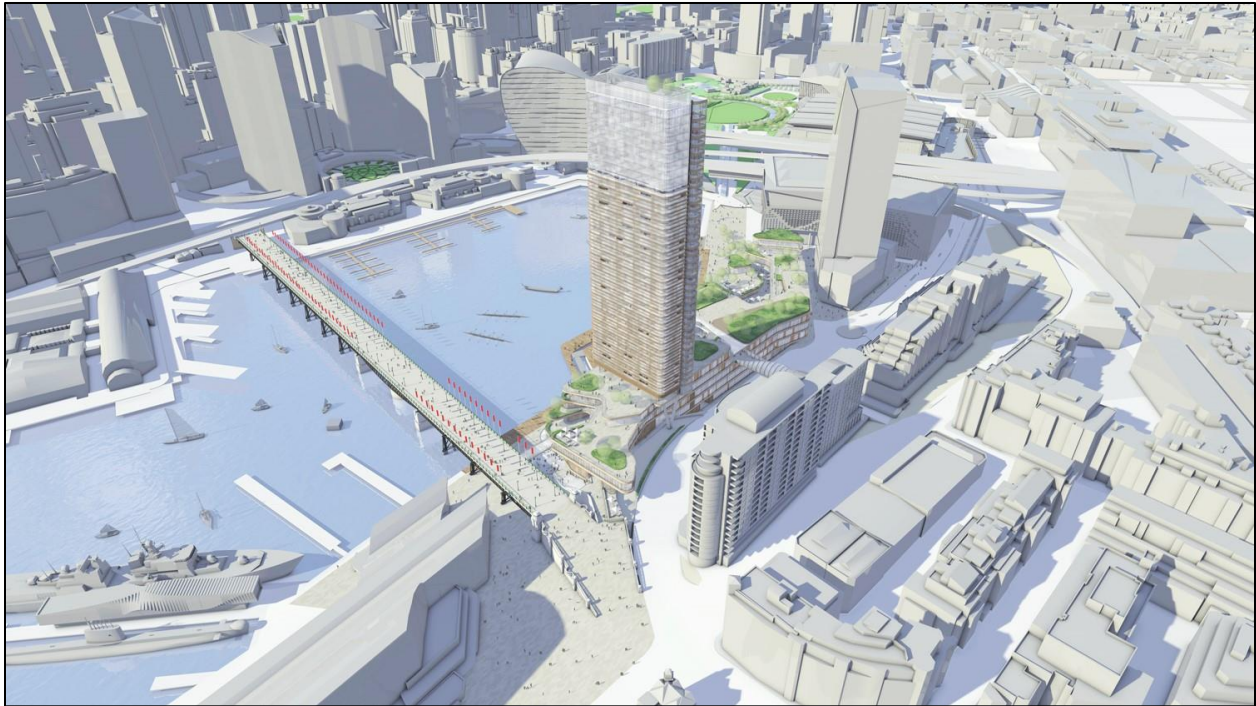


FIGURE 41: SCHEMATIC DRAWING OF THE PROPOSED HARBOURSIDE SHOPPING COMPLEX AND TOWER - CLEARLY SHOWING SETBACKS AND PROPOSED TERRACED AREAS WHICH OPEN UP VIEWS TO THE BRIDGE, IN ITS HARBOURSIDE SETTING. N.B. CONCEPT IMAGE ONLY, SUBJECT TO CHANGE LATER IN STAGE 2 DA DETAILED DESIGN. (SOURCE: FJMT 2016)

By pulling back the retail podium of the new development to provide a 10 metre buffer, and providing a new generous width ‘ribbon stair’ (concept image presented in Figure 42 below), increasing to 50 metres between the tower and the bridge, there is the opportunity for the bridge approaches, undercarriage, trusses and sandstone elements to be better visually appreciated and interpreted (Figure 54).

In addition, the proposed public domain step concept, including the introduction of terracing around the podium and adjacent to the bridge undercarriage and trusses is of a scale that will provide new opportunities for site users to visually appreciate the industrial nature and technical aspects of the bridge. Currently, this area of the public domain is underutilised and does not provide a suitable place for site users to gravitate towards (Figure 43). By creating a strong connection between the public domain and this section of the bridge fabric, the aesthetic qualities of the bridge will be better viewed, interpreted and understood. It also keeps the focus of the site users at ground level, with the bridge still providing a key point of visual interest.



FIGURE 42: PROPOSED 'RIBBON STAIR'

N.B. CONCEPT IMAGE ONLY, SUBJECT TO CHANGE LATER IN STAGE 2 DA DETAILED DESIGN. (SOURCE: FJMT/MIRVAC 2016)



FIGURE 43: EXISTING HARBOURSIDE SHOPPING CENTRE, WITH RED ARROW SHOWING THE BUFFER BETWEEN THE EXISTING SITE AND THE BRIDGE. SOURCE: GOOGLE EARTH PRO WITH ADDITIONS BY CURIO PROJECTS, 2016.

The existing Harbourside Shopping Centre does not have a strong visual connection with the Pyrmont Bridge from its interiors. Externally, the positioning of restaurants along the promenade do allow for an appreciation of the bridge, but once inside the the shopping centre all sense of the site's relationship to the harbour and the bridge is generally lost.

The proposed concept plan has been designed to open up access to numerous new views and vistas of the harbour and Pyrmont Bridge from all levels of the development. This is a key positive impact of the proposed development because it allows the opening up of previously unavailable views and vistas to the bridge from within the Darling Harbour Precinct itself. The introduction of beautifully designed public areas will provide opportunities for visitors to Darling Harbour to engage with uninterrupted views of the bridge within its harbour setting, on a daily basis and during event-based activities. The design of the open public spaces within shopping centre also provides opportunities for views to and from the Darling Harbour Rail Corridor and the Darling Harbour Water Feature.

The impact of the proposed tower on the Pyrmont Conservation Area and the twelve items identified as having local significance will be minor, in that the Darling Harbour Precinct which provides a backdrop and an access point between Pyrmont and city will only be slightly altered by the addition of a second tower within the Darling Harbour Precinct. Generally, the views and vistas to and from the bridge that were obstructed by the construction of the Novotel Hotel, Hotel Ibis and Residential Apartments will remain unchanged by the proposed development.

8.2 Landscaping & Public Domain Upgrade Works

The landscaping and public domain upgrade works, as described in the draft concept plan prepared by Aspect Studios provides an overall concept plan that will enhance the connectivity between the heritage significance of the former industrial site and the site's redevelopment as a significant destination for the proposed new commercial tenants, retailers, visitors and the local community.

The landscaping and public domain works will encourage site users to spend more time within the public spaces of the site, appreciating the Pyrmont Bridge and harbour as a backdrop to their daily activities, and will allow site users to discover and explore the new heritage interpretive elements proposed -features such as integrated heritage and public art installations, innovative heritage interpretation..

The proposed works contain carefully considered key design features that will create positive heritage outcomes, in terms of providing a much improved, informative and creative interpretation of the significant former uses of the site within public domain spaces, and a greater appreciation of the historic Pyrmont Bridge, the significance of the Darling Harbour Water Feature, the Darling Harbour Rail Corridor, the former Goods Yards and the Water Cooling System and Manifold.

Previously, in removing the industrial fabric of the earlier occupants of the site to create a place for the people, the history and significance of the precinct was overshadowed and removed from the landscape. Whilst it was a product of its time, now such redevelopment would likely be done more sensitively to ensure that the legacy that items such as the Pyrmont Bridge represent, can be appreciated, enjoyed and understood – through a variety of different medias, including insitu retention and reuse of the former buildings. The proposed redevelopment of the Harbourside Shopping Centre and immediate public domain areas allows for the significance of the place to be reinterpreted and placed firmly back into the landscape of Darling Harbour.

8.3 Physical Impacts

The proposed physical impacts to the site have been assessed in terms of their potentials impacts at this concept stage of the development. The proposed development has the potential to impact on archaeological resources, the State-heritage listed Pyrmont Bridge and its surrounding environs.

8.3.1 Built Heritage Impacts

The proposed development has the potential to improve the physical relationship between the approach to the Pyrmont Bridge and its surrounding Darling Harbour precinct through improved landscaping, removal of the remnant monorail fabric and improved surface treatments of the Pyrmont Bridge and associated approach.

There is the potential for minor adverse impacts associated with the need to create direct pedestrian access between the proposed tower and the bridge, including disabled access (Figure 44). The final details of how this access will be resolved as part of the Stage 2 DA, but the design options are seeking to minimise the impact and respect the significance of the bridge fabric. The concept plan proposes three pedestrian walkways between the tower podium and the bridge. Two pedestrian walkways merge together at one point and link with the interface of the Pyrmont Bridge, which would require the removal of a small section of non-original balustrading and minor amendments to non-original decking fabric on the southern side of the Pyrmont End of the bridge (refer to Figure 28).

The third pedestrian walkway heads north-west towards the Pyrmont end approach to the bridge and will provide pedestrian access to the bridge (refer to Figure 28). This concept provides a far less intrusive approach to the provision of pedestrian access to and from the bridge than the resolution of the city end of the bridge, both in terms of visual impact and physical impact.

It also allows the intrusive elements associated with pedestrian access (such as lifts, escalators and/or stairs) to be kept separate from the bridge and its associated fabric. As part of the bridge works, it is intended to 'make good' the surface of the bridge at the Pyrmont end of the bridge so that it becomes more readable as fabric associated with the bridge. The design details associated with this are yet to be finalised.

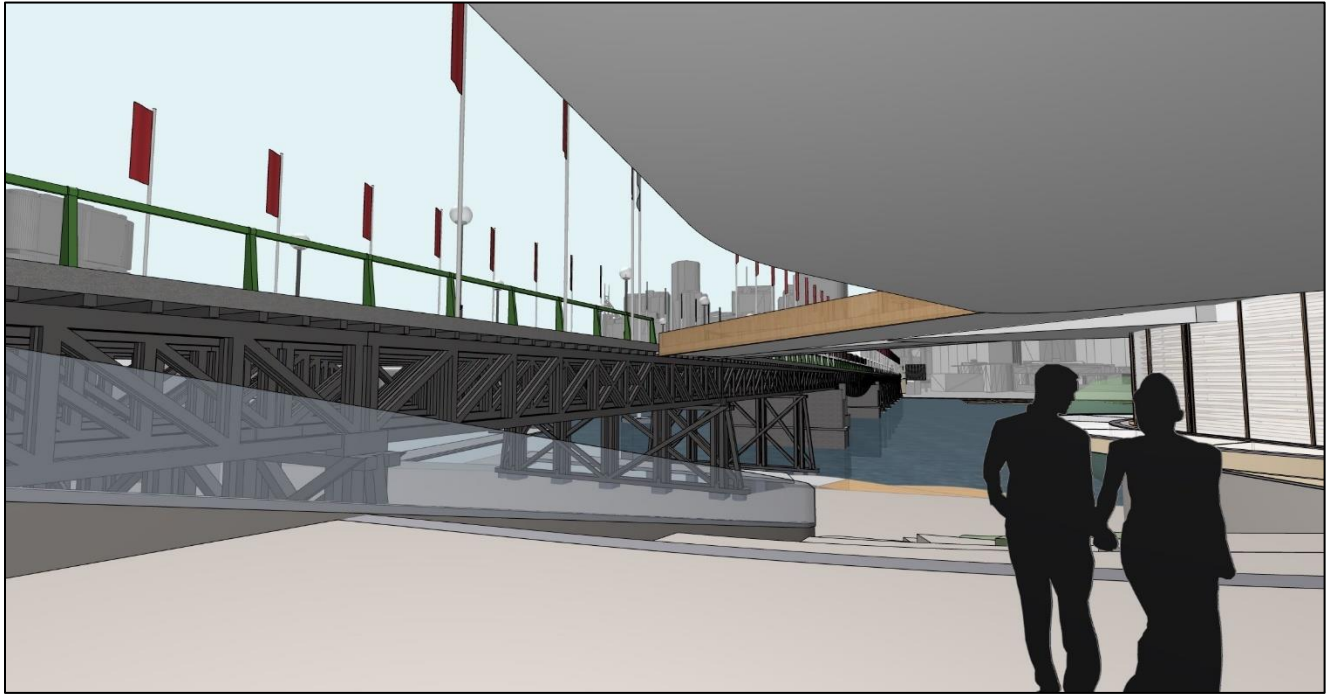


FIGURE 44: PROPOSED ACCESS POINTS TO THE BRIDGE AND TERRACED STEPS – LIGHT IMPACT TO FABRIC OF BRIDGE PROPOSED. (ALSO SEE FIGURE 28 THAT DEMONSTRATES PROPOSED BRIDGE.) SOURCE: FJMT 2016



FIGURE 45: AT THE CITY END OF THE BRIDGE (EASTERN END) THE PROVISION OF ESCALATOR ACCESS HAS HAD A SUBSTANTIAL VISUAL AND PHYSICAL IMPACT ON THE QUALITIES OF THE BRIDGE.



FIGURE 46: THE COVERED ESCALATORS (EASTERN END) ARE HIGHLY VISIBLE AND HAVE REQUIRED THE REMOVAL OF DECK FABRIC.



FIGURE 47: THE PROVISION OF NUMEROUS TYPES OF ACCESS POINTS HAVE HAD A PHYSICAL AND VISUAL IMPACT ON THE CITY END OF THE BRIDGE.

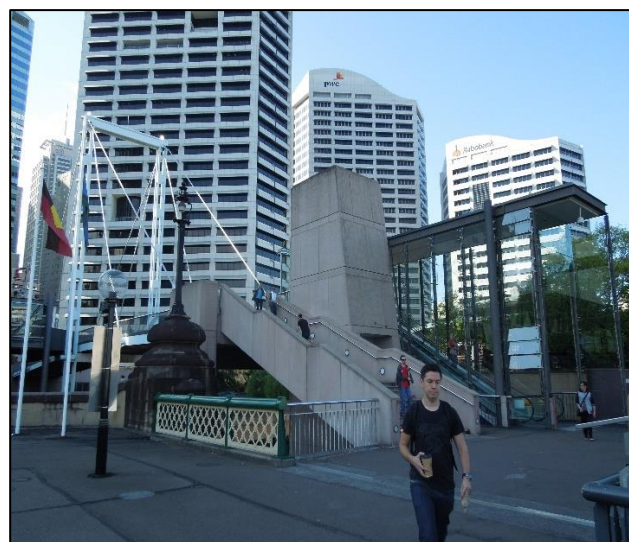


FIGURE 48: THE DESIGN DECISION TO PROVIDE SEPARATE LIFTS, STAIRS AND ESCALATORS AT THE EASTERN END OF THE BRIDGE HAS RESULTED IN TOO MANY INTRUSIONS BOTH VISUALLY, AND PHYSICALLY.



FIGURE 49: THE IMPACT OF THE STAIRS, ESCALATORS AND LIFTS ARE READILY VISIBLE FROM KEY AREAS OF THE PROMENADE (EASTERN END).

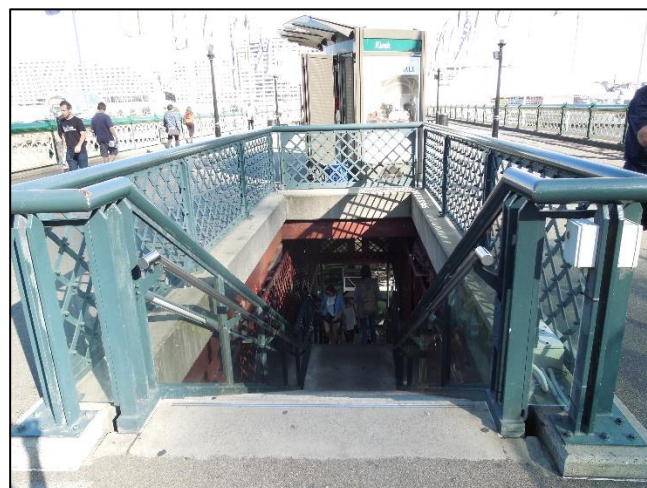


FIGURE 50: THE PROVISION OF STAIRS AND OTHER ACCESS POINTS WITHIN THE BRIDGE DECK HAS RESULTED IN THE REMOVAL OF ORIGINAL DECK FABRIC IN NUMEROUS LOCATIONS AT THE CITY END OF THE BRIDGE.

The introduction of the proposed tower will change the current relationship between the existing site and its surrounding precinct once the redevelopment of the site is complete, with new residents utilising the site, the new shopping centre, its facilities and precincts as part of their daily life.

In addition to this, the existing local community and visitors to the area will utilise the site for recreational, shopping, dining and community uses, in a way that the site has not previously been used due to the modern, open design proposed for the shopping centre - which creates more attractive and accessible green spaces for the local community to relax within, whilst enjoying views of the historic Pyrmont Bridge, Darling Harbour and the views towards Barangaroo and the city.

Therefore, the interface between the heritage fabric of the Pyrmont Bridge and the site users will be expected to increase, with potential impacts to be managed accordingly. The design of the terraced ground levels and steps surrounding the podium, adjacent to the bridge, create an opportunity for interaction between the site users and the bridge. In particular, the design of the terraced public domain/stair concept places the bridge undercarriage and trusses and its industrial fabric

firmly within the public domain and encourages interaction and exploration, whereas currently the areas beneath the bridge approaches are generally dark, without street furniture or lighting and not able to be widely appreciated by high number of site users.

In terms of ensuring that there will be minimal to no impact on the State-Significant Water Cooling System and Manifold located below ground-level at the southern end of the site, the placement of the tower and associated basement parking at the north-western end of the site is optimal.

It is also intended to demolish the existing pedestrian access point from the Novotel carpark to the Harbourside Shopping Centre, and relocate it to connect Bunn Street to the redeveloped Harbourside complex, in order to create one major pedestrian thoroughfare, in the form of an overpass across the goods line. It is considered that the re-establishment of a strong link between Bunn Street and the site is a positive outcome and will allow for interpretative opportunities with respect to the significant history of the good lines, within the design of the overpass. This will have no impact on the fabric of the goods line.

It should also be noted that the current Murray Street pedestrian bridge that provides direct access from the Murray Street apartment complex will be retained as part of the development, as it is also considered to be a significant local community access point to Darling Harbour.



FIGURE 51: CITY WORKERS FIND A SPOT UNDERNEATH THE BRIDGE TO HAVE A BREAK AND ENJOY THE VIEWS. THIS TYPE OF ACTIVITY IS STRONGLY ENCOURAGED IN THE PUBLIC DOMAIN DESIGN AND CONCEPT FOR THE TERRACED STEPS AROUND THE TOWER PODIUM.

8.3.2. Aboriginal Archaeological Impacts

Aboriginal archaeological deposits, should they be present within the vicinity of the study area, would most likely be either stone artefact sites, shell middens, or a combination of both. In order for these archaeological deposits to be present in situ, they would require the retention of natural soil profiles in the area that would be extant from 1788. The historical development at the study area including the large area of land reclamation within the study area itself, as well as the use of the area and surrounds for railway lines and the Darling Harbour Railway Goods Yards, indicates that there is low to nil potential for natural intact soil profiles to be retained in this area. The soil landscape mapping of the region is consistent with this assessment, as the study area is mapped to lie within 'Disturbed Terrain'.

Whilst it is noted that the study area boundary is immediately adjacent to a mapped area of the 'Deep Creek' soil profile, however it is also highly unlikely that any natural soil profiles are retained in this location due to the nature of the industrial development along the western shoreline of Darling Harbour from the 1850s to the 1970s.

Therefore, assessment of the environmental and archaeological context of the study area has determined that there is low to no potential for in situ Aboriginal archaeological deposits to be present within the study area.

8.3.3. Historical Archaeological Impacts

This report assesses the potential historical archaeological impacts based on the concept design available at this stage of the project. As a result, information regarding detailed design of the development (including all of the proposed subsurface impacts), and the scope of site works, including construction methodologies, were not available for consideration as part of this impact assessment.

Based on the concept design, however, the primary activities associated with the proposed redevelopment of the Harbourside Shopping Centre site would include:

- Demolition of the existing Harbourside Shopping Centre.
- Construction of proposed new building, including the construction of new subsurface footings.
- Bulk excavation to 3.6m below existing ground surface (circa -0.10m ASL) for the construction of a two level basement subsurface carpark (Figure 52 and Figure 53).

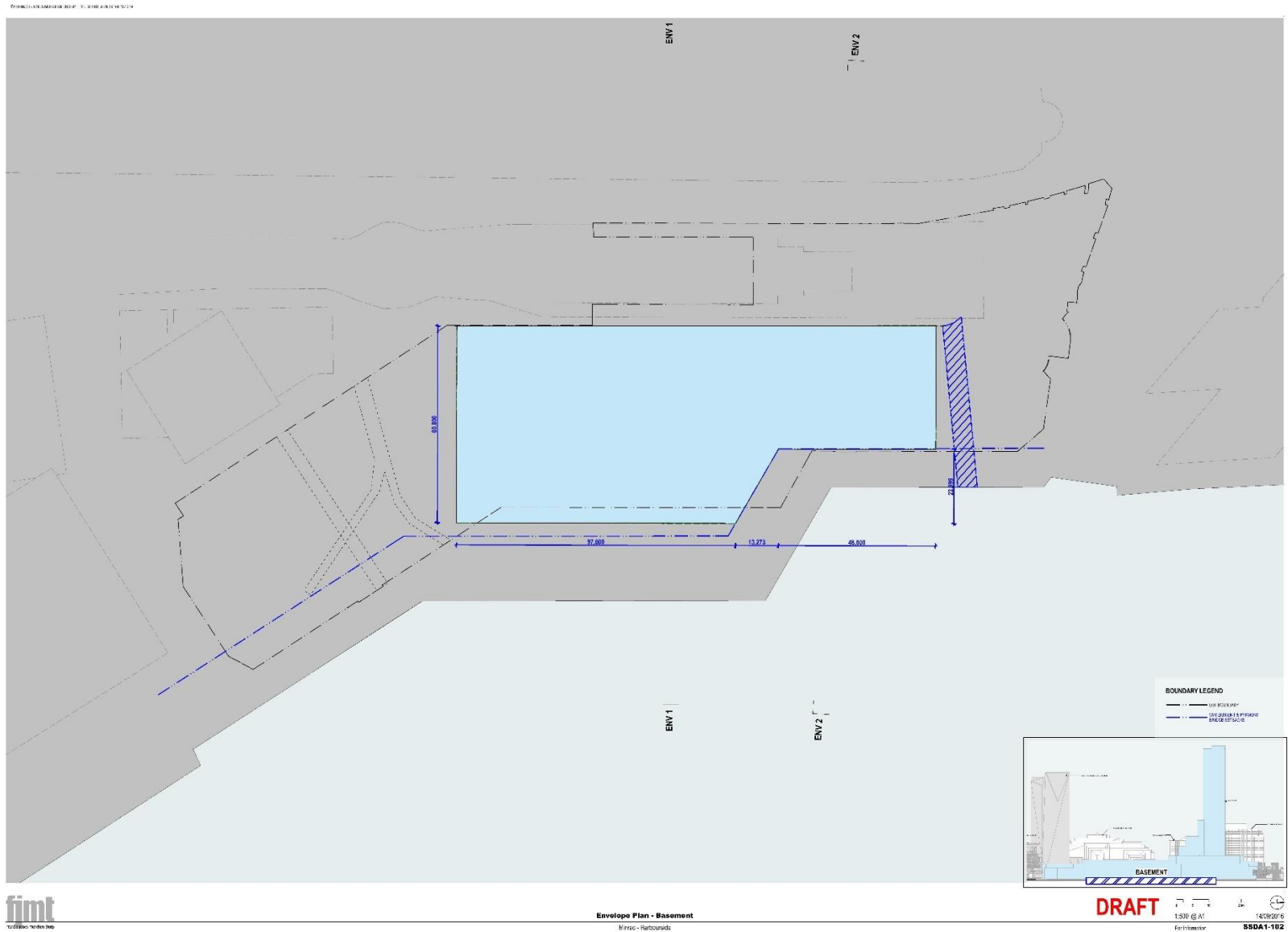


FIGURE 52: PROPOSED BASEMENT AREA (DRAFT PLAN). SOURCE: FJMT PLAN NO. SSDA1-102 ISSUED 14/9/16)



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FIGURE 54: PYRMONT BRIDGE SETBACKS—EXISTING VS PROPOSED (SOURCE: FJMT 2016)

These activities are likely to result in a range of large scale and localised impacts to the identified historical archaeological resource. Bulk excavation for the proposed subsurface carpark would be likely to entirely remove the surviving historical archaeological resource within the basement footprint.

Other activities, such as the demolition of the existing Harbourside Shopping Centre and the construction of new subsurface foundations for the proposed redevelopment, are likely to result in localised impacts to archaeological remains. Historical archaeological remains in the vicinity of elements of the existing structure, particularly the structure's foundations, would be likely to be disturbed by their demolition and removal. The construction of the proposed new structure, particularly the installation of subsurface footings, would also result in disturbances to nearby surviving historical archaeological remains. While the specific locations of such ground disturbance are not yet completely available, the current concept design indicates that the existing structure and the proposed new development extend across much of the subject site. As a result, activities associated with demolition and construction are likely to disturb and/or remove much of the historical archaeological resource across the site, except in the southern portion of the site where it is proposed to minimise any disturbance or impact to the Water Cooling System and Manifold.

The proposed development will thus likely result in the removal of or disturbance to large areas of the subject site's historical archaeological resource through both large-scale impacts (e.g. bulk excavation for the car park) and localised impacts (removal/construction of footings).

This statement of archaeological impact will be refined and updated for the Stage 2 development as more information about existing site conditions (including detailed geotechnical data, service plans) and the proposed development (e.g. detailed design) become available.

8.4 Social/Community Impacts

The proposed redevelopment of the site will bring a functionality to the site that is not possible through the adaptive reuse of the current buildings in their existing context. In the current context, the site, whilst accessible to the public, does not have the feel and design of a publicly accessible, interactive space.

The enhancement of the public domain areas combined with new retail experiences, restaurants and open public spaces, will encourage site users to visit Harbourside on a regular basis. Coupled with the introduction of new user-friendly landscaped green spaces within the development and clever interpretative elements throughout the site, users will be encouraged to stay, explore and develop an affinity with the site's significant history, including the State significant Pyrmont Bridge.

9.0 CONCLUSIONS & RECOMMENDATIONS

The following conclusions and recommendations are based on the concept plan proposal and provide an overview of the potential impacts. Should the Concept Plan be approved and a Stage 2 Development Application be lodged, an updated Heritage Impact Statement should be prepared at this time to assess the detailed impacts of the proposal.

9.1 CONCLUSIONS

It is concluded that whilst the proposed redevelopment of the site will have a visual impact on the immediate setting of the Pyrmont Bridge and its surrounds, it is not dissimilar to the setting which already exists on the opposite, eastern side of the bridge – where the bridge surrounded by office towers- is still readily understood and appreciated within its setting. It is considered that the scaling of the podium and setback of 10 metres will allow for the approach to Pyrmont Bridge and the bridge itself to be read more readily in the round, particularly from ground level. Currently, the Harbourside Shopping Centre abuts the bridge and does not provide a buffer to the curtilage of the bridge.

The tower will have only a minor-moderate impact on the backdrop to the Pyrmont Conservation Area and local items within the vicinity of the site when viewed from Pyrmont, as currently, the views to and from the bridge and Pyrmont are already obstructed by the existing hotels and residential developments, with the new development proposed to cause a similar level of visual impact.

It is likely that the Water Cooling System and Manifold exists below the southern end of the site. Therefore, it is intended to avoid major excavation impacts, where possible, with an exception for footings and other necessary services, where an alternative has been sought and is unable to be utilised.

The development is likely to impact on historical archaeological resources, which are proposed to be recorded and removed as part of an overall archaeological excavation program. It is not considered likely that any Aboriginal cultural objects will be disturbed or discovered during the works program.

The redevelopment will have a minor impact on non-original fabric of the Pyrmont Bridge, as part of the proposed provision of direct pedestrian and disabled access to the bridge, but as a part of offsetting these impacts, it is intended to 'make good' the surfaces of the Pyrmont approach to the bridge and improve the readability of the bridge trusses and undercarriages from the nearby public domain spaces.

The design of the new Harbourside Shopping Centre will open up previously unavailable viewpoints to the the bridge and the surrounding areas – including views of the former Darling Harbour Rail Corridor, the Darling Harbour Water Feature and the historic precinct of Pyrmont. This will be further enhanced by the consolidation of the pedestrian access to the site via a Bunn Street pedestrian bridge linking Pyrmont to Darling Harbour.

The redevelopment of the site provides a new opportunity to interpret the significant former history of the site within the public areas of the site. When the the industrial heritage of the site was demolished to create a place for the people in the 1980s, the site's highly significant history was also removed. This new redevelopment provides an opportunity to reestablish the importance of the site, with the Pyrmont Bridge proposed to be highlighted and celebrated as one of the few tangible reminders of the site's significant history.

9.2 RECOMMENDATIONS

The following recommendations are based on the concept plans that have been prepared at this stage.

9.2.1. Built Heritage

The proposal to design the new shopping centre with many public domain spaces that open up views to the harbour, Pyrmont Bridge, the city and its surrounds should continue to form the basis of future detailed design.

The development of the tower design should seek to provide sensitive design solutions for the interface between the bridge and access to the tower/shopping centre. The final form, design and materials of the tower will need to create a sympathetic background to Pyrmont Bridge.

The proposal to improve the spaces in and around the Pyrmont Bridge approach, and possible bridge surface works is to be further developed and encouraged as part of more detailed designs. In particular, the proposal to remove the intrusive remnant monorail fabric is proposed.

9.2.2. Aboriginal Archaeology

The potential for unexpected relics and/or Aboriginal objects to be discovered will be managed through the appointment of an overseeing project archaeologist for the site who will ensure that any unexpected finds are managed appropriately and reported to the statutory authorities in accordance with the provisions of the NSW National Parks and Wildlife Act, as required.

9.2.3 Historical Archaeology

Any impacts to archaeological relics of local or State significance associated with the redevelopment of the Harbourside Shopping Centre site should be managed in accordance with NSW Heritage Division guidelines to ensure historical archaeological best practice is adhered to.

Once the impacts on the potential archaeological research are finalised, an Archaeological Research Design for the site should be prepared.

Analysis of additional site information including geotechnical data, when available, and service plans should be undertaken to refine the understanding of archaeological potential presented in this report.

Comparative analysis of similar archaeological sites in the vicinity of the subject site should be undertaken as part of the preparation of an Archaeological Research Design. This would allow appropriate research frameworks and research questions to be developed that relate to, and could better contribute to, the body of archaeological investigations undertaken on foreshore sites in Sydney, and particularly Darling Harbour, over the last 20 to 30 years.

9.2.4. Interpretation

There are many opportunities to incorporate the stories and history of the site into public artworks, furniture, landscaping elements, place naming and other key site infrastructure to ensure that significance of the place is celebrated and understood.

The development of an Interpretation Strategy that tells the story of the significance of the site and its surrounding area will greatly improve the appreciation and understanding of the significance of the area, prior to its redevelopment in 1987-1988 and in particular, the significance of the former Goods Line, and the state-heritage listed Pyrmont Bridge. The interpretation at the site should be incorporated into the public domain designs for the site, including public artwork programs, to ensure that it becomes integrated and remains relevant.

The interpretation will help to retell the significance stories that were removed along with the fabric of the site when the redevelopment works of the 1980s sought to distance the new plans for Darling Harbour from its industrial past.

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APPENDIX 1: Historical Assessment: Darling Harbour Railway and Goods Yard in the context of the history of the western side of Darling Harbour, Ultimo and Pyrmont (January 2016)

APPENDIX 2: Redevelopment of Harbourside Shopping Centre: Aboriginal Heritage Due Diligence Assessment Report (September 2016)

APPENDIX 3: Harbourside Shopping Centre Historical Archaeological Assessment (September 2016)

Historical Assessment

Darling Harbour Railway and Goods Yard

in the context of the history of the western side of

Darling Harbour, Ultimo and Pyrmont

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8 January 2016

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Historical Assessment of the Darling Harbour Railway and Goods Yard in the context of the history of western side of Darling Harbour, Ultimo and Pyrmont

1) Darling Harbour: pre-contact to European Settlement and the Ultimo Estateⁱ

Aboriginal occupation of Australia is thought to have begun around 50,000 years ago with occupation of the Sydney Harbour region dating to around 7000-10,000 years ago when sea levels rose to the present, following the end of the Ice Age. Archaeological investigation has dated intensification of Aboriginal occupation of the Sydney region to c500BC (around 2500 years ago). Radiocarbon dating to c1550 of the remains of a meal of cooked snapper and shellfish at Darling Harbour confirms the occupancy of the Dharug people, living off the plentiful supply of fish and crustaceans. Huge shell middens of the Sydney Mud Oyster have been excavated at Walsh Bay. This species of oyster did not survive the destruction of its habitat after 1830. Aboriginal sandstone carvings would not have survived the late nineteenth century largescale stone quarrying operations at Pyrmont and Kent Street.

By 1788 the Cadigal people (of the Dharug language group) were occupying the north side of Sydney Harbour and Darling Harbour (Go-mo-ra) where they bordered the Wangal people who lived south of the harbour. The south end of Darling Harbour was known as Tumbalong. The smallpox epidemic of 1789 killed up to 80% of the Eora people of the Sydney region. The Cadigal, who had more contact than other groups with the soldiers and convicts of the First Fleet, were particularly hard hit. But Cadigal survivors regrouped on the fringes of British settlement. They reportedly occupied the Pyrmont area around the natural spring known as Tinkers Well until the 1830s, and were still camping in Ultimo and harvesting cockles near Ultimo House in the 1850sⁱⁱ.

The First Fleet arrivals at Sydney Cove named Darling Harbour as Long Cove. From 1804 it was known as Cockle Bay, referencing either the original shape of the bay or the large number of Aboriginal shell middens on its shores. In 1826 it was officially named Darling Harbour, in honour of the Governor. Initially the western side of Darling Harbour was utilised for shell middens, to provide the mortar in lime kilns for Governor Macquarie's program of civic improvement under architect Francis Greenway from 1810–21: Salt pans and market gardens around the head of Cockle Bay were other uses.

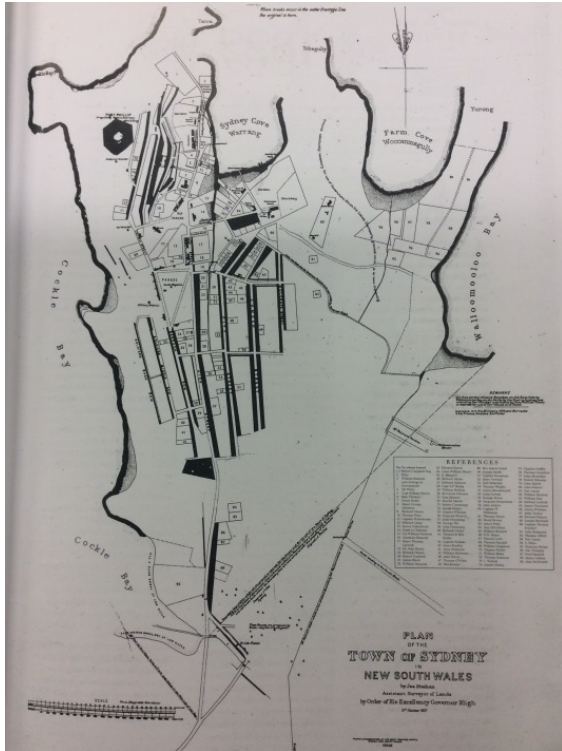


Figure 1. There is no evidence of European settlement on the western side of Darling Harbour in 1807. Plan of the town of Sydney New South Wales, James Meehan, 31 October 1807. Mitchell Library, M2 811.17/1807/1.

John Harris, who arrived in the colony in 1790, was a surgeon, farmer, magistrate and an extensive landowner (including James Ruse's farm at Parramatta). From 1803–6 he acquired virtually all of present day Ultimo through land grants made by Governor King in recognition of his support for King's control of the import of liquor into the colony. Governor Macquarie's 1818 grant to Harris consolidated his Ultimo Estate of 233 acres (94 hectares). This now encompassed part of Haymarket and all of Ultimo, bounded by Parramatta Road to the south, Blackwattle Creek and Blackwattle Bay to the west, Cockle Bay to the east and John Macarthur's Pyrmont Estate to the north.

The remaining 55 acres at the Pyrmont end of the peninsula were early land grants that by 1799 had passed to John Macarthur of Elizabeth Farm, who was already one of the largest landholders in the colony. Pyrmont was reputedly named by one of Macarthur's acquaintances for whom Tinkers Well was a reminder of the similar spring of fresh water at the German spa of Bad Pyrmont. Ultimo was named by Harris after he escaped court martial through a technicality—the incorrect use of the word 'ultimo' (last month) instead of 'instant (this month)'. The differences between the Harris and Macarthur family ownership would shape very different patterns of development for the Ultimo and Pyrmont estates until the 1870s.



Figure 2. Cockle Bay c1819-20. Looking from the eastern shore towards Pyrmont. In the foreground are two windmills on Millers Point and possibly Dicksons Mill at the head of Cockle Bay. Macarthurs windmill on the Pyrmont peninsula is in the background. James Taylor. Mitchell Library 941, a928747.

In 1804 Harris's Ultimo House was the first building on the Ultimo Estate, on the western side of Darling Harbour, overlooking the headwaters of Cockle Bay (near the corner Thomas and Jones streets, Ultimo). It was a convict-built two-storey, brick, Georgian-style mansion with verandahs, which Harris commissioned architect Francis Greenway to extend in 1814. Also in 1804 Governor King had built for Harris a one-storey brick dwelling that became Ultimo Cottage. Harris used his Ultimo Estate as his parkland country retreat, farming only a few acres. On his death in 1838 the Ultimo Estate passed jointly to Harris family descendants. Legal issues disallowed subdivision until after 1859 which precluded any early development of the Ultimo area.

Two roads only were formed in the Ultimo Estate until the 1870s. An early track developed from Ultimo House through the marshes at the headwaters of Darling Harbour to the settlement at Sydney. This became Ultimo Road. Harris's largest grant of 1806 (135 acres/54 hectares) carried the condition that a road be reserved across the Ultimo/Pyrmont peninsula. Harris Road is marked on early maps from at least 1836, running the length of the peninsula from Parramatta Road to Johnstons Bay.

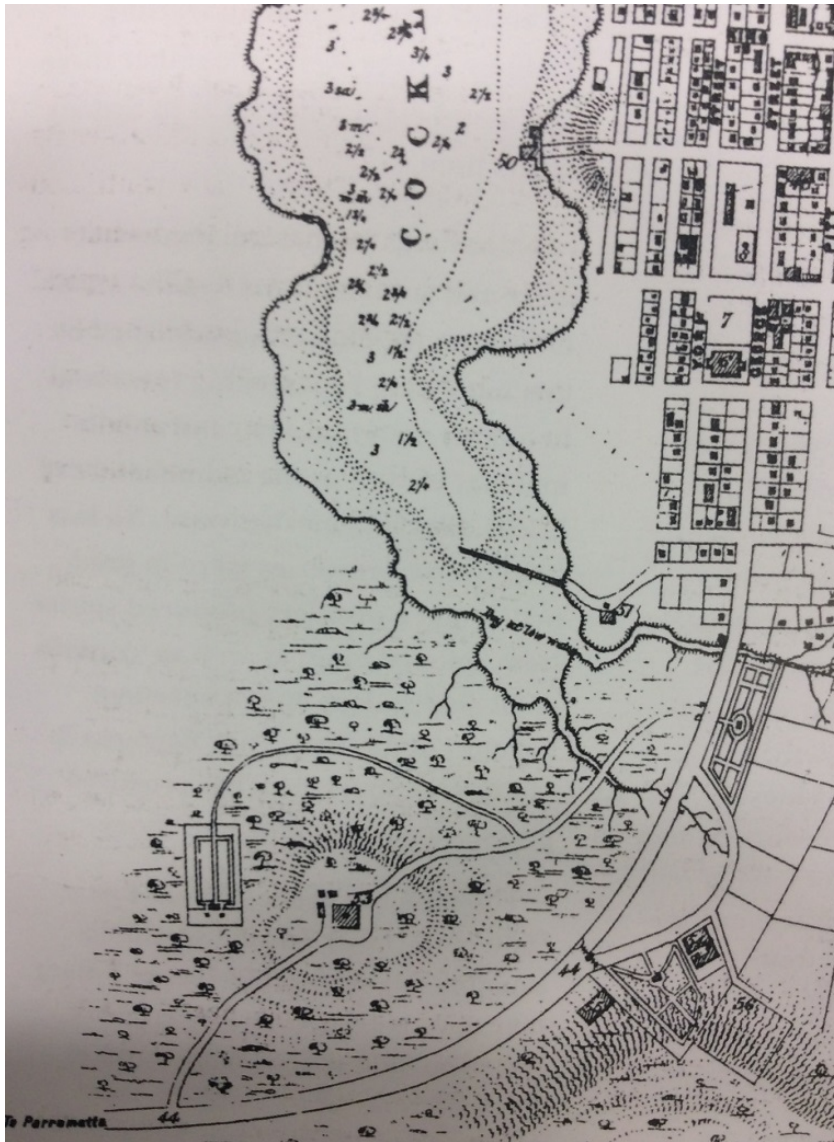


Figure 3. In 1822 the eastern shore of Darling Harbour has developed with grid pattern settlement and two wharves. At the swampy headwaters of Cockle Bay, John Harris's Ultimo Estate is the only settlement shown and there is no European settlement of its western shore. Section of the Plan of the Town and Suburbs of Sydney, August 1822. Mitchell Library M2 811.17/1822/7.

The only other dwelling known to have been built on the Ultimo Estate before 1859 was Newstead House (also known as Bunn's Cottage) on the western shore of Darling Harbour, looking towards the city (on present day Murray Street, near Bunn Street). It was built c1832 by Captain George Bunn on 1.5 acres gifted in 1828 by John Harris to Anne Murray on her marriage to Bunn. Bunn died in 1834 but his widow lived on at Newstead House which remained standing until at least 1889, when it was stated to be 'the oldest house in Pyrmont' (see Section 3.B.iii and Figure 29).ⁱⁱⁱ



Figures 4 & 5.
A pair of miniature portraits,
probably of Captain George
Bunn and Mrs Anna Maria
Bunn, c1829. ML Graphic
Materials, MIN 442 & MIN 443.



The only part of the Ultimo Estate to be populated before the 1870s was the strip along Parramatta Road that the Harris family sold in 1831. The low-lying swampy area along Blackwattle Creek was an unhealthy mix of makeshift cottages (with no water or sewerage), workshops, slaughter yards, boiling down works and other noxious trades that came to characterise 19th century Ultimo as the poorest part of Sydney. The rest of the Ultimo Estate remained rural and unoccupied, other than a few scattered cottage dwellers who ran a few cattle, market gardened or quarried sandstone.

Macarthur, too, had little interest in developing Pymont. But following his death in 1834 his son Edward subdivided the eastern half of the Pymont peninsula in 1839–40. The scheme did not realise his vision of villa development, however, as potential investors were wharf owners and shipbuilders who saw Pymont's potential for extension of the commercial/industrial development already in place at east Darling Harbour. Shipbuilders Chowne and Russell, at Elizabeth and Pymont bays were the first industries to set up on the Pymont peninsula. Pymont's housing stock from the 1840s was roughly built sandstone block cottages of two or three rooms for the working class residents who had no water supply other than natural springs and no sewerage.



Figure 6. Basire's 1836 Plan for the development of Pymont as a mixed model villa estate contrasts Edward Macarthur's vision for Pymont with the negligible development by John Harris of his Ultimo Estate where Ultimo House, Ultimo Cottage and Bunn's Cottage are shown as the only residences. Harris Street is marked out, running the length of the peninsula. Macarthur's estate eventually came on the market in 1839–40 in a modified form with 41 blocks auctioned in 1839. Plan of Sydney with Pymont, New South Wales, the latter the property of Edw. Macarthur Esq, divided into allotments for building 1836, Basire, Mitchell Library Q365/Gv.1, a5573001.

2) Development of the Darling Harbour Railway Goods Yard, 1849–1988^{iv}

A) 1849–74: slow beginnings

In 1849 the Sydney Railway Company was formed with Thomas Barker, owner of Barkers Mill on the east Darling Harbour and one of the Railway Commissioners, as director. Barker envisaged a rail network that would transport goods to and from the hinterland of NSW across the Blue Mountains to Sydney and link to the Darling Harbour industries, wharves and warehouses via a one-mile long branch line from the Sydney terminus to Darling Harbour. In 1853 the Sydney Railway Company bought a 14.5-acre (six-hectare) strip of land from the descendants of John Harris, who still controlled the Ultimo Estate. The company created a railway reserve that extended from present day Central Station (near Regent Street), across Broadway and Ultimo Road and along the western side of Cockle Bay to a goods terminus. Excavations were carried out from 1853–55 for a series of cuttings and embankments for the single track goods branch line which tunnelled under George Street (now Broadway, where the sandstone road bridge survives) and crossed Ultimo Road via a timber bridge.



Figure 7. This 1854 map shows the proposed Darling Harbour Railway Goods Station adjacent to Bunn's Cottage. Ultimo House is the only other dwelling though some scattered structures are shown near the waterfront. A bridge is proposed to link Liverpool Street with west Darling Harbour, but this would be superseded by construction of the first Pyrmont Bridge three years later. Section from Woolcott and Clarke's Map of the City of Sydney with the environs of Balmain and Glebe, Chippendale, Redfern, Paddington, etc 1854. Mitchell Library, M2 811.17/1854/1B, a928962

When the company failed in 1854 (like many of the private railway companies) the NSW Government took it over and opened the first railway in NSW in 1855, from Sydney to Granville, with the branch line to Darling Harbour. The opening of the first Pyrmont Bridge in 1857 enabled the transport of goods between the Darling Harbour rail head and the wharves of East Darling Harbour and the town of Sydney.



Figure 8. The first Pyrmont Bridge pictured in 1874 before the Darling Harbour railway line was extended to Pyrmont. The foreshore has not yet been developed with rail lines, goods yard and wharfage (see Section 3.D.i and Figure 30). Mitchell Library, SPF/838, a089838.

The railway development was supposed to give the Ultimo Estate a land boom with attendant warehouse and wharf development that would boost land prices. But development of the goods line stalled until the 1870s, due partly to legal issues with the Ultimo Estate, partly to the heavy tolls charged by the Pyrmont Bridge Company for the transport of goods, but mainly because the rail line extended insufficiently into the wharf area of Darling Harbour, stopping short of Pyrmont Bridge, with no goods yard established. For its first 20 years the Darling Harbour goods line was used only by the Railways Department which built a small jetty on the western side for landing coal and ballast. The rail line had rendered unusable the thin strip of land between it and the western shoreline below Pyrmont Bridge.

The tying up of the Harris family estate stalled development in Ultimo. By 1855 there were barely 20 properties along the Ultimo section of Harris Street. In 1866 Ultimo was still described a 'tract of land lying between Parramatta Street and the suburb of Pyrmont'.^v At the same time, following the economic downturn of the 1840s, new industries were setting up on the Pyrmont peninsula. From 1851 the Australian Steam Navigation Company operated on Darling Island as a ship building and repair facility and grew to become the largest of the coastal shipping fleets until 1890. In 1870 major reclamation on Darling Island joined it to the mainland as another peninsula. The Saunders quarry opened in 1853 on the north-western corner of the Pyrmont peninsula and began quarrying the high-quality Pyrmont sandstone.

Legal settlement of the Ultimo Estate was finally achieved in 1860 with the estate being subdivided into 70 blocks for the six Harris family heirs. The Harris family remained in Ultimo, building fine houses for themselves in the 1880s and extensive rows of terrace housing with pubs, for which they were landlords.

An 1863 select committee reviewed the future of the Darling Harbour Goods Line which had fallen into disrepair. The committee considered the line to be on the wrong side of Darling Harbour and likely to be made redundant due to the silting up of the head of Cockle Bay, where very long jetties were now required for shipping. The government was forced to undertake reclamation of the mudflats at the head of Darling Harbour to improve shipping access. It also had to compensate the Harris family for damage to the Ultimo Estate and for the failure of the railway line and awarded them some of the reclaimed land in Haymarket, between Ultimo Road and Hay Street. The goods line remained something of a white elephant for the NSW government until the 1870s when developments in rail and transport infrastructure and patterns combined to justify its existence and kick start its long period of growth.

ⁱ General references for this section are: Ashton 1990: 2–6, 8. Johnson 1999: 5–7. Johnson 2008: 7, 8, 9, 14, 15, 42, 54, 60–3, 65, 136. Fitzgerald & Golder 2007: 10–13, 15–18, 21, 23–4, 25–7, 41–2. Dictionary of Sydney: Pyrmont; Ultimo. Barani, *Tinkers Well*, online

ⁱⁱ Tinkers Well was located in a large sandstone overhang at the junction of present day Bowman Street and Distillery Drive. It was destroyed by 20th century sandstone quarrying. See <http://www.sydneybarani.com.au/sites/tinkers-well/>

ⁱⁱⁱ Fitzgerald & G. older 2007: 24

^{iv} General references for this section are: PWD 1984: 60–5. Ashton 1990: 2–5, 8–9, 12, 30–1. Johnson 1999: 5–7. Johnson 2008: 7, 8, 9, 14, 42, 54, 60–3, 65, 136. Fitzgerald & Golder 2007: 10–13, 15–18, 21, 23–4, 25, 35–8, 41, 45–7. Dictionary of Sydney: Pyrmont; Ultimo. SHR 00696: Parramatta Railway Station. SHR 01062: Ultimo Road Railway Underbridge. SHR 01618 Pyrmont Bridge.

^v Balliniers NSW Gazette and Roads Guide Sydney 1866, quoted in Ashton 1990: 14.

B) 1874—1960s: growth and expansionⁱ

The first stage of development of the Darling Harbour Railway Goods Yard was 1874–88. The beginning of this period was marked by the completion of the Iron Wharf which determined the layout of the subsequent rail sidings and goods sheds in the southern part of the Goods Yard. The second major period of Goods Yard expansion and development was from the late 1880s until the 1920s. The increasing use of rail for goods transport put pressure on existing space and facilities at the Darling Harbour Goods Yard. Initially it expanded northwards to Pyrmont in 1891 (primarily for coal), to Darling Island in the 1900s (mainly for wheat) and to Jones Bay a decade later. Extensive reclamation of the head of Darling Harbour in the early 1920s enabled its considerable expansion to the south-east. The area of wharfage associated with the Goods Yard reached its maximum extent by the 1920s. Expansion stalled after the 1920s, but the post WWII period saw the modernisation of goods handling facilities and new brick structures replacing earlier structures in the southern (reclaimed) area of the Goods Yardⁱⁱ.

By the 1870s the Sydney rail network had extended to Parramatta, Liverpool, Goulburn and across the Blue Mountains. It was the congestion of goods traffic at the Sydney rail terminus and the Newtown Goods Yard that prompted the decision to expand and extend the Darling Harbour railway line. In 1874 the single goods line from the Sydney terminus was duplicated and extended along the western side of Cockle Bay to Darling Island and the Darling Harbour Goods Yard was established. This would provide NSW railways with its first direct link with wharfage and shipping. It remained its only such link until 1891 and the most important until 1900ⁱⁱⁱ. The timber bridge at Ultimo Road was replaced in 1879 with the surviving iron girder bridge to carry the duplicated rail track^{iv}.



In 1874 the head of Cockle Bay was reclaimed as far as Liverpool Street and the first substantial wharfage was constructed on the western side of Darling Harbour. The massive Government Iron Wharf wrapped around the reclaimed head of Cockle Bay and the western side of Darling Harbour, adjacent to the rail line. Designed by Edward Orpen Moriarty, Engineer-in-Chief, NSW Public Works Department, it was the first wharf in the world to be built wholly of iron and was considered to be a major engineering feat (see Section 3.D.ix and Figure 31).

Figure 9. The Iron Wharf and first railway line at Darling Harbour. City of Sydney Archives, SRC 1819–028/028237.

Both residential and factory development took off in Ultimo from 1875 with an influx of manufacturing industries that drew both skilled and unskilled workers. New arrivals included several iron foundries and iron works, the Castlemaine Brewery, factories making coaches, cordial and glass, and timber merchants. From the 1880s, streets of substandard housing were resumed and demolished in council slum clearances for construction of wool stores, flour mills and industrial and manufacturing enterprises. This was intensified by the sale of half the Ultimo Estate in 1891 which gave impetus to industrial development.

In Pyrmont, shipbuilding, small iron foundries, engineering workshops, tin smelting works, coal and timber yards had grown up around the Australian Steam Navigation & Co works on Darling Island from the 1850s. From the 1870s heavy industry established itself in Pyrmont, concentrating in the western half of the peninsula. Saunders' quarry expanded its operations

in response to the demand for high quality Pyrmont sandstone and grew into a major industry. Many of Sydney's civic buildings were built of Pyrmont sandstone: the Chief Secretary's Office, the Education and Lands Departments in Bridge Street, the General Post Office and the University of Sydney among them. But quarrying cut down, reshaped and degraded the Pyrmont peninsula as the quarries came to be filled up with Sydney's rubbish. The degradation of Pyrmont continued with the City Iron Works setting up near the quarries in 1870, then the Colonial Sugar Refinery (CSR) which took over the heavily quarried Pyrmont Point on its deep water frontage from 1875. CSR came to be the largest, and one of the longest running, industries of the Pyrmont-Ultimo peninsula, operating until 1995 and eventually covering 31 acres (68. hectares). Construction of its works and wharves had involved the demolition of a large amount of 19th century housing. It dominated north Pyrmont and employment at Pyrmont generally, mainly in the form of heavy industrial casual work for thousands of employees.

The residential base of Ultimo and Pyrmont was swept away by industries taking advantage of the access that western Darling Harbour afforded to both rail and shipping. By the 1890s both Pyrmont and Ultimo were 'fully fledged industrial suburbs'.^v

Darling Harbour Goods Yard was fully operational by 1878 when the line transported the first consignment of wool for shipment from the wharves. The expansion of the Goods Yard was driven by the primacy of the wool industry in the economy of NSW from the 1880s. It was also assisted by developments in the NSW rail system and by the government's purchase of the Pyrmont Bridge in 1883 and the abolition of its tolls. The number of rail lines in the Goods Yard multiplied in the 1880s and 1890s.

Wool was now the main commodity shipped by the Darling Harbour Railway through the Goods Yard to the wharves. In 1875 the NSW Government awarded the contract for the carriage of wool from the Goods Yard to the wool stores to J McMahon & Co. This company held the contract for 50 years until 1926 when a fleet of rail department trucks took over. The first wool store (Goldsbrough & Co.) was built at the corner of Fig and Allen Streets in 1883. Destroyed by fire in 1935, it was rebuilt in extended form in 1936. The Ultimo-Pyrmont peninsula became a centre for wool storage in the decades up to WWI. By WWII there were over 20 huge wool stores lining Wattle, Harris and other streets, covering over 100 acres (41 hectares) of the peninsula and employing over 1000 men.

The expansion of the wool trade through Sydney necessitated the construction in 1891 of the huge corrugated and cast iron Wool Shed in the Darling Harbour Goods Yard. Curving in a great arc around the reclaimed south-western shore of Cockle Bay, close to the Iron Wharf, it was (1060ft) 323m long and 66 ft (20m) wide and could house 120 loaded wool wagons. A single track ran down both sides of the shed leaving an unloading and transport road down the middle. At the same time the Darling Harbour wharves were extended to handle overseas shipping, with wool loaded directly for export.

In 1880, the same year as telephony reached NSW, the first permanent telephone line in NSW was installed between the Darling Harbour Goods Yard and the Royal Exchange. The major Darling Harbour wharves were rapidly connected by telephone to the major wool stores.

By 1882 the Sydney rail system reached Albury, Hay and Dubbo. In 1889 Sydney was linked through to the Queensland border with the construction of the Hawkesbury River Bridge. Sydney was now linked by rail with all the major primary production regions of NSW. The Darling Harbour Railway Station and offices in Pier Street was built in 1886.

During the 1880s inwards goods traffic came to be handled in the southern half of the Goods Yard and outwards goods traffic in the (then) northern section—an arrangement that

continued for the lifetime of the Goods Yard. In 1881 Darling Harbour took over all inward goods traffic from the Sydney terminus yard. In 1891, with the construction of the Outwards Goods Shed (C & D Shed), equipped with hydraulic cranes, south of the Pyrmont Bridge, the Goods Yard took over all Sydney outwards goods traffic as well ^{vi}

Inward general goods traffic was serviced by a small timber and galvanised iron Inwards Delivery Shed. Built in 1883, this was an early Goods Yard structure in the southern section near the Wool Shed (that was not built until 1891). The timber and galvanised iron covered platform immediately south of the 1902 Outwards Goods Shed may also date from the first period of the Goods Yard development (see Section 3.D.iv and Figures 33 and 34).^{vii} The second phase of Goods Yard development from c1888 to the 1920s saw iron and steel take over from timber construction. The three outward goods sheds and the adjacent office building all date from this period.

By 1891 the Goods Yard covered 31 acres (12.5 hectares) with 8 miles (12.8km) of rail sidings. The first Outward Goods Shed (South) was built in 1891 immediately south of the Pyrmont Bridge and parallel to the waterfront. A second Outwards Goods Shed was built in 1902, parallel to and immediately west of the first shed, nearer to the waterfront. The Goods Yard now handled most of Australia's export produce. The Goods Shed Offices/Forwarding Station was also constructed in 1902, on Union Street, close to the two outwards goods sheds. It housed the Assistant Station Master, clerks, cashier, accounts, correspondence, records and stationery for the Goods Yard. It played an important role in the distribution of the Goods Yards freight as all payment was made and documentation completed at this office (see Section 3.B.i & ii, Section 3.D.ii, and Figures 39–52.)

Employment at the Goods Yard more than trebled in three decades^{viii}.

	Porters	Shunters	Clerical workers
1881	72	15	15
1910	265	48	59

Darling Harbour was closely associated with the development of the frozen meat export trade. In 1874 the Railway Commissioner leased to TS Mort some of the reclaimed land fronting Harbour Street between Pier and Liverpool streets for a frozen meat works. Meat was slaughtered at Mort's landholding near Bowenfels in the Blue Mountains and brought by rail to Darling Harbour for coastal shipmen. Mort, working with ED Nicolle, was responsible for pioneering the freezing of meat for export and for handling the bulk of the frozen meat trade to Britain until 1892.^{ix} By the 1890s, the first refrigerated rail cars carried primary produce from all over NSW to Darling Harbour for export and for the Sydney market. The lease on Mort's frozen meat works was transferred to the Fresh Food and Ice Company which operated at Darling Harbour until 1952.

Following the closure of the Glebe Island abattoir, the NSW Government built the huge Meat Market from 1883–8 to the west of the Darling Harbour Goods Yard, south of the junction of Pyrmont and Murray streets, and opposite the new Goldsbrough wool store. The Meat Market was the first structure built at the Goods Yard, (other than rail lines and sidings). Sited on a dedicated goods line, it received meat by rail and steamship from all over NSW. It was a state of the art facility comprising a market and complexes for chilling, freezing and storing a record 435 tons of meat. In 1889 it was leased to J Geddes who took over the handling of frozen meat at Darling Harbour (see Section 3.D.vii and Figures). Meat was exported from the NSW Pastoralists Association works in North Sydney. Geddes transported the export-designated carcasses via pontoon to North Sydney. In 1895 a refrigerated car ramp, sidings, hydraulic ram and pontoon guide were constructed immediately north of the Iron Wharf, opposite the Meat Market, to facilitate this transport (see Sections 3.B.iv and 3.D.vii and Figures 35,36 and 53–6)^x.

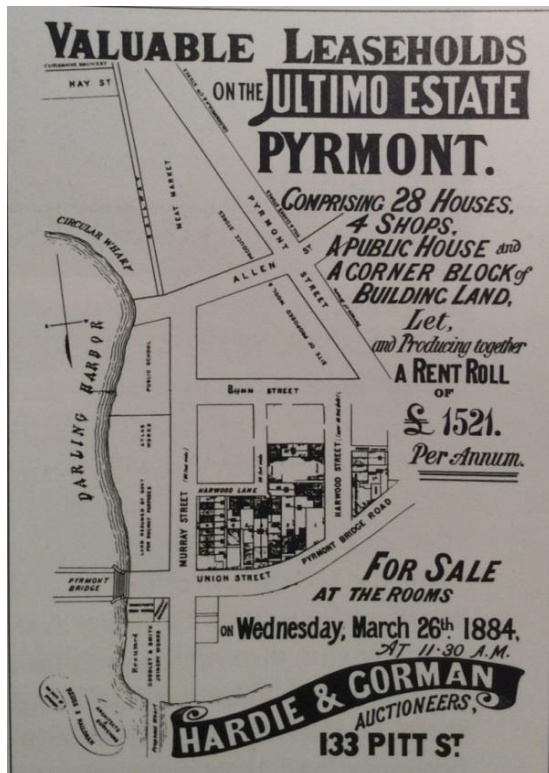


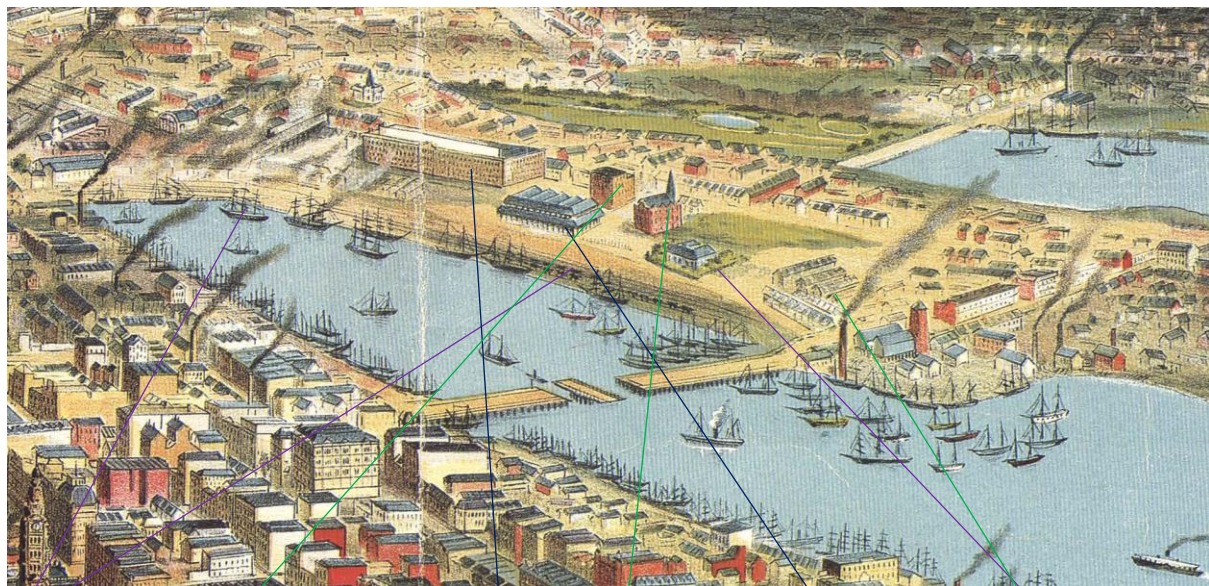
Figure 10 (left). The Atlas Engineering Works & Murray Street School are shown adjacent to land resumed by the railway. Atlas was a major supplier of rolling stock for the Darling Harbour railway. The school was built in 1877 and operated until 1914 when both it and the Altas works were resumed for the expansion of the Goods Yard and construction of the Double Tier Goods Shed (see Sections 3.D.v & vi and Figure 32), Fitzgerald & Golder 2007: 63.

Figure 11 (below). The Iron Wharf flanks west Darling Harbour north to the Meat Market. Behind the wharf, the railway lines have multiplied and the long curved wool shed and inward goods shed are shown in the southern section of the Goods Yard. On Murray Street, the school is next to the quarry. The two other buildings may be Bunn's Cottage and the Altas Engineering Works. But the northern section of this map is inaccurate for 1895. By 1891 the railway line extended past Pyrmont Bridge to the Pyrmont coal wharves and the first Outward Goods Shed (C & D) was built. NSW

Department of Lands 1895, *Map of the city of Sydney, NSW*, <http://nla.gov.au/nla.map-rm3443>



Figure 12. Annotated section of 1888 Birds Eye View of Sydney, City of Sydney Archives, Historical Atlas of Sydney, <http://www.photosau.com.au/CoSMaps/maps/pdf/C19/1888%20City%20of%20Sydney%20-%20Birdseye%20view.pdf>



Shipping moored at the Iron Wharf
Cottage Hill & Clark's store
Goldsbrough wool store
Murray Street School
Meat Market
Bunn's Housing
The railway line is not clearly indicated. By 1888 it was duplicated and extended north of the Pyrmont Bridge to the Pyrmont wharves.

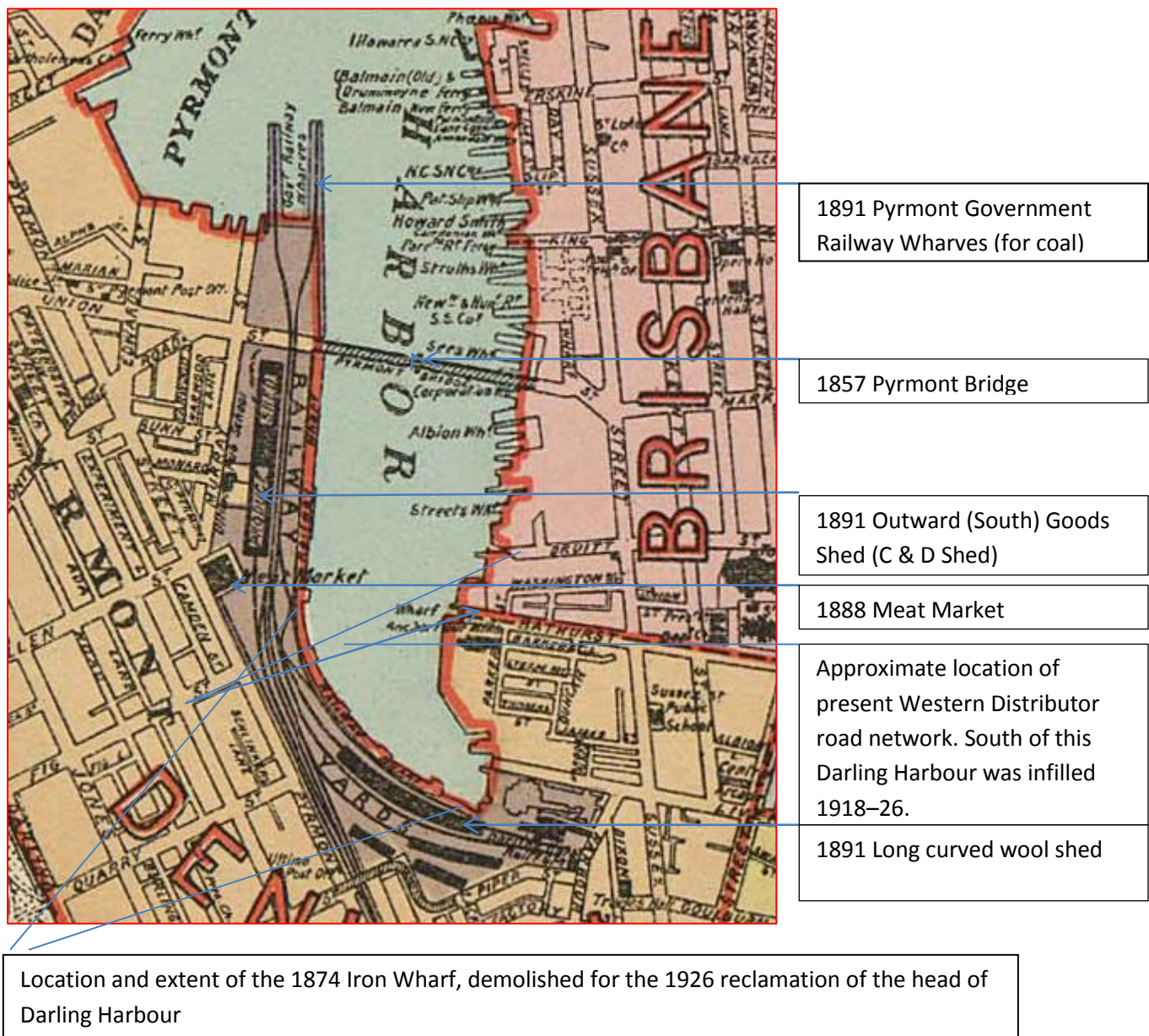
As railway development took off in Darling Harbour, the coal trade through the Goods Yard increased through the late nineteenth and early twentieth centuries. Coal was needed to power the increasing number of steam locomotives and to supply the coal-fired power stations at Pyrmont (1904) and Ultimo (1899) that were built close to the rail lines. Originally coal came by ship from the Hunter Valley, but by the early 1900s it was being brought in by rail.

The Darling Harbour Goods Yard was now a crucial intersection between rail and shipping. But Darling Harbour below Pyrmont Bridge was now too narrow and shallow for wharf development to service the new industries established around Ultimo. Fitzgerald and Golder comment that it was

essential to push the rail line up to and beyond the Pyrmont Bridge and to tie up the waterfronts of Ultimo and Pyrmont into a single economic unit^{xi}

To expand the Goods Yard north into Pyrmont and extend the goods rail network to the Pyrmont and Darling Island wharves, the NSW Government resumed land and bought Darling Island from the defunct Australian Steam Navigation Company in 1889. Twin Government coal wharves served by rail heads opened in 1891 at Pyrmont Bay. Coal was loaded initially with steam operated cranes and after 1907 by electric elevators. From 1900 the Darling Island wharves handled shipment of coal, coke, shale, timber, wheat, metal, firewood and general goods.

Figure 13. Annotated Atlas of the Suburbs of Sydney, City of Sydney, c1885–90. City of Sydney Historical Atlas, <http://www.photosau.com.au/CoSMaps/maps/pdf/AS/Sydney.pdf>



Expansion and development of the Darling Harbour Railway Goods Yard, 1874–91

Twenty years after the NSW Government's takeover of the Pyrmont Bridge and abolition of its tolls, the volume of horse-drawn traffic using the bridge to transport goods between the Darling Harbour wharves, the city, Pyrmont and Glebe had outstripped its capacity. In 1902 the government replaced it with a larger, stronger, more technologically advanced bridge designed by Percy Allen, the longstanding engineer of the NSW Public Works Department. This was an Allen truss 12-span steel, timber and stone bridge with a large electrically-operated swing-opening span to allow shipping to pass through Darling Harbour. Regarded by Allen as his greatest achievement, the Pyrmont Bridge was given early recognition by the Institute of Civil Engineers in London at its 1902 Conference. It is listed on the State Heritage Register under the *Heritage Act 1977* (NSW) in recognition of its significance to the heritage of NSW (see Section 3.A.i and Figures 57 and 58).



Figure 14. Pyrmont Bridge c1907 seen from its western approach. On the right is the 1902 Darling Harbour Railway Yard Goods Office (Forwarding Station) fronting the bridge. The 1891 and 1902 Outward Goods Sheds are in the background. The railway line continues under the bridge to Pyrmont and Darling Island. Powerhouse Museum, Tyrrell Collection 14-1, <http://from.ph/459785>

Following WWI, rapid expansion of the wheat industry's yields and area under crop required the construction in 1906 of a large grain terminal on the western shore of Darling Island to handle the increased shipment of wheat cargoes. Pyrmont became the Port of Sydney's centre for wheat shipment and flour mills relocated to the peninsula. On the eastern side of Darling Island, the Commonwealth Government constructed the Royal Australian Navy's Royal Edward Victualling Yard from 1906–12. These tall and uncharacteristically elegant and decorative buildings for Pyrmont faced onto Jones Bay: three vertical brick warehouses of five to eight storeys, designed by the NSW Government Architect Walter Liberty Vernon.^{xii}

In 1911–19 the NSW Government's Sydney Harbour Trust developed the new Jones Bay Wharf Island that divided Jones Bay. It was connected to the Darling Harbour goods line which was extended west from Darling Island in 1916 and cut through Pyrmont to Jones Bay. The duplicated line was the main goods access to Pyrmont until the 1922 construction of the Metropolitan Goods Lines network which serviced the northern end of Darling Harbour. From Jones Bay, the goods line continued over Wentworth Park, underground through Glebe to the Rozelle Goods Yard at the Glebe Island Wharves and on to Leichhardt, joining the main railway line at Dulwich Hill/Hurlstone Park. The scheme was derailed by labour and materials shortages during WWI. Finally, in the 1920s, the Darling Harbour Railway fulfilled the industrial boom first planned for it in the 1850s.

In 1928 wheat shipment moved from Darling Harbour to the Wheat Terminal at Glebe Island, freeing Darling Island wharves up for general cargo handling. A rapid uptake of electrical-powered materials handling technology at Darling Harbour Goods Yard saw cranes,

conveyors and elevators in general use by the 1920s. But horses were also still used at Darling Harbour.

From the 1920s the Darling Harbour Goods Yard developed into the major NSW hub for general goods traffic. The City Markets at Haymarket had largely been constructed in the decade before WW1 and their produce was forwarded by agents to country rail destinations through the three outwards goods sheds that were built by 1923. The three sheds occupied the entire mid-section of the Goods Yards that was bounded by Union and Murray streets and the waterfront. The third and largest outward goods shed (started in 1914 but not completed until 1923, due to the intervention of WWI) was a unique double-decker design built between, and parallel to, the Outwards (South) Goods Shed (C & D Shed) and Murray Street. The Double Tier Outwards Goods Shed was considered the most up to date receiving shed in the southern hemisphere. Served by two rail lines (one on each level) it could hold 90 four-wheeled wagons and was originally equipped with 48, three-ton cranes. The names of all the country towns and stations hung over the section of the four sidings (see Section 3.D.iii and Figures 42–5). From 1878 until the 1950s the Darling Harbour goods station was the major general cargo station on the NSW rail network, serving every town and hamlet on that network.



Figure 15. Construction of the Double Tier Goods Shed c1916–22. The Outward Goods Shed C & D (1891), Outward Goods Shed A & B (1902) and the covered platform are in the background. National Library of Australia, PIC P860/326, <http://nla.gov.au/nla.obj-142764019>

From 1910, Darling Harbour south of Pyrmont Bridge was becoming too shallow for large vessels and plans were made to reclaim the mud flats at the head of Cockle Bay. This was achieved from 1918 with the spoil obtained from the construction of the City Circle underground railway. In the process the Iron Wharf was demolished in 1926 and part-dumped in the reclaimed harbour. The intention was to link Bathurst Street by road with the western edge of Darling Harbour. But this roadway was never built as the Department of Railways used the reclaimed land to extend the Darling Harbour Goods Yard to 56 acres (22 hectares).

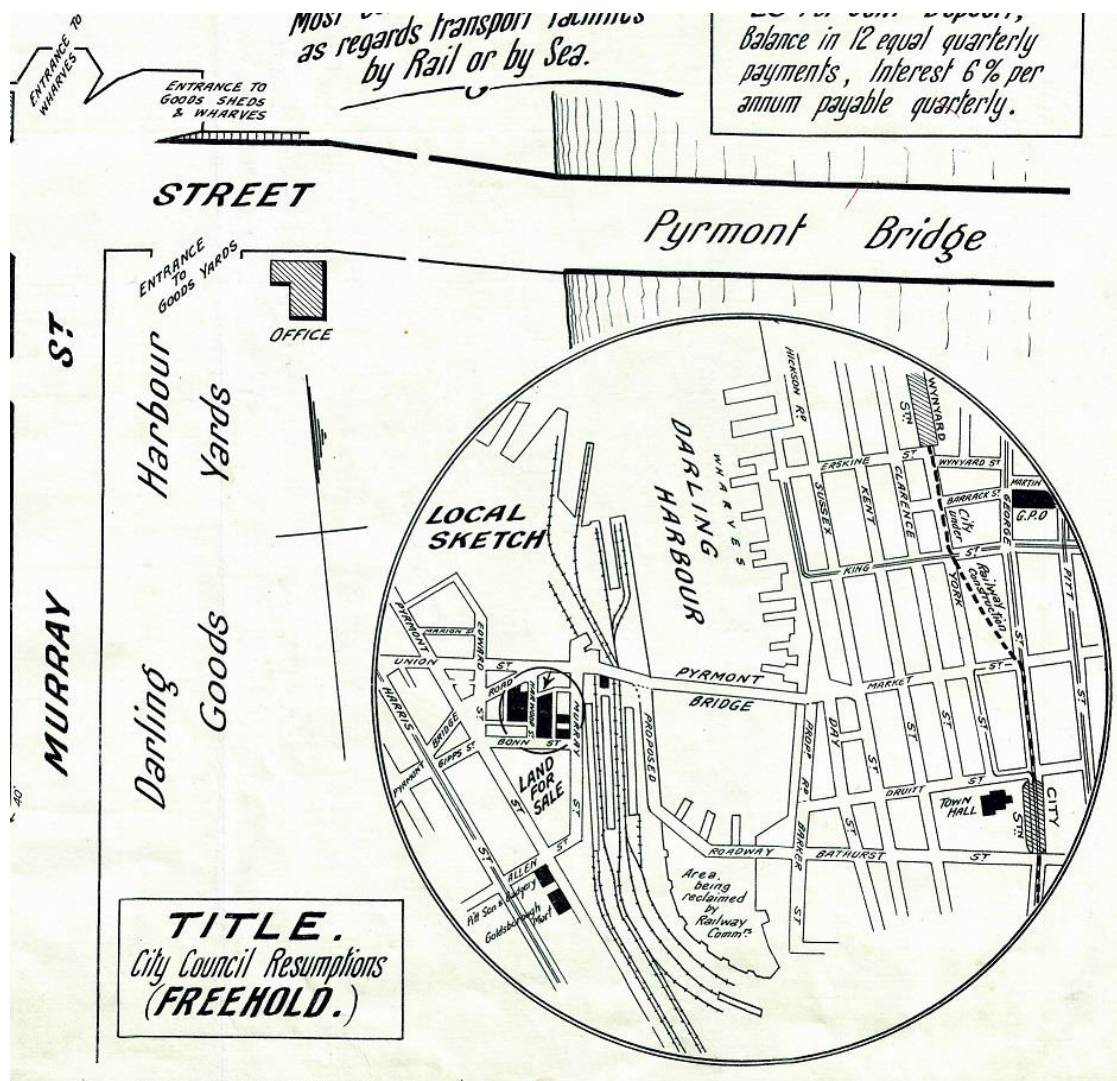


Figure 16. This 1922 land sale map for Pyrmont shows the three goods sheds at the Darling Harbour Goods Yard and their associated rail sidings; the Goods Office/Forwarding Station on Pyrmont Bridge/Union Street; rail lines extended to Pyrmont and Darling Island; and land at the head of Darling Harbour being reclaimed with three proposed wharves and the proposed road link from Bathurst Street to west Darling Harbour. Section of City of Sydney sale of freehold sites at Pyrmont, City of Sydney Historical Atlas, http://www.photosau.com.au/CoSMaps/maps/pdf/ASL/S7C-45_8.pdf

In 1925–8 the Sydney Harbour Trust built wharves 37 and 38 at the western side of the reclaimed head of Cockle Bay. These were small scale finger wharves for the smaller coastal shipping vessels that could pass through Pyrmont Bridge (see Section 3.D.viii and Figures 58 and 59).

In WWII, the Darling Harbour wharves were converted to handle troop departures and arrivals as the existing rail lines enabled troop transport direct to the ships. Darling Island became a principal troop departure point and 18,000 Italian POW's were also landed there.



Aerial views of Darling Harbour taken 1937 (above), 1949 (right) and c1940s (below) consistently show the three goods sheds, the Goods Office/Forwarding Station on Union Street, and wharves 37 and 38 with wharf sheds. A jetty/wharf is shown between wharf 38 and the western foreshore.



Previous page, clockwise from the top:

Figure 17. 1937 Aerial View of Darling Harbour and Pyrmont Bridge looking east. Part of a sequence of aerial views of Sydney published by the Sydney Morning Herald. City of Sydney Archives, NSCA CRS 46/2/48– 005/005998.

Figure 18. 1949. City of Sydney Archives, SRC 2038–028/028456.

Figure 19. View from DWA Wool Stores Darling Harbour c1940s. Frank Hurley. National Library of Australia, <http://nla.gov.au/nla.obj-159089945>

Industry and economic restructure after WWII brought major change to shipping requirements at the Pyrmont and Darling Island wharves. In 1950, coal shipment moved from the twin Pyrmont wharves to the White Bay and Balmain bulk handling facilities. Grain handling had moved to Glebe Island in the late 1920s and the defunct grain storage shed at Darling Island was rebuilt in 1951 as a large overseas passenger terminal. All the remaining Sydney Harbour Trust built wharf facilities at west Darling Island were replaced in the 1968–70, which was to be the last upgrade of Darling Harbour port facilities.

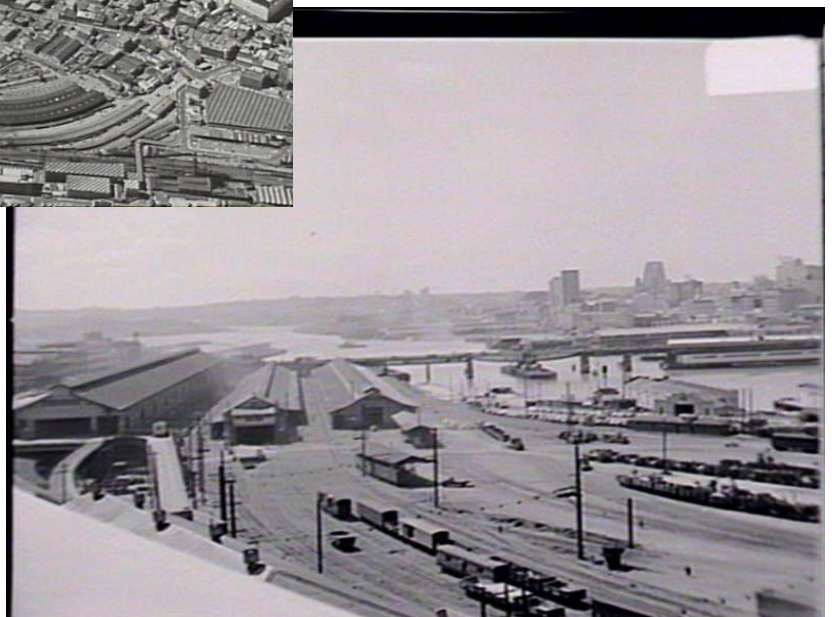
The Darling Harbour Railway and Goods Yard remained a thriving facility through the 1960s postwar economic boom that was driven by overseas demand for Australian wool and wheat. In 1962 it handled 3,733,731 tons of goods: roughly 68% being inward traffic and 31% outward traffic. It covered 56 acres (22 hectares) with nearly 30 miles (50kms) of track that serviced the 18,000 trains which arrived and departed annually, averaging 60 every working day). Around 1100 men were employed on shift work around the clock.^{xiii}



Taken in the early 1960s these images show the same layout of the mid-section of the Goods Yard as 25 years previously, with no additions. Pictured are the three goods sheds; two covered platforms; associated rail approaches and sidings, wharves 37 and 38 and the wharf/jetty.

Figure 20, above: 1963 Aerial. City of Sydney Archives, SRC 1829–028/028247.

Figure 21, right: 1960 View from top of the Government Printing Office. Mitchell Library, d2_15804.



ⁱ General references for this section are: PWD 1984: 65–109. PWD nd: 7, 13–14, 18. Ashton 1990: 15–16, 18–19, 23, 33–4, 36–8. Johnson 2008: 7, 9, 10, 11, 15, 54, 58, 61, 63, 65, 74, 113. SHR 01062. National Trust 1980: Darling Harbour Wharves 37 & 38. National Trust 1984: Darling Harbour Railway Goods Yard. SMH 26/1/1987: 3. Fitzgerald & Golder 2007: 23–4, 49–51, 53, 56–7, 59, 61–2, 68–71, 76, 88–9. Wilson 1985 Pymont Bridge: 5–6. Godden 1989: 6–9. Thorp 1993: 4–8, 11, 12. Gooden MackayHoward Tanner 1993: 8–15.

ⁱⁱ PWD 1984: 76, 104, 108, 110.

ⁱⁱⁱ PWD nd: 110.

^{iv} The Ultimo Road Railway Underbridge is listed on the State Heritage Register SHR 01062 in recognition of its significance to the heritage of NSW

^v Ashton 1990: 21.

^{vi} PWD 1984: 88, 96.

^{vii} PWD 1984: 86, 124.

^{viii} Fitzgerald & Golder 2007: 69.

^{ix} PWD nd: 36.

^x PWD 1984: 90.

^{xi} Fitzgerald & Golder 2007: 71.

^{xii} The Royal Edward Victualing Yard is listed on the State Heritage Register SHR 01855 in recognition of its significance to the heritage of NSW

^{xiii} *The Railwayman*, March–April, 1963.

C) 1960s to 1988: decline, closure and redevelopmentⁱ

The collapse of the post war economic boom by the early 1970s, allied to industry restructure, signalled the end for both the Darling Harbour Railway and Goods Yard and the Pyrmont wharves. Demise was rapid and was driven by several factors, chief of which were: the post war growth of road over rail transport and the consequent road congestion at Pyrmont and Ultimo; relocation in the late 1960s of the wool stores and wool brokers to the 13-hectare bulk handling facility at Yennora in western Sydney; replacement of the interstate and intrastate coastal shipping trade, which had concentrated in Darling Harbour; by road transport; the advent of container cargo shipping, and the beginning of Port Botany's development as Sydney's new container cargo terminal

Industries and transport systems restructured and departed the Darling Harbour area. The Ultimo Power Station had closed in 1963. The Sydney Hydraulic Power Station in Pier Street followed in 1975, and the huge City Markets, which had occupied a large area of Haymarket, moved west to Flemington. Sandstone quarrying had ceased in Pyrmont and Ultimo by 1920, having cut down much of the peninsula. At the wharves, the number of waterfront workers had reduced with automation, but passenger and port traffic plummeted too and the Pyrmont wharves started closing down in the 1980s, joined by the Pyrmont Power Station and the Darling Harbour Railway and Goods Yard. The bastion of Pyrmont's heavy industry, the Colonial Sugar Refinery, closed in 1993. By this time it was taking delivery of sugar by road, instead of rail, with semi-trailers clogging Pyrmont's narrow streets. Pyrmont and Ultimo were both overtaken with giant freeway development, which further reduced amenity and intensified the rundown character of their residential area.

The 1971 City of Sydney Strategic Plan had considered the redevelopment of Darling Harbour. Council considered that the Railway Goods Yard was becoming redundant and was 'a general environmental blight' on the landscapeⁱⁱ. Work began in 1976–77 on the Western Distributor, the concrete flyovers of which bisected and towered over a now largely defunct Darling Harbour. The new road network provided rapid road access to the city and the Harbour Bridge that by-passed the Pyrmont Bridge. This was closed in 1981, but saved from demolition by public protest, and retained for pedestrian, cycle and sometime Monorail access to the Darling Harbour redevelopment.

The Darling Harbour Goods Yard closed down from 1982 and the last goods train ran in 1984. By then the huge yard area was a dilapidated eyesore of decaying sheds and railway infrastructure that marked the western fringe of the city. In 1983 the NSW Public Works Department co-ordinated feasibility studies for Darling Harbour, an Exhibition Centre and a Convention Centre. A masterplan for the proposed development was exhibited at Parliament House.

In 1984 the NSW Government announced that Darling Harbour would be redeveloped under a proposal to 'return it to the people of Sydney after 150 years of industrial use'. This was to be achieved in under four years, to coincide with the state's 1988 Bicentennial celebrations. To achieve this highly ambitious urban renewal outcome within a very tight timeframe, the Darling Harbour Authority was created in May 1984, with sweeping powers to fast track redevelopment. A Conservation Study by the Public Works Department had identified items of heritage significance within the proposed redevelopment. But only the Pyrmont Bridge and the Hydraulic Pumping Station were retained in the redevelopment. The remaining 19th century industrial heritage at Darling Harbour and Pyrmont was swept away as the Darling Harbour Act turned off the approval provisions of the NSW *Environmental Planning and Assessment Act* (1979) and the *Heritage Act* (1977). When the remains of the 1874 Iron Wharf were discovered in 1985 in excavations for the Exhibition Centre, the National Trust did, however, win the requirement for archaeologists to be involved in the site excavations.

Faced with the Goods Yard's closure and imminent redevelopment, two key reports were prepared to identify and assess its heritage significance, by the National Trust (NSW) and the NSW Government Architects Office (the 'Anderson Report'). The National Trust assessed the Darling Harbour Railway Goods Yard Industrial Archaeology Conservation Area and included this listing on the National Trust Register on 28 May 1984. A number of extant Goods Yard structures were identified in the conservation area. (The Trust had already listed several individual items at Darling Harbour/Pyrmont including the Pyrmont Bridge, wharves 37 and 38, the Royal Edward Victualling Yard buildings at Darling Island and Pyrmont wharves 19, 20, 21, 22, and 23).

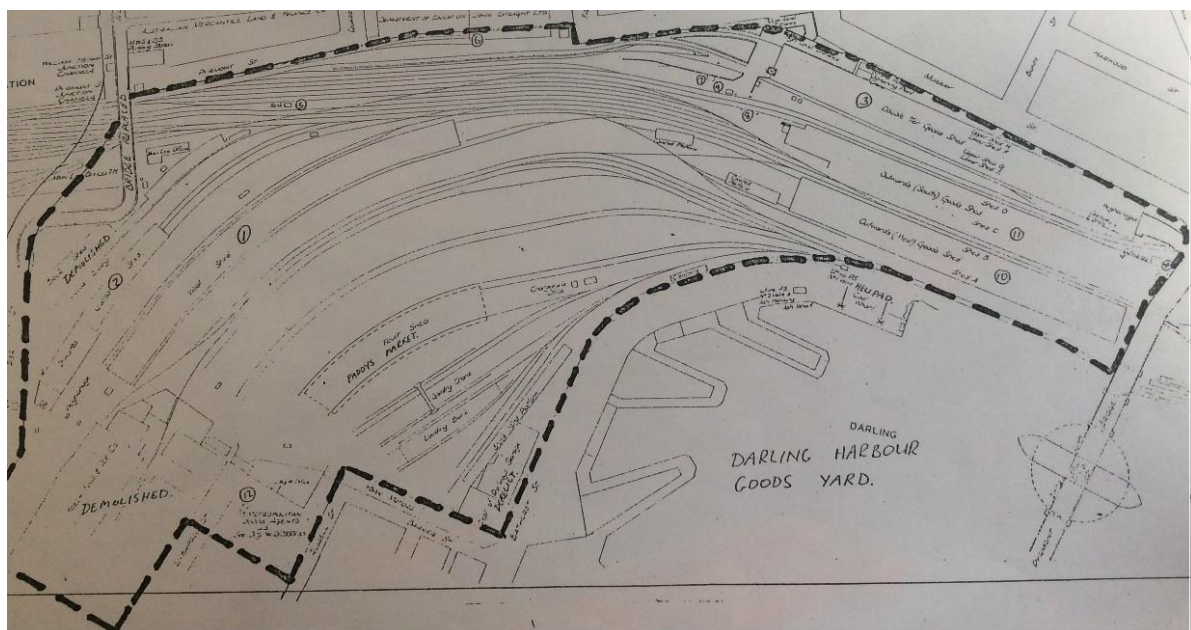
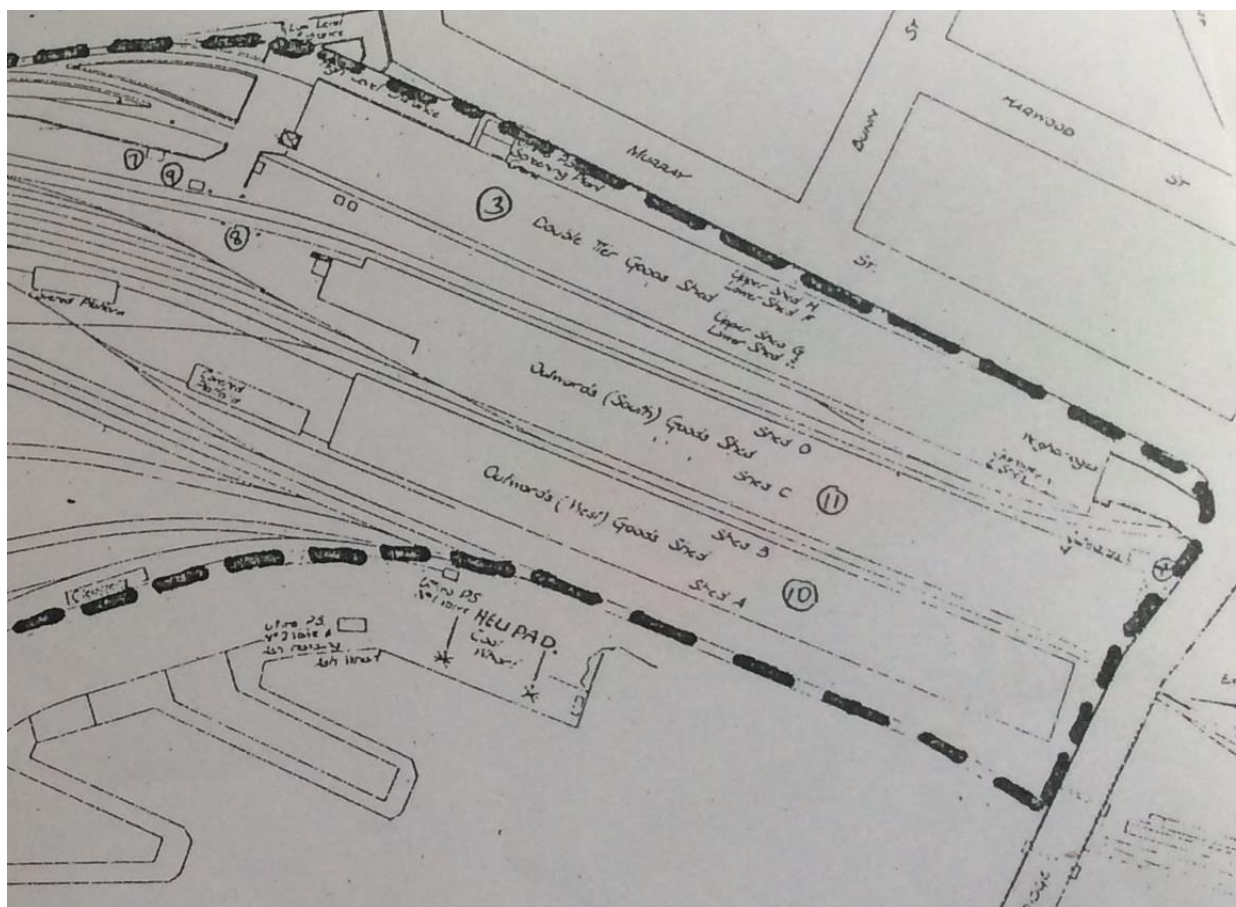


Figure 22 (above) and Figure 23 (following page). National Trust (NSW), Report on heritage conservation matters relating to the Darling Harbour Basin, Sydney, 1984, pp. 24–5, Appendix A, Darling Harbour Railway Goods Yard Industrial Archaeology Conservation Area & Map.

The trust identified several items in the mid-section of the Darling Harbour Railway Goods Yard, as shown in the section map below:

3. Double Tier Outwards Goods Shed (E, F, G & H Shed)
4. Amenities Block (Goods Office/Forwarding Station)
7. Murray Street signal box
8. Double Track End Crossing
9. Signal Post
10. Outwards (West) Goods Shed (A & B Shed)
11. Outwards (South) Goods Shed (C & D Shed)

The section map also shows, next to Wharf 38, an old Coal Wharf then being used as a Helipad. This structure is likely to be on the site of, and may contain elements of, the unidentified structure which may be the 1895 wharf facility for the transport of frozen meat from the Meat Market to North Sydney (see Section 3.B.iv and Figures)



The NSW Government Architect's Office Report identified 10 extant items and one potential archaeological site in Darling Harbour between Pyrmont Bridge and the Western Distributor as shown on the map below:

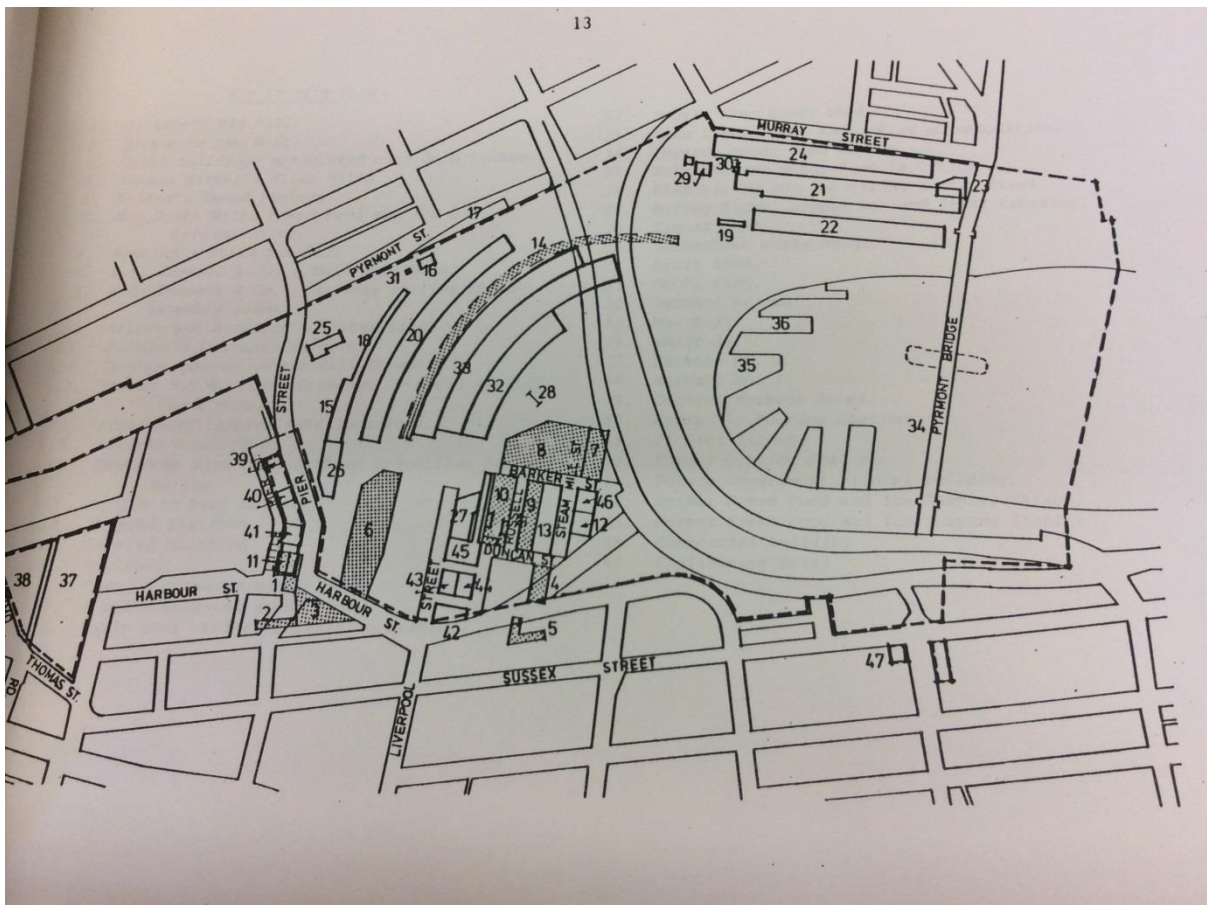


Figure 24. Numbered items:

- 14: Iron Wharf (approximate location, potential archaeological site)
- 19. Covered Platform
- 21. Outwards (South) Goods Shed C & D
- 22. Outwards (West) Goods Shed A & B
- 23. Goods Shed Office (Forwarding Station)
- 24: Double Tier Goods Shed E, F, G & H
- 29. Murray Street Signal Box and Level Crossing
- 30. Signal Post
- 34. Pyrmont Bridge
- 35. Wharf 37
- 36. Wharf 38

NSW Public Works Department, *Darling Harbour Bi-centennial Development Project*, report (undated, unpublished) pp. 13–14

At the same time as the Darling Harbour Authority was instituted in 1984 to redevelop the Darling Harbour Goods Yard and wharves precinct, the City West Development Corporation was formed to oversee redevelopment of the redundant government-owned sites around the wharves of Pyrmont.



1984 images. The Goods Yard is closed and being cleared for redevelopment. Layout and contents are unchanged, except for a small pre-fabricated shed on the foreshore near Wharf 38, and demolition of the wharf sheds 37 and 38. The Western Distributor is under construction, crossing over the southern section of the Goods Yard.



Clockwise from top:

Figure 25. 1984. City of Sydney Archives, SRC1854-028/028272.

Figure 26. c1984. Mitchell Library, d3_05373.

Figure 27. 1984. Mitchell Library, d4_36091.

Figure 28. 1984. Geoff Allcock, <http://www.nswrail.net/locations/photo.php?name=NSW:Darling+Harbour:12>



In 1985 the first phase of construction of the Darling Harbour redevelopment began with four major concept designs, for the harbourside park, the waterfront promenade, the Exhibition Centre and the Conference Centre. Construction on the Harbourside Festival Marketplace began in 1986 as one of the first projects to get underway. Based on a design from Baltimore, USA it was completed in time for the Darling Harbour redevelopment opening at the Bicentennial celebrations, 26 January 1988.

A decade later the goods rail line north of Hay Street was utilised for the light railway that now travels the original rail corridor through Pyrmont. More recently the Ultimo section of the rail corridor has been converted into a public access corridor from Railway Square to Darling Harbour.

3) Summary and Approximate Location of Physical Elements—Darling Harbour Goods Railway and Goods Yard and adjacent sites.ⁱⁱⁱ

A) SURVIVING ITEM IN THE SUBJECT AREA

i) 1902 Pyrmont Bridge

See Figures 14, 57 and 58. The foundation stone of the second (current) bridge was laid on 6 September 1899. The new bridge was constructed immediately south of the 1857 bridge which was retained in use until the opening of the 1902 bridge, then demolished. Some wharfage and sheds from the 1857 bridge may have been retained north of the 1902 bridge. The second (and current) bridge opened on 28 June 1902. Designed by Percy Allan, Engineer, NSW Public Works Department, it is a 12-span steel, timber and stone bridge with a large electrically-operated swing-opening span to allow shipping to pass. The bridge's western approach has retained its elaborate sandstone balustrading and decorative rounded pylons. In 1947 concrete replaced the timber block decking on the side spans, and later also on the swing span. Electric power to the Sydney tram system operated the swing span until the trams ceased running. In 1961 a switch room was built on the western abutment of the Pyrmont Bridge for the conversion of electric power for the swing span.

Following the completion of the Western Distributor road network, Pyrmont Bridge was closed to vehicles and pedestrians in 1981. The eastern abutment of the bridge was demolished for construction of the north-western freeway. Scheduled for demolition in the Darling Harbour redevelopment, Pyrmont Bridge was reprieved. It reopened in 1988 for pedestrian and Monorail access from the CBD to the western side of Darling Harbour, especially to the Harbourside shopping complex. The Monorail was demolished in 2013. Pyrmont Bridge is listed on the State Heritage Register (SHR 01618) under the *Heritage Act 1977* (NSW) in recognition of its significance to the heritage of NSW (see Figure 58).

Pyrmont Bridge is one of only two of the surviving items of the former Darling Harbour Railway and Goods Yard or in the adjacent areas of Ultimo and Pyrmont that was retained in the Darling Harbour redevelopment. The other item was the Hydraulic Power Station at Pier Street. All items summarised hereafter were demolished in 1984–5 by the Darling Harbour Authority, unless otherwise stated.

B) DEMOLISHED ITEMS IN THE SUBJECT AREA

i) Darling Harbour Railway Goods Yard Shed—Outwards (West) Goods Shed (A & B Shed)

See Figures 15, 16 and 40–6. Constructed 1902, the second of the three outwards goods sheds. Built between the eastern wall of the C & D Shed and the waterfront. Shorter in length than both the C & D Shed and the Double Tier Shed. Contained a central roadway with a platform and siding on either side. 'Barmer & Son Globe Foundry Sydney' cast iron circular column and iron walls. Iron columns supported the steel beams and trusses of the corrugated fibro roof. A clock was set in the building's northern gable. Equipped with hydraulic cranes and loading facilities that were later removed. Located on the site of the present Harbourside shopping complex.

ii) Darling Harbour Railway Goods Yard—Goods Shed Offices/Forwarding Station (Amenities Block)

See Figures 14, 45, and 47–52. Constructed 1902 on Union Street, close to the corner of Murray Street, at the north-western corner of the 1891 Outwards (South) Goods Shed (C&D). Two-storey brick and sandstone building with high ceilings of pressed metal and many original ablutions fittings on the first floor, following conversion to changing and mess rooms.

Office space on ground floor. Timber-framed iron-covered roof, hipped with a bonnet facing Union Street. Windows facing Pyrmont had semicircular arches with a stone keystone and decorative stone sills. Located in the north-western corner of the present Harbourside shopping complex.

iii) Newstead House/Bunn's Cottage

See Figure 29. A two-storey house of stone or brick facing over Darling Harbour. Built c1832 on a 1.5 acre land parcel that extended from (later) Murray Street in the vicinity of (later) Bunn Street to the then shoreline. Maps of 1836 and 1854 (Figures 6 and 7) show the property to be opposite the Market Street Wharf, extending from Murray Street to the shoreline with the dwelling situated in the middle of the landholding. The house survived until at least 1889. It would have been resumed and demolished by the Railways Department sometime between 1891 when the Darling Harbour Railway Goods Yard was established and the first Outward Goods Shed built and certainly by 1914 when the Goods Yard was further extended for the Double Tier Goods Shed. The dwelling is likely to have been located on the present day hotel complex on Murray Street or on Darling Drive, east of the Bunn/Murray streets junction. The Bunn property extended eastwards to the original shoreline, across the present day Harbourside shopping complex. The current promenade west of the Harbourside shopping complex is likely to be on reclaimed land.

iv) Unidentified structure on the waterfront due east of Outwards (West) Goods Shed (A & B Shed).

See Figures 53–6. Appears in a plan c1920s and photographs dated 1919 and 1923. Does not appear to be present in a photograph of the later 1920s. Possibly connected with the 1895 construction for transferring frozen meat across the harbour from the Meat Market to the NSW Pastoralists Association works at North Sydney. May have remained in place following the closure of the Meat Market in 1914 until the reclamation of Darling Harbour was completed in 1926. Its site may have been reused for the coal wharf that by 1984 appears to have also supported a helipad^{iv}

C) SURVIVING ITEM OUTSIDE THE SUBJECT AREA

i) Woodward Water Feature

See Figures 61 and 62. Constructed 1988 for the Darling Harbour redevelopment. Designed by Robert Woodward, architect and international fountain designer and built by Melocco Pty Ltd, stone masons for the Darling Harbour Authority. An outstanding work of modern movement design in water and stone located in an uninterrupted plane on the waterfront of the western Darling Harbour promenade. Bounded by the Convention Centre to the west and the Western Distributor to the south. It has received several Australian design awards and is listed on the State Heritage Register (SHR 01933) under the *Heritage Act 1977* (NSW) in recognition of its significance to the heritage of NSW.

D) DEMOLISHED ITEMS OUTSIDE THE SUBJECT AREA

a) The following items are located outside the immediate northern, eastern and southern boundaries of the subject area.

i) 1857 Pyrmont Bridge

See Figures 8 and 30. The first Pyrmont Bridge, constructed by the Pyrmont Bridge Company, and located slightly north of the current (1902) bridge, was a timber toll bridge with a manually-operated central opening span. It was retained in use until completion of the

1902 bridge, then demolished. Some wharfage and sheds from the 1857 bridge may have been retained north of the 1902 bridge.

ii) Darling Harbour Railway Goods Yard Shed—Outwards (South) Goods Shed (C & D Shed)

See Figures 15, 16 and 39–45. Constructed 1891 at the northern end of the Darling Harbour Goods Yard parallel to the waterfront, immediately south of the Pyrmont Bridge. Iron and steel construction with a wooden truss roof with lantern. Central roadway with two platforms which each contained a hydraulic crane and two sidings. Held up to 97 goods wagons. Located in the vicinity of today's Darling Drive.

iii) Darling Harbour Railway Goods Yard Shed—Double Tier Outwards Good Shed (E, F, G & H Shed)

See Figures 15, 16 and 42–5. Begun in 1914 but not completed until 1923. Constructed on the north-western edge of the Goods Yard, parallel to Murray Street. Rock excavation of site needed for its construction. Equipped with 48 electric cranes and weighbridges on both levels. Located on the site of the present day major hotel buildings on Murray Street, between Union and Allen streets.

iv) Two covered platforms located on rail tracks south of the Outwards (West) Goods Shed A and B.^v

See Figures 33 and 34. Both structures were extant in 1984. The timber and galvanised iron covered platform immediately close to the southern face of the 1902 Outwards Goods Shed may date from the first period of the Goods Yard development. Located in the vicinity of the Convention Centre and associated promenade. The second covered platform was located further south of the 1902 goods shed, in the vicinity of Darling Drive and the Western Distributor flyovers^{vi}

v) Murray Street School and vi) Atlas Locomotive/Engineering Works

See Figures 10, 11, 12 and 32. School built 1877 on east side of Murray Street, south of Union Street, facing eastwards over Darling Harbour towards Sydney. Works established 1881 adjacent to the school. Both were resumed and demolished by the Railways Department in 1914, for the expansion of the Goods Yard and the construction of the Double Tier Outward Goods Shed. Located on the site of the present day major hotel buildings on Murray Street, south of Union Street.
site of the present day major hotel buildings on Murray Street, south of Union Street.

vii) Darling Harbour Meat Market

See Figures 10–13, 35 and 36. Constructed in 1883–8, south of the junction of Pyrmont and Murray streets, opposite the Goldsborough wool store in Pyrmont Street. The earliest known building of the Darling Harbour Railway Goods Yard. A market building with adjacent complexes for chilling, freezing and storing meat. Served by a dedicated rail siding (see C.v. below). Demolished for the 1914 expansion of the Goods Yard and construction of the Double Tier Outwards Goods Shed. Located under the western approaches of the Western Distributor.

viii) Darling Harbour Wharves 37 & 38

See Figures 59 and 60. Built by the Sydney Harbour Trust on land reclaimed 1918–26. Small scale wharves for small coastal shipping. Timber jetties built 1925. Timber and fibro sheds with asbestos roofing added 1928. No 38 wharf shed widened 1938. In 1984 these two wharves were the only remaining complex of small scale finger wharves with substantial timber features on Sydney Harbour. Located at the present day Darling Harbour promenade at the head of Cockle Bay.

b) The following items are mainly structures associated with the Darling Harbour Railway Goods Yard that are located well outside the subject area:

ix) Iron Wharf

See Figures 9, 11, 12, 13 and 37. Built 1874, extending around the southern and western shores of reclaimed Cockle Bay, adjacent to the Darling Harbour Railway. Constructed of imported lattice girders with hardwood decking and concrete foundations. Demolished 1926 for the further reclamation of Cockle Bay as far as Bathurst Street. Located in the vicinity of present day Tumbalong Park and Exhibition Centre.

x) Murray Street Signal Box & Signal Post

See Figures 22–4 and 44. Constructed 1922 in the Goods Yard on a rail siding south of the Double Tier Outwards Good Shed (E, F,G & H Shed) and the Outwards (South) Goods Shed (C & D Shed). Signal post controlled up and down traffic and very rare. Located in the vicinity of Darling Drive and the Convention Centre.

xi) Early Rail Siding and Escarpment

See Figures 22–4. Sandstone faced escarpment. Originally led to the 1887 Meat Market on the corner of Pyrmont and Murray streets. Located on Pyrmont Street, south of Fig Street

xii) Wool Shed

See Figures 11, 13, 16, 20, 22, 24, 37 and 38. First and longest of the Goods Yards sheds. Constructed in 1891 in a long curve mirroring the curve of the Iron Wharf on the south-western shore of Cockle Bay. Foreshore later reclaimed 1918–26 as far as Bathurst Street. Located in the vicinity of the present day Tumbalong Park and Exhibition Centre.

xiii) Inwards Delivery Shed

See Figures 22, 24 and 37. Constructed in the Goods Yard behind (south of) the Wool Store. Date unknown but before 1912. Located on the site of the present day Exhibition Centre.

xiv) Water Tank

See Figures 22–4. Constructed on rail sidings in the south-west of the Goods Yard, date unknown. Located in the vicinity of the Exhibition Centre, Darling Drive, light rail corridor south of Quarry Street.

xv) Stationmaster's Office

See Figure 22. Constructed in the 1920s to the rear of Wharf 36. Located in the vicinity of today's Western Distributor flyover near Darling Walk.

xvi) TS Mort's Fresh Food and Ice Company

See Figure 24. Established 1875 on reclaimed land beyond Pier Street in premises that were formerly PN Russell's Sydney Ice Company (1860). Demolished 1952. Located on the present day site of the Chinese Garden at Darling Harbour.

xvii) Ultimo House

See Figures 3, 6 and 7. Incorporated into the Sydney Technical College site when it was established in 1888 on the corner of Mary Ann and Harris Streets, Ultimo. Ultimo House was demolished in 1932 as part of the redevelopment of Sydney Technical College. Sydney Technical College buildings were repurposed as the Museum of Applied Arts and Sciences. Ultimo Cottage, located on Bulwara Road, between Macarthur and Mary Ann streets, was demolished for a bedding factory. The location of the lodge, second cottage and stables of 1826 is unknown. All were demolished.

4. IMAGES

Figure 29: **Bunn's Cottage/Newstead House**, built c1832, demolished between 1891 and 1914, pictured in 1889. Fitzgerald & Golder 2007: 24



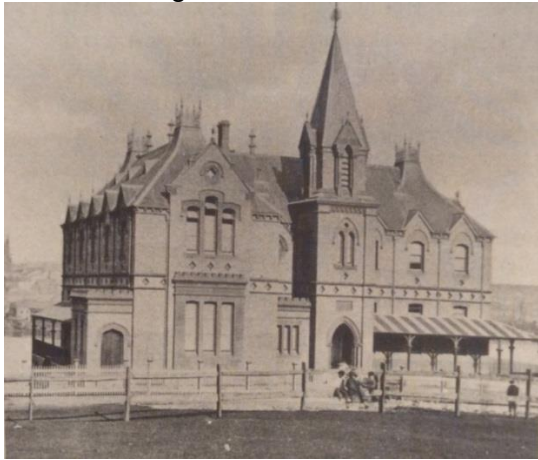
Figure 30. First **Pymont Bridge 1857–1902**. Looking from the north-western end across Darling Harbour to the city. Mitchell Library, SPF/1594, a1528571. See also Figure



Figure 31. **Iron Wharf**, Darling Harbour, 1874—1926. Mitchell Library SPF/844, a089844
See also map at Figure



Figure 32. **Murray Street School**, 1877–1914. Facing east towards Sydney over Darling Harbour, it was an imposing two-storey Gothic-designed brick or stone building for 650 children. Fitzgerald & Golder 2007: 62



Figures 33 & 4. 1979 **Covered Platform**, Darling Harbour Railway Goods Yard, c1880–1984. Mitchell Library, d4_19644, d4_22007.



Figures 35 & 36. **Meat Market** 1888–1914, located at the junction of Pyrmont and Murray streets. Goldsbrough wool store is on the right. Left: PWD Report 1984: 79. Right: Powerhouse Museum Tyrell Collection 54/28, <http://from.ph/31980>



Darling Harbour Railway Goods Yard—Good Sheds

A) Historical images

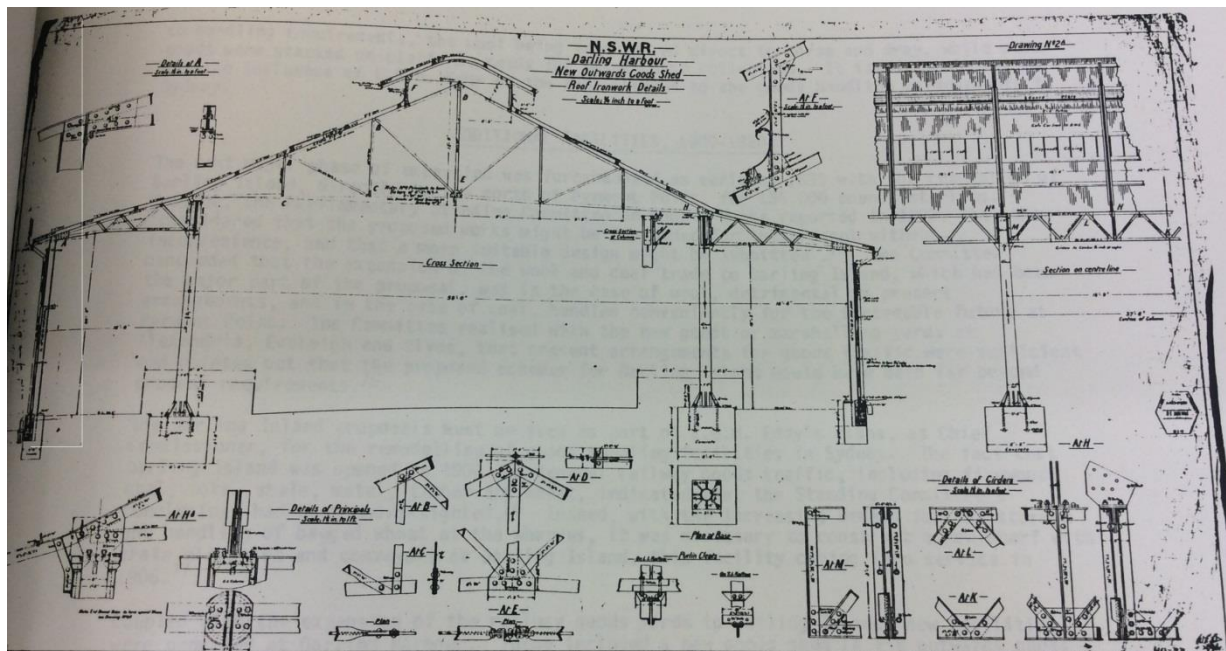
Figures 37 & 38. **Wool Shed** 1891–1984. 1923 Long curved Wool Shed at the soon to be reclaimed headwaters of Darling Harbour. Inwards Goods Shed is behind it and the Iron Wharf in front. Mitchell Library, AE Foster, a6783017. 1891 Interior. PWD 1984: 92.



Figure 39. **Outwards (South) Goods Shed (C & D Shed)** 1891–1984. Interior, showing original roof, c1900.



Figures 40 & 41. **Outwards (West) Goods Shed (A & B Shed) 1902–84.** Plan and Interior, PWD 1984: 99, 118.



Darling Harbour Railway Goods Yard—Good Sheds
B) 1982–84 images

See also Figure

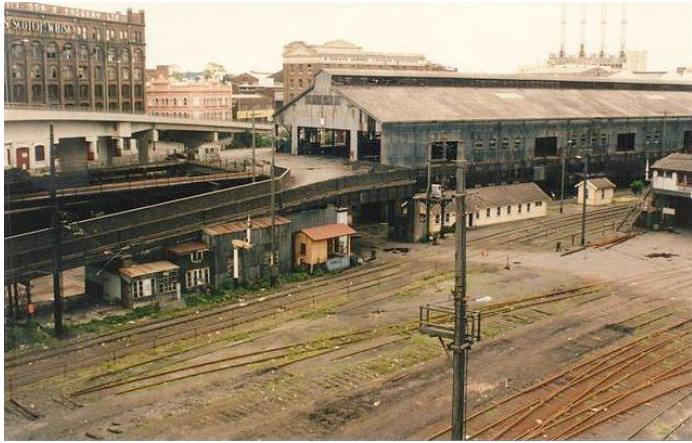
Figure 42. 1984. Goods Yard mid-section, looking north. Left to right: **Double Tier Goods Shed**; **Outward (South) Goods Shed (C & D)**; **Outwards (West) Goods Shed (A & B)**; **Covered Platform**, **Pymont Bridge** in the open position. G. Allcock

<http://www.nswrail.net/locations/photo.php?name=NSW:Darling+Harbour:8>



Figure 43. 1982. The **three Goods Sheds** with Pymont Power Station in the background. Mitchell Library, d4_19367.





Clockwise from top:

Figure 44. 1984. **Double Tier Goods Shed** on Murray Street. Demolished for the Novotel Hotel. The orange building in the centre is the **Murray Street signal box**. G. Allcock, <http://www.nswrail.net/locations/photo.php?name=NSW:Darling%20Harbour:7?iframe=true>

Figure 45. 1982. Rear of the **Goods Office/Forwarding Station** with the Double Tier Goods Shed on the left and the 1891 Outwards Goods Shed on the right. Mitchell Library, d4_19453.

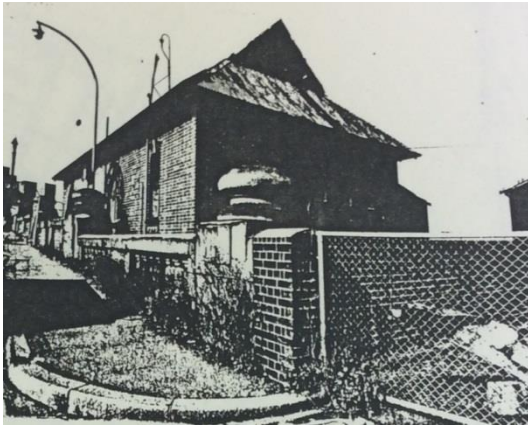
Figure 46. 1984. 1902 **Outwards (West) Goods Shed (A & B Shed)** and the **Covered Platform**. G. Allcock, <http://www.nswrail.net/locations/photo.php?name=NSW:Darling+Harbour:2>



Darling Harbour Railway Goods Yard— Goods Office/Forwarding Station (Amenities Block)

1982 & 1984 images

Figures 47–52. See also Figure 14.



Clockwise from top: City of Sydney Archives—47) NSCA CRS 700/373. 021/021516; 48) NSCA CRS 700/365. 021/021524; 49) NSCA CRS 700/312. 021/021577; 50) NSCA CRS 700/313. 021/021576; 51) NSCA CRS 700/314. 021/021575. 52) PWD 1984: 120.



Unidentified Structure on the Darling Harbour waterfront, due east of the 1902 Outwards Goods Shed. Appears on plan and images 1911–23.

Figure 53. Below left: 1911 panorama of west Darling Harbour. PWD 1984: 111

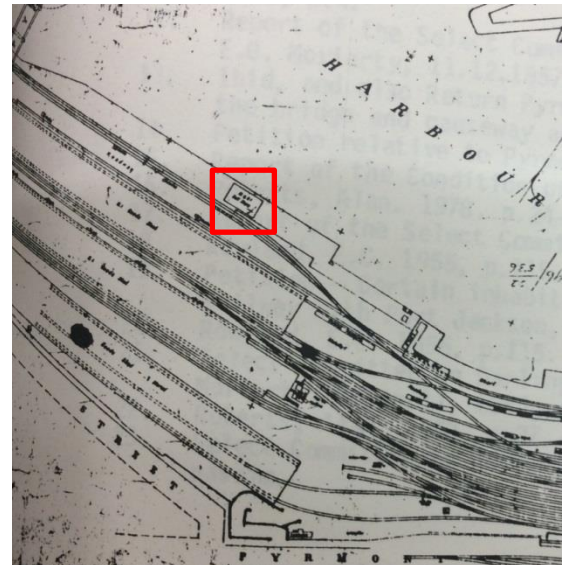
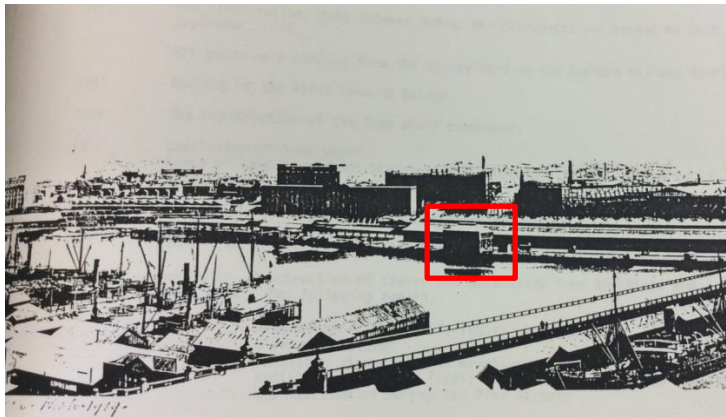
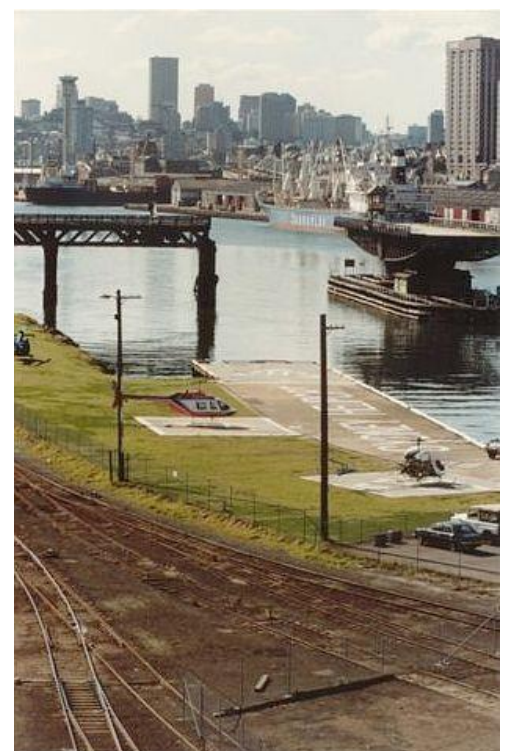
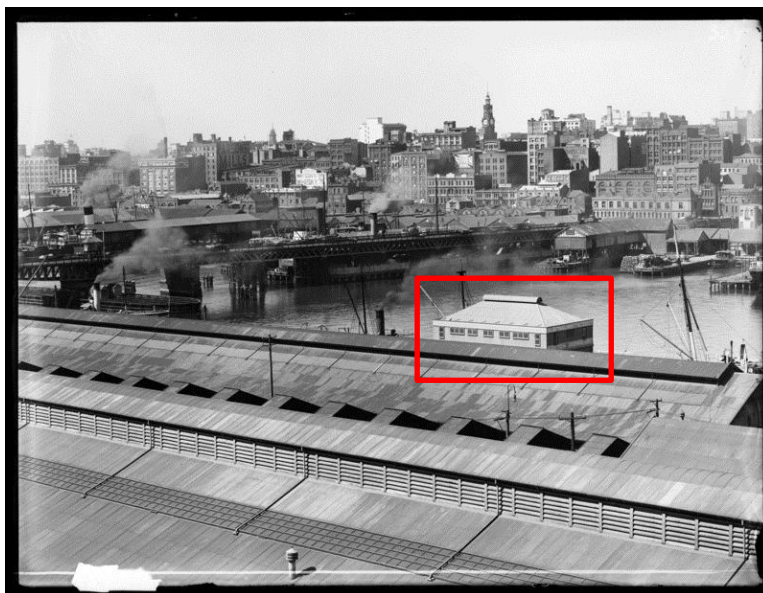


Figure 54. Right: Section of Plan of Goods Yard and Darling Harbour Area c1920s. PWD 1984: 121.

Figure 55. Below left: 1923. AE Foster, Mitchell Library a6783014.

Figure 56. Below right: 1984. Helipad, former Coal Wharf and probable site of unidentified structure, due east of the 1902 Outwards Goods Shed. G. Allcock
<http://www.nswrail.net/locations/photo.php?name=NSW:Darling+Harbour:13>



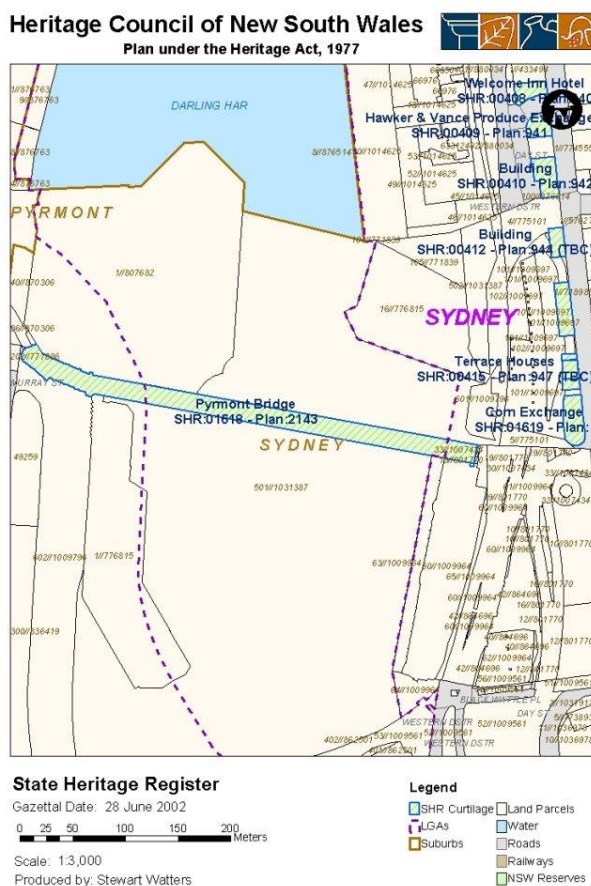
Pymont Bridge, 1902.

Figure 57. 2009, City of Sydney Archives, Mark Goddard Collection 56473.

Figure 58. State Heritage Register listing curtilage. SHR 01618,

<http://www.environment.nsw.gov.au/heritageapp/ViewHeritageItemDetails.aspx?ID=5053337>

See also Figure 14.



Wharf 37, 1925–c1984.

Figure 59. PWD 1985: 155. Figure 60. Wharf shed on completion in 1938. Mitchell Library
d1_10127



Woodward Water Feature, Darling Harbour Promenade, built 1988. 2009.

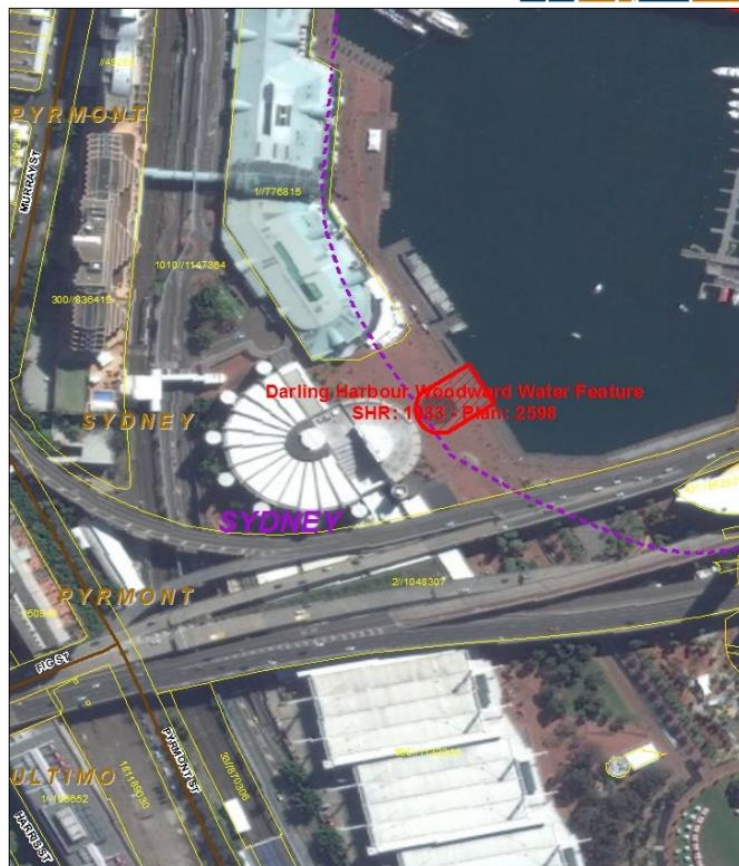
Figure 61. 2009, City of Sydney Archives, Mark Goddard Collection 57000.

Figure 62. State Heritage Register listing curtilage. SHR 01933,

<http://www.environment.nsw.gov.au/heritageapp/ViewHeritageItemDetails.aspx?ID=5061721>



Heritage Council of New South Wales



State Heritage Register - SHR 1933, Plan 2598

Darling Harbour Woodward Water Feature

Gazettal Date: 27 June 2014

0 50 100 Metres

Scale: 1:2,500

Datum/Projection: GCS GDA 1994



Legend

SHR Curtilage

Land Parcels

LGAs

Suburbs

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<http://www.environment.nsw.gov.au/heritageapp/ViewHeritageItemDetails.aspx?ID=5012250>

SHR 01618; Pymont Bridge;
<http://www.environment.nsw.gov.au/heritageapp/ViewHeritageItemDetails.aspx?ID=5053337>

SHR 01855; Royal Edward Victualling Yard;
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ⁱⁱ Discussion Paper 1977: 2–3.

ⁱⁱⁱ General references for this section are: PWD 1984:93–4, 96–104. Ashton 1990: 4, 6. National Trust 1975: Pyrmont Bridge. NT 1980: Darling Harbour Wharves 37 & 38. NT 1984: Darling Harbour Railway Goods Yard. OEH SHR 01618; OEH SHR 10933. SMH 26/1/1887: 3. Fitzgerald & Golder 2007: 21, 23–4, 27, 61–2, 67, 90–1. Wilson 1985 Pyrmont Bridge: 5–6. Dictionary of Sydney: Pyrmont, Ultimo. Darling Harbour Live. Godden 1989: 9.

^{iv} PWD 1984: 87, 90, 111. National Trust 1984, Map Darling Harbour Goods Yard.

^v National Trust 1984, Map Darling Harbour Goods Yard.

^{vi} PWD 1984: 86, 124.