WALSH BAY ARTS AND CULTURAL PRECINCT

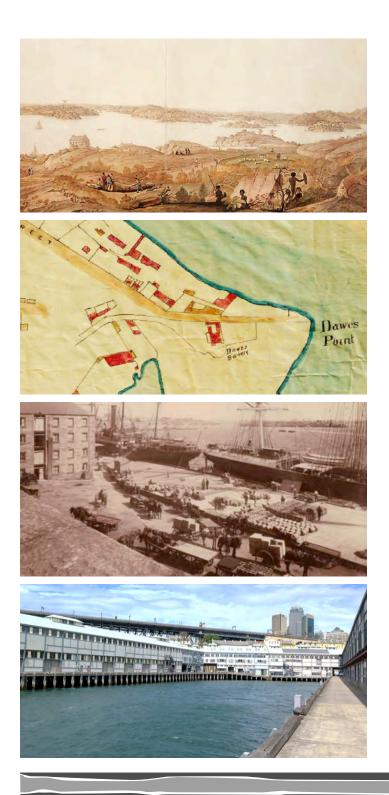
STATE SIGNIFICANT DEVELOPMENT APPLICATION SSDA 8671

APPENDIX 17: ARCHAEOLOGICAL ASSESSMENT



ARCHAEOLOGICAL ASSESSMENT

WALSH BAY ARTS & CULTURAL PRECINCT



SEPTEMBER 2017





ARCHAEOLOGICAL ASSESSMENT WALSH BAY ARTS and CULTURAL PRECINCT

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1. Precis of the Report

1.1 The Project

This report presents an archaeological assessment and impact statement for proposed works in the Walsh Bay Arts and Cultural Precinct (WBAP). The work addresses both historic period archaeology and Aboriginal archaeology. The work responds to the Secretary's Environmental Assessment Requirements (SEARS) issued on 1 September 2017 for the proposed development of Piers 2/3, Wharf 4/5 and Wharf 4/5 shore sheds in the Walsh Bay Arts Precinct. Cultural Resources Management (CRM) has been engaged to prepare the assessment and management plan in accordance with the SEARS. This report forms part of the Environmental Impact Statement for the works. As this project is a declared a State Significant Development (SSD) the provisions of the National Parks and Wildlife Act 1974 (NPW Act) relating to Aboriginal heritage and the NSW Heritage Act 1977 relating to non-indigenous heritage do not apply to this project.

1.2 Objectives

The Walsh Bay Wharves precinct is an item of state significance and Pier 2/3 and Wharf 4/5 are also assessed individually to be of state significance. The potential of the WBAP to encompass a terrestrial archaeological resource is referenced in several heritage listings, however, there has been no dedicated assessment to determine the accuracy of this statement. The objectives of the Archaeological Assessment and Management Plan are to:

- Assess the likelihood of significant archaeology being preserved within the project area;
- If present, identify the nature and scope of those archaeological resources
- Determine the cultural values of archaeological resources within the project area
- Assess the impact of the proposed works on the cultural values of the project area with respect to those archaeological resources
- Identify measures to mitigate any identified impacts

1.3 Methodology

The due diligence assessment and the evaluation of historic period archaeological resources have been prepared according to guidelines issued by the Office of Environment and Heritage, Heritage Division, in several publications. The tasks undertaken to determine potential archaeological resources within the project area are as follows.

1.3.1 Aboriginal Archaeological Resources

- Search of the Aboriginal Heritage Information Management System (AHIMS) register to identify Aboriginal archaeological sites on or close to the project area
- Reference to existing reports and primary and secondary resources to establish the environmental context of the place
- Site inspection

1.3.2 Historic Period Archaeology

- All existing heritage listings were identified and the values expressed in those listings were encompassed within the current assessment
- All relevant earlier reports and studies were identified and information from them has been incorporated into this analysis
- New primary research was undertaken to address the scope of past works and impacts with respect to the preservation or otherwise of archaeological resources within the project area
- Geo-referenced overlays were created of nineteenth and twentieth century surveys on a current aerial to establish areas of archaeological potential
- The proposed works were reviewed in relation to the areas of potential archaeology
- Discussions were held with the maritime archaeologist to co-ordinate information
- Site inspection

1.4 Results

1.4.1 The Environmental Context

Prior to European settlement, reclamation and construction along Walsh Bay, the project area consisted of a steep, rocky sandstone headland overlooking Sydney Harbour. High Water Mark was located well within the present-day Hickson Road. It was a place where several distinctive environmental landscapes met and was one of rich resources valued by both Aboriginal and European peoples. The impact of European settlement, particularly deforestation, was felt by the early years of the nineteenth century. It is possible that some elements of this environment are preserved within the project area, specifically at the former interface between the land and bay.

1.4.2 Aboriginal People and Archaeological Resources

Aboriginal people are known to have lived in this area for at least 30,000 years. The tribe most closely associated with the project area was the Cadigal. A total of ninety-eight Aboriginal sites have been recorded for the local region in the AHIMS. No sites are recorded as existing or having existed within the project area itself, however, evidence of Aboriginal occupation close to it was found when archaeological investigation was undertaken of the Moore's Wharf bond store in 1984.

The most common type of sites recorded in the area are shell middens followed by rock shelters containing shell middens. Other common site types that have been recorded in this area include concentrations of stone artefacts and rock engravings. These are the most likely types of archaeological evidence that may have formed along the Walsh Bay foreshore.

1.4.3 Historic Period Archaeology

For the first few years of European occupation the area of Walsh Bay was too distant from the main settlement and too difficult to reach to be attractive for any particular use and the irregular and rocky shoreline limited its potential. Waterfront activity was confined to Sydney Cove and the Tank Stream in the eighteenth century. As Sydney Cove became more crowded the land west from Dawes Point became more attractive for development and several improvements were made west of the project area; there is no evidence to indicate that the latter was significantly improved prior to the 1820s. It was in this period that the project area was alienated for European use.

Pier 2/3 occupies part of a property owned by John Lamb a merchant who established a woollen brokerage and shipping agency on this site. Adjoining this grant the land associated with Wharf 4/5 was granted to Timothy Godwin Pitman an American merchant from Boston. A small part of the land associated with Wharf 4/5 was also included in a grant made to William Davis, a gentleman of Church

Hill. By the early 1830s the properties had been surrounded by stone walls, reclamation of the foreshore had commenced and substantial buildings constructed for each company.

Throughout the nineteenth century these yards were greatly expanded and during the mid-1880s a major programme of redevelopment was undertaken along Dawes Point and beyond to make available deep sea berths. All of the wharves and stores from Dawes Point through to Millers Point underwent massive change. When bubonic plague came to Sydney in 1900 its origins were quickly traced to the wharves. Immediate measures were taken to contain the spread of the contagion. The Sydney Harbour Trust was formed in 1901 with the express responsibility for the modernisation and control of the harbour and its various works and movements. Immediately a comprehensive cleansing programme was put into action and the opportunity was taken to modernise and extend the deep water berths. The shoreline was further reclaimed and long finger wharves replaced all the existing nineteenth century improvements. Each had shore-sheds on the newly created Hickson Road.

The work commenced in 1907 west of the project area close to Moore's Wharf and was completed in 1922. Pier 2/3 was constructed between 1913 and 1922. It had programmes of repairs undertaken in the 1960s, 1974 and 2003. Wharf 4/5 was constructed in the same period. In 1917 alterations were made to accommodate a temporary ore depot. The wharf underwent substantial remodelling in 1939 and 1940 and was adapted to the present use in 1984.

The construction of Hickson Road and New Pottinger Street were major components of the new waterfront. Both streets required extensive excavation of the bedrock and sloping landform adjacent to the waterfront. Rubble from the excavation was used to fill in the reclaimed waterfront and some of the stone was cut as dimension blocks for use in retaining walls.

1.5 The Archaeological Profile

1.5.1 Aboriginal Archaeology

The extensive development of wharves, buildings and reclamation work at Walsh Bay during the nineteenth century is likely to have significantly impacted if not entirely destroyed any Aboriginal archaeological deposits which may once have existed along this foreshore. The demolition of the nineteenth century maritime landscape and particularly the excavation and levelling of the foreshore for the construction of Hickson Road between 1909 and 1922 would have further compounded this issue. It is considered highly unlikely that the study area would contain any Aboriginal archaeological deposits or objects.

1.5.2 Historic Period Archaeology

The project area is entirely a twentieth century landscape largely created between 1909 and 1922 with alterations and additions from the 1930s and later. It encompasses the wharves, sheds, sea walls and adjoining are the streets and retaining walls. There is clear evidence of the quarrying carried out to form Hickson Road and New Pottinger Street. The works undertaken in this period have had a substantial impact on evidence of earlier occupation.

There are limited opportunities for the preservation of archaeological evidence. Essentially these are confined to the base of very deeply cut features such as wells that might have survived the excavation of the bedrock to create Hickson Road. Secondly, the band of fill behind the sea-walls and up to the excavated bedrock is the only area that may preserve substantial elements of the nineteenth century landscape. The scope of evidence that could be preserved in this area could encompass any of the following categories:

- Environmental evidence including remnant but probably modified land-forms and soils representative of the interface between terrestrial and maritime environments
- Elements of nineteenth century sea-walls or property boundaries
- Fragmentary building components of the nineteenth century waterfront

- Piles from nineteenth century shore-wharves or finger wharves
- Demolition debris from several phases of building
- Soil and rubble removed from the Hickson Road excavation to fill in the gap between the old shoreline and the reclaimed land of c.1909-1922. This is likely to be of several metres depth to accommodate the difference in height between the falling ground of the nineteenth century topography and the regularised twentieth century terrain
- Artefact scatters that encompass domestic material as well as components of demolished structures. They are likely to have been deposited with the fill and represent waste materials accumulated during demolition and their random disposal in the fill as part of the Sydney Harbour Trust programme in the first decades of the twentieth century.

It is unlikely that elements that may be preserved within this zone are complete; this would be a fragmentary resource of disparate elements.

1.6 Cultural Significance

The historic period archaeological profile does not directly relate to the evaluated cultural significance of the Walsh Bay Wharves precinct of which the WBAP is part. This assessment is largely concerned with the twentieth century landscape created between 1909 and 1922, the aesthetic and industrial values associated with it and the demonstration of the importance of the maritime industry to Sydney in this period. The principal value of the potential archaeological resource is the relationship between the nineteenth century buried landscape and the visible twentieth century landscape at Walsh Bay. It is the only direct reference point and physical demonstration of the nearly century-long tradition and maritime landscape that preceded the developments of the twentieth century and provides evidence of the continuity and importance of this place in the maritime role of Sydney. It describes the environment that gave rise to the programme of renewal and provides the context that explains the need for this work. These nineteenth century elements, if found, would also be rare survivors; the scale of the Sydney Harbour Trust programme removed all visible evidence of the older landscape. On this basis as a contributor to the assessed cultural values of the Walsh Bay Wharves precinct and the WBAP the archaeological resource is also assessed to have state significance. The possible presence of preserved environmental evidence of the nineteenth century and, perhaps, of some aspects of the presettlement landscape would also make a contribution to the narrative of the relationship between the specific environmental conditions of this place and its subsequent development for historic period use.

With respect to Aboriginal archaeological resources the study area is assessed to have no potential to contain Aboriginal sites or objects and for this reason it has no cultural value for potential research opportunities.

1.7 Conclusions: Impact Assessment

Most works for the redevelopment of Pier 2/3, Wharf 4/5 and the shore sheds will be concerned with the above ground structures and will have no impact on any in-ground archaeological resource. The only identified potential impacts are associated with utilities; trenching associated with the renewal of existing services or possible provision of new connections. These works would disturb deposits to shallow depths and in discrete areas. Excavations are unlikely to remove or displace structural evidence but they may expose some components and will also displace artefacts and demolition debris contained in the fill. This work will not substantially effect the cultural value of this resource. The proposed works will have no impact on potential Aboriginal archaeological evidence.

1.8 Management Recommendations

1.8.1 Aboriginal Archaeology

- It is concluded that no further archaeological investigation in regard to Aboriginal archaeological sites is necessary. It is recommended that the proponent proceed with the proposed works with caution.
- In the unlikely event that suspected Aboriginal objects are discovered during the course of the proposed works then activity should be stopped in this area, the object safeguarded and a suitably qualified archaeologist contacted to record the find prior to work continuing.
- The Office of Environment and Heritage (OEH) and the Metropolitan Local Aboriginal Land Council should also be contacted and informed of any finds as soon as possible and prior to work in that location continuing.

1.8.2 Historic Period Archaeology

- Excavation works for utilities should be monitored for the purpose of documenting the archaeological profile and any relics or features that are revealed by that work.
- The results of this work will be documented in a report made available to the Department of Planning within twelve months of completion on site.
- This work will not require an excavation permit to be issued by the Heritage Division of OEH, however, a statement of methodology and research design should be prepared to define the scope of works and outcomes for monitoring programmes.
- Archaeological works must be carried out by a nominated Excavation Director who satisfies the Heritage Council's Excavation Director Criteria for undertaking works at state significant historical archaeological sites in NSW.
- The interpretation strategy currently being prepared for the precinct should address any evidence that may be recovered from monitoring works.
- Moveable heritage will be managed according to the current interpretation strategy

2. The Project Scope

2.1 **Project Area: The Site**

The report addresses proposed works within the Walsh Bay Arts and Cultural Precinct (WBAP), Walsh Bay. The precinct is located on the southern side of Sydney Harbour within the suburb of Dawes Point. The Barangaroo development area is located immediately to the south west. It is located within the City of Sydney Local Government Area.

The project area comprises Pier 2/3 and Wharf 4/5 in Walsh Bay of the Walsh Bay Wharves. It includes the associated shore-sheds of Wharf 4/5. The southern boundary of the project area is Hickson Road. The cadastral identification for the project area is as follows:

Pier 2/3: Lot 11 DP 1138931

Wharf 4/5 including shore sheds Lot 65 DP 1048377

The landowner is Roads and Maritime Services (RMS). Create NSW is the lessee under a long-term lease with RMS.



Pier 2/3 on the left and Wharf 4/5 on the right (Source: CRM 2016)

2.2 Project Context

2.2.1 Development

The archaeological analysis described in this report was initiated as a consequence of the plan to redevelop part of the Walsh Bay waterfront known as the Walsh Bay Arts and Cultural Precinct. The intention is to expand the existing group of cultural institutions in this part of the city. Pier 2/3 remains the only undeveloped pier of the berths constructed in the early decades of the twentieth century. It is to be adapted for use as performance spaces, support areas such as offices and rehearsal theatres and will include a large commercial/arts space for events. Wharf 4/5 including the shore sheds is to be

upgraded and improved in several parts including new commercial retail opportunities. The precinct will be used for arts festivals, events and pop-ups.

2.2.2 Planning

The project is a staged State Significant Development (SSD) approved under Part 4 of the *Environmental Planning and Assessment Act 1979* (EP Act). The Walsh Bay Arts Precinct project is considered to be SSD under Schedule 1 of *State Environmental Planning Policy (State and Regional Development) 2011* as it is a cultural facility with a capital investment value of over \$30 million.

A Master Plan for the WBAP was prepared in 2013 including the redevelopment of Pier2/3 and refurbishment of Wharf 4/5 and shore sheds and a public space. The Stage One concept proposal was approved in May 2015. The SEARS were issued on 1 July 2016. Stage 2 application went to exhibition in November 2016. Following an appeal Stage 1 approval was set aside and the Stage 2 application was withdrawn. The current project comprises a revised application for the works at Pier 2/3 and Wharf 4/5 and shore sheds. The Secretary's Environmental Assessment Requirements (SEARs) were received on 1 September 2017. This report addresses SEAR No. 6 (in part) including:

- Describing the heritage significance of all heritage items including all archaeology
- Preparation of an archaeological assessment and management plan in respect of historical and Aboriginal archaeology to evaluate the potential for archaeological evidence, the potential impact of the project on this evidence and the means of mitigating those impacts
- An assessment of the impact of the proposed works on Aboriginal cultural heritage values and identification of measures to avoid or mitigate these impacts or conserve those values and consultation with Aboriginal people on the significance of archaeological evidence
- Provision of a framework to interpret the archaeological associations

Cultural Resources Management (CRM) has been engaged to prepare an Archaeological Assessment and Management Plan in accordance with the SEARS. This report forms part of the Environmental Impact Statement for the proposed works.

As this project is a declared SSD the provisions of the *National Parks and Wildlife Act 1974* (NPW Act) relating to Aboriginal heritage and the *NSW Heritage Act 1977* relating to non-indigenous heritage do not apply to this project.

2.2.3 Prior Works

WBAP is encompassed within the Walsh Bay Wharves Precinct and the latter has been the subject of many reports that have addressed aspects of cultural heritage both above and below ground. Of particular relevance are the following documents:

Date	Author	Document
1989	Planning Workshop	Walsh Bay Redevelopment Statement of Environmental Effects
1991	Kass and Higginbotham	The Rocks Millers Point Archaeological Management Plan
1998	Clive Lucas, Stapleton and Partners	Walsh Bay Precinct Conservation Plan

2. The Project Scope

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1999	Tropman and Tropman Pty Ltd	Heritage Technology Walsh Bay Conservation Management Plan
2000	Tropman and Tropman Pty Ltd	Wharf 2/3 (Pier and Shore Shed) Walsh Bay Precinct Conservation Management Plan
2007	Grahame Brooks and Associates	Wharf 4/5 Walsh Bay Conservation Management Plan
2007	Paul Davies Pty Ltd	Millers Point and Walsh Bay Heritage Review
2010	GML Heritage	Walsh Bay Pier 2/3 Moveable Heritage Catalogue and Significance Assessment
2010	NSW Government Architect	Walsh Bay Precinct Master Plan
2012	ARUP	Walsh Bay Arts Precinct Vision
2014	Department of Planning and Environment	Environmental Impact Assessment Walsh Bay Precinct (and DGRs)
2015	Department of Planning and Environment	Conditions of Consent for SSD 6069
2016	Department of Planning and Environment	Final SEARS for SSD 6069

2.2.4 Heritage Values

The WBAP is surrounded by culturally significant areas as follows:

- Dawes Point
- Millers Point
- Walsh Bay
- Sydney Harbour

The Walsh Bay Wharves Precinct, encompassing the WBAP, is listed as an item on the State Heritage Register (Item 5045067). The basis of this listing is concerned with the above-ground elements and the environmental context.

Wharf 2/3 and shore-shed is listed in the State Heritage Inventory (Item 2426247).

Wharf 4/5 and shore-shed is listed in the State Heritage Inventory (Item 3070001).

The Walsh Bay precinct is listed in the Sydney Regional Environmental Plan listing SREP 16 (Zone 1 Walsh Bay Conservation Zone).

Pier 2/3 (Item 4920069) and Wharf 4/5 (Item 4920070) are listed on RMS s170 Register.

The project area is within the Walsh Bay Precinct Conservation Area. The Conservation Area is adjacent to the Millers Point and Dawes Point Village Precinct and The Rocks Conservation Area.

The Walsh Bay precinct is also listed by the National Trust NSW; this is a non-statutory recognition of cultural significance.

2.3 Archaeology

2.3.1 Scope of Work

This report addresses terrestrial or land-based archaeology relevant to both Aboriginal occupation (preand post-1788) and historic period settlement, from 1788 onwards. The work does not address maritime archaeology; a separate report has been prepared for this resource. This assessment also does not specifically address industrial heritage or moveable relics; these items have been addressed by other reports.

2.3.2 Identified Values

The potential of the WBAP to encompass a terrestrial archaeological resource is referenced in several heritage listings. For example the State Heritage Register listing refers to the place as having medium potential for archaeological evidence preserved under the buildings and within the road. There has been no dedicated assessment to determine the accuracy of this statement.

There are several places identified as "archaeological items" listed in close vicinity as follows:

- MSB Workshops: Hickson Road, Towns Place and Dalgetty Road Millers Point (SHI Item 245907); largely concerned with the building which incorporates elements from older structures. The listing recognised the possibility of in-situ archaeology by requiring an archaeological conservation plan
- Residential buildings: Hickson Road and Napoleon Street, Millers Point (SHI Item 2425988); the listing is primarily concerned with the building but requires an archaeological conservation plan
- Residential buildings: Hickson Road and Jenkins Street, Millers Point (SHI Item 2425989). This listing is also primarily concerned with the existing building but requires an archaeological conservation plan.
- Residential buildings: Hickson Road and Darling Harbour, Millers Point (SHI Item 2425990). The listing is for the buildings but requires archaeological monitoring of ground works
- Submarine Cable Inspection Chamber Hickson Road (SHI Item 2425847); the listing is for the building but requires an archaeological conservation plan

There are no specific archaeological sites identified in any statutory register or listing for the Walsh Bay Arts Precinct.

2.3.3 Objectives

The objectives of the Archaeological Assessment and Management Plan are to:

- Assess the likelihood of significant archaeology being preserved within the project area; this is defined as historical and Aboriginal archaeology. The present report addresses historic-period and Aboriginal archaeology within the land encompassed by the project area
- If present, identify the nature and scope of those archaeological resources
- Determine the cultural values of archaeological resources within the project area
- Assess the impact of the proposed works on the cultural values of the project area with respect of those archaeological resources
- Identify measures to mitigate any identified impacts

2.3.4 Assessment Methodologies

Aboriginal archaeology has been assessed as a Due Diligence Assessment; this is a separate report presented in an appendix to the principal document. The evidence and results of that analysis are

contained in the main body of the report. The Due Diligence archaeological assessment has been prepared in accordance with the current best practice guidelines which include:

- Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales (Department of Environment, Climate Change and Water, Sydney 2010).
- Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales (Department of Environment, Climate Change and Water, Sydney 2010).

CRM recognises that Aboriginal people are the primary determinants of the cultural significance of their heritage. Cultural heritage can include social, cultural, historic, aesthetic values as well as scientific values associated with archaeological sites. Cultural heritage is not restricted to tangible objects or sites; it also includes memories, story-lines, ceremonies, language and 'ways of doing things' that continue to enrich local knowledge about the cultural landscape'¹. The Due Diligence methodology used in this assessment does not require consultation with Aboriginal stakeholders regarding cultural heritage values for this project. Therefore this report does not include an assessment of Aboriginal cultural heritage values or significance.

The historic period assessment was prepared in accordance with the guidelines presented in the following publications:

- Assessing Significance for Historical Archaeological Sites and Relics (Heritage Branch, Department of Planning 2009)
- *Guidelines for the Preparation of Archaeological Management Plans* (Heritage Branch, Department of Planning 2009)

2.3.5 Tasks

The following tasks have been undertaken for the Aboriginal Due Diligence Assessment:

- Search of the Aboriginal Heritage Information Management System (AHIMS) register to identify Aboriginal archaeological sites on or close to the project area
- Reference to existing reports and primary and secondary resources to establish the environmental context of the place
- Site inspection

The following tasks were undertaken for the historic period assessment:

- All existing heritage listings were identified and the values expressed in those listings were encompassed within the current assessment
- All relevant earlier reports and studies were identified and information from them has been incorporated into this analysis
- New primary research was undertaken to address the scope of past works and impacts with respect to the preservation or otherwise of archaeological resources within the project area
- Geo-referenced overlays were created of nineteenth and twentieth century surveys on a current aerial image to establish potential areas of archaeological potential
- The proposed works were reviewed in relation to the areas of potential archaeology
- Discussions were held with the maritime archaeologist to co-ordinate information

¹ Department of Environment, Climate Change & Water, 2010, *Aboriginal cultural heritage requirements for proponents 2010 (April)*, Department of Environment, Climate Change & Water, Sydney.

• Site inspection

2.4 Report Structure

This report presents information and analysis in the following sections:

Sections 3, 4 and 5:	The Environmental Context, Aboriginal and Historic Period Archival Evidence
Section 6:	The Site, Potential Archaeological Resources and Cultural Significance
Section 7:	The Project: description, impact assessment and management strategies

2.5 Authorship and Applicant, Acknowledgements

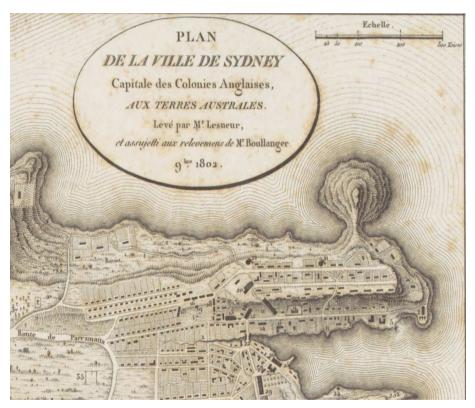
The author of this report is Wendy Thorp (Cultural Resources Management). The Aboriginal Due Diligence Report was prepared by Erin Mein (for CRM). All graphics in this report have been prepared by Ireneusz Golka (CRM).

3. The Environment & Aboriginal Occupation

3.1 Geology and Topography

The environmental context of a place is fundamental with respect to understanding the values of a place to both Aboriginal and European people. The topography, soils, water and other natural resources influenced ways in which all people interacted with the place. In terms of archaeology understanding the original landform and the changes that have been made to it is critical with respect to assessing the likely survival of archaeological resources.

Prior to European settlement, reclamation and construction along Walsh Bay, the project area consisted of a steep, rocky sandstone headland overlooking the deep waters of Sydney Harbour. Early plans of the town and contemporary images indicate that this area comprised steep cliffs leading down to a narrow, rocky foreshore. High Water Mark was located well within the present-day Hickson Road. The excavations undertaken between 1998 and 2007 on sites in Pottinger and Windmill Streets above the project area provide clear evidence of the former terrain of sandstone outcrops and steep, rocky cliffs².



Detail of 1802 "Plan de la Ville de Sydney" showing the steep and rocky headlands of Millers Point and Walsh Bay (*Source: NLA http://trove.nla.gov.au/version/209669543*)

² R.J. Varman Walsh Bay (1998) Archaeological Assessment and Investigation of Development of Pottinger Street and Adjacent Areas and R. J. Varman (2007) Ferry Lane, Downshire and Pottinger Street Walsh Bay Excavation Report



3.2 Soils

The Sydney soil landscape 1:100 000 sheet indicates that the land in the vicinity of the project area is overlain with Gymea soils. These shallow, loose, sandy soils are formed by weathering of the underlying sandstone bedrock; they are highly prone to erosion.³ The original and unaltered foreshore is likely to have been rocky with small pockets of sandy beach deposits. Varman's 2003 Pottinger Street excavation recorded substantial pockets of pre-settlement loams and sandy soils up to a metre in depth on the heights above the shore.

3.3 Flora and Fauna

The sandstone soils that surrounded the harbour had low nutrient values but the scattered deep pockets of soil permitted substantial trees to grow in stands. Early European descriptions of the area around Sydney Cove indicate that the ridgelines such as Bennelong Point and Millers Point were covered in open eucalypt woodland with a grassy understorey.⁴ On the lower slopes were scribbly gums with an understorey of acacias, banksias and tea trees. The upper slopes were colonised by blackbutts and angophoras with an understorey of kunzeas, tea tree and ceratopetalum. On the shoreline, at the interface between the muddy foreshores and the slopes were stands of mangroves. The constituents of the landscape has been demonstrated by the results of several archaeological excavations.



"Cockle Bay Now Darling Harbour" in c. 1820 painted by James Taylor; the image shows the mills on Millers Point and demonstrates the topography as well as the largely cleared landscape. In the middle is a party of men chopping down trees (*Source: ML 941 digital a928747*)

³ Chapman, G, & C Murphy, *Soil Landscapes of the Sydney 1:100 000 Sheet*, Sydney, Soil Conservation Service of NSW, 1989, viewed 29 September 2016 http://www.environment.nsw.gov.au/Salisapp/resources/spade/reports/9030gy.pdf

⁴ Nagle, J., 1829, Jacob Nagle his book *AD 19 May 1829*, Canton, Stark County Ohio, 1775-1802; Collins, D, An Account of the English Colony in New South Wales: With Remarks on the Dispositions, Customs, Manners &c. of the Native Inhabitants of that Country To Which are Added, Some Particulars of New Zealand: Complied by Permission, From the Mss. of Lieutenant. Sydney, Prepared from the print edition published by T. Cadell Jun. and W. Davies 1798, 1798, http://purl.library.usyd.edu.au/setis/id/colacc1; Attenbrow, V. (2010); Sydney's Aboriginal Past: Investigating the Archaeological and Historical Records, Sydney, University of New South Wales Press.

Governor Phillip described this environment in 1788: "The necks of land that form the different coves, and near the water for some distance are in general so rocky that it is surprising such large trees should find sufficient nourishment, but the soil between the rocks is good and the summits of the rocks, as well as the whole country around us, with a few exceptions are covered with trees, most of which are so large that the removing them off the ground after they are cut down is the greatest part of the labour³⁵.

Excavations further south on Darling Harbour have demonstrated that bush-fires ravaged these areas⁶ but the greatest impact on vegetation was the arrival of European settlers. Trees and shrubs were removed to provide raw material for building as well as foodstuffs. By the 1820s contemporary images suggest that much of the vegetation bordering the bay would have been removed.

The project area and the land surrounding it once comprised a rich mosaic of ecological environments. It is located at the junction of several specific environments including the marine resources of the harbour, freshwater resources of local streams, stands of nearby mangroves and open eucalypt woodlands along the ridgelines. The rocky foreshore would have likely been a rich source of shellfish such as Sydney rock oyster, cockles, whelks, turbans and mussels⁷. In the forest areas were kangaroos, possums, birds and other wildlife.

3.4 Aboriginal Occupation and the Changing Landscape and Environment

Archaeological evidence from the Sydney Basin has demonstrated that Aboriginal people have lived in this region for at least 30,000 years.⁸ Over that time the environment and landscape of the Basin has changed dramatically. During the peak of the last Ice Age approximately 20,000 years ago, sea levels would have been between 110 metres to 130 metres lower than the present day; the coast line would have lain approximately fifteen kilometres further east.⁹ At this time Sydney Harbour would have consisted of a steep-sided river valley. Sea levels began to rise following the end of the last glacial period creating estuaries in formerly freshwater rivers and streams. During the current Holocene period sea levels fluctuated, finally stabilising to their current levels around 7000 years ago.¹⁰

3.5 The Cadigal People

Ethnographic recording of the Aboriginal people in the Sydney Basin indicates that the area from the coast into the Blue Mountains was occupied by the Darug. This group was made up of a number of smaller familial clans or tribes. Historical records suggest there was a linguistic and cultural divide between the Darug people of the coastal areas such as the Cadigal and those who lived in the hinterland of the Cumberland Plain and Blue Mountains¹¹.

Aboriginal people who lived along the shores of Port Jackson near Sydney Cove in 1788 were known as the Cadigal people. The Cadigal were some of the first tribes of the Sydney Basin to be encountered by European settlers and a substantial body of historical information regarding their appearance,

⁵ Phillip's Despatch No 1 dated 15 May 1788

⁶ CRM (2004); Interim Report KENS Site Excavation Volume 2

⁷ Attenbrow, V. (2010); Sydney's Aboriginal Past: Investigating the Archaeological and Historical Records, Sydney, University of New South Wales Press.

⁸ JMcDCHM (2005); Archaeological Salvage Excavation of Site RTA-G1, 109-113 George Street, Parramatta, NSW. Report prepared for Landcom

⁹ Attenbrow, V. (2010); Op Cit.

¹⁰ Ibid

¹¹ Kohen, J, 1995 'Mapping Aboriginal Linguistic and Clan Boundaries in the Sydney Region' in *The Globe,* 32–39; Kohen, J., 1993, *The Dharug and Their Neighbours. The traditional Aboriginal Owners of the Sydney Region*, Darug Link in association with Blacktown & District Historical Society, Sydney.

subsistence and cultural practices was recorded by the colonisers during the first years of contact¹². Certainly Aboriginal people occupied and moved through the landscape that bordered Walsh Bay. Evidence of Aboriginal occupation was found when archaeological investigation was undertaken of the Moore's Wharf bond store in 1984.

3.6 Relationship to the Environment

All aspects of the environment were significant to Aboriginal people; it was economically and culturally of importance. The open understorey described in the contemporary European records is suggestive of active fire stick management by Aboriginal people. Regular burning of the understorey was used by Aboriginal people to keep the forest clear and encourage new growth; this was attractive to grazing animals such as kangaroos which could then be hunted. Other terrestrial animals such as possum were also important economically to Aboriginal people around Sydney both for meat and thick fur which was used for making waist belts and cloaks.¹³



Engraving of Aboriginal people fishing in Port Jackson circa 1824; this image also provides graphic evidence of the landform and vegetation (*Source: Lesueur, C.A, 'Nouvelle-Hollande, Nouvelle Galles du Sud, grottes, chasse et peche des sauvages du Port-Jackson', National Library of Australia < http://nla.gov.au/nla.obj-135686453>*)

Coastal Darug peoples relied heavily on marine resources for their subsistence. Fishing from bark canoes using nets, spears and lines as well as harvesting shellfish along the shoreline were important sources of food¹⁴. Contemporary European accounts describe how Aboriginal women made use of nets and fishing lines while men fished using pronged and barbed spears. The headland may also have provided a launching point for fishing in the harbour using canoes as well as a processing location where the spoils of a fishing expedition were cooked, shared and consumed. Large shell middens were

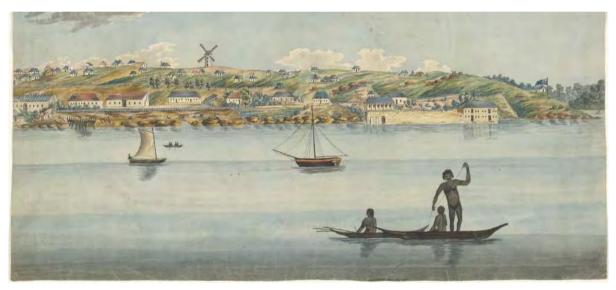
12 Ibid

¹³ Attenbrow, V. (2010); *Sydney's Aboriginal Past: Investigating the Archaeological and Historical Records, Sydney* ¹⁴ Ibid.

reported to have lined the Port Jackson foreshore in the 1790s however many were destroyed by the settlers as they burned the shells to produce lime for mortar.¹⁵

3.7 Links

Aboriginal people who lived around Port Jackson had strong links to neighbouring tribes who shared common spiritual and cultural belief systems. These links were further cemented through marriage ties, trade and complex kinship systems. Aboriginal people from distant areas would regularly come together to undertake ceremonies such as those for initiation and to arrange marriages, share information and trade materials such as basalt from the Blue Mountains, shell for tool production, spears, possum skins, ochre and other products.¹⁶ One such ceremony was recorded in 1795 in the present day Royal Botanic Garden and Domain. Lieutenant Collins observed a 'Yurong' initiation ceremony in which local and Guringai boys were initiated in a multi-day ceremony on the peninsula at Farm Cove.¹⁷ The strong links and shared cultural beliefs between the Aboriginal people of the wider Sydney region is also reflected in the rock art of the region which shares a common graphic vocabulary both in style and motif production.¹⁸



'View of Part of Sydney' circa 1804; this is looking from Sydney Cove to the mill on Millers Point. It shows Aboriginal people in the foreground fishing (*Source: National Library of Australia <u>http://nla.gov.au/nla.obj-135178991</u>)*

15 Ibid

17 Collins, D, 1798, An Account of the English Colony in New South Wales: With Remarks on the Dispositions, Customs, Manners &c. of the Native Inhabitants of that Country. To Which are Added, Some Particulars of New Zealand: Complied by Permission, From the Mss. of Lieutenant.Sydney, University of Sydney Library prepared from the print edition published by T. Cadell Jun. and W. Davies, http://purl.library.usyd.edu.au/setis/id/colacc1.

18 McDonald, J. (2008); Dreamtime Superhighway: Sydney Basin Rock Art and Prehistoric Information Exchange, Terra Australia. Canberra, Australian University Press

¹⁶ Threkeld, LE (W.N. Gunson ed) (1974); Australian reminiscences and papers of L.E. Threkeld, missionary to the Aborigines 1824-1859. Australian Institute of Aboriginal Studies, Canberra.

4. The Nineteenth Century Landscape

4.1 Fringe Area

For the first few years of European occupation the area of Walsh Bay was too distant from the main settlement and too difficult to reach to be attractive for any particular use. Its irregular and rocky shoreline limited its potential uses. In 1792 Dawes Point, then Point Maskelyne, became the site of the first observatory. A track was formed to the point to provide access to this small building but the land fronting the bay was unoccupied as was the area surrounding it¹⁹. Grimes' plan of Sydney in 1800 records no occupation or development on the project area.

4.2 Millers Point

By 1802 a track had been formed from Dawes Point along the ridge of land towards the area of Millers Point but it branched at The Rocks before entering the point. At least three buildings were constructed along this track but the land along the lower bay and the point was not utilised at this time²⁰. There was no change in this situation until 1807 when three windmills were erected at Millers Point then named Cockle Bay Point. These were all owned privately and were located in the Merriman Street area. Their presence as well as the government-owned mill on Windmill Hill gave name to the area as well as several streets²¹.

4.3 Focus on Sydney Cove

The construction of wharves was an important task of the first settlers; water transport was the most reliable and the fastest means of communication between many of the early settlement areas. Wharf construction was underway by 1789; the Government wharves were on the eastern side of Sydney Cove and the hospital wharf on the western side. Both were complete by 1792. These wharves were improved considerably by the early years of the nineteenth century and in the first decades of that century private initiatives had commenced along the eastern side of Darling Harbour and on the Tank Stream particularly associated with boat building. There are no known improvements in the project area in this period.

There are references to at least some of the land bordering Walsh Bay being promised to individuals before 1820 but there is no evidence to indicate that those men improved the land in any way. The land associated with Pier 2/3 is said to have been promised in 1817 to William Brown²². The land at the southern extent associated with Wharf 4/5 was in part promised to Daniel Payne by Governor Hunter (1795-1800).

4.4 Developing the Waterfront

As Sydney Cove became more crowded the land west from Dawes Point became more attractive for development. By 1822 at least three small buildings, probably cottages, had been constructed in the

¹⁹ Dolum and Poates; Survey of the Settlement of NSW, New Holland 1792

²⁰ Leseur, Plan of the Town of Sydney 1802

²¹ L. Fox; Old Sydney Windmills: 36-39

²² Sydney Herald 12 May 1834; 04

area of the later Towns Place, west of the project area. W.H. Chapman, a boat-builder had a wharf and boat shed in this area during the 1820s. By the following year the line of Windmill Street had been formed and several buildings constructed along the bay side of it. A small jetty had also been built by this year in the area of Wharf 8/9 towards the area of the current bond store²³. This was owned by J. Irving a boat builder. During the same period Alexander Berry and Edward Wollstonecraft had a jetty constructed near Irving's yard to handle the produce coming from their estates on the south coast around the Shoalhaven River²⁴.

The small sheltered area between Dawes Point and Millers Point was used as an anchorage for whaling vessels by the 1820s. The merchant firm of William Walker and Company was one of the first to use this water for that purpose (*refer Section 4.5.1*).



Sketch of the waterfront in Sydney Cove in 1832 showing numerous waterfront improvements but limited development at Dawes Point (*Source: SRO NSW Surveyor General Sketch Books Volume 2 Folio 5*)

²³ Harpers Plan of Sydney 1822

²⁴ Wendy Thorp (1988); Walsh Bay EIS Historical and Archaeological Assessment

4.5 Grants

By the early 1820s the waterfront that encompasses the project area was divided between several grants. These are first recorded in detail on a survey of 1833. The principal owners are described in the following sections.

4.5.1 William Walker

The grant that defined the eastern end, although not within the project area, was given to William Walker on 30 June 1823²⁵. This was a large parcel of land on the waterfront west of Dawes Point. It was Allotment 11 of Section 90 of the town. It was described as bound on the west by the waters of the bay and on the east by part of the road that led to a government slaughterhouse at Dawes Point.

William Walker was a merchant with the company of Fairlie and Ferguson based in Calcutta. In 1813 he went to Sydney as an agent for the firm. When he returned to Calcutta he resigned and came back to Sydney in 1820. He formed William Walker and Company with other members of his family already resident there. The firm engaged in coastal shipping and whaling. They established a wharf and warehouse at Dawes Point²⁶. Walker built his house close by in 1825; it is now part of Milton Terrace at 7-9 Lower Fort Street. The 1833 survey records two substantial buildings on this grant that were at the southern end of what is now Pier 2/3, on the boundary with the adjoining grant. The northernmost of these buildings is on the boundary of the project area. The waterfront had been completely regularised by this date, probably with some reclamation as part of the process.

4.5.2 John Lamb

Immediately on the western side of Walker's grant and encompassing the shore line and ground beyond in the area of present-day Hickson Road and Pier 2/3 was Allotment 12 of Section 90. In 1833 this property was owned by John Lamb²⁷. In a court of claims in 1834 Lamb's land was described as originally leased by Governor Macquarie to William Brown in 1817²⁸. John Lamb joined the Royal Navy when he was eleven years of age. In 1815 he commanded the convict transport "Baring" to Sydney. Between 1825 and 1828 he was the master of a merchant ship on the Indian Service of Buckles, Bagster and Buchanan. He founded a merchant company Lamb, Buchanan and Co in 1829 and came to Sydney. This company was dissolved in 1834. He then carried on business as Lamb and Co., woollen brokers and shipping agents. In 1837 he took Frederick Parbury as his partner. He went on to become chairman of many companies and a politician. His home was at Millers Point. He retired in 1855 and returned to England with a large fortune

The 1833 survey records two large buildings on the boundary with Walker's property, both outside the project area, and a very large building on the western boundary of the allotment. This site is also located outside the project area. The allotment was bound by a stone wall on three sides and the waterfront was regularised by reclamation.

4.5.3 Timothy Godwin Pitman

The land that encompasses the shoreline and land associated with Wharf 4/5 and Hickson Road was managed in 1833 by James Foster and James Norton, the executors of Timothy Godwin Pitman. This encompasses Allotment 13 of Section 90 of the town of Sydney. Pitman was an American from Boston,

²⁵ Copies of Deeds and Grants Sydney 1823 SRO NSW 7/482 No. 7

²⁶ Australian Dictionary of Biography listing for William Walker: adb.anu.edu.au/biography/walker-william-2767

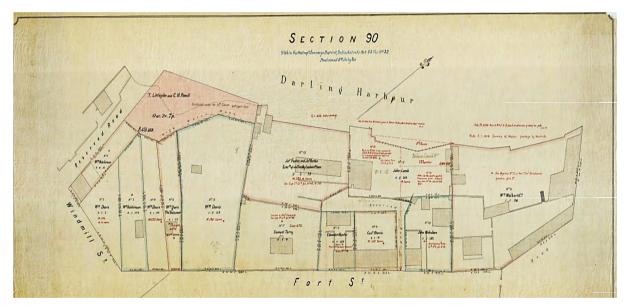
²⁷ SRONSW: Register of Land Grants and Leases 1792-1867 NRS 13836 Item 7/473

²⁸ Sydney Herald 12 May 1834; 04

naturalised in 1825²⁹. He was a merchant who died in the Sandwich Isles in July 1832³⁰ after an illness of five years. The grant at Dawes Point was made to Foster and Norton as the executors of the estate. In 1833 the entire allotment was surrounded by a stone wall except the water frontage which had been straightened by reclamation. The principal building was in the middle of the site, outside the project area. There were a number of stone buildings in the north-western corner of the property on or close to the waterfront. The site of the smallest of these buildings is on the boundary of the project area in Hickson Road close to the entrance to Wharf 4/5.

4.5.4 William Davis

The westernmost portion of the project area, the western end of wharf 4/5, was included in Allotment 6 of Section 90 and was owned in 1833 by William Davis. Davis also owned four smaller allotments adjoining to the west. Davis was described as a gentleman of Church Hill Sydney³¹. It was noted in a court of claims case that the land was first promised by Governor Hunter to Daniel Payne³². This would place the promised grant in the period 1795-1800. In 1833 Davis' allotment was surrounded by a stone wall on three sides; it ended at the high water mark. Beyond that, in this year, an area of over 2 rods had been reclaimed beyond low water mark. In 1833 this land was owned by T. Littlejohn and C. H. Powell. A very small portion of this reclaimed land is within the southern end of Wharf 4/5 in Hickson Road (*refer overlay Plan 2*).



Section 90 of the town of Sydney in 1833 showing the principal grants that are encompassed within the project area (*Source: Sydney City Archives Plan Atlas*)

²⁹ Sydney Gazette 14 July 1825; 02

³⁰ Sydney Herald 23 July 1832; 04

³¹ Sydney Gazette 26 April 1834; 01

³² Ibid

4.6 Limited Access

Until the 1830s and 1840s access to the properties along Darling Harbour, particularly at the northern end was limited: both Kent Street and Sussex Street terminated well before the area. Kent Street was extended in this period and this greater accessibility along with an aggressive economy and the need for more waterfront development led to a period of extensive building, extension and redevelopment along the waterfront and the land adjoining. However, even by the later 1830s access to Millers Point was still a limiting factor in realising the potential of the place. In 1839 it was said;

"The northernmost of the cross streets (of the city) is Windmill Street from its being the first line of communication opened between the Rocks and the windmills at Millers Point... it would naturally be supposed that this is one of the best built streets in Sydney; such, however, is not the case, throughout the greater part of its extent Windmill Street is still to be built...it is rather singular that although Windmill Street is the only direct thoroughfare between the northern extremities of Kent Street and George Street and of course commands the whole of the wharfs between Dawes Point and Millers Point yet few of the properties of these landing places have taken up residence in this quarter.."³³

4.7 Extremes

The decades of the 1830s and 1840s produced extremes of economic change. In the 1830s as coastal shipping boomed and whaling was still an important industry the need was critical for more wharfage and warehouse facilities. All of the established firms within the project area, William Walker, Thomas Lamb and Pitman's property substantially added to their yards in this period and a major component of these works was the construction of wharves or jetties on reclaimed land.

The extent of this period of work is exemplified by Pitman's property on and near present-day Wharf 4/5. This establishment was offered for sale in 1839 and the text of the advertisement provides a glimpse of the improvements that had been carried out here in this decade:

"The whole of that unrivalled and most invaluable improved Sydney property familiarly known to the mercantile and shipping community as Pitman's Wharf possessing nearly two hundred and forty six feet frontage...to the deep water of Darling Harbour on which the later worthy proprietor expended a fortune in the construction of warehouses, stores, offices and buildings.

"Highly finished stone wharf, with good metalled road leading to and fro, of easy access, abutting on deep water sufficient for vessels of the greatest tonnage to discharge and take in cargo, a privilege this property has been allowed by Her Majesty's Government, together with a series of advantages and improvements too numerous for insertion in an advertisement.

"The whole of this Property is enclosed within a high stone wall on one side and the water frontage on the other affording safe keeping to merchandise landed on this wharf"³⁴.

The advertisement goes on to state that there was ample space for more improvements and stone and sand to carry them out was "*a spades depth from the surface*".

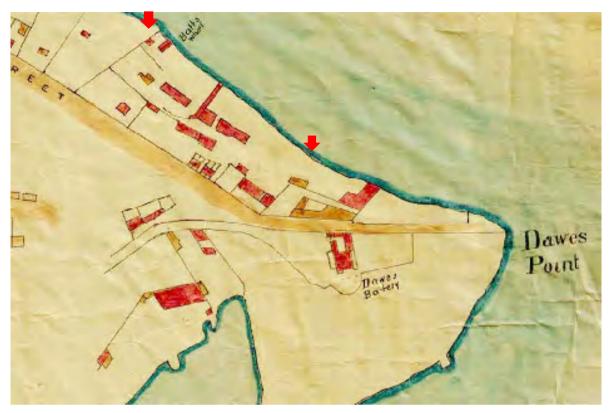
During much of the 1840s the colony suffered a severe recession. It impacted many of the merchants on the waterfront very hard and several went into bankruptcy. Sheild's plan of Sydney in 1845 records the improvements that had been made since the survey of 1833 including those described in 1839 at Pitman's Wharf. In particular a large building had been developed at the eastern end of the yard.

At Lamb's property also substantial buildings had been added to those structures recorded in 1833. All of these sites are beyond the project area. At this time there were no recorded jetties, wharves or other

³³ James Maclehose (1839); Picture of Sydney and Stranger's Guide to NSW: 76-78

³⁴ Sydney Herald 19 April 1839; 04

works that had been built out into the bay in the area of present-day Wharves 4/5 and Pier 2/3 (refer to 1845 overlay, Plan 3).



Detail from Shield's plan of the city in 1845 showing the improvements on the land within the project area; this is the foreshore between the arrows encompassing just the extreme ends of those buildings adjacent (*Source: Sydney City Archives Plan Atlas: Francis Sheild, Map of the city of Sydney New South Wales*)

4.8 Into the Bay and Shaping the Land

From the 1840s onwards the deep waters near Dawes Point were progressively developed for ocean going vessels such as the China clippers and mail boats. This required structures to be built out from the land. As well, this area was selected as the site for the North Shore Steam ferry. The site was located just to the west of the project area. Pottinger Street was built to provide access to this ferry³⁵.

Further west again, at Town's Place substantial changes began to occur to the steep landform to make the shore more suitable for the numerous buildings and other works required to support the businesses based there. Town's Wharf became one of the busiest of the district serving Town's extensive South Seas trade. The construction of the wharf was accompanied by excavation at the foot of the cliff to form a level space, now Town's Place. Steps were formed and a cart ramp gave access to and from Windmill Street and from it to the city by Kent Street³⁶.

From the 1850s onwards the area around the wharves became one of the most densely populated of the city particularly by people directly associated with the maritime trade such as sail makers, boat builders, wharfingers and mast-makers³⁷. During this period almost all vestiges of the former shoreline

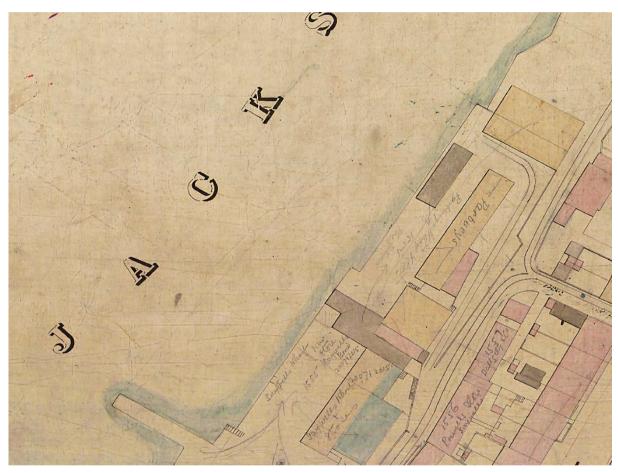
³⁵ Map of Sydney 1843 ML M2 811.17/1843/1

³⁶ Stephenson and Kennedy; History and Description of Sydney Harbour. 155-156

³⁷ W. Forde; Sydney Directory 1851; 42

were lost through even more extensive development of wharves, jetties, stores and sea-walls although some small areas of the original shore and mud flats were still exposed particularly near Kent Street. The present street pattern had been established by 1865.

In 1864 a series of articles about Sydney in the local press described how extensive reclamation along the eastern side of Darling Harbour had changed the level of water. The head of the bay had silted up; at low tide it was described as a pestiferous mud bank. "We see that wharves, jetties, piers and embankments have with the last few years been gradually pushed out from the shore into the waters of the harbour until now they have materially infringed upon them"³⁸.



Detail from town survey of 1865 showing the waterfront encompassed by the project area with the shore buildings behind in the area of present-day Hickson Road. By this date one finger wharf had been built out into the bay from Pitman's old property now known as Saywell's Wharf (*Source: Trigonometrical Survey of Sydney 1865, Section A1*)

By this date the former Lamb's Wharf was then known by the name of Lamb's partner: Parbury's Wharf. Pitman's property was then called Saywell's Wharf and the small portion of Davis' allotment within the project area was Farrelly's Wharf. As the 1865 survey demonstrates the shore buildings for each company had been extensively added to over the previous twenty years with a mixture of stone, brick and iron sheds and stores. These sites are all largely within the area of present-day Hickson Road (*refer overlay Plan 4*).

³⁸ "Rambles Through Sydney" *Sydney Morning Herald* 3 June 1864; 02

4.9 Deep Water Wharfage

Proposals were first made in 1877 to extend some of the wharves into deeper water, a trend which culminated at the turn of the new century. The principal catalyst for change came from the vast wealth generated by the wool industry. The reconstruction of the area allowed for new methods and styles of wharf building to be introduced to the waterfront. Throughout the later years of the nineteenth century wharves were built further out into the bay although it would not be until the twentieth century that a comprehensive solution would be found for deep-sea wharfage.

The first to embrace the new technology and opportunities were the owners of Town's Wharf, west of the project area but major extensions were planned for the entire shoreline. In places the land was extended by up to forty metres. The principal occupants of the redeveloped waterfront in relation to the project area were, from the west, a small part of Dalton's Wharf, the former Pitman's property was then Alger's Wharf, Lamb/Parbury's Wharf was then occupied by Dalgetty which also had taken over Walker's Wharf at the eastern end of the project area. A birds-eye view of the site in 1879 shows the work to have been completed³⁹ but within the project area there were as yet no deep water wharves.

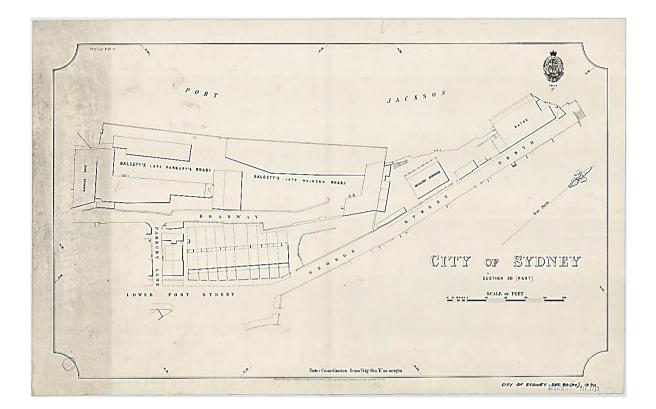


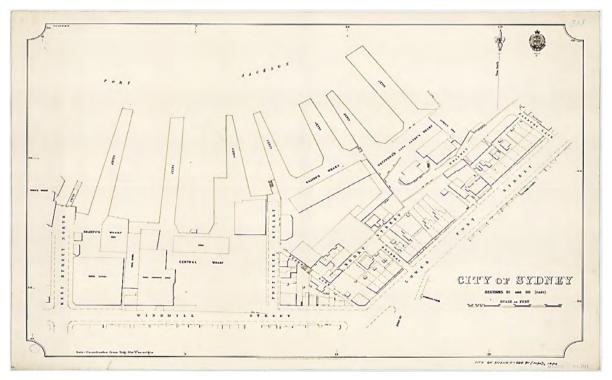
Detail from Gibbs and Shallard's, view of Sydney in 1879 showing the shoreline within the project area before redevelopment in the 1880s (Source: Supplement *to Illustrated Sydney News* 2 October 1879

4.10 Reconstructing the Shore

During the mid-1880s a major programme of redevelopment was undertaken along Dawes Point and beyond to make available deep sea berths where even the largest steamers of the time would be able to tie up. All of the wharves and stores from Moore's through to Dalgetty's Wharf underwent massive change. By 1892 the project area was the site of two large finger wharves on the former Lamb/Alger property now occupied by Hoffnung. A small part of Dalton's jetty occupied the western part of the project area. At the eastern end, Dalgetty's retained long-side wharves (*refer overlay Plan 5*).

³⁹ Gibbs and Shallard and Co "Birds Eye View of Sydney" Supplement to the Illustrated Sydney News 2 October 1879





Surveys of the project area in 1892 showing new finger and land wharves constructed during the 1880s (*Source: NSW Department of Lands, Metropolitan Detail Series Sydney Section 90*)



The Dawes Point waterfront at the end of the nineteenth century (Source: State Library of Victoria Image H91.300/29)



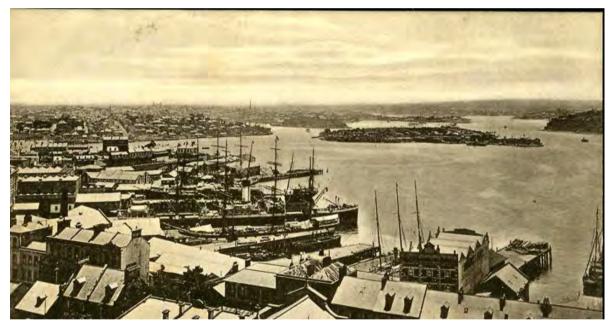
Parbury's Wharves at Dawes Point in 1895 (Source: ML, Kerry and Co SPF/756)

5. The Twentieth Century Landscape

5.1 Bubonic Plague

When bubonic plague came to Sydney in 1900 its origins were quickly traced to the wharves. Immediate measures were taken to contain the spread of the contagion. The wharves, by then fourteen along Walsh Bay, were found to be poorly maintained and harbouring large quantities of rubbish and rats. After the formation of the Sydney Harbour Trust in 1901, the express responsibility of which was the modernisation and control of the harbour and its various works and movements, the Walsh Bay Wharves were resumed by the government (*refer overlay Plan 6*).

Immediately a comprehensive cleansing programme was put into action and the opportunity was taken to modernise and extend the deep water berths. The first wharf at Millers Point to reference the new policies was Dalgetty's White Star Wharf. A large new wharf was constructed for the company and it was backed with a rat-proof wall. The land between the wall and the roadway behind, to a depth of fifty-six feet was infilled to avoid places for rats to establish colonies⁴⁰.



Walsh Bay Wharves circa 1900 before the Sydney Harbour Trust redevelopment. (Source: City of Sydney Archives, Graeme Andrews 'Working Harbour' Collection: 77950)

5.2 A New Plan

By 1906 a comprehensive plan for the reconstruction of the wharves along Millers Point, Darling Harbour and elsewhere had been devised and a plan prepared that described the proposed new wharves in relation to the existing waterfront. The scale of the government initiative dwarfed the

⁴⁰Sydney Harbour Trust *Annual Report 1903*; 19



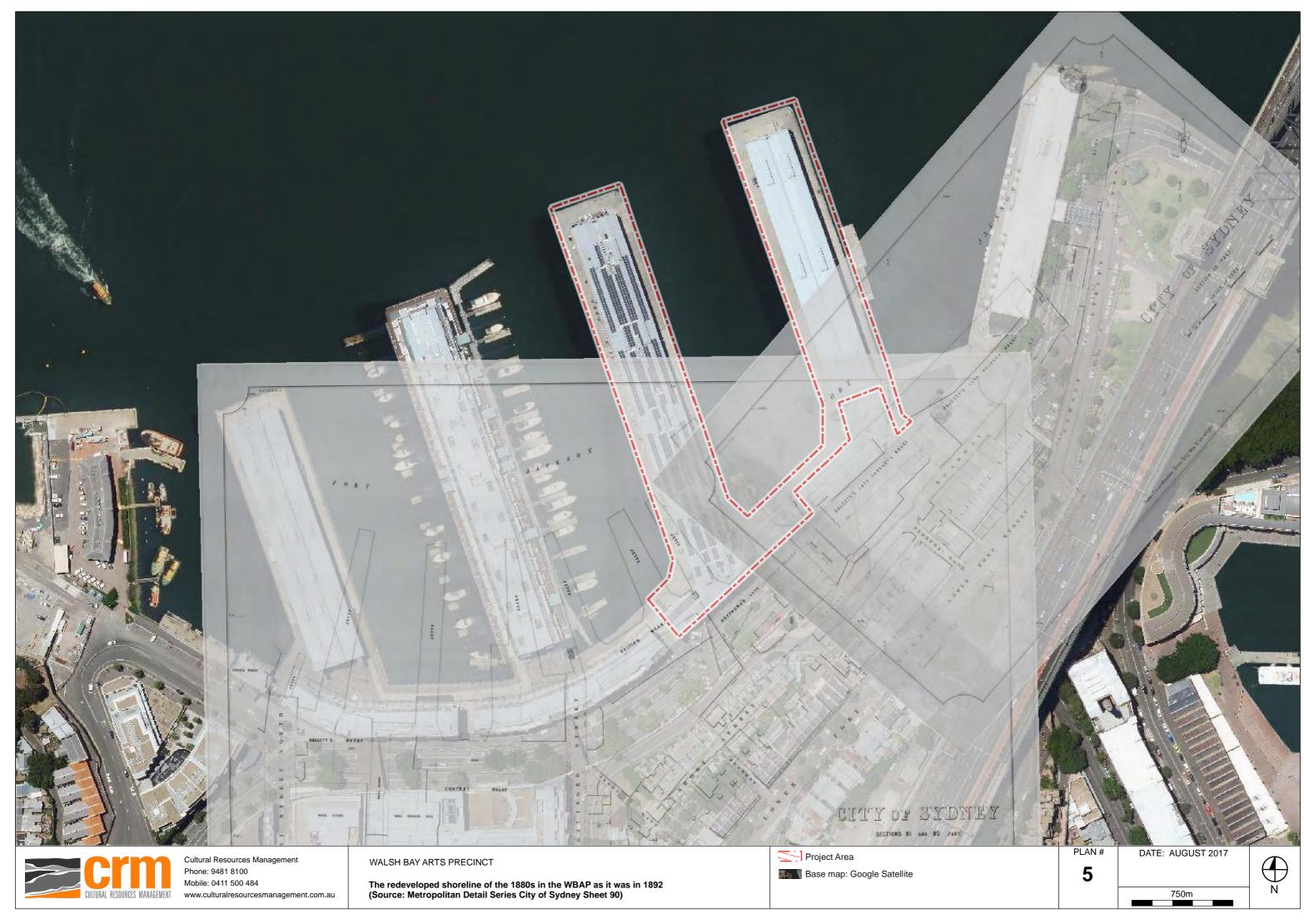




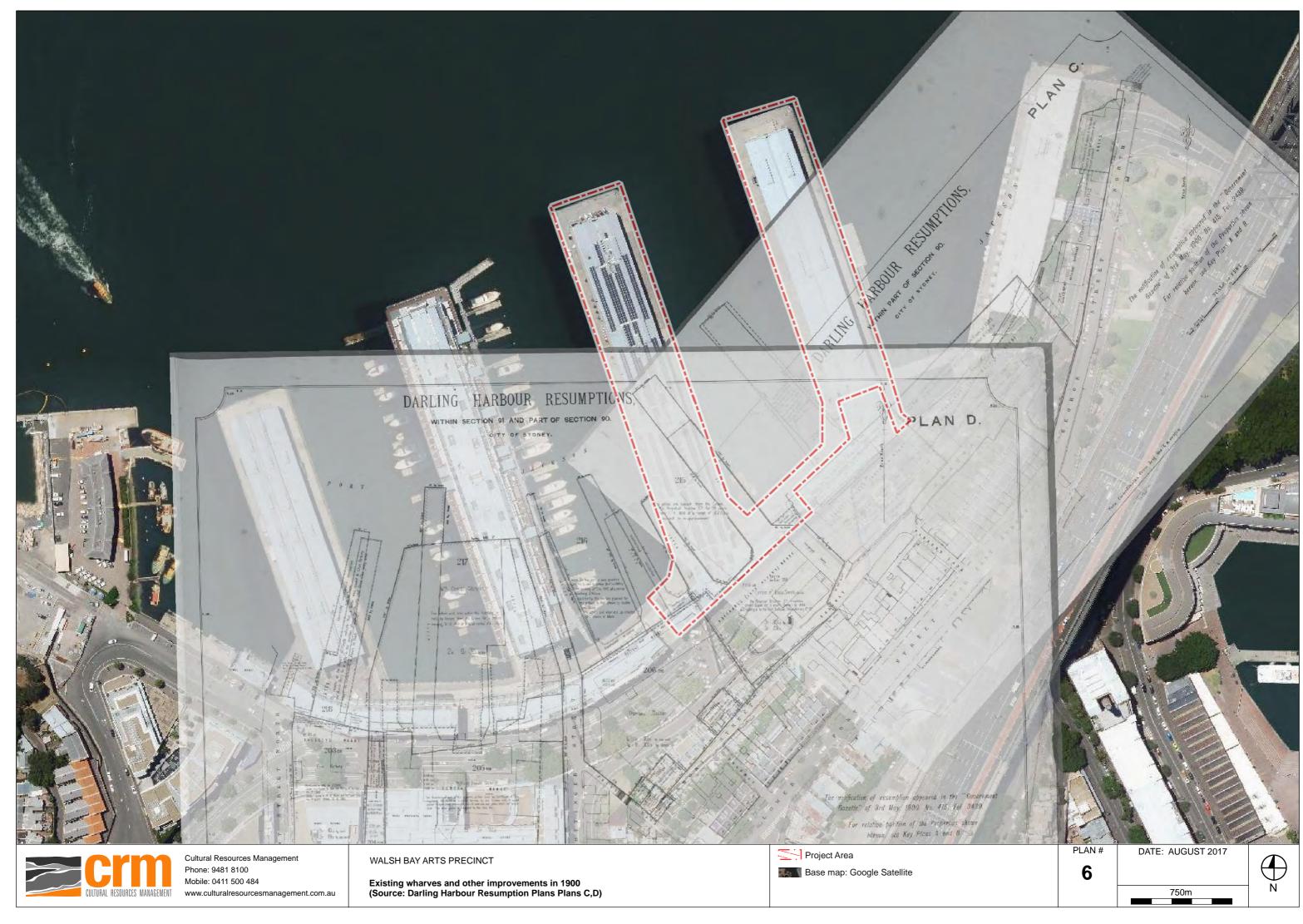








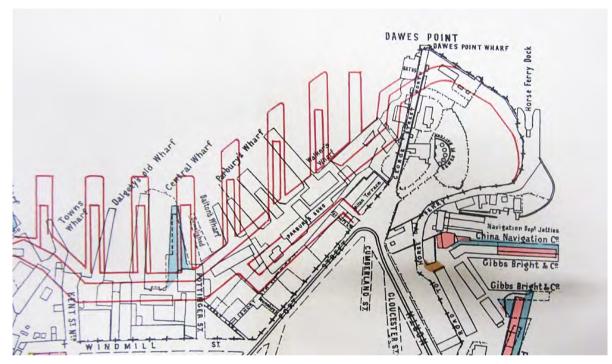






numerous privately constructed wharves and jetties that populated the water front at that time. The Engineer in Chief of the Trust stated in 1911:

"It must be remembered that prior to the formation of the Harbour Trust a large proportion of the wharves and jetties were owned and had been constructed by private companies to suit their individual requirements without system and without regard to future expansions. Most of these jetties had been in existence for many years and have been constructed to suit the small class of vessels then trading to Sydney. These narrow jetties few of which exceed 300 feet in length and with about 80 feet to 90 feet waterways between them were found quite unsuitable for the larger ships to berth or discharge at. In order to afford some immediate relief from this state of things it became necessary to practically reconstruct the whole of the wharfage between Millers Point and the Head of Darling Harbour^{*41}.



Detail from a plan of 1906 showing the proposed new waterfront (red) in relation to the existing wharves, buildings and street pattern (Source: SHT Annual Report 1906)

The problems involved in reconstructing the bay area were enormous particularly in the area of the present study area.

"The deep water between Millers and Dawes Points will make the construction of the great jetties there comparatively costly. In that locality, as is often the case, deep water is backed up by high land and steep grades on the approaches. During recent years the pull up to Windmill and Lower Fort Street, so severe on the horse teams, has been assisted by hydraulic lifts... Under the improvements these will be superseded by a new low level road between Millers Point and Dawes Point which will not only be

⁴¹ H.D. Walsh "Notes on Harbour Engineering" *Journal and Proceedings of the Sydney University Engineering Society* 1911 Volume Xv1, 76-79

a vast improvement to the national wharves but will make a radical alteration in the map of the northern end of Sydney⁴².

Several schemes were considered before the final plan was selected of five finger wharves, two longshore wharves, a low level and upper level roadway.

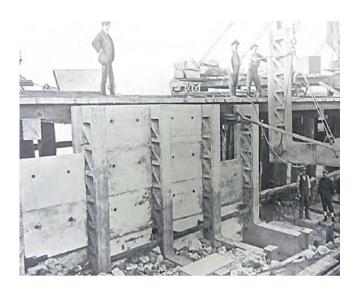


Detail from an SHT drawing showing the completed vision of the new wharfage around Dawes Point and Millers Point (*Source: SHT Annual Report 1913*)

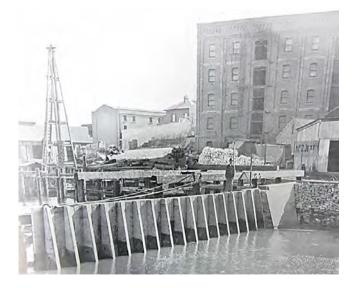
5.3 Beginning with New Technology

The work commenced in 1907 west of the project area close to Moore's Wharf. Here a new wharf was constructed for Tyser's. The work encompassed new technologies that were to be employed throughout the redevelopment area; trestle walls and reinforced concrete walls were constructed with prefabricated elements.

⁴² Norman Selfe "The Quays, Wharves and Shipping of Port Jackson Past", Present and Prospective. *Minutes and Proceedings of the Engineering Association of NSW* Volume XX11, 119







Top and Middle: Reinforced concrete walls and prefabricated elements used in the construction of the new waterfront at Millers Point, here in the area of Moore's Wharf west of the project area (Source: SHT Annual Report 1907)

Bottom: Reinforced trestle wall under construction at Millers Point in 1909 (*Source: SHT Annual Report* 1909)

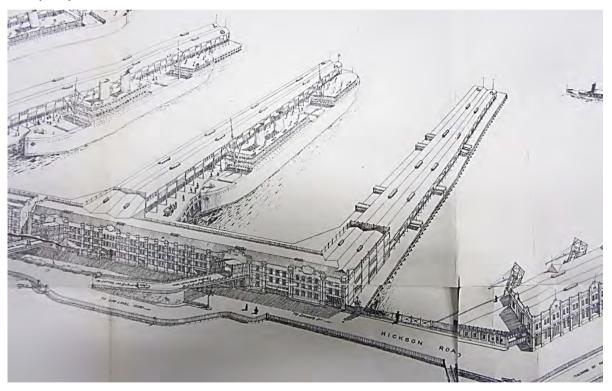
5.4 The Impact of the War

The programme spanned the full period of conflict of World War One and this had a substantial impact on the work in its later stages. In 1919 these impacts were described:

"The effect of the war on prices and costs has been, and still is, a matter for serious concern. There does not at present appear to be any prospect of lower prices and therefore the costs of construction must be expected to continue at what, before the war, would have been looked on as abnormally high rates. Not only have building materials been costly but they have also been scarce and in some cases out of the market. Timber for wharf construction in particular has been difficult to get and a very great delay has been caused thereby on some of the works. Blue metal and tar for road-making have been slow in coming forward, some of the blue metal orders issued over two years ago not yet having been delivered. Toward the end of the financial year orders for tar were over three months in receiving attention"⁴³

The work was completed in 1922. The SHT Report of that year stated that, "the jetties at Walsh Bay are the modern type, up to 700 feet in length each and 130 feet in width with double decked sheds and depressed roadways on each floor and extensive shore accommodation for goods. The upper storeys of these jetties are reached by means of bridges across the main port roadway connecting them with the streets on the higher level of the city; thus advantage is taken of the steepness of the shore to practically double the capacity of the wharves"⁴⁴.

It was in this period that Walsh Bay finally acquired its name; H.D. Walsh was the Engineer in Chief of the Sydney Harbour Trust.



This was a drawing of the work in progress in 1918 showing Pier 2/3, Wharf 4/5 and part of Pier 1 on the right (Source: SHT Annual Report 1918)

⁴³ Annual Report of the SHT: 1919

⁴⁴ SHT Commissioners (1922), Port of Sydney Official Handbook: 27

5.5 Pier One

The earliest work undertaken as part of the new improvements close to the project area was the construction of Pier One. This was commenced in 1910^{45} . It had been largely completed by 1913. The sea wall from this berth was extended to No 2 Berth in 1913. One of its earliest uses was to allow the Orient Steam Navigation Company to berth its mail steamers⁴⁶.



New No. 1 berth at Millers Point at completion (Source: SHT Annual Report 1913)

5.6 Pier 2/3

5.6.1 Demolition and Commencement

The earliest works for the construction of Pier 2/3 are recorded in 1913. In this year it was noted that "considerable progress has been made with the new jetty known as No. 3 Dawes Point which will have a length of 600 feet and a width of 130 feet with double-decked sheds and bridge connections over Hickson Road to Lower Fort Street"⁴⁷.

In 1915 however, it was stated that of No 2 and 3 berths Dawes to Millers Points, "the work of constructing this jetty which will be 627 feet long by 130 feet wide, with double decked jetty and shore sheds was commenced in October last. The western shore end of the old wharf known as Parbury's No 1 was demolished and sixteen squares of the high level section of the new cross wharf have been constructed. The remainder of the shore end of the old wharf has been demolished preparatory to commencing the construction of the shore end of the new jetty"⁴⁸.

48 Annual Report of the SHT 1915

⁴⁵ Annual Report of the Sydney Harbour Trust 1910; 05

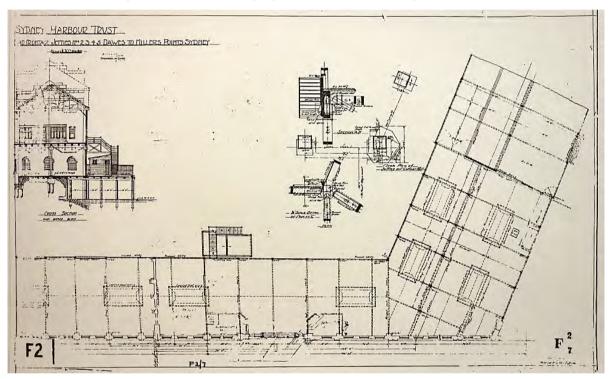
⁴⁶ Ibid: 1913

⁴⁷ Ibid

5.6.2 Alterations and Delays

In 1916 the jetties had nearly been carried out the full distance; "the work of constructing this jetty has continued, much dredging was necessary and all piles had to be potted in the rock. Sixty squares of piles, 256 squares of girders and head stocks and 28 squares of decking were fixed and the outer 56 feet of the old Parbury's Wharf was demolished"⁴⁹. As well in 1916 a commencement had been made on the shed on No 3 berth. "Owing to the difficulty and expense of obtaining the necessary steel for the shed and also for the overhead bridges the Commissioners have decided to erect in timber the first storey of the wharf sheds so as to bring the jetty into use at an earlier date"⁵⁰.

In 1917, "during the early part of the year, 180.5 squares of piles were driven, the main jetty girders laid to 125 feet out from shore and 125 squares of decking fixed. The whole of the land ties have been set and twenty-five piles driven for the shore shed foundations. In January last owing to the necessary reductions in expenditure this work was practically closed down only a few men being employed to complete the decking of the portion of the jetty where the piles already have been driven^{*51}.



Construction details and sections jetties 2,3, 4 and 5 (Source: MSB courtesy Cosmos Archaeology)

5.6.3 Shore sheds and Sea Walls

By 1918 work was proceeding at a better pace. It was stated that "substantial progress is being made with the new jetty Berths No 2 and No 3; the upper deck of which will be connected with New Pottinger Street by means of a bridge⁵². As well 221 squares of the jetty were completed making a total completed length of 280 feet long and 130 feet wide. The whole of the shore shed and sea wall bearing blocks and piles have been driven and the foundation wall on the Hickson Road alignment completed

⁴⁹ Annual Report of the SHT 1916

⁵⁰ Annual Report of the SHT 1916

⁵¹ Annual Report of the SHT 1917

⁵² Annual Report of the SHT; 1918

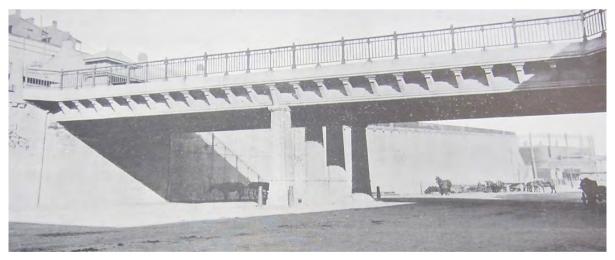
to the level entrance of No. 2 Berth. Thirty-four squares of shore shed floor and the ramp to No 3 Berth was completed"⁵³.

5.6.4 Piles and Ballast

The war fully impacted work on berths 2/3 although towards the middle of 1919 it was reported that work was resumed here after a long stoppage. 237 squares were added to it making the total completed length then 415 feet. Fifteen squares of shore shed floors were finished thus completing the whole of the shore shed foundations and floor. About 2877 tons of ballast were tipped under the centre of the jetty for the purpose of stiffening the piles in an area of very soft ground in the harbour⁵⁴. In this period the portion of the sea wall between No. 2 and No. 1 Walsh Bay was completed length 525 feet; *"great difficulty has been experienced in obtaining suitable piles for the work*⁵⁵. About 11,000 cubic yards of ballast were tipped under the jetty to strengthen the piles. The double storey sheds were said to be well in hand after the materials shortages had been overcome. About 225 feet of the jetty shed was completed and ready for use in this year⁵⁶. The wharf was effectively completed in 1922 and was leased; there are no reports of major works or alterations to any part of the buildings or jetty for forty years afterwards.

5.6.5 Deterioration

By the 1960s Pier 2/3 was deteriorating and required repairs. These works included the replacement of the timber apron with concrete and the renewal of some elements of the piles and deck in 1974. In this decade the wharves ceased to have a commercial function. By the 1980s the wharves were severely deteriorated and in danger of collapse. In 2003 more repairs were carried out to remove asbestos roofing, repaint and improve fire safety. Pier 2/3 remains the only wharf and shed that is in the original but repaired state.



New concrete bridge over Hickson Road from High Street to the upper decks of Pier 2/3 and No 4 (Source: SHT Annual Report 1913)

53 Ibid
54 Annual Report of the SHT: 1919
⁵⁵ Annual Report of the SHT 1920
⁵⁶ Ibid

5.7 Wharf 4/5

5.7.1 Difficulties

Work on Wharf 4/5 commenced at the same time as that at Pier 2/3 but the second wharf encountered more difficulties in respect of the existing structures and environmental issues. In 1913 it was reported that "the construction of this jetty providing these two berths has been pushed on but on account of the old jetty known as Parbury's No. 3 crossing the line of the new work, operations will be hampered until this old structure, still in use for shipping can be removed. The water in the vicinity being deep and this bed of the harbour being soft, piles 110 feet long consisting of two turpentine spars spliced together are used and longer piles will be needed as the jetty is pushed out from the shore. A portion of the longshore wharf, sea-wall and reclamation extending westerly have been completed"⁵⁷. In 1914 it was reported that "considerable work" had been done on wharf 4/5 "but the great depth of water hereabouts makes progress somewhat slow"⁵⁸.

Apart from the water depths other problems emerged in the construction of this wharf; there was difficulty in finding suitable piles for splicing. Very long lengths up to 130 feet were required; they were driven through what was described as ballast, clay, silt and sand to a depth of up to ninety feet.

5.7.2 Progress

By 1914 the high level section of the jetty had been completed 260 feet out from the reclamation and piles were driven out for a further distance of forty feet. The construction of the new wharf required the demolition of the old Parbury's No 2 Wharf and the shed on that wharf was removed to the new jetty. The low level section of the jetty was commenced in October 1913 and in 1914 it had been carried out 160 feet and the piles and other substructures an additional eighty feet. The cross wharf had been completed on the western side and up to 80 feet on the eastern side. The sea wall at the back of the cross wharf was said to be well advanced in 1914⁵⁹.

In 1915 it was reported that "steady progress was made with the construction of this jetty during the greater part of the year. In March last operations were temporarily suspended to allow the blanketing of ballast placed on the bed of the harbour time to settle. The unstable nature of the bed of the harbour at this site (has been discussed several times). The jetty has now been completed for a length of 380 feet from the reclamation line and has been used for shipping purposes for some time past"⁶⁰.

5.7.3 The Shore-shed

In 1916 "on the shore end a large amount of work has been done in connection with the shed foundations, all the piles are now in place and most of the sills and joists. The foundations for the wall fronting Hickson Road are for the most part of solid concrete the rock at this place being well above low water level"⁶¹.

In 1917 the work on this wharf was practically closed down because of shortage of funds; "*no* permanent construction was done on the jetty proper but the whole of the shore shed foundation piles, including 127 squares of headstocks, have been completed and 875 cubic yards of concrete for the main front wall have been set. The ramp approach to No 5 berth and the low level right of way between

⁵⁷ Annual Report of the SHT 1913

⁵⁸ Annual Report SHT 1914

⁵⁹ Ibid

⁶⁰ Annual Report of the SHT 1915

⁶¹ Annual Report of the SHT 1916

No 5 and No 6 have been completed^{**62}. Further work was required to demolish more of the old Parbury Wharf in order to widen the entrance to No 4⁶³. Timber had been ordered but work on the sheds had not commenced at this time. In 1918 the whole of the shore shed foundations were completed and also the rat-proofing of the floor of the high section of shed. "*Considerable progress was made in the erection of the brick front facing Hickson Road*^{*64}.

5.7.4 Temporary Depot

Despite not being complete Wharf 4/5 was in use as an ore depot in 1917⁶⁵. Alterations were carried out for the formation of a temporary ore depot for the Imperial authorities and Birt and Company used it for that purpose. The work required fenders set on both sides of the unfinished end of the wharf to protect it and bins were constructed on the eastern side to hold the ore⁶⁶.

5.7.5 Solving Problems and Completion

The war also effected construction of Wharf 4/5; in 1919 it was reported that no extension had been made to the jetty in this year. 2600 tons of ballast were tipped under a portion of the jetty that had settled because of the soft ground in the harbour at this point⁶⁷.

The year 1920 was characterised by materials shortages and rectifying faults in the structure. In the latter part of 1920 work commenced on raising the subsided portion of the jetty; an area of about 120 x 90 feet of the high level portion was raised to the correct height. 3000 cubic yards of ballast was tipped under the centre of the jetty to stiffen the piles⁶⁸. In 1920 another 170 feet were added and the buildings were described as "*practically completed and ready for use*"⁶⁹. The wharf was effectively completed in 1922.

5.7.6 Remodelling and Adaptation

Wharf 4/5 had another period of work undertaken in 1938. The work of remodelling was described in that year and encompassed the following:

- lowering of the raised portion of the upper floor;
- raising of the wharf deck of No 4 to bring it up the same level as No 5
- widening of the lower shed by 20 feet
- the provision of a platform, together with five new steel gantries on the western side of the upper floor
- relegating the elevators, dead houses, offices and sanitary accommodation to exterior or end positions.

"The alterations when completed will enable more effective use to be made of the upper and lower floors, both of which will have uninterrupted cargo space of 612 feet x 80 feet from end to end; will

⁶² Annual Report of the SHT 1917

⁶³ Ibid

⁶⁴ Annual Report of the SHT 1918

⁶⁵ Annual Report of the SHT 1917

⁶⁶ Ibid

⁶⁷ Annual Report of the SHT 1919

⁶⁸ Annual Report of the SHT 1920

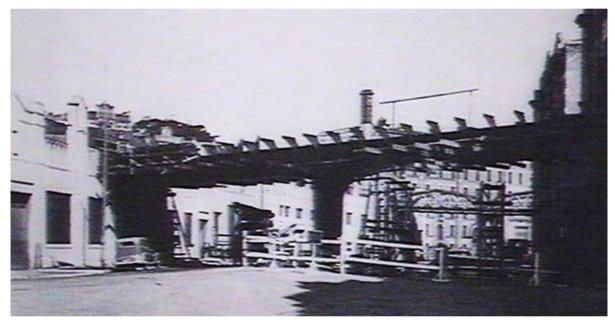
⁶⁹ Ibid

permit vessels being berthed and worked on either side of the jetty and will with the provision of adequate lifting appliances facilitate the handling of cargo"⁷⁰.

The work continued into 1939; the new cargo handling appliances were described then as:

- No 4 wharf side: seven wooden gantries
- No 5 wharf side: eight steel gantries
- Upper floor of shed: six 15cwt bridge cranes
- Lower floor of shed: one 5-tonne electric travelling hoist, one 3-tonne electric travelling hoist and one 3-tonne bridge crane⁷¹

The work of remodelling was completed in 1940. As part of the work the wooden bridge spanning Hickson Road and leading to the upper floor of the shed was demolished and replaced with a new and wider bridge constructed in steel with a concrete deck⁷². In 1984 Wharf 4/5 was adapted for new use as the Wharf Theatre and Restaurant. The successful adaptation of this building won two awards for excellence.



Constructing the new bridge to Wharf 4/5 in the 1930s (Source: Government Printer 1-19648)

⁷⁰ Annual Report of the SHT 1938

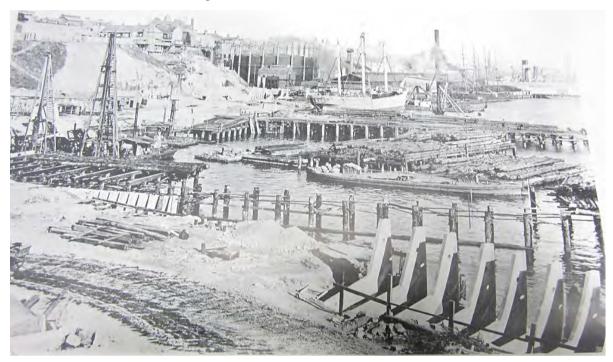
⁷¹ Annual report of the SHT 1939

⁷² Annual Report of the SHT 1940

5.8 Hickson Road

5.8.1 Excavation

An integral part of the new work was the construction of a road that would connect the new wharves at Darling Harbour with those at Millers Point and Dawes Point. The scheme required demolition of existing buildings and substantial excavation back into the face of the sandstone cliffs that bounded this waterfront. Work on Hickson Road commenced in 1909⁷³. The excavation commenced close to the gas works on Darling Harbour; the sandstone rubble removed as part of the excavation was used as fill behind the trestle walls being built on the shore.



Excavation of the foreshore for the new road, here a view of these works and the construction of new wharves on the western side of Darling Harbour near the Gas Works in 1909 (*Source: SHT Annual Report 1909*)

In 1913 it was reported that the section of the road from Dawes to Millers Point was making good progress: "the excavation of the rock necessary to give the width of the roadway has been completed as far as Parbury's Bond Store. The total amount excavated in the year amounted to 14,500 cubic yards of which 1,532 cubic yards has been taken out as dimension stone. The retaining wall has been completed up to Milton-terrace with the exception of the coping and the wall has been continued around the back of Milton-terrace for a distance of 70-feet"⁷⁴.

By mid-1914 the road from Dawes Point to Millers Point had been completed as far as the Parbury Wharf within the project area in addition to a section at the western end near Wharf 8/9. "*The excavation of rock necessary to form the road between the two points has been effected. Some of this rock has been taken out as dimension stone and used in the construction of retaining walls at Woolloomooloo*"⁷⁵.

⁷³ Annual Report of the Sydney Harbour Trust Commissioners 1909; 21

⁷⁴ Annual Report of the SHT 1913

⁷⁵ Annual Report of the SHT 1914

At the same time the construction of the new deviation to Pottinger Street to meet Hickson Road was in progress; 4,400 cubic yards of rock had been removed in three months⁷⁶.



View west along Hickson Road showing the new bridge that spanned what was described as "deep rock cutting" through Millers Point. Wharf 8/9 is in the background and in the foreground can be seen some of the sandstone that has been extracted as dimension stone (*Source: SHT Annual Report 1913*)

5.8.2 First Use

The war that began in 1914 had an effect on several aspects of the construction programme but the road works appear to have been the least impacted; in 1915 traffic was then using Hickson Road between Dawes Point and the Gas Works on Darling Harbour⁷⁷. In 1915 the section of Hickson Road from Dawes to Millers Point with the exception of a small portion at the New Pottinger Street deviation was complete and opened for traffic⁷⁸.

5.8.3 New Pottinger Street

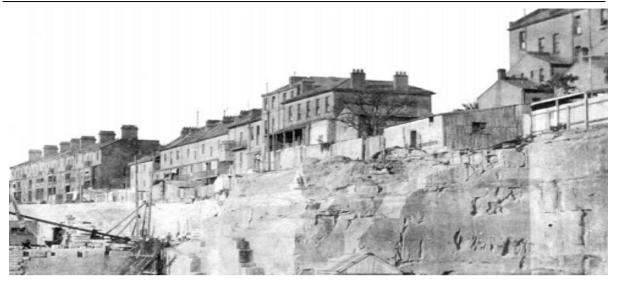
Considerable work was completed on New Pottinger Street in 1916. The rock excavation for the road and store were completed with the removal of 24,460 cubic yards of stone. "*The retaining wall fronting Hickson Road and the bridge abutments have been completed and the retaining walls on each side at the bottom end of the roadway are well in hand. The kerbing, guttering and pathway are formed as far as the site for the reinforced concrete viaduct, preparations for the construction of which are well in hand.*"⁷⁹.

⁷⁶ Ibid

⁷⁷ Annual Report SHT 1915

⁷⁸ Ibid

⁷⁹ Annual Report of the SHT 1916



The extent of excavation of the existing landform required to create the new streets of Hickson Road and New Pottinger Street is demonstrated in this image (*Source: GPO collection reproduced in Fitzgerald and Keating (1991), Millers Point the Urban Village*)



The junction of New Pottinger Street and Hickson Road in the course of construction in 1916 (*Source: SHT Annual report 1916*)

5.8.4 Completion

Hickson Road had almost been completed in all details by this date in the area of Dawes and Millers Point. In 1916 all that remained to finish was the kerbing and guttering opposite berths 4-7 and the completion of the retaining wall behind Milton-terrace. The unformed section of the road next to New Pottinger Road was also completed at this time⁸⁰. In 1917 the portion of Hickson Road in front of Pier 2/3 was ballasted, metalled and formed and the kerbing was laid in front of Wharf 4/5. On New Pottinger

80 Ibid