

Godden Mackay Logan

Heritage Consultants

**Barangaroo**



# Barangaroo Central Waterfront Promenade and Interim Public Domain Archaeological Assessment

Report prepared for Boulderstone  
October 2012

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## Report Register

The following report register documents the development and issue of the report entitled Barangaroo Central Waterfront Promenade and Interim Public Domain—Archaeological Assessment, undertaken by Godden Mackay Logan Pty Ltd in accordance with its quality management system. Godden Mackay Logan operates under a quality management system which has been certified as complying with the Australian/New Zealand Standard for quality management systems AS/NZS ISO 9001:2008.

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## Executive Summary

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### Background

- Godden Mackay Logan Pty Ltd (GML) has been engaged by Boulderstone Pty Ltd to prepare an Archaeological Assessment of the Barangaroo Central Waterfront Promenade and Interim Public Domain.
- This report assesses the study area's historical and Aboriginal archaeological potential, and includes recommendations for the management and mitigation of potential historical and Aboriginal archaeological impacts as part of the proposed redevelopment of the site.
- This report has been prepared in response to the Director General's Environmental Assessment Requirements (DGRs) for the Barangaroo Central Waterfront Promenade and Interim Public Domain project, for inclusion in the Environmental Impact Statement (EIS) as part of the State Significant Development Application (SSDA) for the project.

### Aboriginal Archaeology

- The study area contains no previously identified Aboriginal sites or places.
- Two Aboriginal sites are recorded to the north of the study area, within the Barangaroo Headland Park precinct (one of which is recorded as 'destroyed'), while two others are located on the sandstone ridge, now the location of the freeway onto the Harbour Bridge. Other recorded Aboriginal sites are located elsewhere in the CBD, some distance from the current study area and within different landforms to those surrounding the current study area.
- Barangaroo Central is assessed as having no to very low potential to contain in situ Aboriginal archaeological evidence.
- Owing to the natural topography of the foreshore, much of the study area would have been inaccessible to Aboriginal people, and any evidence of Aboriginal use of the area is likely to have been disturbed or removed by subsequent historical use and development of the site.

### Historical Archaeology

- The Barangaroo Central precinct remained largely undeveloped throughout the nineteenth century and much of the study area now comprises reclaimed land.
- While the northern headland and the southern portion of the Barangaroo site were extensively developed from the early nineteenth century, the central portion remained relatively undeveloped until the 1860s, owing to the steep topography of this area. Maritime industry extended into this part of the site after this time.
- The study area has little or no potential to contain historical archaeological remains associated with late eighteenth or early-to-mid nineteenth century historical development and occupation of the site, as the study area remained undeveloped during this time.
- The northeastern part of the study area has moderate potential to contain historical archaeological evidence associated with the maritime-related development of the area during

the late nineteenth century. This evidence may include structural supports for wharves/jetties, remnant sea walls, and other infrastructure.

- Parts of the study area have moderate potential to contain historical archaeological evidence associated redevelopment of the area during the early-to-mid twentieth century. This evidence may include structural supports for wharves/jetties and associated infrastructure, as well as fill deposits introduced for progressive reclamation of the site. The study area may also include evidence about the impact of large-scale resumption, demolition, reclamation and redevelopment on remains of earlier development.
- Potential historical archaeological remains associated with late nineteenth century and early twentieth century maritime industrial development and operation of the site would be of Local significance with limited archaeological research potential.

### Archaeological Impact Assessment

- On the basis of the assessed archaeological potential of the Barangaroo Central site, and the nature and extent of proposed works, the Barangaroo Central Waterfront Promenade and Interim Public Domain project, including proposed events and activities within the lawn area, would be unlikely to result in any archaeological impacts (Aboriginal or historical).

### Recommendations

- The Barangaroo Central Waterfront Promenade and Interim Public Domain could commence without the need for further archaeological assessment or physical archaeological investigation of the site.
- Any proposed excavation in the easternmost portion of the Barangaroo Central precinct should be limited to less than approximately 2m below the existing ground surface in that area, to minimise any potential for disturbance of archaeological remains as part of the Barangaroo Central Waterfront Promenade and Interim Public Domain project.
- In the event that any unexpected historical archaeological remains were to be discovered at the site, works in the affected area/s should cease and the Heritage Branch should be notified under Section 146 of the *Heritage Act 1977* (NSW). Further assessment or documentation may be required before site works could recommence in the affected area/s.
- In the event that any Aboriginal archaeological evidence or objects were to be discovered at the site, all works in the affected area/s must cease and OEH must be notified under Section 91 of the *National Parks and Wildlife Act 1974* (NSW) and a suitable procedure negotiated. Further assessment or documentation may be required before site works could recommence in the affected area/s.
- If any archaeological remains are discovered at the site, opportunities for interpretation of these remains should be considered as part of the current Barangaroo Central Waterfront Promenade and Interim Public Domain project, future redevelopment of the Public Domain area, and/or redevelopment of the broader Barangaroo site.
- Consultation with Aboriginal groups is being undertaken as part of the broader Barangaroo development. This archaeological report may assist ongoing consultation with Aboriginal stakeholder groups as part of the consultation process.

## 1.0 Introduction

### 1.1 Project Initiation and Background

Godden Mackay Logan Pty Ltd (GML) has been engaged by Boulderstone Pty Ltd to prepare an Archaeological Assessment of the Barangaroo Central Waterfront Promenade and Interim Public Domain.

This assessment addresses both historical and Aboriginal archaeological issues and includes a detailed historical archaeological assessment and an Aboriginal 'Due Diligence' assessment for the Barangaroo Central Waterfront Promenade and Interim Public Domain project. This report assesses the study area's archaeological potential, and includes recommendations for the management and mitigation of potential historical and Aboriginal archaeological impacts as part of the proposed redevelopment of the site.

This report has been prepared in response to the Director General's Environmental Assessment Requirements (DGRs) for the Barangaroo Central Waterfront Promenade and Interim Public Domain project, for inclusion in the Environmental Impact Statement (EIS) as part of the State Significant Development Application for the project.

### 1.2 Study Area

The Barangaroo precinct is located on the northwestern edge of the Sydney CBD on the western side of Hickson Road between Darling Harbour (to the south), Millers Point and The Rocks to the east, and Walsh Bay to the northeast. The Barangaroo Central site is located in the central portion of the Barangaroo precinct (Figure 1.1). The Barangaroo Central Waterfront Promenade and Interim Public Domain (the study area of this report) is bounded by the proposed Northern Cove and Headland Park to the north, the harbour to the west, Hickson Road to the east, and the Lend Lease Temporary Construction Staging Area to the south (Figure 1.2).

The Barangaroo Central Waterfront Promenade and Interim Public Domain comprises two areas: the Barangaroo Central Waterfront Promenade, a zone approximately 30m wide which runs along western and northern edges of the Barangaroo Central precinct; and the Barangaroo Central Interim Public Domain, which covers the remainder of the Barangaroo Central precinct north of the temporary construction staging area (Figure 1.3).

The development of the Central Waterfront Promenade and Interim Public Domain is the first stage in the development of the Barangaroo Central site.

### 1.3 Statutory Context

#### 1.3.1 State Significant Development

The Barangaroo Central Waterfront Promenade and Interim Public Domain Development Application will be assessed under the section 89C State Significant Development (SSD) provisions of the *Environmental Planning and Assessment Act 1979* (NSW) (EP&A Act) because development at Barangaroo is identified as an individual precinct regarded as important by the NSW Government in Schedule 2 of the State Environmental Planning Policy (State and Regional Development) 2011.

Part 89C Approval replaces the approval processes that would usually be required under Part 3 or other Parts of the EP&A Act and the Minister for Planning becomes the consent authority for the

project. In relation to archaeological requirements, the SSD provisions approval effectively 'turn off' most of the provisions of the *Heritage Act 1977* (NSW) and the *National Parks and Wildlife Act 1974* (NSW) (NPW Act). However, the SSD provisions do not turn off Section 146 of the Heritage Act or Section 91 of the NPW Act. Both of these sections relate to the discovery of unexpected archaeological remains, and the need to notify the relevant agencies in the event of any such discoveries.

### 1.3.2 Barangaroo Central

The Barangaroo Central Waterfront Promenade and Interim Public Domain project is a State Significant Development Application (SSDA). The Director General's Environmental Assessment Requirements (DGRs) for the project (No. SSD 5374) were issued on 30 July 2012. The SSDA DGRs specify the following requirements for addressing heritage issues within the Barangaroo Central precinct:

#### 12. Heritage

- *Prepare an archaeological assessment of the likely impacts of the proposal on any Aboriginal cultural heritage, European cultural heritage and other archaeological items and outline proposed mitigation and conservation measures.*
- *Prepare an interpretation strategy that includes the provision for interpretation of any archaeological resources uncovered during the works.*

This Archaeological Assessment has been prepared in response to the first part of this clause. A separate Interpretation Strategy is also being prepared in response to the second part of this clause.

### 1.3.3 Barangaroo Concept Plan Approval

The Concept Plan for the Barangaroo project (Barangaroo, East Darling Harbour—MP06\_0162 MOD 3) was approved as a 'Major Project' under Part 3A of the EP&A Act on 11 November 2009. The Statement of Commitments for the Barangaroo Concept Plan included a number of clauses related to management of the site's historical archaeological resources (Clauses 60, 60A–C), including preparation of an Archaeological Assessment (Clause 60). An Archaeological Assessment and Management Plan (AAMP) was prepared by Austral Archaeology Pty Ltd in June 2010 for the Barangaroo Delivery Authority in response to this requirement.

The Concept Plan approval for the Barangaroo project included no specific requirements in relation to Aboriginal heritage.

## 1.4 Limitations

- This report includes a preliminary Aboriginal archaeological assessment only, in accordance with the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales* (13 September 2010), and does not comprise a full Aboriginal archaeological and cultural heritage assessment. No Aboriginal consultation has been undertaken in the preparation of this report.
- This report relies on historical research undertaken as part of the 'Barangaroo Archaeological Assessment and Management Plan' (AAMP), prepared by Austral Archaeology Pty Ltd for



Barangaroo Delivery Authority, June 2010. No additional historical research has been undertaken in the preparation of this report.

- This report relies on analysis of geotechnical information presented in the 2010 AAMP.

## **1.5 Authorship**

This report has been prepared by Anne Mackay, Senior Associate, and Diana Cowie, Consultant, with input from Angela So, Consultant. This report has been reviewed by Natalie Vinton, Archaeology Manager.

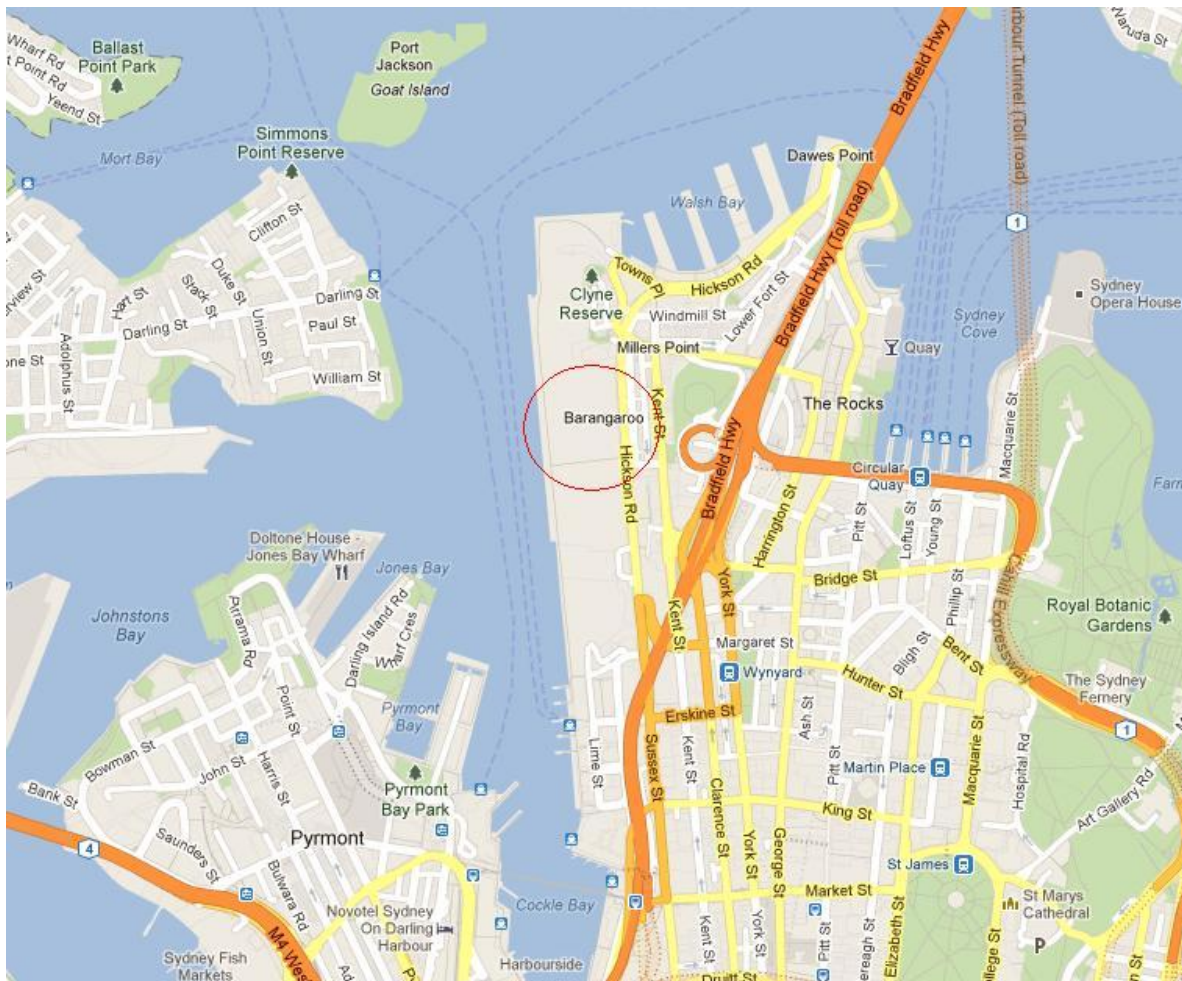
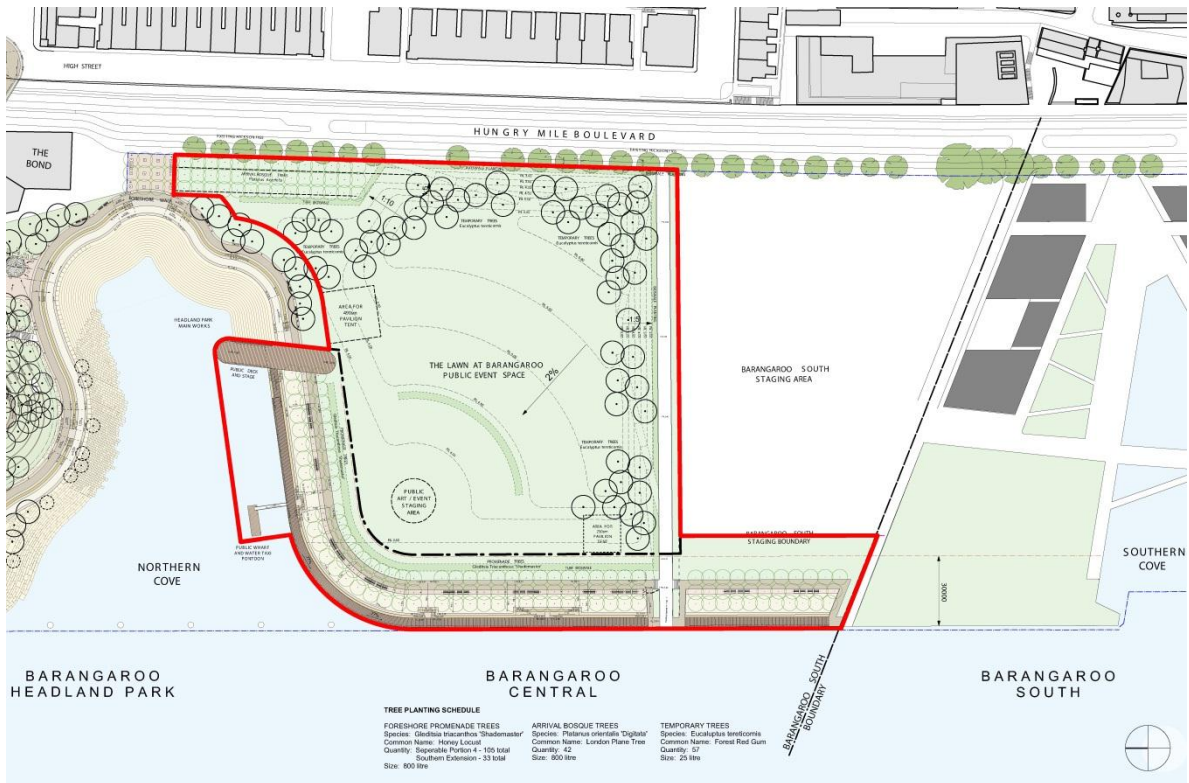


Figure 1.1 Site locality plan.





**Figure 1.2** Aerial photograph showing the Barangaroo site in context, with the boundary of the Barangaroo Central Waterfront Promenade and Interim Public Domain outlined in red. (Source: Google with GML additions)



**Figure 1.3** Plan showing details of the Barangaroo Central Waterfront Promenade and Interim Public Domain. (Source: PWP Landscape Architecture, extract from 'Tree Planting Plan', dated 17 September 2012)

## 2.0 Historical Summary

### 2.1 Introduction

The Barangaroo Archaeological Assessment and Management Plan (AAMP) prepared by Austral Archaeology in June 2010<sup>1</sup> included an extensive discussion of the historical development of the broader Barangaroo site. The historical outline section of the 2010 AAMP is included in full in Appendix A to this report.

This section presents a summary of the historical development and phasing of the broader Barangaroo site, and includes a discussion of the physical development of the Barangaroo Central precinct. This summary and discussion is based primarily on information provided in the 2010 AAMP. No additional historical research has been undertaken by GML in the preparation of this report.

This section presents a timeline of the historical development of the study area, with particular focus on the physical development of the site. This timeline is based on the historical research undertaken for 'Barangaroo Archaeological Assessment and Management Plan' (AAMP) prepared by Austral Archaeology Pty Ltd in June 2010. The historical background section from the 2010 AAMP is included in Appendix A to this report.

### 2.2 Summary of Historical Development—Broader Barangaroo Site

The historical development of the broader Barangaroo site is largely related to maritime industries, including wharves, shipbuilding, and associated commercial and industrial enterprises. The historical development of the broader Barangaroo site included the following phases:<sup>2</sup>

#### *Phase 1—Aboriginal occupation*

Aboriginal people occupied the foreshores of Sydney Harbour prior to the arrival of Europeans. The Aboriginal population migrated around the landscape to access seasonal resources. The harbour provided abundant fish resources and the shores of Darling Harbour were an important source of cockles, rock oyster and mud oysters as evidenced in European descriptions of piles of shell and fish bone along the harbour shores and inlets. Aboriginal people continued to live around the harbour following European occupation.

(Further discussion about the pre-Contact environment and Aboriginal use of the area is included in Section 5.0 of this report.)

#### *Phase 2—Private Ownership 1788–c1870*

The rugged topography initially discouraged settlement of Millers Point and Darling Harbour.<sup>3</sup> Private ownership and development within Millers Point began with the construction of three private windmills there c1800–1810.<sup>4</sup> There were a number of occupants across Millers Point during the first few decades of the nineteenth century, prior to the establishment of official grants or purchases in this area.<sup>5</sup>

While much of early Sydney was shaped by the colonial government, Millers Point was predominantly developed by private enterprise. From the 1830s, maritime and shipping industries developed around Millers Point and in Darling Harbour related to passenger transport, trade (import and export), cargo storage and shipbuilding.<sup>6</sup>



Numerous shipbuilders, ship owners, transporters, merchants and traders established their businesses in Cockle Bay during the early-to-mid nineteenth century. Many traded only briefly while others survived long-term, and the development of their enterprises had a major impact on the commercial, industrial and physical character of the precinct.<sup>7</sup>

The development around Millers Point was predominantly maritime-related, and included a number of small-scale industries related to maritime and shipping activities (eg boat builders, shipwrights, rope makers, anchor smiths and sail makers). The only large-scale industrial pursuit within the Barangaroo site was the Australian Gas Light Company (AGL), a privately-owned company that established gasworks at Darling Harbour in the 1830s.<sup>8</sup>

By 1870 most of the foreshore between Dawes Point and Darling Harbour had been modified by quarrying, reclamation or the construction of seawalls, and the area was almost entirely occupied by wharves, stores and commercial properties.<sup>9</sup>

### *Phase 3—Intensive Development and Decline c1870–1901*

The area around Millers Point and Darling Harbour was subject to major transformation during the late nineteenth century. Many of the facilities had become dilapidated by this time and changes in shipping technology rendered some of the wharf and jetty facilities unsuitable and in need of upgrading. Darling Harbour had also become polluted with rubbish, sewage and industrial waste.<sup>10</sup> A major program of government resumption and redevelopment commenced, which had a profound effect on the character and form of the area. Between 1880 and 1900, most of the wharves and other structures were demolished as part of the government renewal of the area.

### *Phase 4—Renewal 1902–2010*

The Sydney Harbour Trust (SHT) was established to control and manage the improvement and preservation of the Port of Sydney. SHT's responsibilities included demolition of old wharfage, land reclamation, construction of new port facilities, dredging operations and removal of shipwrecks.

The wharves around Millers Point were entirely removed and new finger wharfs were constructed to accommodate new large ship berths. Wharves in the southern part of the Barangaroo site were repaired and altered.

## **2.3 Summary of Historical Development—Barangaroo Central Precinct**

Most of the nineteenth century development within this part of the harbour was focused around Millers Point and Darling Harbour, to the north and south of the Barangaroo Central precinct. Most of the Barangaroo Central site was originally located below the water line, and the natural foreshore within the Barangaroo Central site was very steep. While the northern headland and the southern portion of the Barangaroo site was extensively developed from the early nineteenth century, the central portion remained relatively undeveloped until the 1860s, owing to the steep topography of this area. Maritime industry extended into this part of the site after this time. This development corresponds with the latter part of Phase 2 of the site's history (Private Ownership 1788–c1870).

John Cuthbert had bought waterfront land in Darling Harbour by 1849, and bought Munn's shipyard at Millers Point in 1856. By 1865, Cuthbert's shipyard had extended into the area of the Barangaroo Central precinct, including construction of some wharf infrastructure in this area.

Figure 2.8 shows a photograph of Cuthbert's shipyard in 1873. The photo is looking north and all of the wharves, sheds and other facilities shown in this photo were probably located to the north of the

study area, in the Barangaroo Headland Park precinct. The foreground of this photo may show part of the Barangaroo Central precinct. The foreshore is retained behind a stone retaining wall (noted in the AAMP photo caption as being about three metres high).<sup>11</sup> Overlays of historical plans of this area suggest that the eastern boundary of the Barangaroo Central precinct was located approximately in alignment with this retaining wall. The partially visible ship's mast indicates that wharf or jetty facilities would have been located adjacent of the base of the wall at the water's edge.

By 1865, Cuthbert's enterprise extended from Millers Point to Darling Harbour. It is noted in the AAMP that 'Cuthbert's yard was one of the most extensive in the colony employing upward of 250 men at the end of the 1860s'.<sup>12</sup> Cuthbert's facilities and operations included 'a large jetty and yard comprising blacksmiths' shops, carpenters' sheds, sail lofts, a steam saw mill and large store of timbers, most sourced from the Sydney region'.<sup>13</sup> It is likely that most of these elements were located to the north or south of the study area, however, as historical plans of the area indicate that study area remained largely unclaimed during Cuthbert's ownership. Structural elements within the study area during this period were generally limited to wharf/jetty structures constructed over the water. These appear to have been primarily located in the northeastern portion of the study area. Cuthbert's shipyard closed following Cuthbert's death in 1874.

The late nineteenth century was characterised by phases of reconstruction of wharves and storage facilities. The large-scale resumption and demolition across the area in the late nineteenth century had a major impact on facilities within the Barangaroo Central precinct. Cuthbert's shipyard was the first large land parcel to be redeveloped. Cuthbert's land was acquired by TA Dibbs, and was entirely redeveloped for large scale wharfage and goods storage.<sup>14</sup> Dibb's Wharf was then demolished in turn to make way for further redevelopment and improvement.<sup>15</sup> This period of demolition and change corresponds with Phase 3 of the site's historical development (Intensive Development and Decline c1870–1901). Large finger wharves were constructed in this area c1912 (Wharves 2–4 extended to within the study area). The area continued to be redeveloped throughout the twentieth century as shipping technology evolved. Large container shipping became more prevalent during the post-war period and the finger wharves became redundant. By the 1950s, progressive infilling between the finger wharves created a large wharf to service container ships.

Hickson Road was constructed c1912. These works included excavation of bedrock along the road alignment and major modification of the shoreline along the Barangaroo Central precinct.<sup>16</sup>

These periods of major redevelopment correspond with Phase 4 of the site's history (Renewal 1902–2010).

Figure 2.9 shows a photograph looking south across the study area, showing construction of the finger wharves in the study area c1912. This photo also shows excavation of the steep foreshore adjacent to the study area in the progress, as part of the construction of Hickson Road.<sup>17</sup>

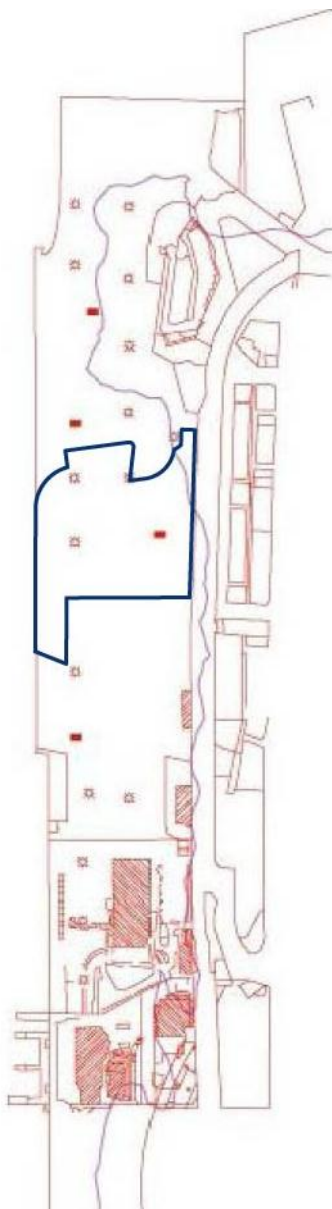
The Patrick Corporation operated within the site from 1996 to 2006, when the existing facilities was considered no longer viable for large super freighters. Since 2006, all of the Patrick Corporation structures have been removed from the site. An interim cruise passenger terminal was established within the Barangaroo Central site in 2010, as well as site sheds and other temporary facilities associated with the current phase of redevelopment.

## 2.4 Historical Overlays

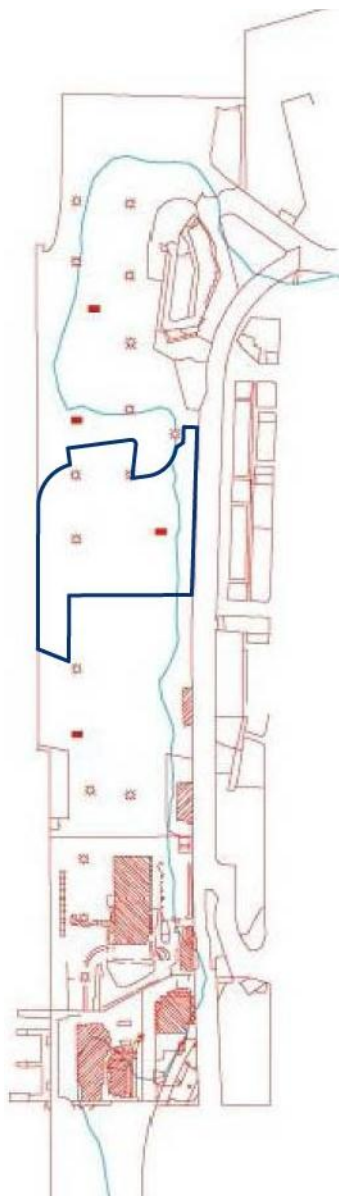
The historical overlays included in Figures 2.1–2.7 have been reproduced from the 2010 AAMP.<sup>18</sup> The Barangaroo Central study area has been overlaid on these figures by GML. These figures have been reproduced here to provide a visual summary of the physical development of the study area, and to demonstrate how the majority of the site now comprises reclaimed land. More detailed historical overlays prepared for the 2010 AAMP are included at the end of Appendix A.

The historical overlays of plans from 1788 and 1807 (Figures 2.1 and 2.2) show parts of the foreshore extending into the study area. It should be noted, however, that these very early plans of Sydney are considered relatively spatially inaccurate and provide indicative information about the landforms and site elements only. Later historical plans are much more accurate and show the original shoreline in relation to the current site boundary. Historical overlays of plans from 1831 and 1843 (Figures 2.3 and 2.4) show the study area to be entirely below the water line.

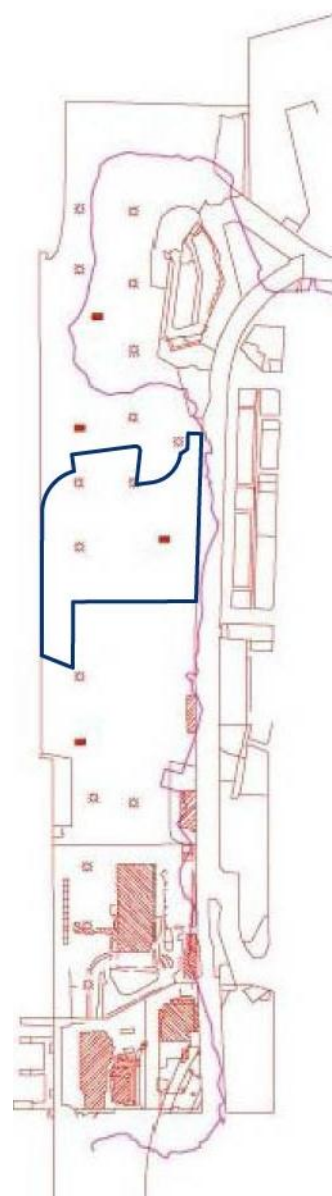




**Figure 2.1** Historical overlay 1788.<sup>19</sup>

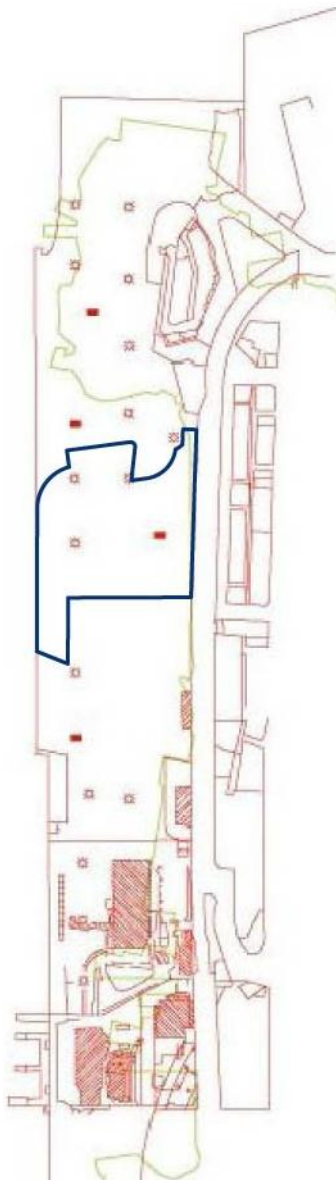


**Figure 2.2** Historical overlay 1807.<sup>20</sup>

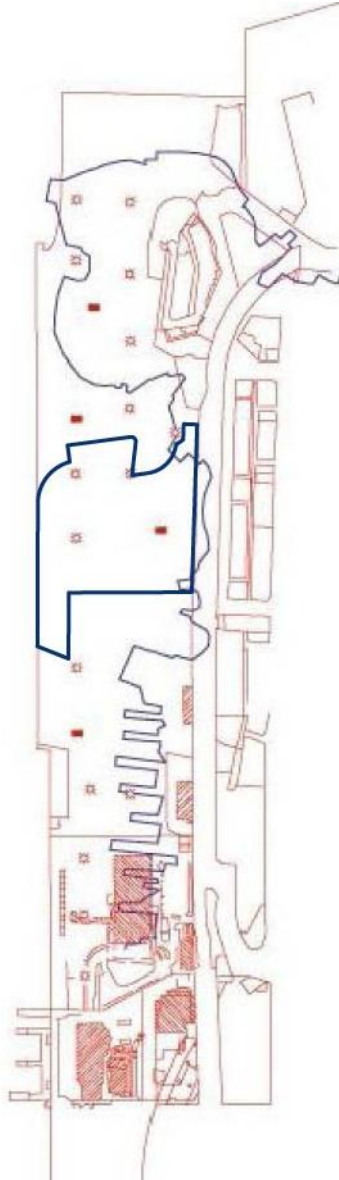


**Figure 2.3** Historical overlay 1831.<sup>21</sup>

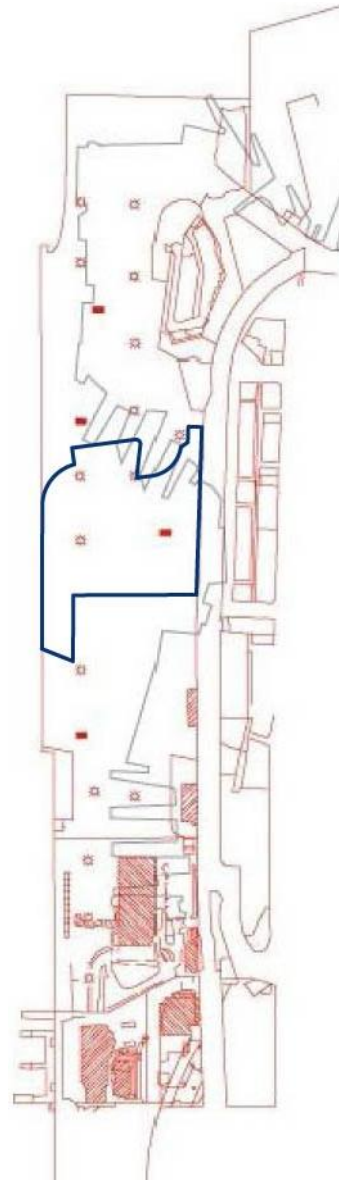
— The dark blue line indicates the boundary of the Barangaroo Central precinct



**Figure 2.4** Historical overlay 1843.<sup>22</sup>

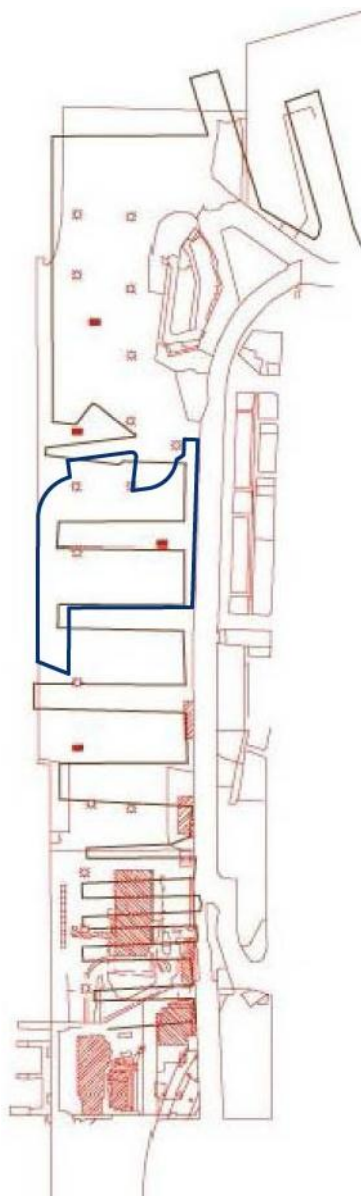


**Figure 2.5** Historical overlay 1870.<sup>23</sup>



**Figure 2.6** Historical overlay 1900.<sup>24</sup>

— The dark blue line indicates the boundary of the Barangaroo Central precinct

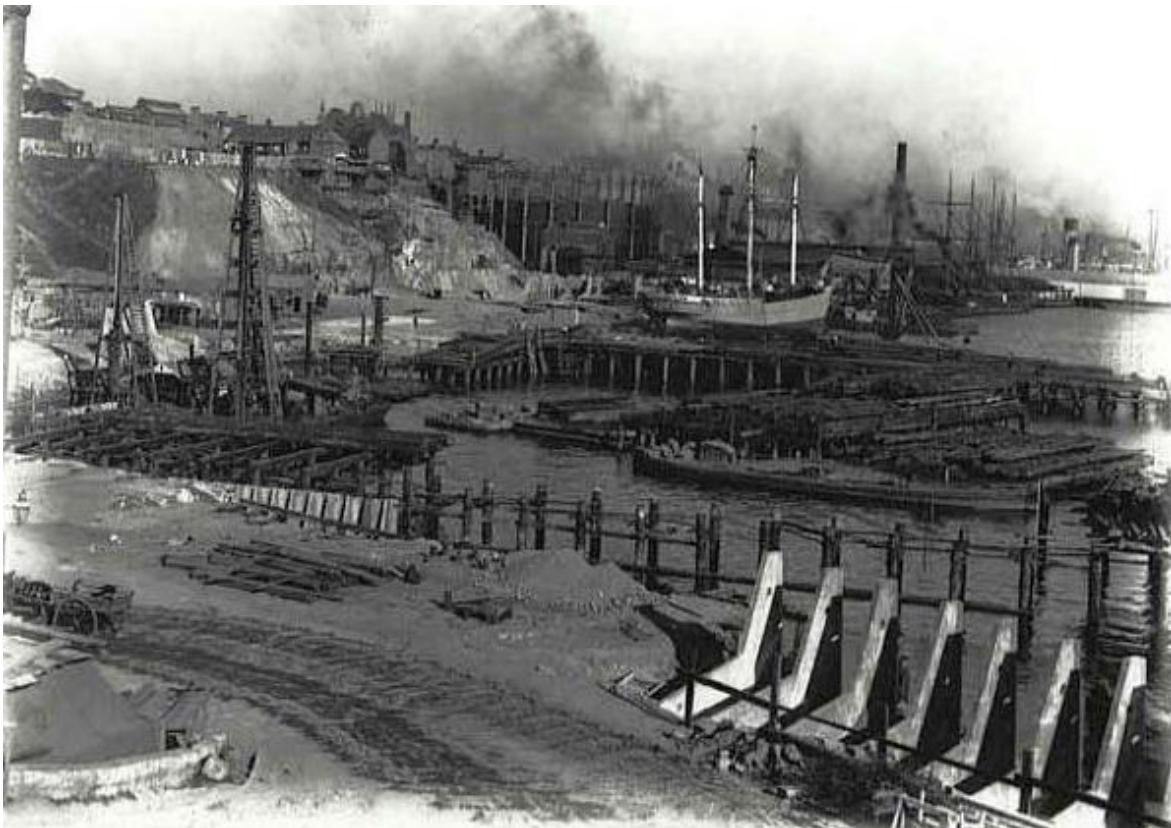


**Figure 2.7** Historical overlay 1930.<sup>25</sup>

— The dark blue line indicates the boundary of the Barangaroo Central precinct



**Figure 2.8** Photograph looking north showing Cuthbert's shipyard in 1873. All of the wharves, sheds and other facilities shown in this photo were probably located to the north of the study area, in the Barangaroo Headland Park precinct. The foreground of this photo may show part of the Barangaroo Central precinct. The foreshore is retained behind a stone retaining wall (noted in the AAMP photo caption as being about three metres high). (Source: Holterman Collection, Mitchell Library, reproduced from 2010 AAMP Figure 3.11)<sup>26</sup>



**Figure 2.9** Photograph looking south across the Barangaroo Central precinct c1912, showing the construction of finger wharves in progress. This photo also shows the excavation of the adjacent steep foreshore for the construction of Hickson Road in progress. (Source: State Records ao17-AO17000007, reproduced from 2010 AAMP Figure 3.25)<sup>27</sup>



## 2.5 Endnotes

- <sup>1</sup> Austral Archaeology Pty Ltd, Barangaroo Archaeological Assessment and Management Plan, prepared for Barangaroo Delivery Authority, June 2010, p.11–46.
- <sup>2</sup> These historical phases are based on the information provided in the 2010 AAMP.
- <sup>3</sup> Austral Archaeology AAMP, June 2010, p20.
- <sup>4</sup> Austral Archaeology AAMP, June 2010, p20.
- <sup>5</sup> Austral Archaeology AAMP, June 2010, p23–24.
- <sup>6</sup> Austral Archaeology AAMP, June 2010, p24.
- <sup>7</sup> Austral Archaeology AAMP, June 2010, p24.
- <sup>8</sup> Austral Archaeology AAMP, June 2010, p31.
- <sup>9</sup> Austral Archaeology AAMP, June 2010, p30.
- <sup>10</sup> Austral Archaeology AAMP, June 2010, p35.
- <sup>11</sup> Austral Archaeology AAMP, June 2010, Figure 3.11, p25.
- <sup>12</sup> Austral Archaeology AAMP, June 2010, p26.
- <sup>13</sup> Austral Archaeology AAMP, June 2010, p26.
- <sup>14</sup> Austral Archaeology AAMP, June 2010, p36.
- <sup>15</sup> Austral Archaeology AAMP, June 2010, p41.
- <sup>16</sup> Austral Archaeology AAMP, June 2010, p41–42.
- <sup>17</sup> Austral Archaeology AAMP, June 2010, p42.
- <sup>18</sup> Austral Archaeology AAMP, June 2010, p17, 20, 22, 32, 34, 37 and 44.
- <sup>19</sup> Austral Archaeology AAMP, June 2010, p17, with Barangaroo Central study area boundary added by GML.
- <sup>20</sup> Austral Archaeology AAMP, June 2010, p20, with Barangaroo Central study area boundary added by GML.
- <sup>21</sup> Austral Archaeology AAMP, June 2010, p22, with Barangaroo Central study area boundary added by GML.
- <sup>22</sup> Austral Archaeology AAMP, June 2010, p32, with Barangaroo Central study area boundary added by GML.
- <sup>23</sup> Austral Archaeology AAMP, June 2010, p34, with Barangaroo Central study area boundary added by GML.
- <sup>24</sup> Austral Archaeology AAMP, June 2010, p37, with Barangaroo Central study area boundary added by GML.
- <sup>25</sup> Austral Archaeology AAMP, June 2010, p44, with Barangaroo Central study area boundary added by GML.
- <sup>26</sup> Austral Archaeology AAMP, June 2010, Figure 3.11, p25.
- <sup>27</sup> Austral Archaeology AAMP, June 2010, Figure 3.25, p42.



## 3.0 Physical Analysis

### 3.1 Site Inspection

The study area was inspected by Diana Cowie of GML on 30 August 2012. The entire study area is covered by a flat concrete and bitumen deck that extends from Hickson Road on the east and the water's edge on the west. The concrete deck extends north and south of the Barangaroo Central study area boundary. The concrete deck survives from the former phase of the site's use as a shipping container wharf. Photographs taken during this inspection are included in Figures 3.1–3.4.

The site inspection was limited to the surface areas of the site. No inspection of areas beneath the concrete deck or any supporting structures were observed as part of this inspection.

All former buildings have been removed from the study area, and a number of temporary structures have been erected. The study area currently contains the temporary structures and infrastructure associated with the Maritime Security Zone and Barangaroo Wharf 5 Passenger Terminal, as well as Boulderstone site sheds. The western edge of the concrete deck also includes the Foreshore Walk, a public waterside thoroughfare that extends the length of the Barangaroo site.

### 3.2 Geotechnical Information

Geotechnical investigation of the Barangaroo precinct was undertaken by ERM in 2006. This discussion has been adapted from the results of the investigation presented in the 2010 Barangaroo AAMP.<sup>1</sup>

A total of 153 boreholes were drilled across the Barangaroo site, resulting in mapping of the geology, soils and fills of the site. The concrete deck that extends across the site is of varying thickness and sits above fill and alluvial/marine deposits. The fill material is variable, and with timber, stone, brick, concrete and steel encountered during drilling.

The fill is well compacted at the top but loose at the bottom. The fill directly overlies sandstone bedrock at the eastern end of the precinct but sits on marine sediments which overly the bedrock in the middle and western end of the precinct. The fill depth ranges from 1m to 3m along the eastern part of the site, adjacent to Hickson Road, and 15m to 30m across other parts of the site. The fill is generally deeper with distance from the original shoreline and between the cove at the western end, and the headland to the east. The groundwater level was recorded as between 0.3m and 0.65m below the deck level.

The investigation found that the natural topography of the precinct formed a bay with the headland at the north and the deepest sandstone sea floor (at 28m) on the south western part of the precinct. The natural topography had been cut back along the eastern portion of the site, where the natural foreshore was relatively steep.

The results of the geotechnical investigation indicate that remains of previous phases of the site's history and formation may still be present across the Barangaroo site. The extensive fill deposits across the site also have potential to contain demolition material and structural remains associated with former site features, including former sea walls and wharves.



**Figure 3.1** View to the south across the study area. Barangaroo South staging boundary is the white wall in the background.



**Figure 3.2** View to the southwest across the study area. Barangaroo South staging boundary is the white wall in the background. The large marque building on the right is the overseas passenger terminal.



**Figure 3.3** View to the east across the northern part of the study area. The green tree line marks the boundary.



**Figure 3.4** View to the south east from the northern boundary of the study area.

### 3.3 Endnotes

- <sup>1</sup> Austral Archaeology Pty Ltd, Barangaroo Archaeological Assessment and Management Plan, prepared for Barangaroo Delivery Authority, June 2010, p56–57.



## 4.0 Aboriginal Archaeology

### 4.1 Introduction

This section discusses the potential for the Barangaroo Central site to contain archaeological evidence associated with Aboriginal occupation and habitation of the study area. This is a preliminary assessment which has been prepared with regard to *Code Of Practice* issued by the Office of Environment and Heritage (OEH), which defines a 'due diligence' approach to Aboriginal heritage: *Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW* (13 September 2010). The Code of Practice guideline is designed to assist individuals and organisations to exercise due diligence when carrying out activities that may harm Aboriginal objects, and/or Aboriginal Places, and to determine whether further Aboriginal archaeological management is required.

No Aboriginal consultation has been undertaken as part of the preparation of this report and the Aboriginal cultural significance of the site has not been considered in this report.

Consultation with Aboriginal groups will be undertaken as part of the broader Barangaroo development.

### 4.2 Environmental Context

This section provides environmental context information for use in developing a predictive model of Aboriginal archaeological site locations associated with the study area. Interactions between people and their surroundings are of integral importance in the initial formation, and the subsequent preservation, of the archaeological record. The nature and availability of resources, including water, flora and fauna and suitable raw materials for the manufacture of stone tools and other items, had (and continues to have) a significant influence over the way in which people utilise the landscape.

Alterations to the natural environment also impact upon the preservation and integrity of any cultural materials that may have been deposited. For these reasons, it is essential to consider the environmental context as a component of any Aboriginal archaeological assessment.

#### 4.2.1 Geology and Soils

The study area is located on the GyMEA soil landscape, which is underlain by Hawkesbury sandstone. It is characterised by shallow to moderately deep soils, with frequent rock outcrops.<sup>1</sup>

Prior to historical landscape modification, the land in the vicinity of the study area was characterised by the Barangaroo headland sandstone outcropping and tidal mudflats. However, the study area has been subject to holistic land reclamation—refer to Section 5.4.

#### 4.2.2 Landforms and Landscape Features

The study area's location is on reclaimed land abutting the Barangaroo headland and ridge leading to the headland. The Barangaroo headland to the east of the study area is a rocky ridge dividing Barangaroo from the intertidal estuarine zone of Sydney Cove. Originally the headland consisted of steeply sloping sides to a gently rounded foreshore plateau. The original topography has been substantially altered by industrial development and other modifications to the area.

Aboriginal habitation patterns are characterised by landforms. The study area was unlikely to contain suitable landforms that would have been used by Aboriginal people.

#### 4.2.3 Hydrology

The Tank Stream was the nearest fresh water source, located approximately 500m east of the study area. The Tank Stream is formed by seepage springs in underlying sandstone in the vicinity of what is now Hyde Park, and originally formed a definitive creek around King Street, before flowing into Sydney Cove.<sup>2</sup>

The study area is located on the estuarine foreshores of Cockle Bay. This location would have provided convenient access to maritime resources.

#### 4.2.4 Fauna and Flora

The natural environment at the study area would have reflected the transitional landforms of the site as the study area changed from the rocky ridge to the mudflats of the intertidal zone. The deep waters near Cockle Bay are unlikely to have supported mangroves on the mudflats.<sup>3</sup>

The rocky ridge of the Barangaroo headland and its steep drop to the water would have consisted of open woodland of Scribbly Gum and *Eucalyptus racemosa*. A shrubby understorey may have been present, with *Leptospermum flavescens*, *Banksia oblongifolia* and *Callistemon citrinus*.<sup>4</sup>

The fauna of Sydney, at the time of contact, is well documented and includes many species still present in other Sydney regions like that of the nearby Cumberland lowlands today. The various species included kangaroo, wallaby, wombat, echidna, flying fox, emus, quolls, various native rats and mice, snakes and lizards.<sup>5</sup> Marine resources such as fish would have been plentiful and accessed from bays near to the study area, although Watkin Tench, a military officer on the First Fleet, describes in 1788 the fish at Port Jackson less plentiful than at Botany Bay. Tench mentions fish species such as:

*bass, mullets, skate, soles, leather-jackets and many other species, all so good in their kind as to double our regret at their not being more numerous. Sharks of an enormous size are also found here.*<sup>6</sup>

#### 4.2.5 Synopsis of the Environmental Context

The study area is located on the harbour foreshore approximately 500m away from the freshwater of the Tank Stream estuary. The study area's location is on reclaimed land with the Barangaroo headland and ridge leading to the headland at the east and water being the western boundary. This general area would have given Aboriginal people access to a wide range of terrestrial and marine resources that were used in different ways by local Aboriginal people.

### 4.3 Archaeological Context

#### 4.3.1 Search of Heritage Registers

A search of the OEH AHIMS database was undertaken on 3 September 2012 for the study area and land surrounding the study area. The results indicate that no previously recorded Aboriginal sites are located within the study area (Figure 4.1). No Aboriginal places have been declared within the search area.

A search of the State Heritage Register (SHR) also shows there are no Aboriginal sites listed on the SHR in the study area or its immediate vicinity.

Two Aboriginal sites (45-6-1939 and 45-6-0519) are recorded to the north of the study area, within the Barangaroo Headland Park precinct. One site, 45-6-1939, is a rock engraving which has been destroyed, while 45-6-0519 is an open camp site (artefact site). Two other sites (45-6-1853, a midden with artefacts, and 45-6-2742, a potential archaeological deposit) are located on the sandstone ridge, now the location of the freeway onto the Harbour Bridge (Figure 4.1). Other recorded Aboriginal sites are located elsewhere in the CBD, some distance from the current study area and within different landforms to those surrounding the current study area.

AHIMS results suggest that artefacts (isolated or scatters), potential archaeological deposits and shells/middens are the most commonly recorded Aboriginal archaeological sites in the vicinity of the study area.

The pattern of Aboriginal sites revealed by AHIMS is likely to have been heavily skewed by the nature of urban development in Sydney's inner city. The high level of ground disturbance caused by urban development has most certainly destroyed and/or damaged high levels of Aboriginal archaeological evidence within the CBD. Many of the recorded sites have been identified within the last 15–20 years and have been registered as modern development has encroached on less disturbed areas of land and the laws with respect to protection of Aboriginal objects have been tightened up.<sup>7</sup>

#### 4.3.2 Ethnohistory

Most of the available ethnohistorical information for the Aboriginal people who lived at and near Cockle Bay comes from the writings of officials who travelled to New South Wales with the First Fleet, including Governor Arthur Phillip, judge-advocate David Collins, Captain-lieutenant Watkin Tench and Lieutenant William Dawes. Dawes also recorded a large amount of vocabulary of Aboriginal people around Port Jackson, and included notes on pronunciation and grammar. Paintings and sketches were also produced by various artists. They depicted Aboriginal people, camps, tools and weapons.<sup>8</sup> A wealth of information is contained in these documents.

Much of the information presented below has been extrapolated from Val Attenbrow's 2002 seminal work on Aboriginal ethnohistory and archaeology at Sydney—*Sydney's Aboriginal Past: Investigating the archaeological and historical records*. It has been supplemented with some further research of primary and secondary sources. The account below focuses on the aspects of Aboriginal life that would have left physical evidence.

Accounts of Governor Arthur Phillip and Philip Gidley King identified the Gadigal (also spelt Cadigal) people as the inhabitants of the Sydney City region on the southern shore of Port Jackson between South Head and Darling Harbour, and south to Petersham. The Cadigal were part of the Darug language group. The Wangal people were the closest neighbours, residing to the west of the Cadigal, including Goat Island, Balmain, the south side of Sydney Harbour and Parramatta River to Rouse Hill.<sup>9</sup> The Cameragal (Gammerraygal, Camera-gal, and Kamarigal) people occupied the land on the northern shores of Port Jackson, but Barangaroo is recorded as being of the Cameragal people.<sup>10</sup> In addition, people living around Darling Harbour are said to have been their own tribe separate from the Cadigal.

The original Aboriginal inhabitants of the Barangaroo area would have been among the first Indigenous people to experience the effects of physical and social dislocation as a result of the arrival and settlement of the First Fleet at Sydney Cove. Further, epidemics of smallpox dramatically affected the Aboriginal population in Sydney, and across Australia. The population of

Aboriginal people when European contact was first made is difficult to estimate. Nevertheless, Governor Phillip suggested there were 1500 Aboriginal people occupying the coastal area of Botany Bay, Port Jackson and Broken Bay. This population was substantially impacted by the introduction of smallpox. In 1790 Bennelong estimated to Governor Phillip that over half of Sydney's original Aboriginal population had died as a result of the smallpox epidemic that broke in 1789.<sup>11</sup> Other effects of European colonisation on local Aboriginal populations included loss of access to traditional lands and resources, inter-tribal conflict, starvation, and the breakdown of traditional cultural practices. The effects of such severe social dislocation may have dramatically altered some aspects of the lives of local Aboriginal people recorded by early European observers.

The Aboriginal population migrated around the landscape to access seasonal resources. The harbour provided abundant fish resources and the shores of Darling Harbour were an important source of cockles, rock oyster and mud oysters as evidenced in European descriptions of piles of shell and fish bone along the harbour shores and inlets. Aboriginal people continued to live around the harbour following European occupation.

### **Subsistence Activities**

The people that inhabited the coastal areas of Port Jackson had access to a wide range of natural resources, including terrestrial and marine flora and fauna. For coastal Aboriginal people marine resources were a vital part of their diet. Tench suggests fishing was their primary subsistence activity:

*...[they] wholly depend for food on the few fruits they gather, the roots they dig up in the swamps, and the fish they pick up along shore or contrive to strike from their canoes with spears. Fishing, indeed, seems to engross nearly the whole of their time, probably from its forming the chief part of a subsistence...<sup>12</sup>*

Other marine resources such as shellfish and crustaceans were frequently collected and eaten. Historical references and archaeological evidence indicates that beached whales were also eaten—and may have presented an opportunity for different Aboriginal groups to gather and feast together, as suggested by this event recorded by Tench at Manly Beach in 1790:

*...a dead whale in the most disgusting state of putrefaction was seen lying on the beach, and at least two hundred Indians surrounding it, broiling the flesh on different fires and feasting on it with the most extravagant of greediness and rapture.<sup>13</sup>*

Although marine animals formed a substantial part of the diet of Aboriginal people who lived in and around the study area, terrestrial animals such as kangaroos, possums, and various birds were also hunted and eaten regularly. The landscape was also manipulated by Aboriginal people through periodic burning of the undergrowth to encourage terrestrial animals such as kangaroos to graze, and thus facilitate hunting. Evidence of this is recorded in the vicinity of Sydney Cove and, despite the close proximity to marine resources, indicates that terrestrial animals were commonly exploited as a food resource.

Written accounts describe the exploitation of a variety of edible plants in the Sydney region, including seeds, fruits and roots. While there are over 200 edible native plant species known in the Sydney region, it is difficult to reconstruct how important each was to the subsistence diet of Aboriginal people near the study area. This is largely a result of the discrepancies in recording this information, given the widely different names and descriptions given to different native plant species in the late eighteenth and early nineteenth centuries.

## Material Culture

The material culture of local Aboriginal groups is also recorded to some extent in early historical accounts, and is reinforced by the archaeological record. Many of the tools were multi-purpose and portable, allowing groups to practice subsistence activities and cultural traditions across the landscape. Aboriginal people made and used a suite of stone tools, and this is one of the most ubiquitous forms of archaeological evidence across Australia. Following contact there are common examples of glass, and sometimes ceramic, being knapped in the same way as stone to form tools.

Many tools were made of organic materials and many, such as string bags or bark canoes, have not been preserved archaeologically (although some examples are found in museum and private collections). Some organic materials, such as shell and bone, survive better than others, and are well represented in the historical and archaeological records.

Fish hooks were the most common shell implement in the Sydney area, however they are unique in Australia to the area between Port Stephens and the NSW/Victorian border and all date within the last 1000 years.<sup>14</sup> Historical accounts indicate that in the Port Jackson area, although both genders engaged in fishing, fish hooks were only used by women and spears were only used by men.

## Patterns of Land-Use

Many written accounts and drawings record Aboriginal people who occupied the Port Jackson area, including the Gadigal, as camping, cooking, and fishing on the open shoreline, estuarine and river banks and rockshelters near water. Attenbrow's analysis of ethnohistorical evidence regarding landscape use indicates a focus of Aboriginal activity on valley bottoms and shorelines.<sup>15</sup> Attenbrow's (1991) Port Jackson Archaeological Project also demonstrated that archaeological sites were similarly patterned in a way that supports this focus. She does, however, caution reliance on these patterns as they are skewed by archaeological preservational factors, as well as biases in what has been portrayed in the historical record.<sup>16</sup>

### 4.3.3 Relevant Local Literature

A number of archaeological studies and academic works have been prepared for land in the vicinity of the study area (Moore's Wharf, Port Jackson and Darling Walk studies) and for sites in the wider Sydney CBD which indicate Aboriginal archaeological potential, integrity and condition. Those works and reports of relevance to this due diligence assessment are detailed below.

#### Lampert and Truscott 1984—Bond Store, Moore's Wharf

In 1980 archaeological excavations were undertaken at the Bond Store, Moore's Wharf.<sup>17</sup> RJ Lampert undertook the Aboriginal archaeological component of investigation. The excavations recovered 392 stone artefacts which included 2 scrapers, 2 polished flakes and a fish hook file. The artefact assemblage was identified as consistent with occupation sites along the coastal areas of the Sydney region. No shell material usually associated with midden sites was identified—Lampert concluded that this material must have been deposited at some stage, but has since decomposed. Four sherds of ceramic transfer ware were also identified; and suggested that the site may have continued to be used post-contact.

#### Val Attenbrow 1991—Port Jackson Archaeological Project

In 1991 Val Attenbrow undertook a project to relocate registered DECCW sites (now known as AHIMS sites) as many were poorly recorded. Site survey was undertaken across the Port Jackson

catchment, which Attenbrow divided into eight sub-catchments. Over 350 middens and archaeological deposits were relocated or newly identified. Attenbrow identified a number of patterns of site distribution associated with aquatic zones and geological formations within the catchment.

Attenbrow's study revealed that 98% of middens in the entire Port Jackson catchment were located on Hawkesbury sandstone, even though there is a greater area of Wianamatta shale landscapes within the project's study area. The number of middens varied drastically across the Port Jackson catchment—partly due to discrepancies in factors such as land area of each sub-catchment and intensity of residential and industrial development—however, it was clear that middens and deposits occurred in higher densities in sub-catchments that include an estuary mouth.<sup>18</sup>

### **Godden Mackay 1998—Angel Place**

Godden Mackay identified Aboriginal archaeological deposits at Angel Place in Sydney's CBD during their 1997–1998 program of historical archaeological investigations. Following the discovery, salvage excavation of the Aboriginal archaeological deposit was also undertaken as part of the archaeological works prior to redevelopment.

The Angel Place site was the first Aboriginal archaeological site identified at the Tank Stream during development works. The assemblage comprised 54 artefacts including flakes, cores and debitage. The range of artefact types indicated that the assemblage had been formed through on-site knapping processes of a range of raw stone materials, including silicified tuff, indurated mudstone, silcrete and quartz. The nature of the archaeological deposit suggested that the assemblage had not been formed during one isolated event. The deposit was more likely an example of repetitive stone tool manufacture and/or lithic reduction activities undertaken along the banks of the Tank Stream, and may have originally been part of a contiguous archaeological deposit that has been fragmented and largely destroyed by historical land disturbance.

### **Dominic Steele Consulting Archaeology 2003—Quadrant Development Site**

The Quadrant site, on the corner of Broadway and Mountain Street in Ultimo, was the subject of archaeological testing by Dominic Steele Consulting Archaeology in 2001 and 2002. Blackwattle Creek originally passed through the Quadrant site, which was also a natural swamp.

Excavation revealed that in a portion of the site natural soil profiles had been preserved beneath a capping of introduced fill laid in the historical period, although were truncated and disturbed. The soil profiles present at this site comprised of a deep alluvial deposit, with the upper layers consisting of a Blacktown soil landscape. The Blacktown soil landscape is characterised by its poor drainage quality.<sup>19</sup>

An artefact scatter was identified during a programme of testing. The scatter was identified as a background distribution of stone artefacts in a landscape only sporadically visited by Aboriginal people. Steele concluded that the limited Aboriginal archaeological evidence encountered at the Quadrant site was the product of two factors. The first was the significant disturbance across the site in the historical period. The second was the way past Aboriginal people were likely to have utilised the natural environment:

*The poorly-drained nature of the landscape at the Quadrant site is one possible explanation for the absence of more substantial Aboriginal archaeological remains identified during the investigation program. It is*

*reasonable to assume that Aboriginal people in the past may have exploited the various resources available within these environments, but it is unlikely people established long-term occupation sites on them.<sup>20</sup>*

The report identified that beyond the creek line and swamp more elevated portions of the site located on Hawkesbury Sandstone would have been more favourable for Aboriginal occupation and activities and may have had a more substantial archaeological signature. Steele notes that these locations have generally experienced such a degree of historical development that the natural A horizon soils capable of bearing artefacts and archaeological deposits have been removed or heavily disturbed.

### **Dominic Steele Consulting Archaeology 2006—KENS Site**

The Kent, Erskine, Napoleon and Sussex Streets (KENS) site was subject to Aboriginal and historical archaeological excavation in 2003, prior to the redevelopment of the city block. The Aboriginal archaeological component of this project was carried out by Dominic Steele Consulting Archaeology.

A number of buried original (pre-1788) soil profiles were identified over the course of the archaeological excavation programme. Archaeological testing and salvage across these profiles revealed that they had been truncated and somewhat disturbed by historical activity; however, excavation yielded a total of 952 artefacts across the site. A large proportion of the artefacts were broken by trampling or burning—this damage may have occurred during the early historical period. The assemblage did not provide a large amount of data about the range or nature of stone tool technologies. Analysis suggested that the assemblage dated to the Middle and Late Bondaian period, and the discovery of some flaked glass indicated the site's continued use following contact in 1788.

While the extant soil profiles and artefact assemblage were not particularly significant in terms of the nature of the stone tool technology identified, the site was important for the way it demonstrated that this part of the Sydney CBD—marginal to the early European settlement and primary records of Aboriginal activity in the late eighteenth century at Sydney Cove—was intensively used by Aboriginal populations prior to, and for a short time following, 1788. It also clearly illustrated processes of site taphonomy where early historical activities such as land clearing and increased traffic (humans and/or horses) had had a significant impact on the survival of the Aboriginal archaeological record.

The KENS site was also considered significant for its place in the Aboriginal cultural landscape as a rare site that contributes new insights into an understanding of the documented and potential Aboriginal archaeological resource within the Sydney CBD. The KENS site also demonstrated that Aboriginal archaeological sites could survive in places that had experienced multiple historical phases of historical development and disturbance.

### **Comber Consultants 2008–2009—Darling Walk**

As part of the redevelopment of Darling Walk, Darling Harbour, an extensive series of Aboriginal and historical archaeological excavation was undertaken in 2008 and 2009. The Aboriginal component of the excavation was carried out by Comber Consultants. The final post-excavation report is still in preparation; however, a preliminary overview of the historical archaeological excavation also includes a summary of the results of the Aboriginal investigation.<sup>21</sup>

The Darling Walk site is located along the original foreshore of Cockle Bay (Darling Harbour), and is located on a similar landform to the study area. The excavations identified the remains of a shell midden, which included some possible stone artefacts. The midden deposit was located on an exposed area of sandstone bedrock approximately 3–4m east of the natural high water mark. It is possible that the midden had originally been located on higher ground further east but had slumped closer to the water's edge.<sup>22</sup> Stone, shell, pollen and geomorphological analysis has been undertaken for this site; however, the results are not available as yet.

#### **4.4 Historical Development of the Study Area**

The extent of land reclamation associated with the study area is instrumental to understanding its Aboriginal archaeological potential. Historical plans from the early nineteenth century map the foreshores of Sydney Harbour during the early years of Sydney's development (see historical overlays in Figures 2.1–2.4). Historical overlays of plans from 1831 and 1843 show the study area to be entirely below the water line. The 1788 and 1807 overlays show that parts of the foreshore extended into the study area, but these very early plans of Sydney are considered relatively spatially inaccurate and are indicative of the landform only.

Acknowledging continuous changes to sea level throughout the Holocene (the last 10,000 years), where small periodic rises and falls in sea level have occurred, it can be stated that the whole of the study area would have been below the high water mark c1788. The effect of wave action and daily water level rises and falls on any archaeological deposits within the tidal inundation zone would have been substantial. The effect would have significantly impacted any archaeological deposits resulting in their erosion and consequential loss.

The initial historical activity that could have affected archaeological deposits which survived sea level changes would have been lime burning. This historical evidence was common around Cockle Bay during the early days of Colonial occupation. Lime burning used Aboriginal shell deposits from foreshore areas. Therefore, it is likely that any midden material which may have been located on the former foreshore was used for lime burning.

From the mid nineteenth century, extensive maritime industries expanded into the study area. Wharf structures and associated infrastructure were built across the study area, altering the original foreshore and modifying the landforms along Cockle Bay.

Land reclamation along the foreshore of Cockle Bay commenced in the late nineteenth century. This process resulted in the importation of large quantities of fill deposit. The deposition of fill would have modified and buried any residual landforms associated with the study area, with the consequence of impacting areas of bedrock, sand sheets and any associated soil horizons.

Finally, construction of Hickson Road, c1912, including bulk excavation across the eastern portion of the site, would have had a major impact on the topography of the area. This construction would have removed any surviving Aboriginal occupation deposits or other in situ Aboriginal archaeological evidence that had survived the aforementioned historical impacts.

#### **4.5 Statement of Aboriginal Archaeological Potential**

The study area is covered by extensive deposits of historical fill material related to successive phases of land reclamation. The study area contains no previously identified Aboriginal sites or places. The impacts of historical use and construction on any Aboriginal archaeological evidence



are likely to be very high. Thus, the study area has no to very low potential to contain in situ Aboriginal archaeological evidence.

Owing to the natural topography of the foreshore, much of the study area would have been inaccessible to Aboriginal people for most of the Holocene (when sea levels were comparable to those observed today). Had any evidence of Aboriginal use of the area been present, then it is more than likely that this evidence was impacted and removed during one of the many historical development events to which the study area has been subject.



**Figure 4.1** The study area in relation to registered AHIMS sites within the CBD. (Source: Google Earth with GML additions)

## 4.6 Endnotes

- <sup>1</sup> Chapman, GA and CL Murphy, 1989. *Soil Landscapes of the Sydney 1:100 000 Sheet*, Soil Conservation Service of NSW, Sydney, pp.64-65.
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- <sup>14</sup> Attenbrow 2002: 98–99.
- <sup>15</sup> Attenbrow 2002: 47–48.
- <sup>16</sup> Attenbrow 2002: 50–53.
- <sup>17</sup> Lampert, RJ and MC Truscott 1984, *The archaeological investigation of the bond store, Moore's Wharf, 1980*, prepared for the Maritime Services Board and the Heritage Council of NSW, 1984.
- <sup>18</sup> Attenbrow, V 1991, *Port Jackson archaeological project: a study of the prehistory of the Port Jackson Catchment, New South Wales. Stage I — site recording and site assessment. Australian Aboriginal Studies* 1991/No 2: 50-53.
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## 5.0 Historical Archaeology

### 5.1 Introduction

This section discusses the potential for the Barangaroo Central site to contain archaeological evidence associated with historical use and development of the study area. This section includes analysis of the historical development of the site, discussion of the site's potential to contain archaeological resources related to this historical development, and an assessment of the significance of the site's potential historical resources. This assessment draws on historical research presented in the 2010 Barangaroo AAMP prepared by Austral Archaeology Pty Ltd.<sup>1</sup>

### 5.2 Previous Assessment of the Study Area

#### 5.2.1 Barangaroo Archaeological Assessment and Management Plan

The 2010 AAMP prepared by Austral Archaeology included an assessment of the historical archaeological potential of the entire Barangaroo site, including the Barangaroo Central precinct. Information and site analysis related the Barangaroo Central precinct has been extrapolated from discussion about the broader Barangaroo site.

As presented in the 2010 AAMP, the historical development of the Barangaroo site is characterised by the development of maritime and wharf industries, and the precinct is significant for its association with the history of reclamation along the Sydney Harbour foreshore, as reflected in its composition, its association with numerous important people and as a place that has hosted important historical and political events. Parts of the broader Barangaroo site have been assessed as having moderate to high potential to contain historical archaeological remains associated with nineteenth and twentieth century maritime development, including wharf structures, sea walls, shoreline modification, and maritime-related industrial activities.

#### 5.2.2 Barangaroo Headland Park—Archaeological Testing

Archaeological testing was undertaken in the Barangaroo Headland Park precinct by Austral Archaeology Pty Ltd in 2010–2011. The Headland Park precinct had been assessed in the 2010 AAMP as having moderate-to-high potential to contain archaeological remains. Testing along the northern side of the proposed Northern Cove, immediately to the north of the Barangaroo Central precinct, revealed intact archaeological features and deposits associated with nineteenth century development in this area, including remains of a slipway, earlier seawall and other remains associated with former wharf structures and shipbuilding activities. The results of the testing program are presented in the Barangaroo Headland Park Archaeological Test Excavation Report, prepared by Austral Archaeology in January 2012.

#### 5.2.3 Barangaroo South

Archaeological assessment and investigation of the southern portion of the Barangaroo site has been undertaken by Casey & Lowe Pty Ltd. Like the Headland Park precinct, the southern portion of the Barangaroo site was extensively developed for maritime-related and other industrial purposes throughout the nineteenth and twentieth centuries. It is understood that archaeological excavation of this area in 2011–2012 has revealed the presence of extensive archaeological remains associated with these former uses, generally consistent with the historical development of the area. As archaeological works in this area are still continuing, detailed information about the results of

these investigations are not currently available on the public record and have not been reviewed as part of the preparation of this report.

### **5.3 Barangaroo Central—Summary of Historical Development**

The historical development of the Barangaroo site is almost entirely related to maritime industries, including wharves, shipbuilding, and associated enterprises. The development and operation of these industries had a tremendous effect on the physical form of the site, including reclamation and major changes to the shoreline.

The historical development of the broader Barangaroo site included the following phases:

- Phase 1—Aboriginal occupation
- Phase 2—Private Ownership 1788–c1870
- Phase 3—Intensive Development and Decline c1870–1901
- Phase 4—Renewal 1902–2010

Most of the nineteenth century development within this part of the harbour was focused around the northern and southern parts of the Barangaroo precinct. Most of the Barangaroo Central site was originally located below the water line, with the natural topography of the foreshore within the Barangaroo Central site being very steep.

The area of Barangaroo Central remained largely undeveloped throughout the nineteenth century and much of the study area now comprises reclaimed land. While the northern headland and the southern portion of the Barangaroo site was extensively developed from the early nineteenth century, the central portion remained relatively undeveloped until the 1860s, owing to the steep topography of this area. Maritime industry only extended into this part of the site after this time.

By 1865, Cuthbert's shipyard had partially extended into the area of the Barangaroo Central precinct, including construction of some wharf infrastructure in this area. Dibb's wharf was constructed in this area following Cuthbert's death in 1874.

By 1870, most of the foreshore between Dawes Point and Darling Harbour had been modified by quarrying, reclamation or the construction of seawalls, and the area was almost entirely occupied by wharves, stores and commercial properties. Between 1880 and 1900, most of the wharves and other structures were demolished as part of the government resumption of the area.

Hickson Road was constructed c1912. These works included excavation of bedrock along the road alignment and major modification of the shoreline along the Barangaroo Central precinct.

The foreshore within the Barangaroo Central was partially reclaimed in the early twentieth century, and a number of finger wharves were constructed in this area c1912. By the 1950s, the finger wharves were no longer suitable for modern shipping. The areas between the wharves in the central and southern parts of the Barangaroo site were progressively infilled.

### **5.4 Assessment of Historical Archaeological Potential**

The study area has little or no potential to contain historical archaeological remains dating to the late eighteenth or early-to-mid nineteenth century (related to the early part of Phase 2 of the site's



history), as there was no historical development or occupation recorded within the study area prior to the 1860s.

The northeastern portion of the study area has moderate potential to contain historical archaeological evidence associated with the mid-to-late nineteenth-century development of the area (related to the latter part of Phase 2, and to Phase 3 of the site's history). This evidence may include structural supports for wharves and jetties, remnant sea walls, and other infrastructure associated with Cuthbert's shipyard, which extended into this area after 1856. At its peak, Cuthbert's enterprise extended from Millers Point to Darling Harbour. While Cuthbert's operations included various industrial and structural elements (eg blacksmiths' shops, carpenters' sheds, a saw mill and storage facilities)<sup>2</sup>, historical plans of the area indicate that study area remained largely unclaimed during Cuthbert's ownership, and structural elements within the study area were generally limited to wharf/jetty structures constructed over the water. Any operational elements in this area would have been constructed on wharf/jetty structures, so archaeological evidence of these elements would likely be limited to pier supports and related infrastructure of the wharves/jetties themselves.

The study area has moderate potential to contain historical archaeological evidence associated with redevelopment of the area during the early-to-mid twentieth century (related to Phase 4 of the site's history). This evidence may include structural supports for three finger wharves that ran east–west across the study area, as well as remnant sea walls, and other infrastructure.

The study area also has some potential to contain evidence of the large-scale demolition and reclamation that occurred in the area at the end of the nineteenth century and during the early twentieth century (related to Phases 3 and 4 of the site's history). The study area contains extensive fill deposits, which have potential to contain items and deposits from the site, including timber, iron, steel or stone elements from demolished wharves, seawalls or other structures/infrastructure. These elements may be specifically related to the historical development of the Barangaroo Central site or the broader Barangaroo precinct.

Demolition of some of the wharves and other structures involved manual dismantling, with many of the materials sold or reused. It is possible that wharves, seawalls and other structures were not completely removed, but some elements were left in place and covered with fill during the various phases of the reclamation of the site.

The study area has little potential to contain stratified occupation deposits associated with the historical development and use of the site, either along the original shoreline or below the water level (from any phases of the site's history). The late nineteenth and early twentieth century historical development of the study area was dominated by elements constructed over the water (wharves/jetties), and did not include ground surfaces (other than the sea floor) where archaeological deposits could have accumulated. The study area was sealed with concrete decking following progressive reclamation with unstratified introduced fills during the twentieth century.

There is some potential for evidence of wharf infrastructure to survive on the harbour floor, as well as incidental remains associated with the operation of shipping and maritime-related industries (eg wharf elements, tools, shipping parts, personal items, rubbish, etc, related to Phases 2–4 of the site's history). Dredging of the sea floor may have disturbed any such evidence; however, the extent of dredging that may have occurred in this part of the harbour is unknown.

Research in the Austral AAMP indicates that there are no shipwrecks directly off the Barangaroo shore.

The location of areas of historical archaeological potential are shown in Figure 5.1.

## 5.5 Historical Archaeological Significance

### 5.5.1 Introduction

Archaeological significance refers to the heritage significance of known or potential archaeological remains. As with other types of heritage items, archaeological remains should be managed in accordance with their significance. In situations where development is proposed, this can influence the degree of impact that may be acceptable or the level of investigation and recording that may be required.

While archaeological remains often form an integral component of the overall significance of a heritage place, it is necessary to assess them independently from above ground and other historic elements. Assessing the heritage value of archaeological remains is made more difficult by the fact that their extent and nature is often unknown. It becomes necessary for judgments to be made on the basis of expected or potential attributes.

The *NSW Heritage Manual* guidelines, prepared by the (then) NSW Heritage Office and Department of Urban Affairs and Planning (as amended July 2002), provide the framework for the following significance assessment for the study area. These guidelines incorporate the aspects of cultural heritage value identified in the Burra Charter which are accepted by heritage authorities in New South Wales.

The Heritage Branch has also issued guidelines for assessing the significance of historical archaeological sites and relics.<sup>3</sup> This calls for a broader consideration of multiple values of archaeological sites beyond their research potential.

The assessment of significance of historical archaeological sites requires a specialised framework for consideration. The most widely used framework is that developed by Bickford and Sullivan in 1984<sup>4</sup> and comprises three key questions which can be used as a guide for assessing the significance of an archaeological site:

1. Can the site contribute knowledge that no other resource can?
2. Can the site contribute knowledge that no other site can?
3. Is this knowledge relevant to general questions about human history or other substantive questions relating to Australian history, or does it contribute to other major research questions?

The following assessment of archaeological significance for the subject site responds to both the Heritage Branch guidelines and Bickford and Sullivan's questions. This significance assessment has also been prepared with regard to the significance assessment presented in the 2010 AAMP. However, as the Barangaroo Central precinct is only part of the broader Barangaroo site, and the historical archaeological potential of this part of the site is different to other areas of the Barangaroo site, this assessment has been prepared with specific reference to the historical potential of Barangaroo Central, the study area of this report.



## **5.5.2 Assessment of Archaeological Significance—NSW Heritage Criteria**

### **Archaeological Research Potential (NSW Heritage Criterion E)**

The Barangaroo Central site is associated the development of maritime industrial operations within Sydney Harbour during the nineteenth century. The development of maritime industries and infrastructure was focused around the Millers Point headland (to the north of the study area) and within Darling Harbour (to the south if the study area) during the early-to-mid nineteenth century, and expanded into the central precinct in the mid-to-late nineteenth century, before the area was subject to major resumption, reclamation and redevelopment in the late nineteenth and early twentieth centuries.

Parts of the study area have potential to contain physical evidence related to the maritime-related development of the area during the mid-to-late nineteenth century and early-to-mid twentieth century. Much of this evidence would be considered to have limited research potential for its ability to provide new or substantive information about the development and occupation of the study area, or the broader development of the Barangaroo site.

There may be some evidence related to late nineteenth century maritime development of the area, including structural supports for wharves and other infrastructure associated with Cuthbert's shipyard, which extended into this area after 1856. Remnant sections of sea walls may also survive in this area. This evidence may have some research potential for its ability to provide information about the nature and extent of the wharves and other infrastructure that were developed by Cuthbert, including the location and dimensions of the former wharves and other elements, and the materials and construction methods used. This physical information may supplement historical documentation about the form and operation of Cuthbert's yard, as well as the general nature and operation of nineteenth century maritime and shipbuilding activities in this part of the harbour.

Evidence related to large-scale demolition and reclamation that occurred in the area at the end of the nineteenth century and during the early twentieth century may include extensive fill deposits that have potential to contain items and deposits from the site, such as timber, iron, steel or stone elements from demolished wharves, seawalls or other structures/infrastructure. While some of this material may be characteristic of the industrial activities that once thrived in this area, this material would be unstratified and therefore disconnected from this historical association. The study area is also likely to contain introduced fill deposits that may contain objects entirely unrelated to the historical development and occupation of the site. These reclamation fills, and any artefacts contained within them, would have little or no research potential, other than their ability to demonstrate how (and possibly when) these areas of the site were reclaimed.

Evidence related to major redevelopment of the area as finger wharves in the early-to-mid twentieth century, followed by progressive infilling in response to modernised shipping practices, may include structural supports of wharf elements, remnant sea walls, and other infrastructure, as well as fill deposits related to the reclamation. The twentieth-century development of the wharves is relatively well documented in photographs and other sources. This evidence would therefore be considered to have little research potential for its ability to provide information about the form and operation of the site that could not be obtained from other sources.

The study area is unlikely to contain any occupation deposits associated with the development, operation or habitation of any of the former structures or other infrastructure at the site. There is some potential for incidental remains associated with the occupation and operation of the wharves

to survive on the harbour floor, though any such evidence may have been disturbed by dredging. Any such material would likely be unstratified and out of context and therefore would generally be considered to have little archaeological research potential.

The archaeological information within the Barangaroo Central study area may supplement archaeological information recovered from other parts of the Barangaroo site. The potential archaeological resources within the Barangaroo Central site would be part of a broader suite of evidence related to the historical development of the precinct. The historical development of maritime-related industries and infrastructure within the Barangaroo Central site is generally consistent with the development of the broader precinct; however, the Barangaroo Central site was developed later than the northern and southern precincts, and was not subject to multiple phases of intensive development and use as other areas of the Barangaroo site. The nature and extent of the potential evidence within the Barangaroo Central study area would therefore be considered as marginal or supplementary to the broader archaeological resources across the whole Barangaroo site.

### **Association with Individuals, Events or Groups of Historical Importance (NSW Heritage Criteria A, B & D)**

While much of early Sydney was shaped by the colonial government, the area around Millers Point was predominantly developed by private enterprise. The maritime development of the broader Barangaroo site throughout the nineteenth century is associated with a number of individual landowners, businessmen and entrepreneurs who drove the commercial and industrial development and operation of the area. Many of these individuals were not prominent in their own right, and their contributions remain generally invisible in the historical record. However, one individual stands out as a prominent figure in the development of the study area.

The central portion of the Barangaroo site was developed relatively late, after the shipyard to the north of the study area was acquired and expanded by John Cuthbert in 1856. It is noted in the 2010 AAMP that:

*By 1865 (Cuthbert) had expanded his yards north to Millers Point and south almost to the gas works ... He recognized the advantages of Darling Harbour as a shipbuilding site, he appears to have purchased most of the land from (Millers) point south to the gas works and helped to reclaim parts of the harbour. Much of his own property was reclaimed land ... Cuthbert's yard was one of the most extensive in the colony employing upward of 250 men at the end of the 1860s ... In 1871 Cuthbert claimed that his business was 'second to none in Australia'.<sup>5</sup>*

The AAMP also notes that:

*Cuthbert died in December 1874 and is remembered as one of the outstanding colonial shipbuilding entrepreneurs, diligent and responsive to technological change. In his substantial will he left bequests to St Vincent's Hospital, the Randwick Asylum, the Ragged School, and the Kent Street soup kitchen. The yard closed after his death.<sup>6</sup>*

Archaeological remains in the study area related to Cuthbert's shipyard may have Local significance for their association with this figure who was prominent in shaping this part of Sydney.

### **Aesthetic or Technical Significance (NSW Heritage Criterion C)**

It is difficult to ascertain the aesthetic qualities of archaeological remains, as the nature and condition of the remains are usually unknown prior to their exposure. However, the potential

archaeological remains that may survive within the Barangaroo Central study area would likely be fragmentary in nature and limited to remnant structural timbers of former wharves/jetties. While these remains may be evocative of the former maritime character of the area, they would likely have only limited aesthetic significance.

Resumption, reclamation and redevelopment of the area in the late nineteenth and early twentieth centuries would have had a major impact on the surviving remains. Historical evidence suggests that the former wharves were largely dismantled, and their materials salvaged or reused, with some structural elements (eg piers, structural supports) left in place and covered by extensive reclamation deposits. While it is possible that some surviving elements may have some ability to demonstrate technical aspects of the construction of the former wharf structures, much of this technical information may have been lost when the structures were dismantled and demolished.

More extensive and intact remains of former wharves/jetties and other maritime-related infrastructure are likely to survive in other parts of the Barangaroo Site, and this evidence would likely have greater potential for aesthetic or technical significance than the limited resources within the Barangaroo Central study area. Intact standing wharves and jetties dating from the nineteenth and early twentieth century also survive in other parts of Sydney Harbour, and these examples would have greater aesthetic or technical value than the fragmentary evidence that may survive within the study area.

#### **Ability to Demonstrate the Past Through Archaeological Remains (NSW Heritage Criteria A, C F & G)**

The potential archaeological remains that may survive within the Barangaroo Central site would be representative of the extensive maritime-related industries that dominated the precinct, and demonstrate the modifications to this area that began in late nineteenth century. Structural supports and other elements of former wharves that may survive in this area, as well as remnant sections of sea walls or reclamation fill deposits, may indicate how built elements transformed this part of the harbour foreshore, creating an important and operational industrial precinct in an area that was previously undeveloped and underwater.

Remnant elements of former wharf structures are evocative of the former maritime industries that once characterised the area, and these remains may demonstrate this aspect of the historical development and operation of the site. As the needs and technology of maritime industries changed over time, the former wharves in this area were no longer needed, so were dismantled and demolished as part of the major redevelopment of the area as a modern shipping port, in the late nineteenth and early twentieth centuries. The large-scale physical changes that occurred at the site during this phase may be represented by the fragmentary nature of some elements of the historical remains. The remnant wharf structures that may survive within the Barangaroo Central site would have been largely stripped of their superstructure and entombed by the various episodes of reclamation that occurred here.

### **5.5.3 Response to Bickford and Sullivan's Questions**

#### **Can the site contribute knowledge that no other resource can?**

The potential historical archaeological remains that may survive at the site may provide information about the form and layout of the phases of historical development and operation of the wharves and other infrastructure in this area, particularly related to Cuthbert's shipyard, which may not be available from other sources. The archaeological evidence at the site may also provide information

about the extent of demolition and salvage that occurred across the site during periods of wide-scale resumption, demolition, reclamation and redevelopment.

### **Can the site contribute knowledge that no other site can?**

The Barangaroo Central site may contain archaeological evidence that is specific to the historical development and operation of this area, particularly related to Cuthbert's shipyard. However, the archaeological evidence that may survive within the study area would likely be representative of the broader commercial maritime industrial operations and development that dominated this part of Sydney throughout much of the nineteenth century. This evidence would also demonstrate the major changes that occurred along the waterfront as part of the large-scale redevelopment of the area in the late nineteenth and early twentieth centuries. The archaeological evidence that may survive in this part of the site is likely to also be represented in other parts of the broader Barangaroo site, which were subject to similar phases of commercial and industrial maritime development and expansion followed by extensive redevelopment.

The potential archaeological resources within the Barangaroo Central site would be part of a broader suite of evidence related to the historical development of the precinct, and the archaeological information within the Barangaroo Central study area may supplement archaeological information recovered from other parts of the Barangaroo site.

### **Is this knowledge relevant to general questions about human history or other substantive questions relating to Australian history, or does it contribute to other major research questions?**

The site's potential historical archaeological remains would be generally associated with historical themes related to maritime and trade activities in Sydney Harbour that were important to the development of Sydney and the broader Australian economy. However, the site's potential archaeological resources would have limited ability to provide substantive information about the development or occupation of the site or the precinct that would contribute to major research questions relating to the history of Sydney or Australia.

#### **5.5.4 Summary Statement of Significance**

The Barangaroo Central site is associated the development of maritime industrial operations within Sydney Harbour during the nineteenth century. The development of maritime industries and infrastructure was focused around the Millers Point headland (to the north of the study area) and within Darling Harbour (to the south if the study area) during the early-to-mid nineteenth century, and expanded into the central precinct in the mid-to-late nineteenth century, before the area was subject to major resumption, reclamation and redevelopment in the late nineteenth and early twentieth centuries.

The study area has some potential to contain physical evidence related to the maritime-related development of the area during the mid-to-late nineteenth century and early-to-mid twentieth century. The potential archaeological remains that may survive within the Barangaroo Central site would be generally representative of the extensive maritime-related industries that dominated the precinct, and demonstrate the modifications to this area that began in late nineteenth century.

Owing to the steep slope of the natural topography of this area, the study area remained relatively undeveloped until the mid-to-late nineteenth century and most of the study area comprises reclaimed land.

Evidence related to late nineteenth century maritime development of the area may include structural supports for wharves and other infrastructure associated with Cuthbert's shipyard, which extended into this area after 1856. Remnant sections of sea walls may also survive in this area.

The study area is likely to contain extensive fill deposits related to large-scale demolition and reclamation that occurred in the area at the end of the nineteenth century and during the early twentieth century. These fill deposits have potential to contain items and deposits related to the development and operation of the site, as well as other unrelated material that was brought to the site in introduced fill.




Evidence related to major redevelopment of the area as finger wharves in the early-to-mid twentieth century, followed by progressive infilling in response to modernised shipping practices, may include structural supports of wharf elements, remnant sea walls, and other infrastructure, as well as fill deposits related to the reclamation.

The study area is unlikely to contain any occupation deposits associated with the development, operation or habitation of any of the former structures or other infrastructure at the site.

The site's potential historical archaeological resources are generally associated with important phases in the development of Sydney and Australia's maritime and trading history, and some of these remains may be evocative of the character of former maritime enterprises in this area.

The archaeological potential and significance of the Barangaroo Central precinct would be considered low relative to other parts of the Barangaroo site that have been subject to more extensive historical development. The potential evidence that may survive within the study area would be limited primarily to fragmentary remains of former wharves/jetties. Much of this potential archaeological evidence would have limited research potential and would be unlikely to provide new or substantive information about the development and occupation of the study area, or the broader Barangaroo site, that could not be obtained from other sources. The potential historical archaeological resources within the Barangaroo Central precinct would be considered to be of Local significance.



-  Potential remains associated with Cuthbert's shipyard (1860s-1870s)
-  Potential remains associated with Dibb's Wharf (1870s-c1900)
-  Potential remains of former finger wharves (c1912-1950s)

**Figure 5.1** Plan of the study area showing areas of historical archaeological potential.

## 5.6 Endnotes

- <sup>1</sup> Austral Archaeology Pty Ltd, Barangaroo Archaeological Assessment and Management Plan, prepared for Barangaroo Delivery Authority, June 2010.
- <sup>2</sup> Austral Archaeology AAMP, June 2010, p26.
- <sup>3</sup> Heritage Branch, NSW Department of Planning (now the OEH) 2009, Assessing Significance for Historical Archaeological Sites and 'Relics'.
- <sup>4</sup> Bickford, A and S Sullivan 1984, 'Assessing the Research Significance of Historic Sites', in Sullivan, S and S Bowdler (eds), *Site Surveys and Significance Assessment in Australian Archaeology* (proceedings of the 1981 Springwood Conference on Australian Prehistory), Department of Prehistory, Research School of Pacific Studies, the Australian National University, Canberra.
- <sup>5</sup> Austral Archaeology AAMP, June 2010, p25.
- <sup>6</sup> Austral Archaeology AAMP, June 2010, p26; Australian Dictionary of Biography (ADB) <http://adbonline.anu.edu.au/adbonline.htm>





## 6.0 Archaeological Impact Assessment

### 6.1 Description of the Proposed Development

The Barangaroo Central Waterfront Promenade and Interim Public Domain is the first stage in the development of Barangaroo Central. This development will provide a public access to the waterfront between the Headland Park and Barangaroo South.

The Promenade is a public walkway being installed along the waterfront and extends along the full length of the Barangaroo Central site from the eastern side of the public deck in the Northern Cove to the Barangaroo South boundary. The Promenade area extends from the harbour edge approximately 30m into the site (Figure 5.1). It has a lower level boardwalk, a section which provides deep water short-term berthing and infrastructure for special events and a pontoon in the Northern Cove for small boat drop off and pick up of people. The Promenade area will require filling to raise the levels by approximately 1m to 1.5m. Following this, permanent pavement/boardwalk will be laid over the Promenade area. A temporary access way is proposed to connect the Promenade to Hickson Road.

The Interim Public Domain space will be a graded lawn area for public and special events, casual sports and picnicking etc. Earthworks will be undertaken to re-profile the lawn area. The lawn includes space for two temporary pavilions and public art/event staging areas.

The Promenade and Interim Public Domain will have landscaping treatment including planting of shade trees, installation of seats, drinking fountains, garbage bins, bike racks, paving of walkways, signage and lighting. All required services to support the intended use of these areas including stormwater, sewer, potable water irrigation, telecommunications, security, electrical and public lighting will be undertaken.

### 6.2 Impacts Arising from the Proposed Development

The structural works required to form the Northern Cove (including bulk excavation of the area and construction of new retaining walls) are part of the Barangaroo Headland Park Main Works and were included in planning approvals for the Headland Park project. As such, archaeological impacts of bulk excavation works in the new Northern Cove area have been addressed as part of the Barangaroo Headland Park project and are therefore not relevant here.

The proposed works associated with the construction of the Barangaroo Central Waterfront Promenade and Interim Public Domain do not include any bulk excavation of the site. The existing bitumen and concrete deck would remain across the area of the Interim Public Domain to provide a separation layer from deposits below. Proposed earthworks to re-profile the lawn area of the Interim Public Domain would be limited to filling of the area to achieve the required slope. No excavation of this area is proposed below the existing ground level.

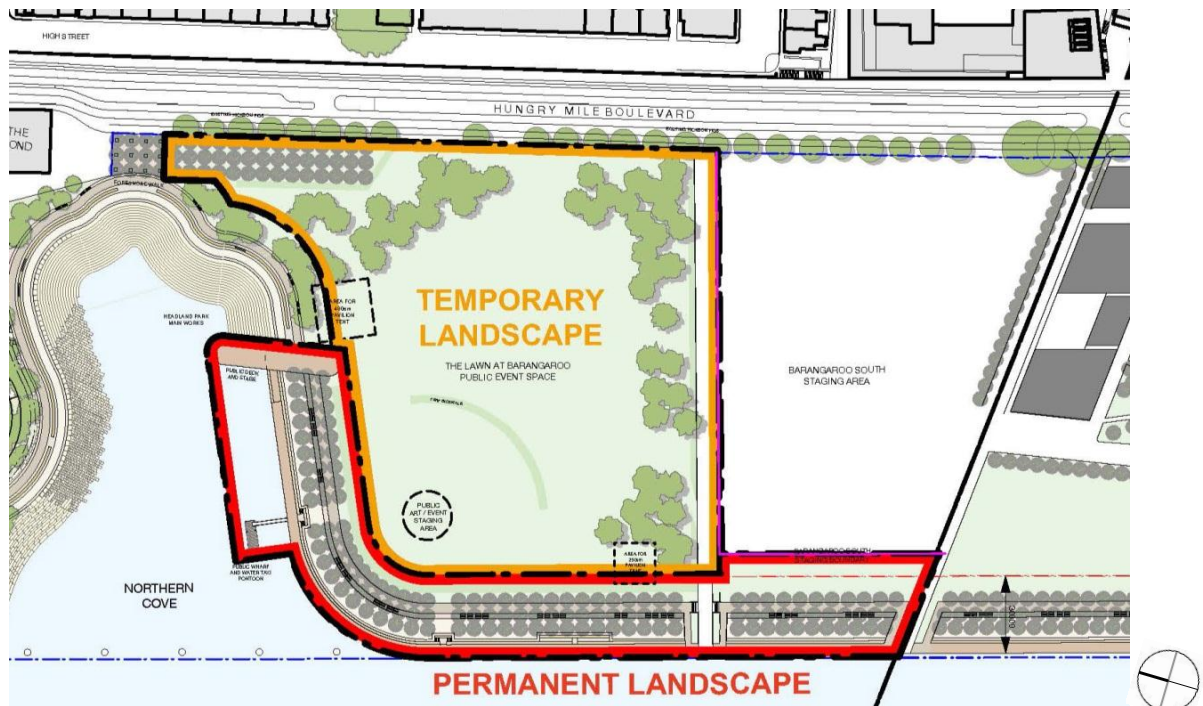
Construction of the Promenade would incorporate the existing caissons as a seawall and this area would also be filled to achieve the required finished levels.

Areas of proposed excavation associated with the Barangaroo Central Waterfront Promenade and Interim Public Domain would be limited to localised excavation for tree plantings around the perimeter of the Interim Public Domain, installation of services across the site, and establishment of temporary structures and facilities associated with events and activities in the Interim Public

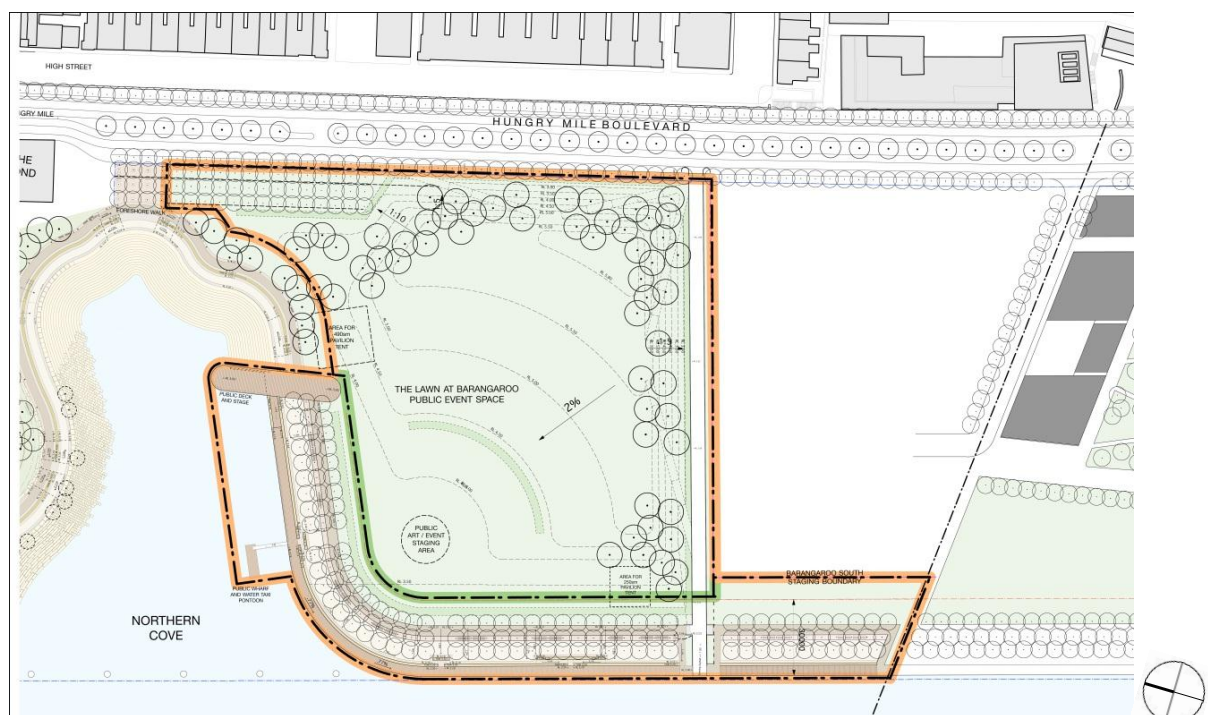
Domain. It is anticipated that the majority of any such excavation would be contained within fill deposits introduced or redeposited across the site as part of this project. As such, there are no aspects of the proposed development that would result in any major subsurface impacts.

Geotechnical information for the Barangaroo site, as well as recent archaeological testing in the Headland Park precinct, indicate that most of the Barangaroo site is covered by extensive fill deposits above any surviving cultural material. Any potential archaeological remains within the Barangaroo Central precinct would therefore likely be at least 1–3m below the existing ground surface. There are unlikely to be any elements of the proposed development works, or proposed events and activities within the lawn area, requiring excavation that would exceed this depth.

On the basis of the assessed archaeological potential of the Barangaroo Central site, and the nature and extent of proposed works, the Barangaroo Central Waterfront Promenade and Interim Public Domain project, including proposed events and activities within the lawn area, would be unlikely to result in any archaeological impacts (Aboriginal or historical).



**Figure 6.1** Plan showing the boundary of the Barangaroo Central Waterfront Promenade (outlined in red) and Interim Public Domain (outlined in orange) areas. (Source: PWP Landscape Architecture, extract from 'Outline Design Plan: Public Domain', August 31, 2012)



**Figure 6.2** Plan showing details of the Barangaroo Central Waterfront Promenade and Interim Public Domain areas. This plan indicates where temporary structures and event facilities will be located within the lawn area, and where landscape elements are proposed. (Source: PWP Landscape Architecture, extract from 'Tree Planting Plan', August 31, 2012)





**Figure 6.3** Section drawing showing the proposed profile of the Interim Public Domain. The lawn area will be filled to achieve the required slope. (Source: PWP Landscape Architecture, extract from 'Design Development Stage Two Site Sections—West East Site Section, Drawing No. TE-PWP-L-S3-8002)



## 7.0 Conclusions and Recommendations

### 7.1 Conclusions

#### 7.1.1 Aboriginal Archaeology

- The study area contains no previously identified Aboriginal sites or places.
- Two Aboriginal sites are recorded to the north of the study area, within the Barangaroo Headland Park precinct (one of which is recorded as 'destroyed'), while two others are located on the sandstone ridge, now the location of the freeway onto the Harbour Bridge. Other recorded Aboriginal sites are located elsewhere in the CBD, some distance from the current study area and within different landforms to those surrounding the current study area.
- Barangaroo Central is assessed as having no to very low potential to contain in situ Aboriginal archaeological evidence.
- Owing to the natural topography of the foreshore, much of the study area would have been inaccessible to Aboriginal people, and any evidence of Aboriginal use of the area is likely to have been disturbed or removed by subsequent historical use and development of the site.
- The proposed works associated with the Barangaroo Central Waterfront Promenade and Interim Public Domain project, including proposed events and activities within the lawn area, would be unlikely to result in any Aboriginal archaeological impacts.

#### 7.1.2 Historical Archaeology

- The Barangaroo Central precinct remained largely undeveloped throughout the nineteenth century and much of the study area now comprises reclaimed land.
- While the northern headland and the southern portion of the Barangaroo site were extensively developed from the early nineteenth century, the central portion remained relatively undeveloped until the 1860s, owing to the steep topography of this area. Maritime industry extended into this part of the site after this time.
- The study area has little or no potential to contain historical archaeological remains associated with late eighteenth or early-to-mid nineteenth century historical development and occupation of the site, as the study area remained undeveloped during this time.
- The northeastern part of the study area has moderate potential to contain historical archaeological evidence associated with the maritime-related development of the area during the late nineteenth century. This evidence may include structural supports for wharves/jetties, remnant sea walls, and other infrastructure.
- Parts of the study area have moderate potential to contain historical archaeological evidence associated with redevelopment of the area during the early-to-mid twentieth century. This evidence may include structural supports for wharves/jetties and associated infrastructure, as well as fill deposits introduced for progressive reclamation of the site. The study area may also include evidence about the impact of large-scale resumption, demolition, reclamation and redevelopment on remains of earlier development.



- Potential historical archaeological remains associated with late nineteenth century and early twentieth century maritime industrial development and operation of the site would be of Local significance with limited archaeological research potential.
- The proposed works associated with the Barangaroo Central Waterfront Promenade and Interim Public Domain project, including proposed events and activities within the lawn area, would be unlikely to result in any historical archaeological impacts.

## 7.2 Recommendations

The following recommendations relate to the management of the site's historical and Aboriginal archaeological potential and should be considered as part of the proposed redevelopment of the site:

- The Barangaroo Central Waterfront Promenade and Interim Public Domain could commence without the need for further archaeological assessment or physical archaeological investigation of the site.
- Any proposed excavation in the easternmost portion of the Barangaroo Central precinct should be limited to less than approximately 2m below the existing ground surface in that area to minimise any potential for disturbance of archaeological remains as part of the Barangaroo Central Waterfront Promenade and Interim Public Domain project.
- In the event that any unexpected historical archaeological remains were to be discovered at the site, works in the affected area/s should cease and the Heritage Branch should be notified under Section 146 of the Heritage Act. Further assessment or documentation may be required before site works could recommence in the affected area/s.
- In the event that any Aboriginal archaeological evidence or objects were to be discovered at the site, all works in the affected area/s must cease and OEH must be notified under Section 91 of the NPW Act and a suitable procedure negotiated. Further assessment or documentation may be required before site works could recommence in the affected area/s.
- In the unlikely event that human remains are discovered at the site, the findings should immediately be reported to the NSW Coroner's Office and the NSW Police. If the remains are suspected to be Aboriginal, the OEH should also be contacted and a specialist consulted to determine the nature of the remains.
- If any archaeological remains are discovered at the site, opportunities for interpretation of these remains should be considered as part of the current Barangaroo Central Waterfront Promenade and Interim Public Domain project, future redevelopment of the Public Domain area, and/or redevelopment of the broader Barangaroo site.
- Consultation with Aboriginal groups is being undertaken as part of the broader Barangaroo development. This archaeological report may assist ongoing consultation with Aboriginal stakeholder groups as part of the consultation process.

## 8.0 Appendices

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### Appendix A

Extract from 'Barangaroo Archaeological Assessment and Management Plan', prepared by Austral Archaeology Pty Ltd for Barangaroo Delivery Authority, June 2010—Historical Background



## **Appendix A**

Extract from 'Barangaroo Archaeological Assessment and Management Plan', prepared by Austral Archaeology Pty Ltd for Barangaroo Delivery Authority, June 2010—Historical Background



## 3.0 HISTORICAL BACKGROUND

### 3.1 PHASE 1- ABORIGINAL OCCUPATION

Prior to the European colonisation of Sydney Harbour, the landscape was characterised by sandstone ridges and plateaus cut by streams and rivers forming bays and estuaries that provided a wide range of resources for the Aboriginal inhabitants. Eucalypt forest in the protected gullies gave way to open woodland on the slopes and coastal plains and inter-tidal rock platforms, beaches or mangrove mudflats on the shore (Attenbrow 2002: 40). This varied landscape, combined with a mild annual climate, provided an ideal environment for the Aboriginal people who had occupied the Port Jackson harbour area and its islands for thousands of years.

The traditional owners of the Sydney City region are the Cadigal (or Gadigal) people. Their country covered the area on the southern shore of Port Jackson from South Head to Darling Harbour and south to Petersham. They were of the Darug language group that extended across to the north shore and west to the Cumberland Plain and into the Blue Mountains

The Wangal people were recorded as living to the west of the Cadigal and included Goat Island, Balmain and the south side of Sydney Harbour and Parramatta River to Rose Hill. Where the Cadigal territory ended and Wangal territory commenced however, is uncertain as pre-contact Aboriginal territorial boundaries, like language boundaries, remain uncertain and it is likely that there was overlap in some areas, (SLNSW 2006). Collins (1798 in Fletcher 1975: 463) identified Bennelong as a Wangal man although no other aboriginal men or women were known as Wangul. Bennelong called himself both Cadigal and Wangal.

The Cameragal (Gammerraygal, Camera-gal, and Kamarigal) people appeared to have utilized the area on the northern shores of Port Jackson, particularly the area about the north-west part of the harbour. Barangaroo was of the Cameragal people (Collins 1798 in Fletcher 1975: 463).

People living around Go-mo-ra (Darling Harbour) and the headwaters of Blackwattle Creek may have formed a separate clan from the generally recognised Cadigal. Tentatively named the Gommerigal, this clan has yet to be officially recognised, but existence of the Darling Harbour 'tribe' was recorded as late as 1830. (Shirley Fitzgerald <http://www.dictionaryofsydney.org/entry/ultimo>). Aboriginal people still frequented the Ultimo Estate in the 1830s as the area was so undeveloped ([http://www.powerhousemuseum.com/exhibitions/paradise\\_early\\_ultimo.asp](http://www.powerhousemuseum.com/exhibitions/paradise_early_ultimo.asp))

It is difficult to determine population figures at the point of European and Indigenous contact, however Governor Phillip estimated that there were about 1500 Aboriginal people inhabiting the coastal area of Botany Bay, Port Jackson and Broken Bay. The population reduced dramatically with the introduction of smallpox into Sydney's Aboriginal community in the first years of European settlement. More than half of Sydney's Indigenous population is believed to have died in the smallpox epidemic of 1789 which spread to the Cumberland Plain and Hawkesbury well before the colonists (Attenbrow 2002: 21).

The Aboriginal population was not sedentary but moved about the landscape, within their territories, in order to access the resources they needed. Campsites were usually located close to the shore, especially during summer when fish and shellfish was the staple diet. Women caught fish from canoes or on the shore using fishing line made from bark and shell fish hooks. The favoured bait for fishing was cockle flesh (Tench 1789 & 1793 in Flannery 2005: 259). The women also chewed the cockle flesh and then spat it into the water to lure the fish. The men predominantly speared fish from the shore using multi-pronged spears tipped with bone and only rarely speared fish from a canoe. According to the early diarists, fish was preferred over shell fish. The many varieties of fish and shellfish were supplemented with vegetables, grubs, birds, reptiles, possums, wombats and kangaroos (Attenbrow 2002: 41).

The shores of Darling Harbour were an important source of cockles (*Anadara trapezia*), rock oyster (*Saccostrea commercialis*) and mud oyster (*Ostrea angasi*) for both the indigenous and European population. Early European descriptions of the harbour shores and inlets note large piles of shell, the remains of many meals built up over time (Mulaney et al 1999: 286). It appears likely that the middens were not just the result of many previous meals but also as a result of fishing as the Aboriginal community appeared to prefer eating fish and cockle was the preferred bait. The Cockle shell was also used for making fish hooks, hafted into tools and as a sharp cutting edge.

In urban areas sites such as Millers Point, the vast majority of evidence of past Aboriginal activity has been destroyed through quarrying, lime burning and other modification processes before it could be recorded. Several archaeological sites located nearby however, illustrate the use of the harbour by Aboriginal people prior to the arrival of the First Fleet. A 1994 excavation at Cumberland Street on the ridge overlooking The Rocks and the harbour uncovered a campfire (radiocarbon dated to about 1500 AD) with the remains of a meal consisting of snapper and rock oysters. Archaeological investigation of the former banks of the Tank Stream under Angel Place recovered Aboriginal artefacts, pollen and botanic remains of eucalypt rainforest (Godden Mackay 1998).

Excavations of Moore's Wharf (Lampert & Truscott 1980) on the northern edge of the Barangaroo site, revealed shell midden beneath the rubble floor of the building. Shells, fish bone and stone tools were recovered in association with shards of blue and white transfer printed ceramic indicating Indigenous people continued to live around the harbour following European occupation. Aboriginal groups were living a semi traditional lifestyle on large land well into the 1830s.

Evidence of Aboriginal occupation at other sites in the vicinity includes Darling Walk where 10 artefacts were recovered from an extremely disturbed context and the recovery of 952 artefacts from the KENS site (Casey and Lowe 2009). Both of these sites however, have different profiles to Barangaroo. Considering much of the Barangaroo site south of the headland was originally below the high tide line (which was not the case with Darling Walk, the KENS site or Cumberland Street) the potential for Aboriginal artefacts to survive in the Barangaroo site considered extremely low.



Figure 3.1. View to the west of *Cockle Bay* by Major James Taylor c1820. Aboriginal people sharing the landscape with the European settlers. The native vegetation appears to be substantially removed and the steep and rocky topography is particularly well documented in this image. Millers Point headland can be seen in the background with two mills (Source ML 941).

### 3.1.1 Bennelong and Barangaroo

In December 1788, not long after the landing of the First Fleet, Arabanoo a 30 year old Aboriginal man was captured by the British. He was dressed in European clothes, trained in English and called Manly (after his place of capture). Arabanoo was a serious and gentle man and though restrained at first, showed no inclination to return to his people (Tench in Flannery 2005:105). He



dined regularly with Phillip, providing the first real information about Aboriginal society and culture for the Europeans.

He nursed two orphaned sick children named Nanbaree and Abaroo back to good health after the outbreak of smallpox resulted in the death of approximately half of the indigenous population. He fell victim to the disease himself and was buried in the Governor's garden in May 1789. The children remained in the care of the Governor (Tench 1789 & 1793 in Flannery 2005:106).

In an effort to initiate further communication and interaction with the Aboriginal population of Port Jackson, Bennelong (variously spelled as Baneelon, Binnaalong, Bennillong) and Colbee were captured by Lieutenant Bradley, acting under instruction from Governor Phillip on 25 November 1789. They were taken from a large group of Aborigines camping and fishing in the Manly area, shackled to prevent their escape and taken to live with Governor Phillip. Bradley (1792 in Smith 1969) states that Nanbarree and Abaroo were overjoyed at seeing Bennelong and Colbee and assured the captives they would be well treated. Nanbaree said that Colbee and Bennelong were well known warriors and leading men among them. Although Bradley (Kenny 1973:24) states that capturing the two men was *'by far the most unpleasant service I ever was order'd to Execute'*, he was somewhat placated by the knowledge that neither man had a wife or family who would feel their loss.

While a relationship of sorts was established between Phillip, Bennelong and Colbee, five months after their capture, Bennelong and Colbee were released from their shackles and promptly absconded. They were located at Manly four months later with a large group of relatives, feasting on a beached whale. After an initial friendly encounter with Governor Phillip, Bennelong and Colbee again fled after the Governor was speared by another Aborigine (Willemerring) (Tench 1789 & 1793 in Flannery 2005:135).

Phillip continued to seek out Bennelong and ensure him the new colony wished to live with the Aboriginal people harmoniously (Hunter 1787-1792 in Bach 1968:311). As part of this process of enticement, Phillip gave Bennelong gifts of clothing, tools, fishing gear and food. Bennelong had a love for all things European, particularly food and wine, however he and his clansmen did not place importance on possessions and ownership. Very few of the many articles that were given to Bennelong remained with him, being distributed amongst his and other tribes (Hunter 1787-1792 in Bach 1968:324). Their only possessions were the spears, nets and canoes they made for themselves (Collins 1789 in Fletcher 1975:497). Both Hunter (1787-1792 in Bach 1968:314) and Tench (1789 & 1793 in Flannery 2005:117) noted that the Aborigines did not take anything by stealth and that honesty within their own society was very strong.

In June 1790 Tench (1789 & 1793 in Flannery 2005:117, 244) described Bennelong as about 26 years old, slight, yet well built, one of the tallest of his countrymen standing at 5 foot 8 inches and with evidence of having contracted small pox. He was described as fearless and defiant, opportunistic, clever, self satisfied, impulsive and a great source of information and entertainment; a contrast to the quiet and thoughtful Arabanoo (Tench 1789 & 1793 in Flannery 2005:8). Bennelong had a second name, Wolarawaree.

During his lifetime, Bennelong had numerous wives and consorts. When Bennelong first encountered the British colonisers, he had recently lost a wife but spoke of Barangaroo (pronounced Ba-rang-a-roo) often. They evidently formed a relationship after Phillip was speared and Bennelong was not living in the settlement (mid 1790). Barangaroo appeared somewhat older than Bennelong and had two children from a previous relationship, both of whom had died according to Hunter (1793 in Bach 1969: 311). Brodsky (1975:61) suggests Bennelong accepted Barangaroo's children as his own, while Tench states that two children were adopted by Bennelong and Barangaroo after the death of their parents due to small pox (Tench 1789 & 1793 in Flannery 2005:160).

Hunter (1793 in Bach 1969: 311), Collins (1789 in Fletcher 1975: 464) and Tench (1789 & 1793 in Flannery 2005:135) observed that Bennelong and Barangaroo appeared fond of each other, however Tench doubted that monogamy was widely practiced. In July 1790 Bennelong stated that Barangaroo was the wife of Colbee and he had two other women as compensation. Bennelong also abducted a young woman, Goroobaroooola from Botany Bay, while living with Barangaroo (Collins 1789 in Fletcher 1975: 464). Goroobaroooola remained with Bennelong after Barangaroo's death, but became attached to another man after Bennelong sailed to England. She eventually became Colbee's third wife. Bennelong and Colbee fought over her in 1805 with

Colbee the victor. This story fascinated the readers of the colonial diarists reports in England and it was turned into a play and performed in London in 1798 (SLNSW 2006:5).

It appears that Bennelong may have had children to several different women, but there is little known about the lives of his children. One of Bennelong's offspring was known by a European name, Walter Thomas Coke. An obituary from the *Hobart Town Gazette* in 1823, ten years after the death of his father states;

Sydney Feb. 6. On Friday night last, Walter Thomas Coke, an Aboriginal native and son of the renowned Bennelong, departed this life at Wesleyan Aboriginal Mission House in the vicinity of Parramatta, after a short illness. It as an especial duty, we perceive, to record the demise of this interesting youth; his age was somewhere about 20. When the Reverend Mr. Walker first came to the colony [1821] he adopted the deceased as his own son, in the benign view not only of feeding and clothing him, but also in to install into his mind the saving principles of Christianity. A single aberration excepted, the once poor friendless black boy amply compensated his master-friend and brother for the sedulous attention that paid to his interests. Three or four months since, he was publicly baptised being honoured with the distinguished and humanising name of the immortal Dr Coke. A few weeks since, he was married to a native girl, who had some considerable time previous maternally treated in the family of Mrs. Hassell, of Parramatta: her name Maria (*Hobart Town Gazette and Van Diemens Land Advertiser*, 15 March 1823).

In September 1790, at a meeting between soldiers including Tench and a group of Aborigines including Colbee, Abanoo and Bennelong, Barangaroo was presented to the British party and encouraged to eat and drink their offerings, which she refused. Tench initially saw Barangaroo as good looking woman, gentle, modest and timid, but quickly observed her to be a determined and persuasive character. On one occasion she refused to go to Sydney Cove to visit the Governor with Bennelong and despite her opposition, Bennelong went any way. In a fit of rage Barangaroo broke one of his fishing spears (Tench 1789 & 1793 in Flannery 2005: 142). In another incident, a convict was being flogged for stealing the local Aborigine's hunting and fishing gear. Barangaroo threatened the executioner of the flogging with a large stick (Tench 1789 & 1793 in Flannery 2005: 184). The Aborigines understood punishment for bad or unacceptable behavior, but were also quick to seek revenge.

Barangaroo was an attractive woman who appears to have had some influence over Bennelong. She had strong beliefs and was not easily swayed, leading Tench to comment on her 'fierce and un-submissive character' that she displayed on a regular basis (Tench 1789 & 1793 in Flannery 2005:184). However, as this was not a trait British women were admired for, Tench is likely to be somewhat harsh in his judgement stating her to be a 'scold and a vixen for whom nobody felt pity' (Tench 1789 & 1793 in Flannery 2005: 264). She accepted food and fishing gear from the Europeans but refused to wear European clothes or drink their wine.

Barangaroo was one of only a few women that had a pierced septum. She would visit the colony 'dressed up' with a bone through her nose and painted with white clay. While there are a number of early paintings and drawings depicting Aboriginal women, there are no known specific images of Barangaroo.

Bennelong and Barangaroo were regularly seen fishing in the harbour together. One day in July 1791 Hunter (1793 in Bach 1969:313) found Bennelong on Goat Island with Barangaroo but they were not there the following day suggesting they did not stay overnight. They were found on the north shore with a number of Cameragal and intended to stay there for some time. Bennelong and other Aboriginal people known from around Sydney Cove were regularly seen fishing on the north shore of the harbour and in the company of the Cameragal people while also stating on numerous occasions that the Camaragal were 'bad' and their enemy (Hunter 1793 in Bach 1969: 323). It seems likely that the settlement of the English colony and the death of so many Aboriginal people had broken down some of the traditional boundaries and clan groupings.

Lieutenant David Collins assumed that Bennelong had a strong association with Goat Island as he noted Bennelong and Barangaroo on the island on a number of occasions and Bennelong claimed 'descent-based property rights' and 'ownership' of the Island. Collins states;

"But strange as it may appear they also have their real estates. Ben-nil-long, both before he went to England and since his return, often assured me that the Island Me Mel (called by us Goat Island) close by Sydney Cove was his father's and that he should give it to By-

gone his good friend and companion. To this little spot he seemed much attached; and we have often seen him and his wife Ba-rang-a-roo enjoying themselves on it. He told us of other people who possessed this kind of hereditary property which they retained undisturbed". (Collins 1798 in Fletcher 1975: 497)

The concept of ownership is likely to be lost in translation and not something studies of Aboriginal anthropology have noted (see Attenbrow 2002). Custodianship rather than ownership appears more likely. Other early diarists (Phillip, Tench, Bradley, Hunter) do not mention Bennelong's connection with the island at all. Bennelong's habit of misleading the British should also be taken into account. He was 'not ignorant of occasional falsehood and adept at evasion' (Collins 1798 in Fletcher 1975: 498). The Aborigines regularly contradicted each other, changed their minds and pretended ignorance or illness to gain advantage (Tench in Flannery 2005: 255). Tench also believed that Bennelong regularly and deliberately misled the Europeans and there was mistrust and mis-understanding on both sides (Tench 1789 & 1793 in Flannery 2005: 147). Toward the end of his governorship, Phillip reluctantly came to the realization that Bennelong was very cunning (Hunter 1793 in Bach 1969: 327).

On the other hand, Tench was impressed by the generosity of the Aboriginal people despite the British colonising their territory and the Aborigines often complaining of it. Bennelong and Colbee regularly accompanied touring parties on expeditions and acted as translators for Aboriginal groups encountered outside the Sydney area. On one occasion a boat overturned in the harbour and Bennelong and a number of other clansmen dived into the harbour, rescued the passengers, took them to shore where they lit a fire, dried their clothes fed them fish and escorted them back to the colony without expecting any reward (Tench 1789 & 1793 in Flannery 2005: 204).

By October 1790 Bennelong, Barangaroo and several others, including Colbee, were visiting the settlement daily, Barangaroo apparently overcoming her mistrust of the British colonisers. The esteem Phillip held for Bennelong resulted in the construction of a brick hut, at a place of Bennelong's choosing on the eastern shore of the cove (Bennelong Point). Bennelong, Barangaroo and two children lived there and were regularly visited by other Aboriginal people (Tench 1789 & 1793 in Flannery 2005: 160).

In May 1791, Bennelong had volunteered with Colbee to accompany a party of soldiers to the Nepean River however, Barangaroo would not allow Bennelong to join them. Barangaroo was pregnant at this time and gave birth in August 1791 (Hunter 1793 in Bach 1969: 360). Collins (1798 in Fletcher 1975:463) noted that Barangaroo was well and walking around after the delivery of her baby girl Dilbong, despite being severely beaten by Bennelong just prior to giving birth. It appears that within a short time she had suffered an injury or illness and died. Collins guessed that Barangaroo was about 50 when she died (Collins 1798 in Fletcher 1975: 499) which is fairly unlikely.

Phillip and Collins assisted Bennelong, his sister Carangarang and a few others in the cremation of Barangaroo (Collins 1798 in Fletcher 1975: 502). Bennelong created a pile of sticks and logs about three feet high. Barangaroo's body was covered with a blanket and laid on the pile with her head toward the north and a basket of fishing gear and other small items by her side. Bark and large branches were laid over her and set on fire. Collins (1798 in Fletcher 1975: 503) noted that while there was much crying, fighting and distress at the time of death, there was no singing or crying at the cremation of an adult. The group did not stay to watch the fire. The following day Bennelong scooped the ash into a pile which he covered with sticks and stones.

Dilbong died not long after her mother, probably as there were no women in the clan that could feed her. While adults were cremated, infants were buried. Dilbong was buried in the Governor's garden (like many other Aboriginal infants) and Bennelong was seen to sleep on her grave for several nights (Collins 1798 in Fletcher 1975: 499).

Over time, Bennelong became a man of some consequence amongst his clansmen as a representative of the Aboriginal people to the British government. After the death of his wife and child, Bennelong sailed with Chapman and King to Norfolk Island at the end of 1791 and later met King George III during a trip to England in 1793. Bennelong returned from England in September 1795 seeing himself as somewhat superior to his clansmen. By this time he was no longer considered important by the colonial government nor was he respected by his Aboriginal friends. His inability to find full acceptance with either his countrymen or the white men resulted in his often being drunk and violent. He was dangerously wounded in tribal battles on a number of

occasions and eventually died in January 1813 on the property of brewer James Squire in Kissing Point, where he was buried (Australian Dictionary of Biography). Nanbaree was also buried there 10 years later.

### 3.2 PHASE 2- EUROPEAN SITE HISTORY - PRIVATE OWNERSHIP 1788-1870

Various known as Long Bay and Cockle Bay, there are very few references to the eastern shores of Darling Harbour by the early colonial diarists. The name appears to come from European descriptions of the harbour shore, its large piles of shell and the availability of shellfish in the shallow bay. A number of early maps chart the depth of water in the various bays and inlets of Port Jackson. The depth of water around the head of Cockle Bay was between 1.5 – 2 metres (4-6 feet) deep, while the depth of water at Walsh Bay was 2 – 2.5 metres (7-8 feet). The harbour fell sharply into deep water just off shore at the headland making Millers Point accessible to both large and small vessels (Figure 3.2).

The massive middens of shell in Cockle Bay were to provide the perfect source for lime for the burgeoning colony. From the early 1800s the shells were collected, crushed and burnt in kilns to produce quicklime, a necessary component of building mortar for Sydney's early brick and stone buildings. Land transportation of raw materials such as limestone, shell, coal and timber was hampered by the lack of roads in the early decades of the colony and required distribution by boat. As a result, quicklime was generally manufactured around harbours or ports.



Figure 3.2. Detail of Captain John Hunter's *Plan of Port Jackson, New South Wales* (1788) showing depth of water around Sydney Cove and Darling Harbour (SLNSW ML ZM4 811.15/1788/1)

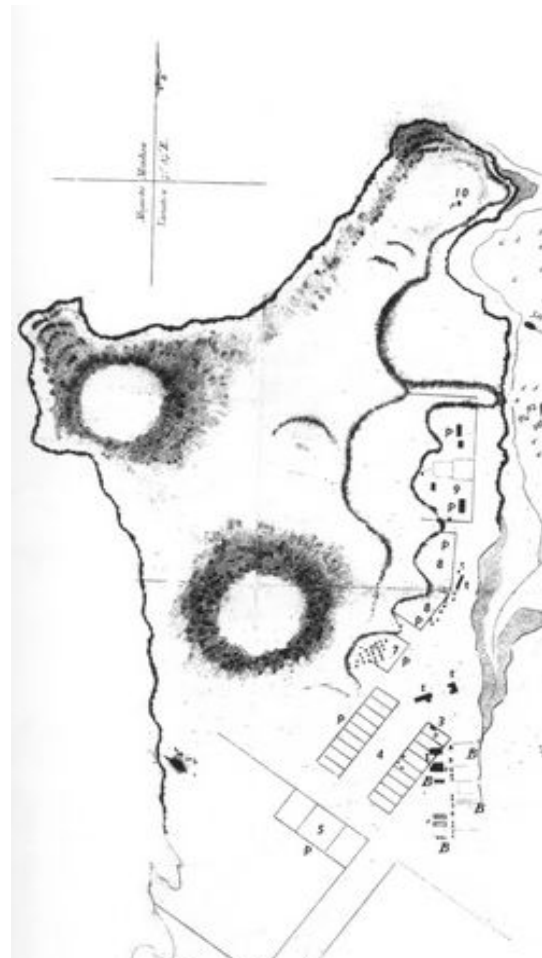
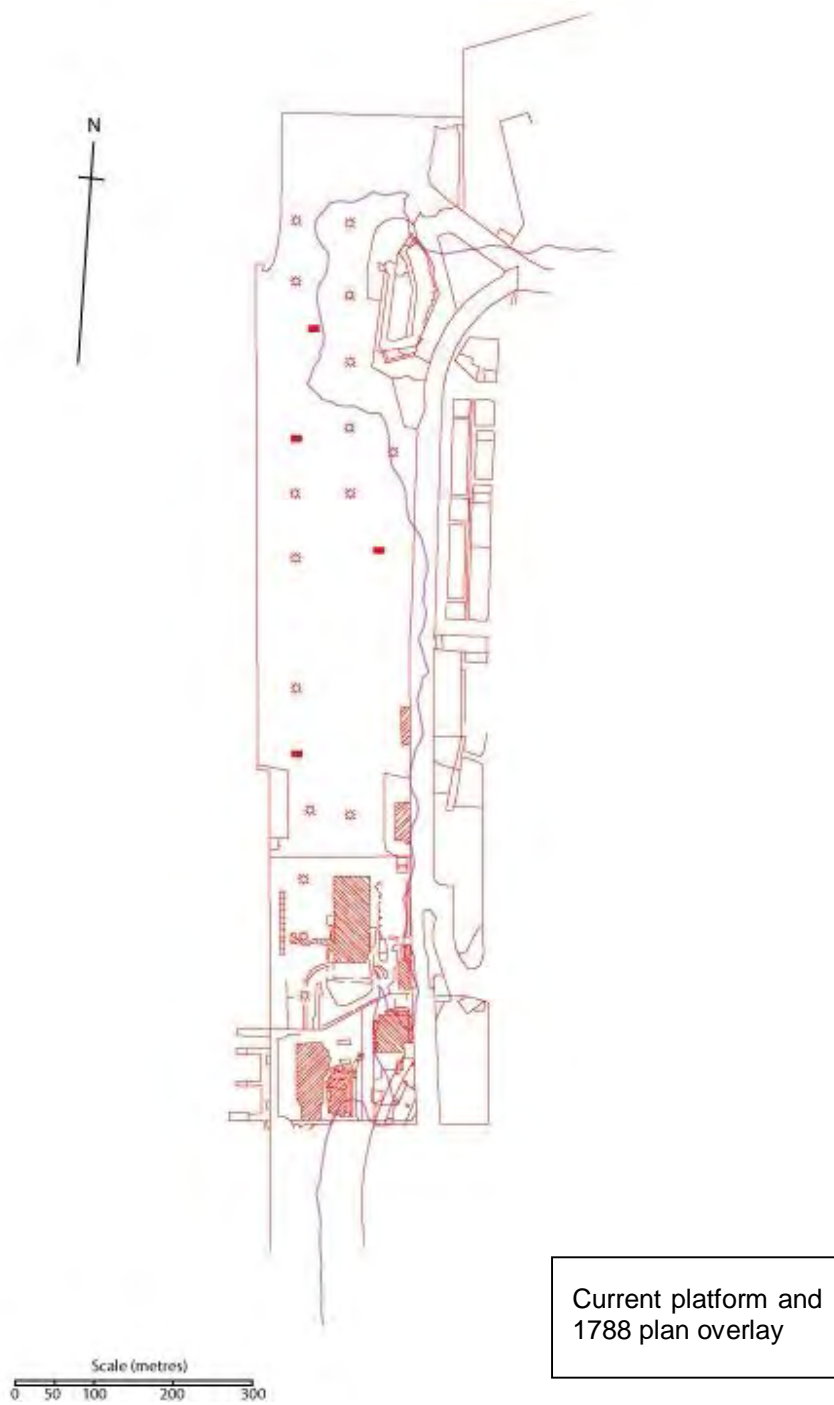


Figure 3.3. *Sketch of Sydney Cove Port Jackson* 1788 by John Hunter and William Dawes. It shows existing buildings in the colony and the topography including ridgelines and the elevated areas of the Millers Point headland and Observatory Hill (Source: Ashton and Waterson 2000:5).



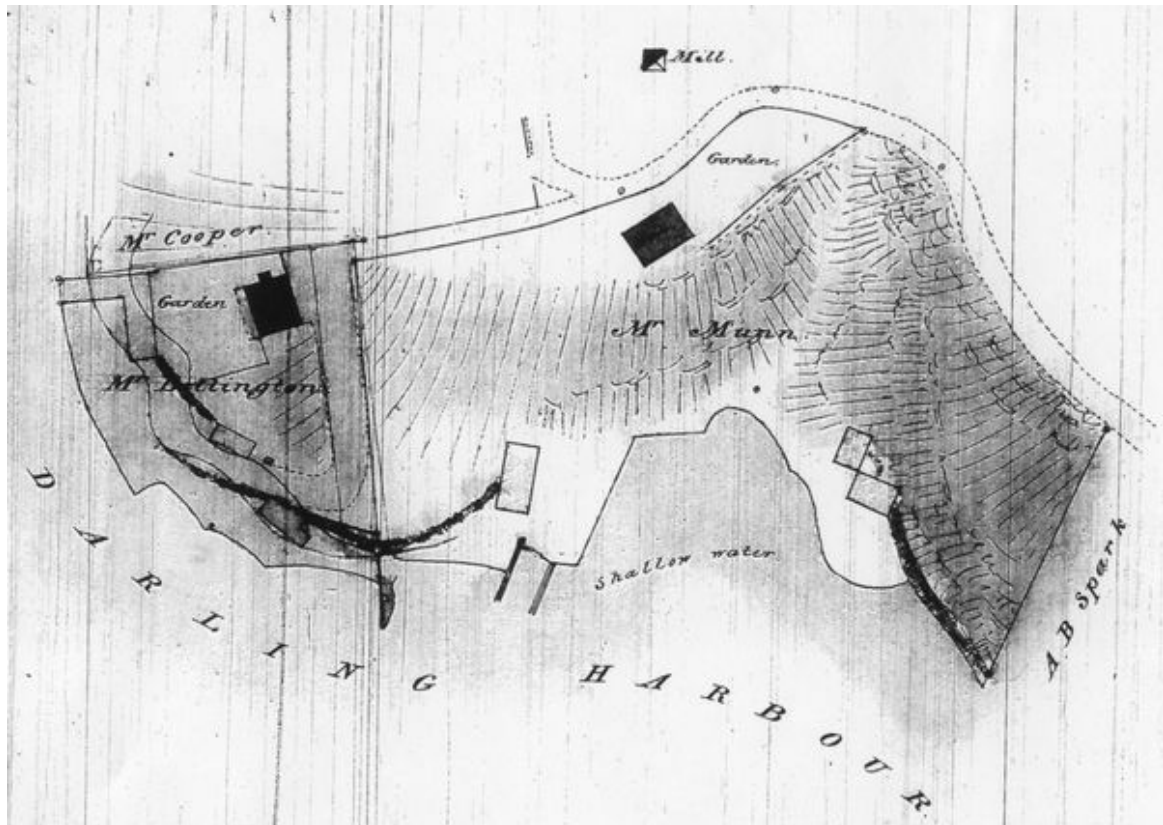


Figure 3.4. Plan of Darling Harbour 1831, showing one of Leighton's mills at the top of the image, the track leading to the property of Munn and Bettington (that became Bettington Street) as well as the location of their houses, gardens and wharfs. The lime kilns (adjoining rectangular buildings) are built into a rock face close to the shore (Source: State Records maps and plans Parish of St Philip vo1 folios 1-50 reel 2746) .

A slightly later plan annotates the structure as 'remains of old lime kiln' (see detail below).

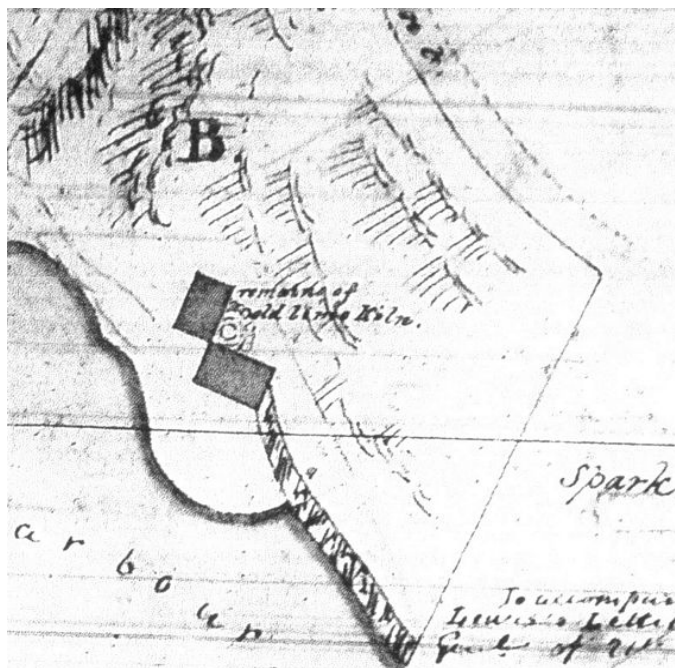


Figure 3.5. Detail of the lime kilns on Munn's property built into the side of an escarpment close to the waters edge. Common shaft kilns had a cylindrical shaped burning chamber with an air inlet in the base. They were usually constructed into an embankment and lined or faced with brick, stone or limestone blocks. The kiln was packed with alternate layers of fuel (timber or coal) and limestone, coral or shell, often covered at the top to control the burn and fired from the base. This layering limited the size of the kiln to 2-4 meters diameter and up to 3 meters in depth. They generally had a turn around time of approximately one week, several days to load and unload and 2-3 days to fire. This type of technology did not require a great deal of skill to operate, but was labour intensive often employing convict labour (Harrington 2000). (Source: State Records maps and plans Parish of St Philip vo1 folios 1-50 reel 2746).



Lime kilns were established in Cockle Bay, Lavender Bay, Garden Island and Goat Island to take advantage of the abundance of local resources. As the local supply of shell diminished, middens were excavated from the wider Sydney area and brought by boat to be burnt at Darling Harbour (Fitzgerald & Keating 1991:17). There were a number of kilns operating in Darling Harbour in various locations. The remains of two kilns built into a rock face are marked on a plan of James Munn's property dating to 1830 (Figure 3.5). Early lime kilns may also have been located approximately on the current site of Wharves 9 and 10, south of the Barangaroo site ([http://www.darlingharbour.com/sydney-EducationHeritage\\_and\\_History\\_A\\_Burgeoning\\_Trade\\_Port.htm](http://www.darlingharbour.com/sydney-EducationHeritage_and_History_A_Burgeoning_Trade_Port.htm)).

Lime production in Darling Harbour seems to have continued into the mid-nineteenth century as Michael Kennedy, owner and occupant of the terraces at 49-51 Kent Street, ran a lime burning business adjacent to Jones Wharf (later Towns' Wharf) from the early 1840s to the late 1850s (Fitzgerald & Keating 1991:22, Davies 2007:24). Apart from one intact and one partial kiln located on Goat Island, these simple shaft kilns no longer survive in NSW as they were never intended to be permanent structures. The original Lime Street, at the very southern end of the site disappeared during the upgrade of the wharves in the early 20<sup>th</sup> century. The Darling Harbour reconstruction works in 2002 returned Lime Street which now runs parallel to the shore from the southern boundary of Barangaroo to the Aquarium and is a reminder of long gone activities once undertaken in the area.

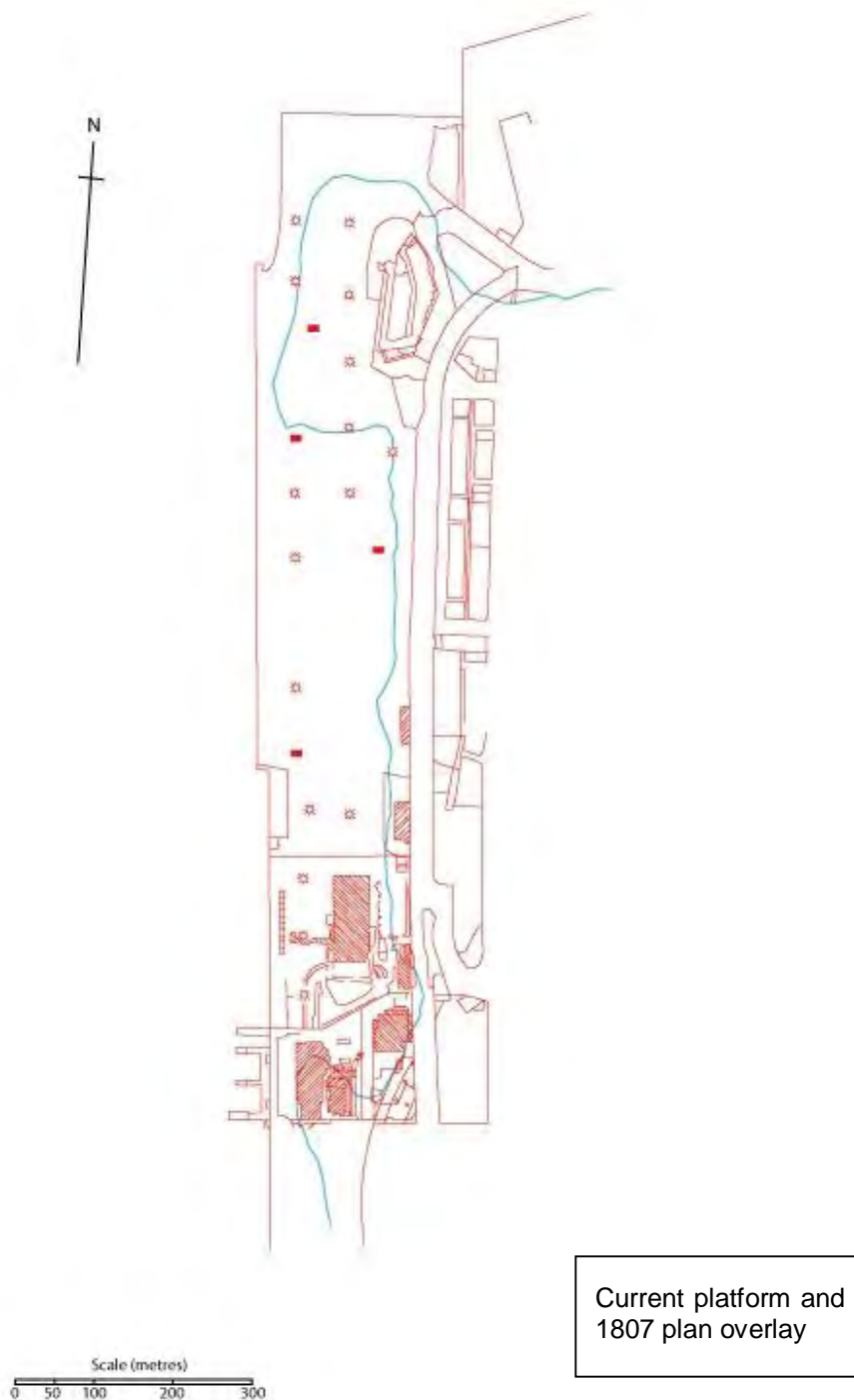


Figure 3.6. Lesueur's map of Sydney 1802 (*De La Ville De Sydney*) (Source Ashton and Waterson 2000:7).



Figure 3.7. *Plan of the Town of Sydney 1807* Meehan (Source: SHFA historic map collection).





The rugged topography initially discouraged settlement of Millers Point and Darling Harbour. However the exposed promontory of Millers Point proved a suitable location for the establishment of windmills for the production of flour. The first government windmill was erected in 1797 on the ridge behind the settlement (known as Windmill Hill, Flagstaff Hill and later Observatory Hill) with the second constructed in 1798. (Throughout the text this location will be referred to as Observatory Hill despite not being known by this name until the late 1850s)

Millers Point was named for the three private windmills that were established there within the first decade of 1800 by John Leighton. The windmills were landmarks in Sydney Harbour and frequently depicted in early nineteenth century paintings and sketches of Sydney Cove (Davies 2007:23) (Figure 3.1).

Lesueur's map of Sydney 1802 (Figure 3.6) shows the settlement of Sydney Cove spreading to the south. By this time there were some early allotments, possibly small farms and an access track around the location of Sussex Street at the southern end of the site. However, the rocky ridgeline to the west of Sydney Cove acted as a natural barrier to rapid occupation of Millers Point and the shores Darling Harbour at the northern end of the site. The location of the windmills is shown on Lesueur's map as well as a few buildings and associated tracks on the shores of Walsh Bay.

James Meehan was assistant to the Colonial Surveyor General in 1807. His *Plan of the Town of Sydney* (1807) names the eastern headland of Darling Harbour "Cockle Bay Point". Fort Phillip on Flagstaff Hill is the only feature in Millers Point depicted on this map, despite a number of government and private developments such as paths, roads, mills, property boundaries and dwellings that were likely to be present at the time. The return of houses published in the *Sydney Gazette* 15 April 1804, lists 18 houses in the Cockle Bay area, the majority of these are likely to have been located south of the study area.

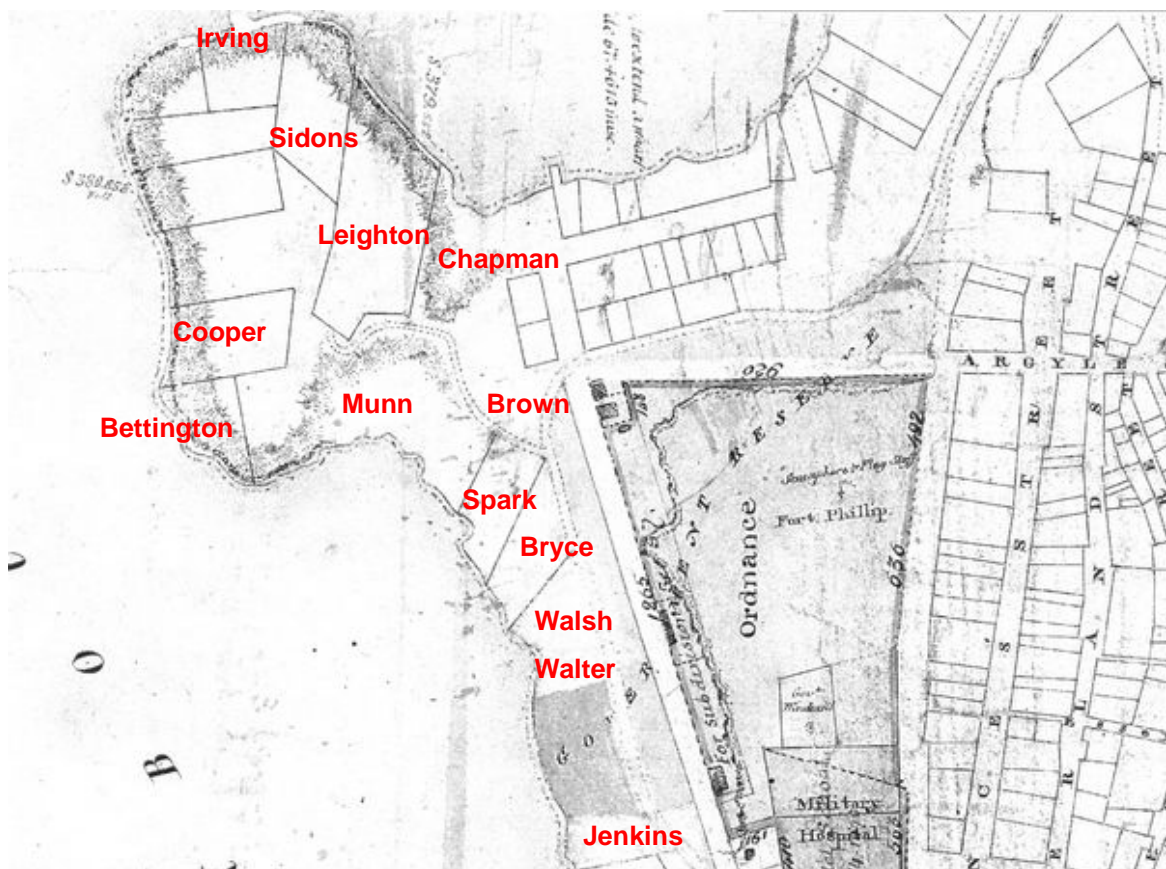


Figure 3.8. Extract from County Cumberland, Parish of St Philip, NSW Crown Lands Administrative Maps (no date, 1830?) showing the division of land along the foreshore and tracks accessing properties. Kent Street is not fully formed, quarrying is being undertaken along the eastern side of Flagstaff Hill 'for subdivision' and the land that will eventually become the gas works is a government reserve. The names of occupiers and grantees at the time (in red) have been collated from a number of different sources (Source: Parish Mp of St Philip no 14073701 State Records NSW).

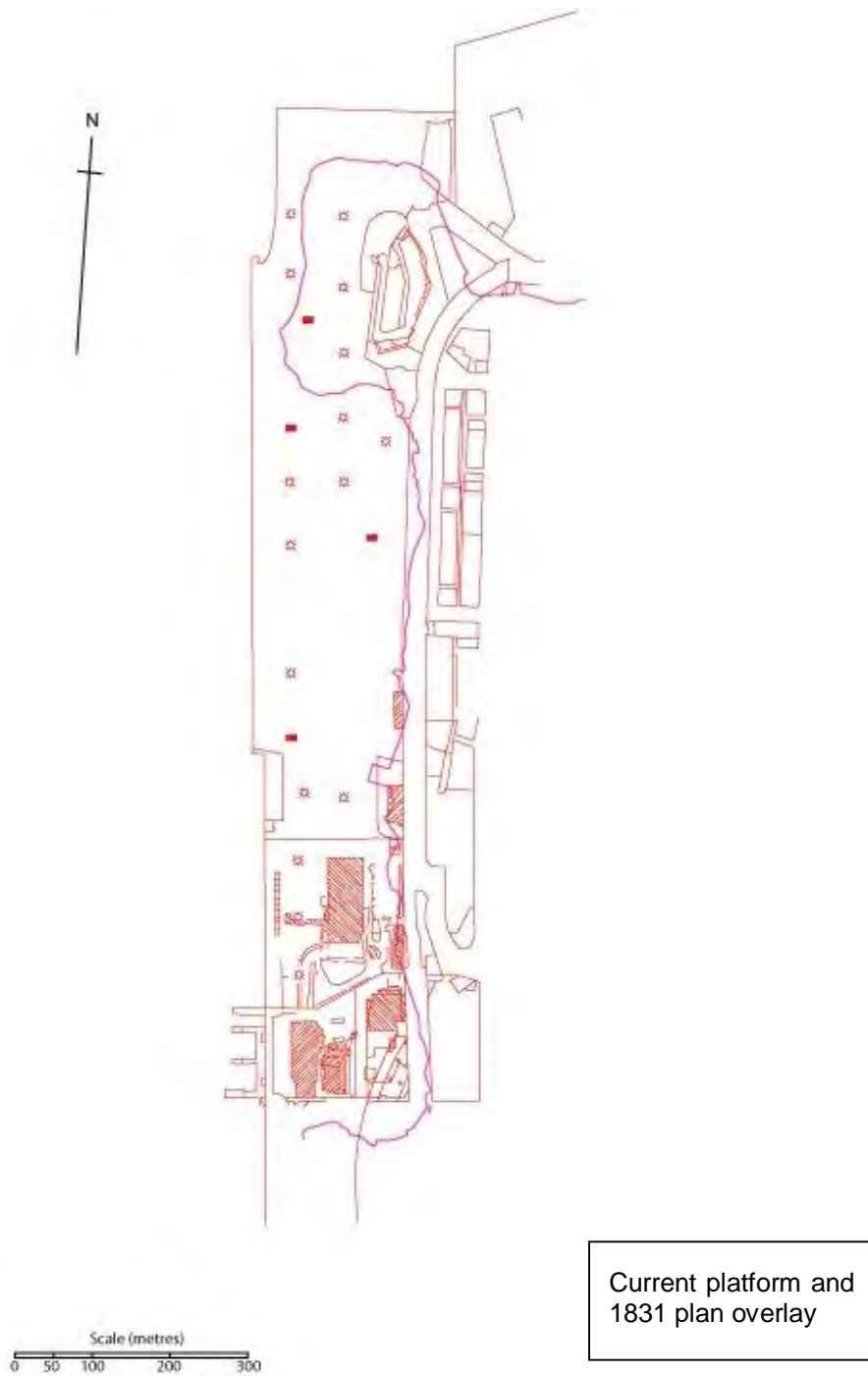




Figure 3.9. Detail of Harpers map which was begun in 1823 and added to later. It is very similar to the later parish map but shows the location of the windmills and buildings on the properties (Source: State Records collection map reproduced in Fitzgerald & Keating, *Millers Point, The Urban Village* 1991).

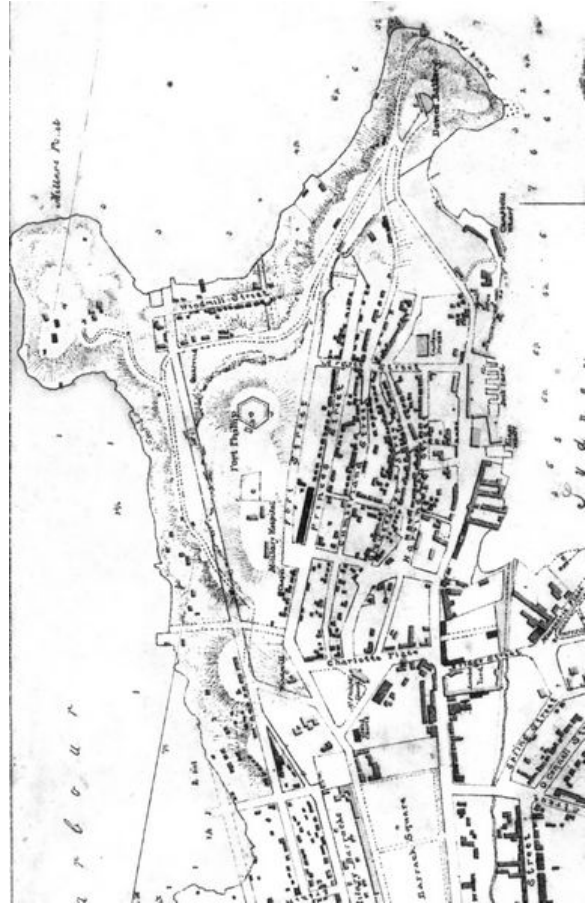


Figure 3.10. *Map of the Town of Sydney, 1831.* Lanner and Mitchell. This image shows the development of streets in Millers Point, the location of tracks and houses and the proposed alignment of Sussex Street. The headland is annotated Millers Point and Cockle Bay has been renamed Darling Harbour (Source Ashton and Waterson 2000:17).

Governor Macquarie ordered the construction of the first wharf in Cockle Bay in 1811. It was located south of the Barangaroo site, at the foot of Market Street, to service the Parramatta River trade. This was followed by wharfs serving the steam mills of Dixon (1813) and Barker (1824) which were the beginning of the predominantly industrial development of the southern part of Darling Harbour.

From the earliest days of settlement, land was granted to soldiers, emancipists and free settlers as a means of encouraging growth, productivity and self sufficiency in the new colony. In 1825 the sale of land by private tender began and by 1831 no further free grants (except those already promised) were given. All land was sold at public auction after this date (State Records, Short Guide 8 - Land grants, 1788-1856).

Despite the growth of Sydney town, Millers Point remained relatively isolated and access was only possible around the shore line of Dawes Point or over the steep and rocky ridge of Observatory Hill and The Rocks. Permanent settlement of the Millers Point area commenced well before the 1820s, although formal Crown grants were not issued in the area until the 1830s. While some land occupation was documented as granted leases, much of the area was settled as permissive occupancies.

Harper's map of Sydney started around 1823 (Figure 3.9) establishes the topography and land tenure of Millers Point prior to the official granting of titles (Fitzgerald & Keating 1991:18). The plan shows fence or boundary lines and squarish modified sections of shoreline in the central and southern part of the site that is likely to be indicative of reclamation or wharf construction.

By the mid 1830s surety of land title necessitated a Crown Commissioner of Claims to issue land grants for most of Millers Point. The configuration, size and distribution of the grants recognized and reflected the existing land usage, with large grants on the water frontage and smaller town allotments behind fronting Argyle, Windmill and Kent Streets. The difficult terrain also necessitated measures to demarcate property boundaries including high retaining walls and quarrying (Davies 2007:55). Despite the lack of detail on a number of plans predating 1830, a number of occupants lived across the site for many years prior to official grant or purchase of their properties and could show chain of title to the first decade of 1800.

Kent Street appears as an orderly road in early plans, however in the late 1830s it was no more than a steep and rugged track unsuitable to wheeled vehicles (Maclehose 1839: 63-64). The earliest building still existing in Millers Point is St Brigid's Church constructed on Kent Street in 1835. By 1834 the Kent Street was well occupied and plans show a large number of small houses and allotments along the street in the southern half of the site. In order to overcome the steep foreshore terrain, especially in the northern half of the site, owners filled and reclaimed the shallows of their waterfront allotments to create wharfs and building platforms.

From the 1830s, progressive development of the shore line to accommodate the shipping industry including passenger transport, trade (import and export of primary produce), cargo storage and wharf construction, required land reclamation and cutting back of the sandstone cliffs at the base of Observatory Hill. The development of the northern areas of Kent Street was stifled for many years due to the natural barrier of the steep rocky outcrop. Kent Street was not extended to Argyle Street until after the 1830s and the district was used as sandstone quarry from the first decade of 1800.

Millers Point was never an area associated with colonial industry but was predominantly developed by private enterprise. With the exception of the Australian Gas Light Company's works, established in 1843, practically all employers and employees in the area were connected to the wharves, quarries or associated with the small local infrastructure of shops, hotels and boarding houses that supported them. There was a great deal of mobility within the workforce due to the availability of work and lack of controlled hours and pay (Fitzgerald & Keating 1991).

Certainly the early perceived commercial advantage of waterfront property in Cockle Bay brought a diverse range of skilled and unskilled people together, some of whom prospered while others did not. Historical accounts record numerous ship builders, transporters and merchants conducting business on the site only briefly. Some enterprises however, flourished for long periods of time, while other entrepreneurs began their careers in maritime activities and maintained them while diversifying their interests in other fields. The following discussion is a small snapshot of well known people conducting business on the site and highlights their various activities.

### **3.2.1 Ship owners and Ship builders**

According to the Register of Australian and New Zealand Vessels (2006) ship building was being undertaken in Cockle Bay as early as January 1809 when the Sydney Gazette (1 January 1809 p 1 b-c) notes the construction of a 60 ton ship named *Brothers*, built in Cockle Bay by James and William Jenkins. In 1811 Charles Griffin built the timber cargo sloop *Hawkesbury Packet* and in 1814, James and William Jenkins built the timber schooner *John Palmer*. These appeared to be reasonably short lived projects, although Jenkins remained a property owner south of the government reserve until the 1830s. The earliest enduring ship building yard in the area was established by James Munn located at the foot of Munn and Clyde Streets in the mid to late 1820s.

James Munn, ship builder and ship owner, arrived in the colony in 1824 with his wife Anne on his brig *Amity* (1828 census). Colonial secretary papers of June 8 1824, note that he was tendering the boat for sale to the Government (Reel 6061; 4/1779 p.132). On June 14 1824, he applied for a grant at Cockle Bay and having received permission by the end of July, took possession of land and commenced business under a promise of a Grant once he had undertaken certain improvements (ADB <http://adbonline.anu.edu.au/adbonline.htm>).

Munn placed an advertisement in the Sydney Gazette, 19 September 1829, for the imminent sailing of his 90 ton schooner, *Harlequin*, bound for the Swan River colony, with limited cargo and passenger availability. According to the Register of Australian and New Zealand Vessels (2006)

Munn also built and operated '*Columbine*' a 68 ton timber trading schooner in 1833. The boat was wrecked in 1851 on a voyage to Richmond River.

Plans of Munn's property are conflicting with some showing a division in the centre and others not. It appears that Munn bought out his partner Arthur Martin in the early 1830s. By 1845 part of Munn's original grant had been subdivided and Munn Street and Bettington Street had been formalized (Figure 3.13.). Leighton's property had also been sold off in fragmentary fashion from the mid 1830s further complicating establishment of ownership.

Munn died at his home in Millers Point at the age of 68 in 1848. The Sydney Morning Herald lists his funeral notice on Monday 28 February 1848 at his Munn Street property. It was not a private function and was likely to have been well attended. The track at the northern end of Kent Street that led to Munn's property eventually became Munn Street.

After Munn's death, Lawrence Corcoran took over his yard and built a number of boats. The property was then acquired by John Cuthbert in 1856. Cuthbert, a ship builder from Ireland, migrated to Sydney in 1844 and worked for Cochrane. By 1849 he had bought waterfront land in Darling Harbour to the south of Munn's yard and extended his property by buying Cochrane out in the mid 1850s. By 1865 he had expanded his yards north to Millers Point and south almost to the gas works, occupied the patent slip wharf, was lessee of Mort's dock and a member of the Royal Yacht Squadron. He recognized the advantages of Darling Harbour as a shipbuilding site, he appears to have purchased most of the land from the point south to the gas works and helped to reclaim parts of the harbour. Much of his own property was reclaimed land (ADB <http://adbonline.anu.edu.au/adbonline.htm>).



Figure 3.11. Cuthbert's shipyard 1873. The business was replaced by Dibbs wharf within a few years of this photograph being taken. The wharf has been extended out into the harbour at the north west of the property to access deep water. A group of ten people are standing on a stone retaining wall at the bottom of the image. The shore is about three metres below them (Source: Holterman Collection, Mitchell Library).

Cuthbert's yard was one of the most extensive in the colony employing upward of 250 men at the end of the 1860's. A number of steam ships were built there for the government and local shipping firms such as the A.S.N. Co. as well as schooners for the Admiralty and a gunboat for the British government. There was a large jetty and yard comprising blacksmiths' shops, carpenters' sheds, sail lofts, a steam saw mill and large store of timbers, most sourced from the Sydney region. In addition to new boat construction, the yard had a profitable business in refitting vessels, many from England requiring repair. In 1871 Cuthbert claimed that his business was 'second to none in Australia'.



In the early 1870s, AGL attempted to purchase a portion of Cuthbert's land to the north of the AGL site for expansion. Cuthbert refused and sold the land to Rowntree who operated the floating dock just off shore (Broomham 2007:23). Cuthbert died in December 1874 and is remembered as one of the outstanding colonial shipbuilding entrepreneurs, diligent and responsive to technological change. In his substantial will he left bequests to St Vincent's Hospital, the Randwick Asylum, the Ragged School, and the Kent Street soup kitchen (ADB <http://adbonline.anu.edu.au/adbonline.htm>). The yard closed after his death and the site was acquired by T.A. Dibbs, Cuthbert's neighbour to the north, who redeveloped the adjoining properties for wharfage and storage. Rowntree sold his portion to AGL in 1880 allowing the gas works to expand.

Ship builder Henry Bass, purchased two lots south of the gas works in 1832 and rapidly improved the property with the addition of wharfage and a number of buildings. Bass built and repaired boats in Darling Harbour until 1853 when the property was sold.

Smaller boat building yards also operated in the area including Langford's yard to the south of Cuthbert's on Darling Harbour. This yard had an enviable reputation for its watermen's skiffs. Other ship yards were established by the 1840s including those operated by John Redgrave, Joseph Farris, Andrew Sommerbell and John Irving (Davies 2007:39). The first year of the publication of the *Sands Directories* (1856) lists a considerable number of ship builders and shipwrights living in Millers Point. Historic research to date has not found any record of shipwrecks in the vicinity of Barangaroo.

### **3.2.2 Merchants and Traders**

James Merriman was born in 1816 at Parramatta, the son of free settler and a convict. He trained as a cooper, practiced his trade and sailed in a whaler for four years. On returning to Sydney around 1850, he became licensee of the Whaler's Arms at Millers Point (Windmill Street) and later the Grafton Hotel and the Gladstone Hotel.

In the early 1850s he formed a partnership with William Andrews and ran a regular shipping service between Sydney and Wellington (NZ) from Millers Wharf. He prospered in the 1860s as a 'captain and owner' organising whaling ventures, engaged extensively in the *bêche-de-mer* trade in Torres Strait and founder of the pearl-shell industry in Torres Strait. In 1861 he owned two ships and had a part share in a third. In 1869 he was implicated in the kidnapping of natives from the Loyalty Islands and gave evidence to the royal commission.

Merriman was elected to the Sydney City Council for Gipps Ward, representing it between 1867 and 1883 and was mayor in 1873, 1877 and 1878. He advocated reform of the land law, extension of the railways, a municipal bill which would provide increased endowment for the city and a building act. He supported the 1866 Public Schools Act and opposed the payment of members of parliament. He also served as a trustee of Hyde, Phillip and Cook Parks and as a transit commissioner. Merriman was credited with giving Sydney's mercantile life stability.

He died in 1883 at his home in Argyle Street. He was remembered as energetic, sensible and persevering. His estate was valued for probate at over £51,000 and a street was named after him (ADB <http://adbonline.anu.edu.au/adbonline.htm>).

James Brindley Bettington operated a business on the adjacent waterfront property to the north west of Munn, right on the point. He had worked as a general merchant and wool-importer in the family business in London, before emigrating to Sydney in 1827 to breed sheep and establish a wool-broker's office. He began business as a shipping agent, purchased land in Millers Point from Mr. Hazard before 1830, became a magistrate and joined the Agricultural and Horticultural Society. He leased 700 acres of government land at Rooty Hill for his imported sheep and also began breeding horses, winning a number of awards for his stock. In 1830 Bettington joined his father-in-law on the directorate of the Bank of New South Wales then took up a land grant of 2560 acres in the Bathurst district. (ADB <http://adbonline.anu.edu.au/adbonline.htm>)

By 1832 Bettington's wharf at Darling Harbour was a busy centre, chiefly for colonial whalers and timber vessels, but as competition increased he decided to concentrate on pastoral development. Bettington announced his retirement from his Sydney business in 1837 (ADB <http://adbonline.anu.edu.au/adbonline.htm>). Bettington Street, Millers Point, commemorates the family name.



An increasingly acrimonious relationship developed between neighbours James Munn and James Bettington in the late 1820s to early 1830s. It is a clear example of the ambition and competition of early maritime business. Grievances between the two parties ended up in the Supreme Court on a number of occasions.

In the first case brought before the courts in October 1831, Munn attempted to stop Bettington from constructing a wall and wharf on the boundary of their properties. As a ship builder, Munn argued that he would be deprived of access to the deep water of the harbour which was necessary for his business. Munn had been promised a grant on the waterfront of Cockle Bay in 1824 provided he had improved the property. Munn was conducting his business and had constructed a wharf, dock and other buildings necessary for his trade well before 1830.

The Court would have granted an injunction to prevent Bettington from impacting on Munn's use of his land, however as Munn's grant had not been formalised, his right of property was dubious and the injunction was refused (Dowling, *Select Cases*, Archives Office of N.S.W., 2/3466). Interestingly, Bettington had occupied his land only recently and his grant had not been formalised either. The court went on to say that Munn himself may have been overreaching on the harbour, disadvantaging the public use of the deep water as a highway (Dowling, *Select Cases*, Archives Office of N.S.W., 2/3466). This seems unlikely as a number of plans from this time do not show wharfrage extending into the harbour.

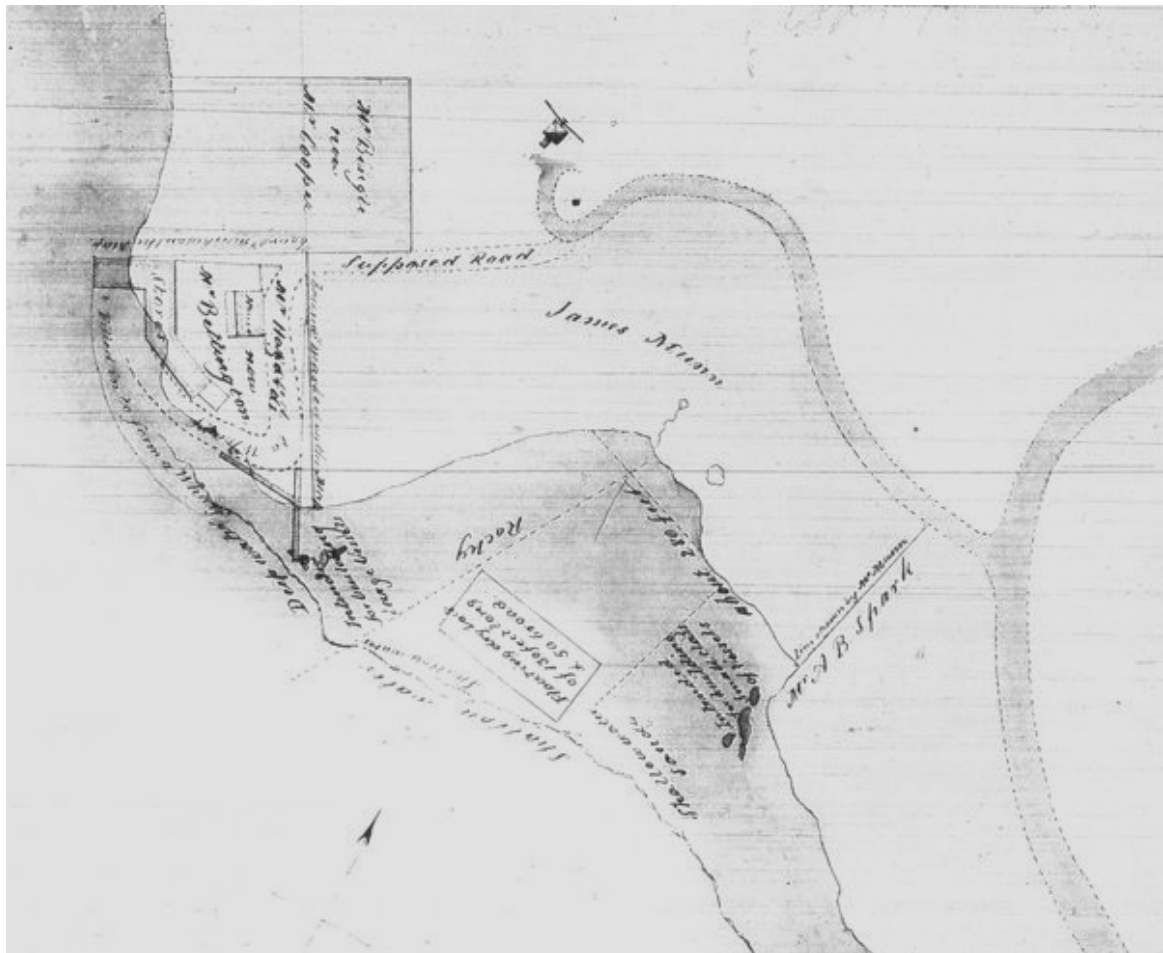


Figure 3.12. Drawing of Munn and Bettington's properties from October 1831. The majority of the waterfront of Munn's property is shallow and rocky. The western side of Munn's property is annotated 'Intended for the building of large vessels'. In the bay is a 'floating dry dock 130 ft long and 50 ft broad'. The eastern side of the property is 'intended for building small class of vessels'. Munn also had a slipway, not indicated on this plan near the boundary with Bettington. Bettington has constructed stores and a wharf at the north western edge of his property and reclaimed land beyond the shoreline; it has been 'filled in to create a wharf'. The wall and wharf that is the main issue for Munn has been constructed by Bettington on the most southern part of the point and extending out into the harbour, obscuring Munn's access to deep water (Source: State Records maps and plans Parish of St Philip vo1 folios 1-50 reel 2746).

In June 1832, Bettington brought a case to the courts to recover £500 compensation in damages for an assault on himself by Munn. Bettington stated that Munn was trespassing on his land and removing the soil. He also claimed that while building a wall between their properties in the presence of his overseer, Munn pushed Bettington, shook his fist in his face and threatened to break his nose. Munn claimed no assault had taken place and both men produced witness contradicting each claim. The court ruled in Bettington's favour and damages were set at one shilling, each party was to pay their own costs (Sydney Herald, 21 June 1832).

A further case was brought by Munn before the courts in October 1832, where he again claimed compensation from Bettington for depriving him of the use and benefit of deep water in Cockle Bay, on the north side of his premises (Sydney Herald, 25 October 1832). Munn appears to be a persistent fellow, with court records suggesting this matter had been brought forward on a number of occasions previously.

Munn wished to recover £1000, maintaining he had sustained great loss to his business. Munn produced a sketch of his allotment, to which Sir Thomas Brisbane had given his consent in 1824 and a letter confirming that a grant would be made accordingly. The allotment diverged from a straight line from the upper end of the grant to include deep water on the north side (on the point) necessary for building ships of large dimensions. At the time of the grant application the adjacent allotment was occupied by Mr Hazard, who was present when Munn put down his fence, and Hazard assented to the boundary. When Bettington purchased Hazard's property he did not take the divergence of the boundary into consideration and began constructing a wall and wharf, cutting off access to the deep water claimed by Munn (Figure 3.12 above).

The sketch plan above suggests that Munn might have had a case and the jury was possibly swayed by Bettington's position. Bettington was an experienced, educated, wealthy and well-connected man. By the time of the court cases he was a member of the Agricultural and Horticultural Society, a magistrate and a director of the Bank of New South Wales. His wharf was a place of activity catering to colonial whalers and timber vessels and probably very successful.

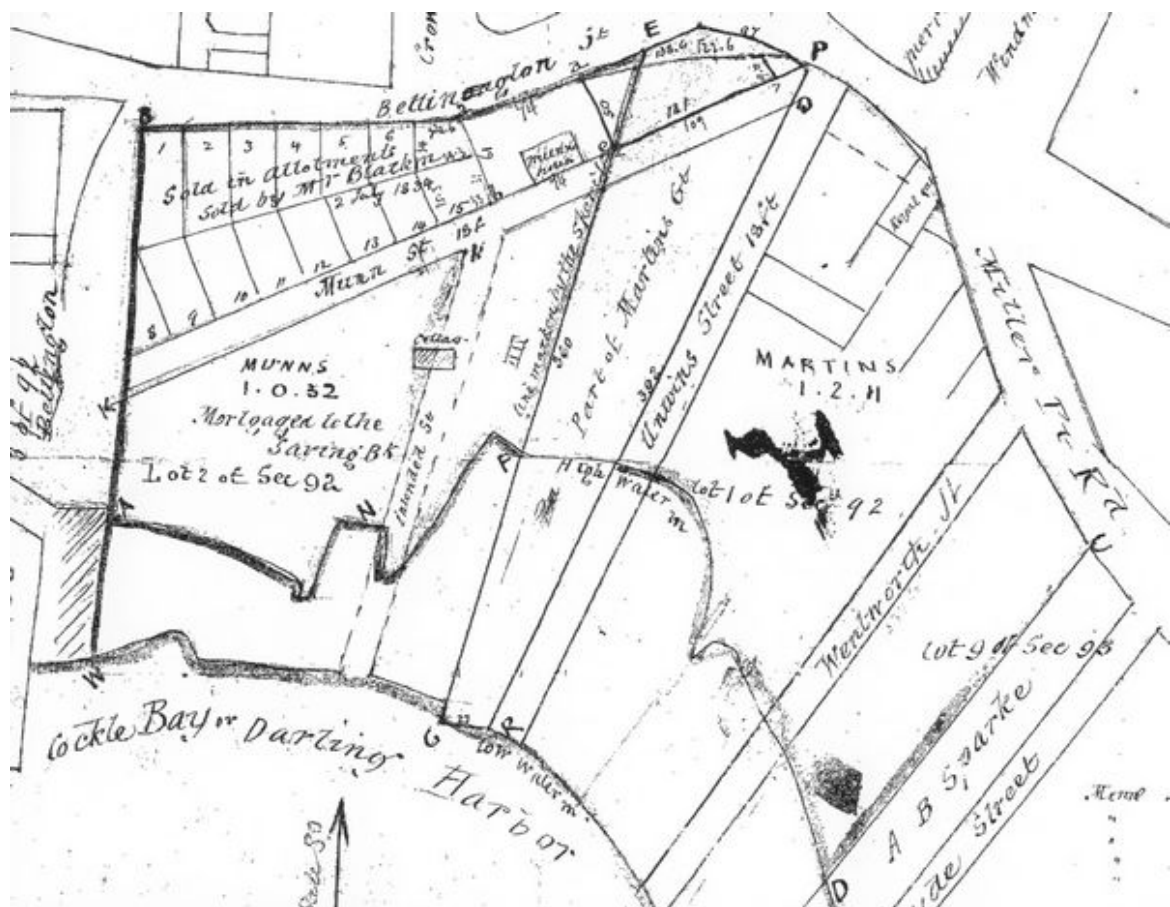


Figure 3.13. Subdivision Plan of Darling Harbour 1845. This plan shows the high and low water mark, the subdivision of properties and the establishment of streets (Source: State Records maps and plans Parish of St Philip vo1 folios 1-50 reel 2746) .

Scotsman Charles Smith arrived in the colony in 1836 after joining the merchant navy. He took up whaling and in 1850 became manager of Flower, Salting & Co.'s whaling fleet. He began importing coconut oil and tortoise-shell, bought a schooner and maintained a regular service to the Gilbert Islands. He also acquired Bettington's original property and wharf at Millers Point, soon known as Smith's Wharf.

Smith formed a business partnership and founded a general merchants company with John Henry Challis. They purchased Bass' property and additional land south of the gas works in 1854 and developed it to form the Grafton Wharf (1854-1880). In the 1860s, Grafton Wharf and Stores consisted of 240 feet of waterfront property with four jetties and a range of store houses. Lessees included shipping company offices and maritime trades.

Smith was a member of the Steam Navigation Board in 1859-73 served on the committees of the Sailors' Home and the Sydney Bethel Union, was a director of the Australian General Assurance Co., chairman of the Waratah Coal Co., an auditor of the Commercial Banking Co. of Sydney and a founding councilor of St Andrew's College, University of Sydney. In 1864 he was a committee-man of the New South Wales Free Trade Association. While not active in politics, Smith was a member of a commission preparing for the naval reception of the Duke of Edinburgh and sat on an imperial royal commission into alleged kidnapping of natives of the Loyalty Islands

He was a trustee of the Savings Bank of New South Wales and a local director of the Imperial Fire Insurance Co. of London, president of the Chamber of Commerce, a director of the Bank of New South Wales between 1890-97, a commissioner for the Calcutta Exhibition in 1883-84, and a trustee and committee-man of the Union Club.

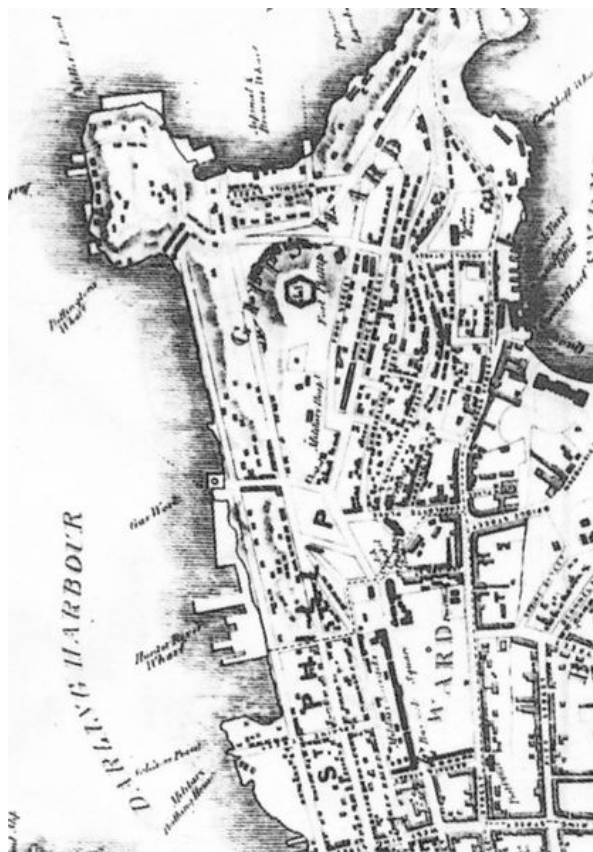


Figure 3.14. *Map of the City of Sydney, 1843* William Henry Wells. This map shows the location of the gas works and a number of wharves around the harbour. The extension of Sussex Street (Hickson Road) did not exist until the redevelopment of the harbour foreshore in the twentieth century and at this stage would have been on or below the high tide mark (Source Ashton and Waterson 2000:25).



Figure 3.15. 1875 plan illustrated in the *Supplement to Sydney Mail*. This image is almost identical to the 1855 plan by Smith and Gardner. These plans name the more important of the wharves present at the time (Source: Sydney Harbour Foreshore Authority Historic Maps & Plans Collection).

Smith and Challis sold the Grafton Wharf 1880; Smith retired from active business in 1888 but retained his north Millers Point wharf and business. He died in 1897 aged 80 at his home in King's Cross. His estate was valued for probate at £494,468 a huge sum at that time (ADB <http://www.adb.online.anu.edu.au/biogs/A060162b.htm>).

### 3.2.3 Wharves and Warehouses

Wharves had been constructed in the area by private enterprise on an as-need basis without consideration of future expansion since the 1820s. Apart from not obstructing public navigation, there was no government regulation for wharf construction. These wharfs became more numerous over time, with rapid construction taking place in the 1850s and 60s. The majority of the wharves were less than 300 feet long with only 80-90 feet between them. This situation was unsuitable to changing cargos and technologies as ships became larger at the end of the century (Walsh 1910:79).

Maritime activity in the early 19<sup>th</sup> century was generally export-oriented specializing in timber, whaling and sealing products and the south sea island trade. The impetus for the rapid development of wharf and storage facilities at Millers Point/Walsh Bay came with the pastoral expansion of the colony and the wool export trade. Wharves and warehouses were constructed and expanded in size to accommodate the ever-increasing tonnage of wool and wheat which was displacing whale oil as the predominant cargo on the Millers Point wharves (Fitzgerald & Keating :29). The wharves also serviced local harbour ferry services as well as coastal, interstate and international passenger routes. Extensive jetties had been built south of the gas works in the early 1840s but the area to the north of the gas works was extremely steep and only marginally developed.

The village of Millers Point emerged as the wharves generated the establishment of small firms of skilled tradesmen associated with the maritime industry as well as providing work for stone masons, seamen and labourers, most of whom lived nearby. Millers Point provided residences for both the wealthy merchants and the large proportion of working class population. Like most busy port side neighbourhoods, the vast majority of housing stock was modest rental property. Speculative development of tenements and terraces were built to meet demand. (Davies 2007:47). A local ship's blacksmith, George Talbot, built a number of terraces around Millers Point in the 1840s. In 1861 there were 400 houses in Millers Point (Fitzgerald and Keating 1991:45). The first of several gold rushes occurred in 1851. Passenger transport increased dramatically as did the shipment of goods to the gold fields. Many wharfs underwent additions and alterations at this time and new companies sprung up to take advantage of the associated business opportunities.

Smith & Gardiner's *Map of the City of Sydney 1855* lists a number of wharfs including the Australian Agricultural Company, Dukes, Deloitte's, Agars' Wharf, AS&N Co, P&O AGL Wharf, the Balmain Steam Ferry Wharf was located just south of the Gas Works at the end of Erskine Street and further south was the North Coast Steam Navigation Co. and the Union Steam Navigation Co. In 1868 there were at least 16 major wharves operating around just the northern part of Millers Point (Davies 2007:20).

By 1870 almost the entire foreshore from Dawes Point to the head of Darling Harbour was modified by quarrying, reclamation and the construction of a series of seawalls as well as entirely occupied by wharves, stores and commercial premises. Historic images from the 1870s show small areas such as the section between Cuthbert's Shipyard and the gas works that was not extensively developed due to the very steep foreshore. Reclamation appears to have been achieved by driving a series of piles into the harbour and then backfilling to create a solid platform. Wharfs and jetties were then anchored to the platform reaching out into the deep waters of the harbour (Walsh 1910:79).

From the earliest days of the colony wharfage and storage was available for hire and it was not necessary to own your own wharf or facilities. Owners were obliged to maintain their wharfs as competition was rife. Over time, ships became highly specialized depending on their cargo, many wharfs were simply extended while some wharves were rebuilt and enlarged to accommodate the larger vessels

It was recognised from the 1880s that the reconstruction of wharfage was necessary for the whole of Millers Point and east Darling Harbour. The demolition of a number of these wharfs (not all it

seems) around the turn of the century gave engineer Henry Walsh the opportunity to observe the construction techniques and types of timber which was valuable information for subsequent wharf construction. Walsh found that almost all of the wharfs had been constructed of turpentine piles of 200-300 mm (9-12 inches) diameter and most were at least 40 years old. These timbers were found to be in sound condition as turpentine was resistant to borers and were reused in the new wharfs (Walsh 1910:80).

### **3.2.4 Industry**

Millers Point was never an area associated with large scale industrial use, being predominantly maritime in nature. A number of small industries supported ship building including fabrication works for ship building components such as chains, anchors, masts, tools, rope and sails as well as ship maintenance and providores.

The Australian Gas Light Company (AGL) was the largest industrial premises within the subject site. It was a privately owned company formed in the financially stable 1830s. The original land grant of just over two acres on the shores of Cockle Bay was to John Macarthur in 1810. It appears he did not develop the site and leased portions of the property. By 1830 land holders had already reclaimed part of the foreshore and cottages and a wharf had been erected. That same year the grant was subdivided into eight allotments, the harbour frontage lots being wedge shaped. The subdivision created a road from Kent Street to the rear of the foreshore allotments that later became Gas Lane. Lands to the north of the subdivision remained in Government ownership while land to the south was owned by Aspinall Browne & Co and also contained a wharf (Broomham 2007: 9).

Emancipist James Jenkins purchased two of the subdivided lots in 1831, one of which contained a cottage and wharf. He had been associated with Darling Harbour since 1811 and may have leased Macarthur's property prior to subdivision. He built a substantial house fronting Kent Street, partially on government land, that was not legally acquired until 1837 by his widow.

The Australian Gas Light company was formed in 1836 but found it difficult to purchase suitable land on the harbour. Richard Jones, an AGL company director purchased one of Macarthur's subdivided lots fronting Darling Harbour in 1839 and sold it to the company who then purchased the adjacent Jenkins' lot. The Jenkins lot was subdivided to square off the wedge shape of the land and create a rectangular allotment for the gas works. The remaining portion was sold to land owner to the south, Captain Milne who operated a slip (Broomham 2007: 13).

Preparation of the gas works site involved extensive quarrying to level the gas works yard and excavation to a depth of 20 feet (approximately 6.5 metres) for the instillation of the two gas holders. Some of the stone removed from the excavations was used for the construction of buildings on site including the perimeter wall, store houses and the base of the chimney (Broomham 2007: 15). The first gas supplied to customers commenced on 24<sup>th</sup> May, 1841. The Gas works was partially built on reclaimed land consisting of large wharfs for unloading coal supplied from Newcastle. The coal was burnt to form reticulated gas for domestic, industrial and municipal consumption and was stored in the gas holders on site.

Between 1869 and 1882 major extension works to the gas plant were undertaken which consisted of acquisition of land to the south and east and the demolition and construction of buildings. A second phase of extension occurred from 1882 to 1896 including periodic acquisition of land to extend the premises. A number of buildings were added to the site over the ensuing years including work shops, stores, an additional retort house and a third gas holder to accommodate rising demand.

Gas production was progressively transferred to facilities in Mortlake from the mid 1880s. The site was acquired by the government in 1912 and cleared by 1922 to allow completion of Hickson Road as the main access road to the harbour and wharfs.

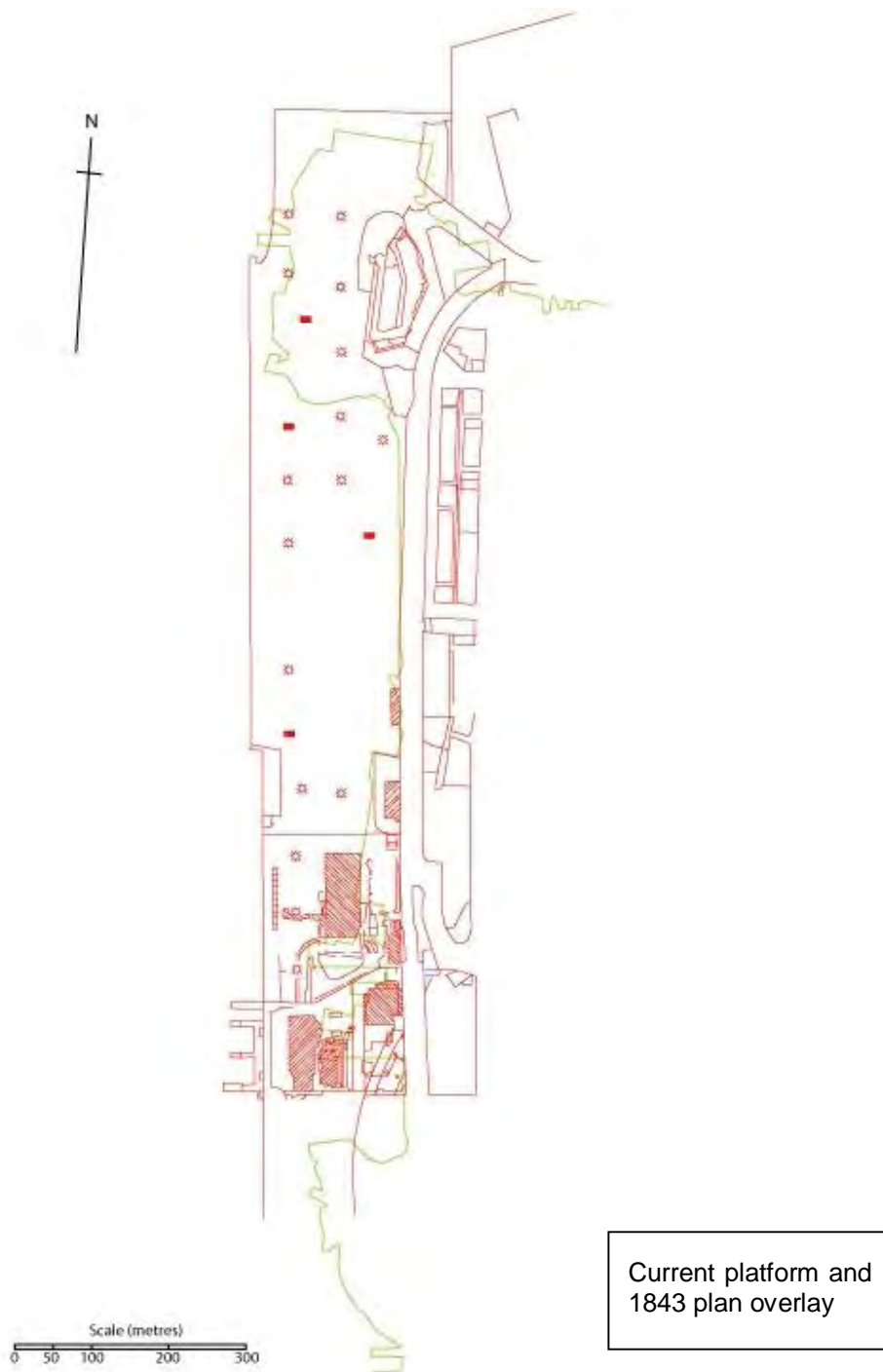






Figure 3.18. View to the south of the gas works around 1870. The large ships are moored at Rowntree's floating dock which was owned for a time by Cuthbert. The steep slope down to the harbour is traversed by stairs and a path with a handrail. Fencing appears to have been constructed around cliff edges. The gas works is constructed on reclaimed land (Source: State Library of NSW)

In 1832, publican Francis Girard purchased two allotments of land on the foreshore of Darling Harbour at the most southern end of the Barangaroo site. He constructed a flour mill, wharf and a number of other buildings and also purchased other land in the vicinity. In 1841 the property was divided and some of the land next to the waterfront was sold to the Hunter River Steam Navigation Company while Gerard's flour mill was purchased by Thomas Breillat, a former shipping and trading merchant. Breillat bought out the other investors in the mill and managed the Sydney Flour Co until his death in 1873. Breillat was also founder of the Sydney Chamber of Commerce and a founding director of the Australian Joint Stock Bank (ADB online).

Charles Smith, Breillat's neighbour to the north, purchased the property in 1878 and rapidly improved the facilities by replacing the two jetties on the property with new ones accompanied by substantial stores buildings. Not long after replacing the wharves, Smith sold the property to the Clarence & Richmond River Steam Navigation Co and the Queensland Steam Shipping Co. Ltd.

Apart from small service businesses, activity on the Barangaroo site was almost entirely shipping related. Other industry in the area included boat builders, shipwrights, rope makers, mast and block manufacturers, anchor smiths and sail makers.

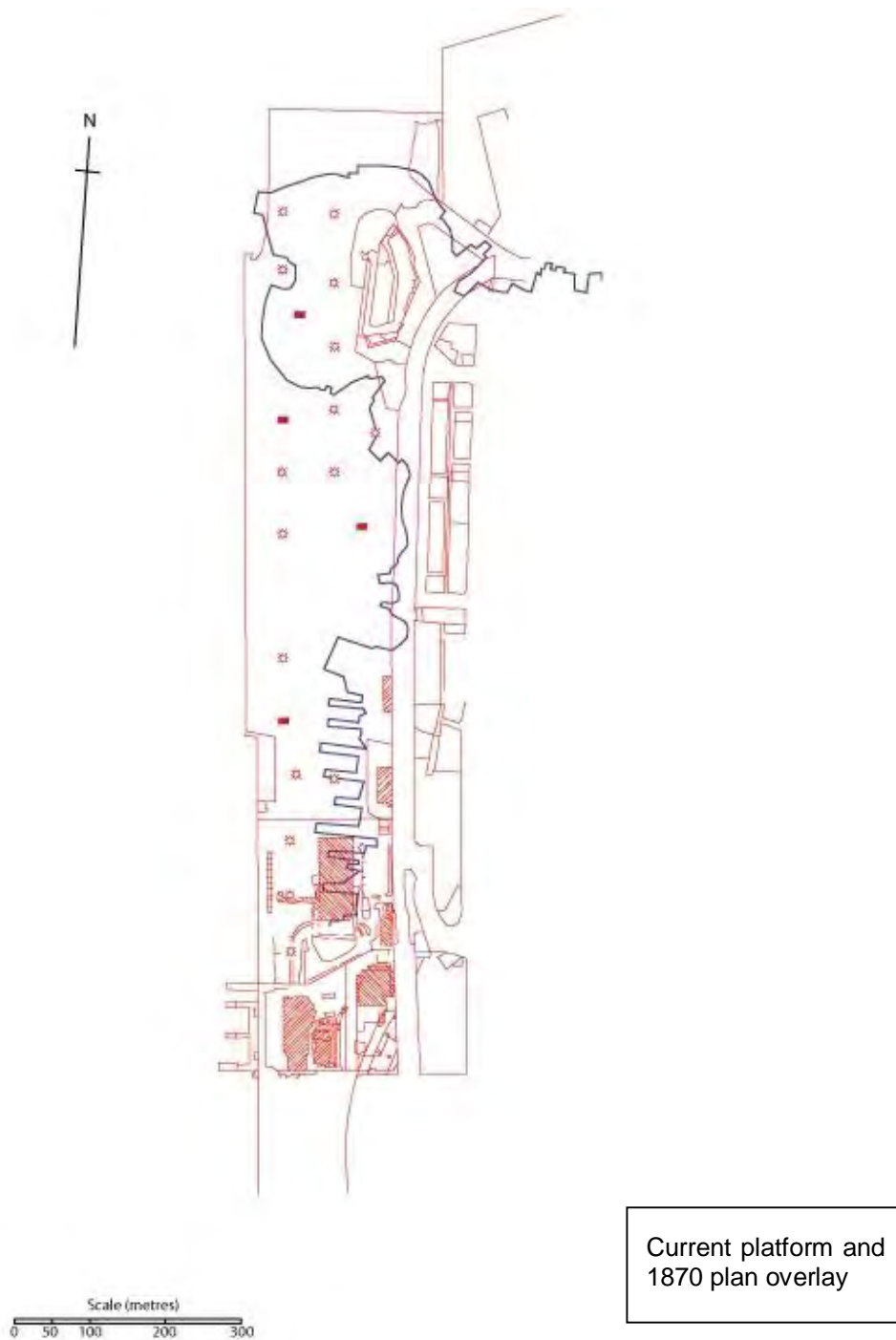






Figure 3.16. *Plan of the North West Portion of the City of Sydney Locally Known as The Rocks with its Surroundings From Darling Harbour to Circular Quay* WA Gullick Government Printer 1900. This image shows the wharf formation prior to government resumption. At this time the gas works had become a very large site, there were at least six wharves at the south of the headland, and the headland had been extensively modified to create long berths on the north and west shores (Source Ashton and Waterson 2000:49).

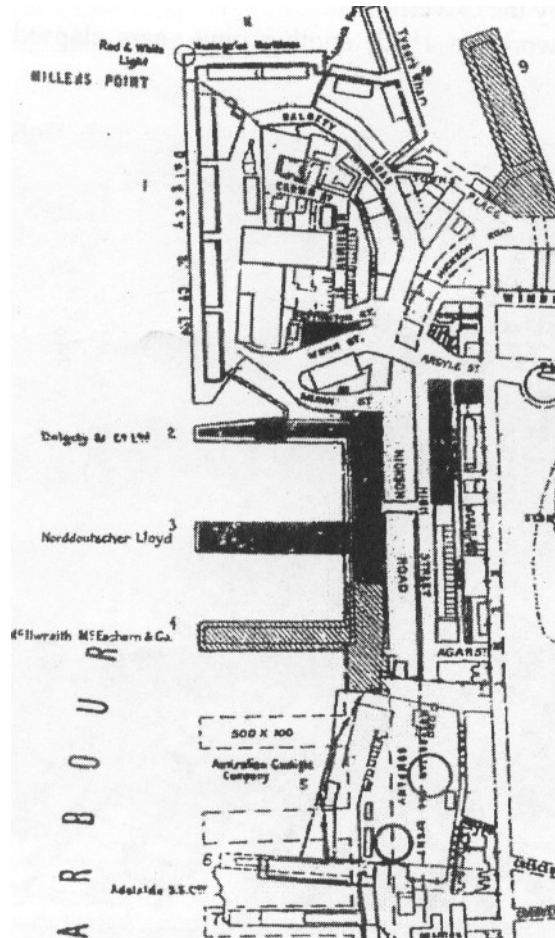


Figure 3.17 Detail from SHT 1911 plan. The plan shows Dalgetty's long shore wharf squaring up the northern headland, No. 2-4 wharves completed and the position of the gas works in relation to wharf 5 & 6 (Source: SLNSW)

### 3.3 PHASE 3- INTENSIVE DEVELOPMENT AND DECLINE, 1870-1901

By the last decades of the 19<sup>th</sup> century, apart from being unsuitable for modern shipping, most of the wharves and jetties in Darling Harbour were old, dilapidated and constructed in a haphazard manner. A report to the Secretary of Public works in 1889 (Coode 1889: 8) declared some harbour facilities unfit for use. Additionally, Darling Harbour was a dumping ground for rubbish, sewage and industrial waste and was highly polluted. The Government recognised that all of the wharfage from the head of Darling Harbour to Millers Point would need to be reconstructed but the enormity of the task and the cost to resume the land was seen as prohibitive.

Changes in trade goods, hydraulic lifting and shipping technology (sail to steam) resulted in new bulk capacity boats that required larger wharfs and storage facilities. From the 1870s, some of the older wharves were demolished to make way for larger more modern facilities. This adaptation to accommodate new technologies resulted in the loss of a sizable range of local trades and the small businesses catering to specific technologies.

This phase is characterized by the beginning of reconstruction of wharves and storage facilities. Cuthbert's shipyard was the first large land parcel to be redeveloped as land became more valuable (Fitzgerald & Keating: 47). The property was taken over by Dibbs, who had additional premises on the western edge of Millers Point, and entirely rebuilt in the late 1870s for large scale wharfage and goods storage. In the early 1880s new jetties and stores were built at Grafton Wharf to accommodate the largest ships of the time and the Adelaide Steam Ship Company wharves were extended and widened a number of times. The gas works was also upgraded with a number of new buildings constructed.

The first government resumption was the Balmain ferry wharf at the foot of Erskine Street in 1889. The facilities were in extremely poor condition and the Mayor of Balmain had been lobbying for some time to have the wharf rebuilt. Negotiation of a satisfactory outcome proved to be a long and costly process involving solicitors for numerous parties, wharf inspectors, engineers for the Department of Public Works, the Colonial Treasurer and the Legislative Assembly (Victoria Wharf return respecting 1888-1891SLNSW).

Firstly, ascertaining ownership of the property was complicated and boundaries were in dispute with several parties claiming title to the land. Secondly, the value of the property was based on similar recent real estate sales in the vicinity, however as the land was leased and sub-leased, tenants claimed compensation for loss of business. Despite the ruinous condition of their facilities, both owners and tenants claimed much higher sums from the Government than would have been achieved in the free market.

After almost a year of protracted negotiation, resumption was achieved and some owners of adjacent properties were quick to offer the Government purchase of their land as well. It is likely that smaller enterprises were well aware of the limitations of their capacity to function long term in a rapidly changing environment without outlaying considerable funds to upgrade their facilities. Government purchase was therefore an attractive option.



Figure 3.19. Balmain from Millers Point pre 1885 by Henry Russell. View of ships moored at the crowded wharves of East Darling Harbour (Source: State Library of NSW SPF832).

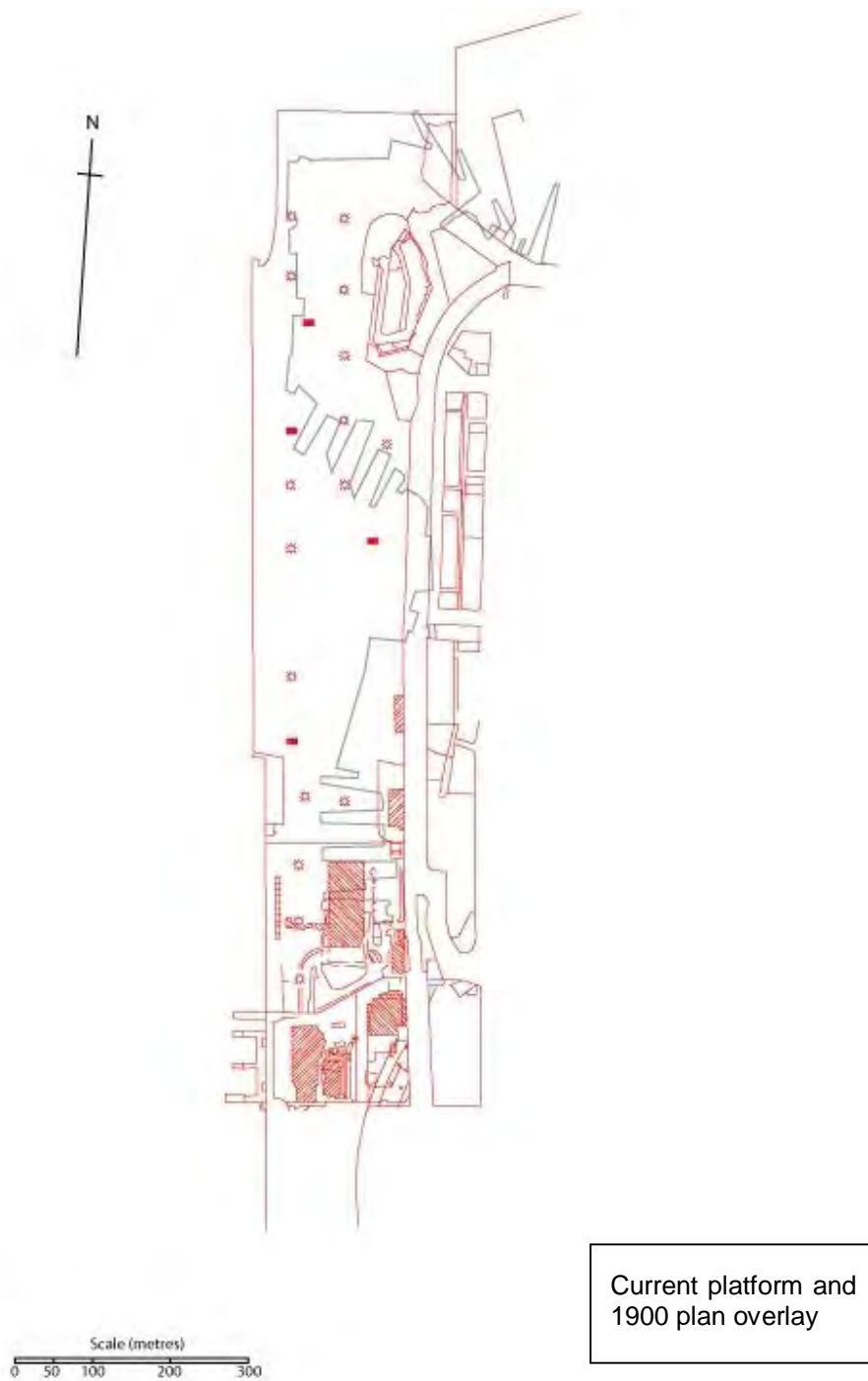




Figure 3.20. Gas Lane 1900 just prior to resumption. This steep street had stepped footpaths and either a cobbled or woodblock surface to aide traction for heavily laden carts. Note the gas holder in the background (Source: Sydney Archives CSR 51 000566).



Figure 3.21. Clyde Street 1900. This street ran down to the harbour at the far northern headland, however the construction of the new wharves and Hickson Road after 1910 resulted in the removal of the street and all the houses on it. (Source: State Records 4481\_a026\_000095).

The outbreak of bubonic plague in 1901 resulted in harbour-side areas such as The Rocks, Millers Point and Darling Harbour being quarantined and wharfs and properties were subject to inspection. This was the impetus for the Government to begin resumption of entire suburbs and the demolition of substandard housing and wharfage. The consolidation of free hold land allowed the Government to redevelop on a massive scale without the constraints of original property boundaries (Davies 2007: 55)



Figure 3.22. Demolition of the AS&N Co wharf 1910. The timbers on the wharfs and surrounding buildings are being lifted and taken away. Much of the timber was reused (Source: State Library of NSW GPO 1-48303)

### 3.4 PHASE 4 – RENEWAL 1902-2010

#### 3.4.1 *Sydney Harbour Trust 1902-1936*

Government ownership of the wharfs resulted in the formation of a new authority to control and manage the wharfing housing and development in the area. The SHT was generally responsible for the improvement and preservation of the Port of Sydney and its duties included:

- rehabilitation of Sydney Harbour through the demolition of old wharfage , land reclamation, and the construction of new port facilities and other shipping areas,
- regulation of the movement of vessels and the handling of cargo via a Harbour Master,
- dredging operations & removal of wrecks,
- granting licenses for the erection of piers; maintain wharf facilities and collect wharfage rates,
- maintaining recreational swimming baths,
- fire fighting (Davies 2007:50).

The provision of housing for workers also became an important role for the SHT. A large proportion of old local residences were demolished between 1901-1910 as a plague prevention measure and to accommodate new warehousing and wharfs. Entire streets had been demolished to make way for the Walsh Bay wharfs. The majority of housing for waterside workers was constructed between 1908-1915.



Originally, plans for Darling Harbour included reconstruction of all the wharves and jetties as part of the overall harbour improvements. The wharves constructed around Millers Point in the northern half of the site were entirely removed and five new finger wharves constructed to accommodate the new large berth sips. The wharfage of the southern half of the site, between the gasworks and Margaret Street, were repaired, altered and named wharf 6 to 12.



Figure 3.23. Construction of the new wharfs 1911 (Source: State Records ao17-AO17000004).

Another responsibility was dredging of the harbour. Significant deepening of the harbour was undertaken that included the provision of two main channels within the entrance to the port. The dredged material was used for land reclamation (Davies 2007:174).

On the inception of the Sydney Harbour Trust, Henry Walsh was appointed engineer-in-chief. His engineering and administrative abilities included the design and construction of the Walsh Bay and Jones Bay wharves and cargo-handling systems as well as the reconstruction of East Darling Harbour. As a result of the plague, his work included broad-scale demolition of 'unwholesome wharves and contiguous properties' as well as construction of a rat-proof wall around much of the shipping waterfront. Almost £5 million was spent on the Sydney Harbour front under his direct supervision (ADB <http://adbonline.anu.edu.au/adbonline.htm>). Walsh Bay was designed to accommodate deep sea cargo vessels where East Darling harbour functioned as the passenger and goods terminal for interstate and coastal shipping services.

After the resumptions of the early 20<sup>th</sup> century, the first major work to be completed was the new Dalgety's wharf on the point. The Sydney Harbour Trust constructed a large long shore berth squaring off the headland and provided a wool store with modern mechanical handling devices for the company at the turn of the century (Walsh Bay Wharf 11 and Darling Harbour Wharves 1a, 1b & 2). Dalgety & Co centralized its wool and bond stores at Millers Point with the New Bond and Free Stores in Munn Street and wool stores in Merriman Street. Dalgety & Co. continued to operate its wool handling facility operation at Millers Point into the 1950s (Davies 2007:29)

Construction of bond stores and warehouses at Walsh Bay were the next priority and in 1909 the major work of constructing Hickson Road began. High Lane and Lance Lane were cut out of the cliff to the east of Darling Harbour and the newly created High Street leveled to accommodate flats built by 1917. Below High Street, Hickson Road was built by extensive vertical cutting through the headland to create the 61m (200 foot) wide road. The fill from these excavations was used to construct new finger wharves that entirely changed the configuration of Millers Point and Darling Harbour.

The new wharfage scheme for East Darling Harbour consisted of 960 feet (320m) of land between Dalgetty's Wharf at Millers Point and the gas works. This area had been Cuthbert's shipyard and was relatively undeveloped due to the steep foreshore. Dibbs Wharf, which was in a dilapidated state, was demolished. Wharfs and dilapidated buildings outside that area were not necessarily demolished immediately and many structures were repaired to reduce costs (Broomham 2007: 33).

Demolition of wharves gave Walsh the opportunity to research past building techniques and provided useful information for the construction of the new wharfs. Walsh found that almost all of the wharfs had been constructed of turpentine which was still in excellent condition despite having been in the water for 40 years or more. Many of the piles pulled from the harbour were driven again into the reclamation behind no 2, 3 & 4 jetties (Walsh 1910:83).

Walsh was so impressed by the qualities of turpentine logs that he used over 4500 of them varying in length from 12-20 m (40-80 feet) in the construction of the new wharfs in Darling Harbour. The piles were spaced on a 3m (10ft) grid, capped with a 355mm square (14in by 14in) iron-bark headstock and tied together by 305mm square (12in by 12in) iron-bark girders at 1m (3ft 4in) centres. The whole was covered with 228mm (9in) by 101mm (4in) brush-box decking. Later this was covered with a 101mm (4in) thick concrete deck. The new wharfs were designed to carry 20 tonnes (20 tons) to each pile and piles were usually driven 7.6m (25 feet) into stiff clay on the harbour floor (Walsh 1910:80).

It appears from Walsh's descriptions and photographic evidence that the wharfs were dismantled manually and materials sold or reused. A new rat proof sea wall was constructed in the harbour in the form of a timber wharf which was then reinforced with concrete 'L' shaped trestles. The foreshore was dredged for the construction of the wall and the area behind was simply filled. This suggests that it may not have been necessary to remove all the previous wharfs, sea walls and standing structures back to the original shore line as the creation of a new harbour edge required large quantities of fill. Walsh states that not all the piles were removed, some were cut off below the waterline and some were reused.

While the sea wall was constructed mainly of concrete, the wharfs continued to be built of timber despite this technology becoming obsolete in many parts of the world (Walsh 1910:13). Walsh believed that the local conditions and the excellent quality of timber in Australia negated the use of steel and concrete wharf structures.

The orderly purpose-built reconstruction of the wharfs and subsequent associated bond stores, warehousing and road access saw whole streets disappear in Millers Point as the cliff was cut back for the construction of Hickson Road. Broomham (2007:3) suggests that the construction of Hickson Road required cutting of the bedrock in some places and fill in others. The road was poorly drained and constructed and within a short time required major repairs.

Much of the stone cut from the cliff to the east was used to fill the reclamation behind the new seawall. In 1915 Hickson Road terminated at the gas works and it was not until 1921 when the gas works had relocated, the road was constructed southward through the site to meet Sussex Street. Hickson Road was constructed to provide continuous shoreline access to the wharfage from Circular Quay to Darling Harbour. The SHT only demolished those buildings on the gas works site necessary for the construction of the road, likewise the buildings south of the gas works including Grafton Bond. The remaining structures were modified for the SHT use and the 10m deep gas holder footing was filled.

Jetty No. 5, the longest of the new wharfs, was constructed between 1915 and 1925 and was attached to the AGL wharf. No. 6 jetty was constructed for the Adelaide Steamship Company. To achieve these wharfs some of the AGL reclamations were cut away



Figure 3.24. Bridge over Hickson Road from Munn Street. The headland has been cut away and new housing constructed along High Street. (Source: State Records ao17-AO17000010).



Figure 3.25. Construction of new wharfs at Darling Harbour c1912 with the gas holder and gas works in the background. Land has been reclaimed before the wharfs are constructed. Hickson Road is not yet formed and many of the old wharfs are still in place (Source: State Records ao17-AO17000007).

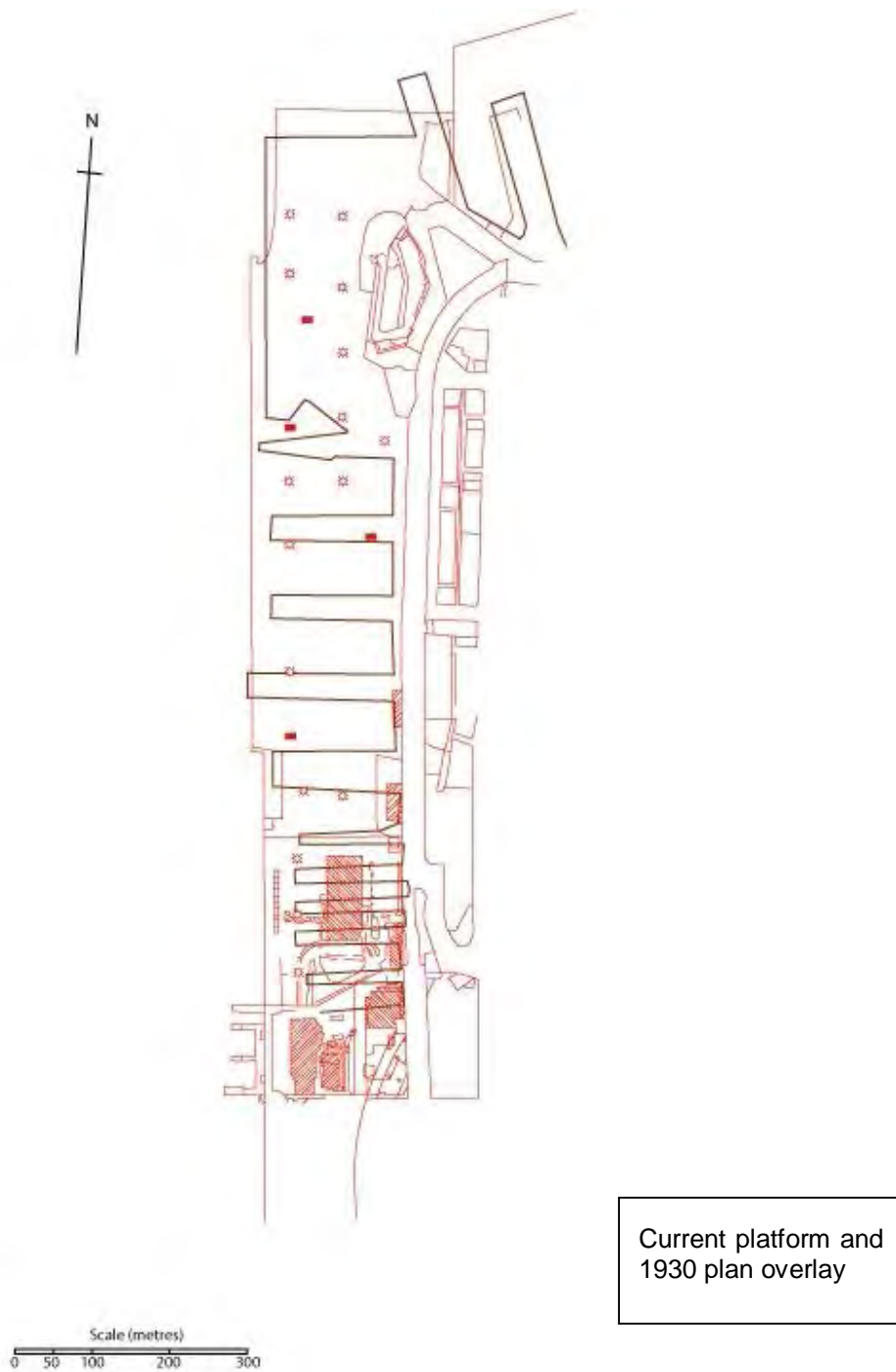




Figure 3.26. Repair of the northern edge of the wharf in the 1970s showing both timber and concrete piles (Source: State Library of NSW MP115).



Figure 3.27. Excavation and reconstruction of the headland in the 1970s. Moore's Wharf has not been relocated and the surviving buildings are indicative of the former shape of the headland. (Source: Maritime Services Board Annual Report 1977-78, p 8)



### **3.4.2 Maritime Services Board 1936-2005**

In 1936 the Sydney Harbour Trust was dissolved after over thirty years of reconstruction and upgrading of the harbour's facilities. The Maritime Service Board (MSB) assumed its responsibilities for administering ports and port facilities such as wharves and pilotage services, conserving the navigable waters and ensure the safety of passengers and seaworthiness of vessels registered in New South Wales. The MSB differed from the SHT in that it had responsibility for all state waters, not just those of Sydney, and was answerable to the state government as well as commercial interests such as shipping and mercantile companies (Davies 2007:185).

Road and rail began to replace coastal shipping in the post war period and large container shipping became more prevalent. The finger wharfs became redundant for modern shipping and the MSB instigated an overall modernisation strategy which called for expanded port facilities. By the 1950s progressive infilling between the finger wharfs in the central and the southern part of the Barangaroo site created a large broadside wharf to service container ships. Long berths constructed by creating a new sea wall made of large concrete caissons (50ft x 30ft x 41ft) linking the ends of the finger wharfs and infilling.

During the 1970s the area to the west of Merriman Street was demolished including Dalgety's wool store and Maritime Services Board buildings on the headland. The northern headland was dramatically cut back, and the Port Operations Communications tower was constructed adjacent to Clyne reserve. The addition of cranes, lighting and storage sheds met the needs of the new technology (Davies 2007:196). Wharf 6 and 7 in the approximate location of Block 2 at the southern end of the site, was the last part of the site to be in filled. The Patrick Corporation held the stevedoring contract on the site from 1996 until 2006 when the site became no longer commercially viable for large super freighters. The operation was moved to industrial premises in Kurnell which has coincided with a general decrease in shipping within the harbour.

### **3.4.3 Barangaroo Delivery Authority 2006**

The site has been vacant since 2006 and has been the venue for a number of events including the world record for the longest distance jumped on a Harley-Davidson, the Green Peace Rally and World youth Day in 2008. The Barangaroo Delivery Authority is a NSW government agency established under the Barangaroo Delivery Authority Act 2009 to manage and plan for the future renewal of the site. The site has been made available for film shoots and major events such as world youth day,

The NSW government's objective for the Barangaroo project is to deliver a mixed use development consisting of commercial, residential, retail and recreational facilities. The site will be renewed as an extension of the Sydney CBD with a significant new foreshore park providing recreational areas. Lend Lease was chosen as the developer to oversee the construction of the district and construction is expected to commence by 2011.



Figure 10.1. Approved Concept Plan shoreline (yellow dotted line) and development blocks (coloured) overlaid onto *Sketch of Sydney Cove, Port Jackson count of Cumberland NSW 1788* by William Dawes and Captain Hunter. (Source Ashton and Waterson 2000:9). This image shows the proposed development to be located predominantly in the harbour and would potentially impact the original shore line at the southern end of the site. William Dawes was an engineer and astronomer who arrived on the First Fleet. He participated in a number of surveys and expeditions beyond Sydney Cove and his plans are well drawn. This image depicts the high points of the geography and the steep ridges on which The Rocks was settled.



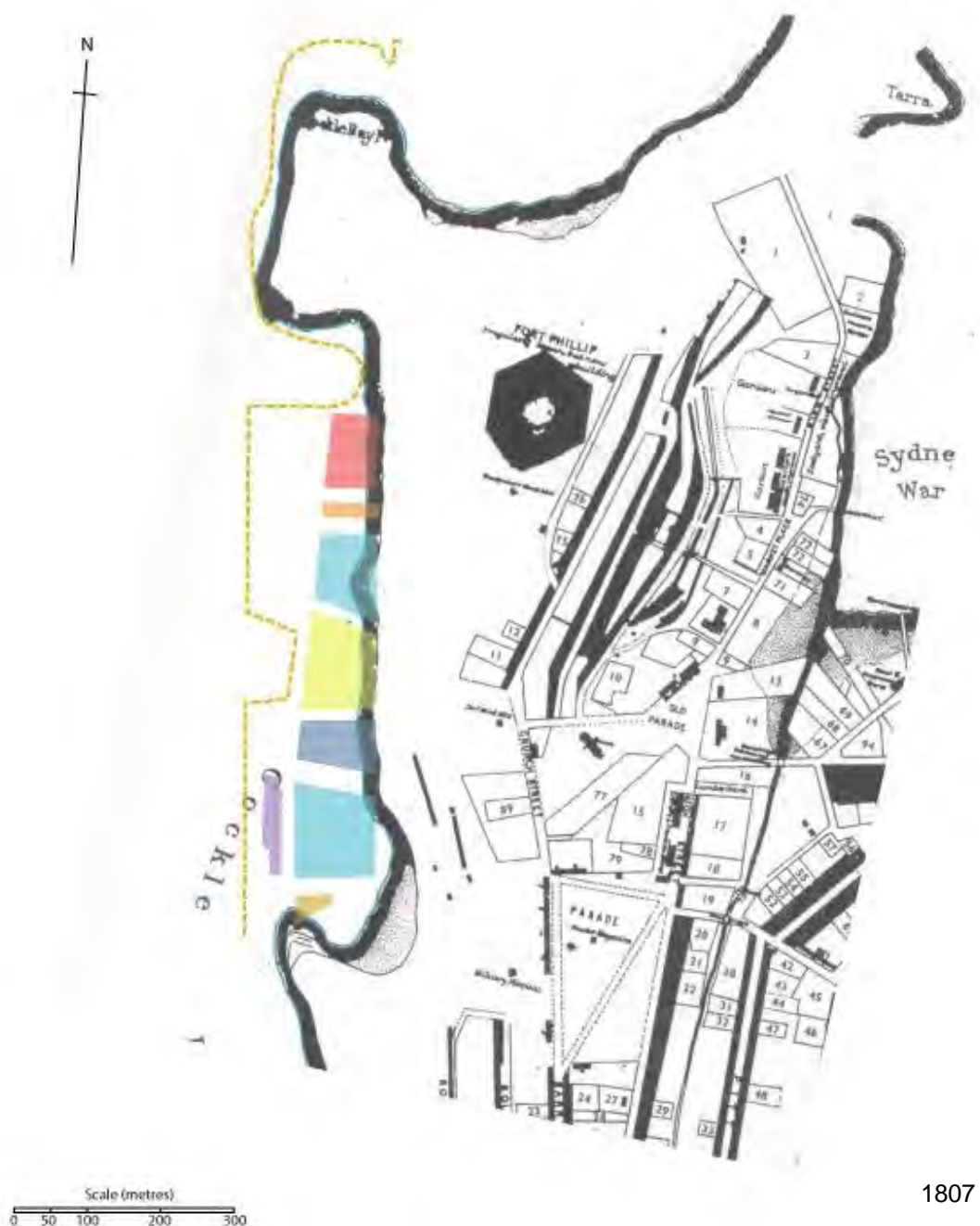


Figure 10.2. Approved Concept Plan shoreline (yellow dotted line) and development blocks (coloured) overlaid onto *Plan of the Town of Sydney in New South Wales 1807* by James Meehan (Source Ashton and Waterson 2000:17). This image is similar to the previous in that the potential impact would affect the original harbour shoreline. The area is already known as Cockle Bay and the northern part of Millers Point is known as Cockle Bay Point. The plan does not depict structures or tracks in the Millers Point area even though a few did exist at this time, but The Rocks and the region around the cove is well developed. Fort Phillip was constructed on a high point to the west of Sydney and although uncompleted when this plan was produced, has been drawn as the finished structure.



1831

Figure 10.3. Approved Concept Plan shoreline (yellow dotted line) and development blocks (coloured) overlaid onto *Map of the Town of Sydney, 1831*. Lanner and Mitchell (Source Ashton and Waterson 2000:17). This image shows the development of streets in Millers Point, the location of tracks and houses, the alignment of Kent Street, the escarpment around the headland, a wharf and steps around the centre of the site as well as the proposed alignment of Sussex Street. Munn was ship building at this time and a number of small wharves are likely to be present on the southern shore of the headland, but were not illustrated on the map. The headland is now known as Millers Point and Cockle Bay has become Darling Harbour.



1843

Figure 10.4. Approved Concept Plan shoreline (yellow dotted line) and development blocks (coloured) overlaid onto *Map of the City of Sydney, 1843* William Henry Wells Land Surveyor (Source Ashton and Waterson 2000:25). This map shows the location of the gas works and the Hunter River Wharf to the south and a number of wharves around the headland to the north which have substantially reclaimed land in the harbour. A road parallel to Kent Street is shown on the plan but this road (Hickson Road) did not exist until the redevelopment of the harbour foreshore in the twentieth century. This image clearly demonstrates the potential impact of development blocks 2-5 on the gas works and early wharves.





1854-1875

Figure 10.5. Approved Concept Plan shoreline (yellow dotted line) and development blocks (coloured) overlaid onto a 1875 plan illustrated in the *Supplement to Sydney Mail* (Source: Sydney Harbour Foreshore Authority Historic Maps & Plans Collection). This image is almost identical to an 1855 plan by Smith and Gardner and Wollcott and Clarke's Map of the City of Sydney 1854. All of these plans name the more important of the wharves present at the time. These include Smiths Wharf owned by Charles Smith shipping merchant, Dibs's Wharf owned by George Dibs, shipping and wine merchant whose property adjoined Cuthbert's ship building yard, and Rountree's floating dock owned by Thomas Rountree Master Mariner and ship builder.

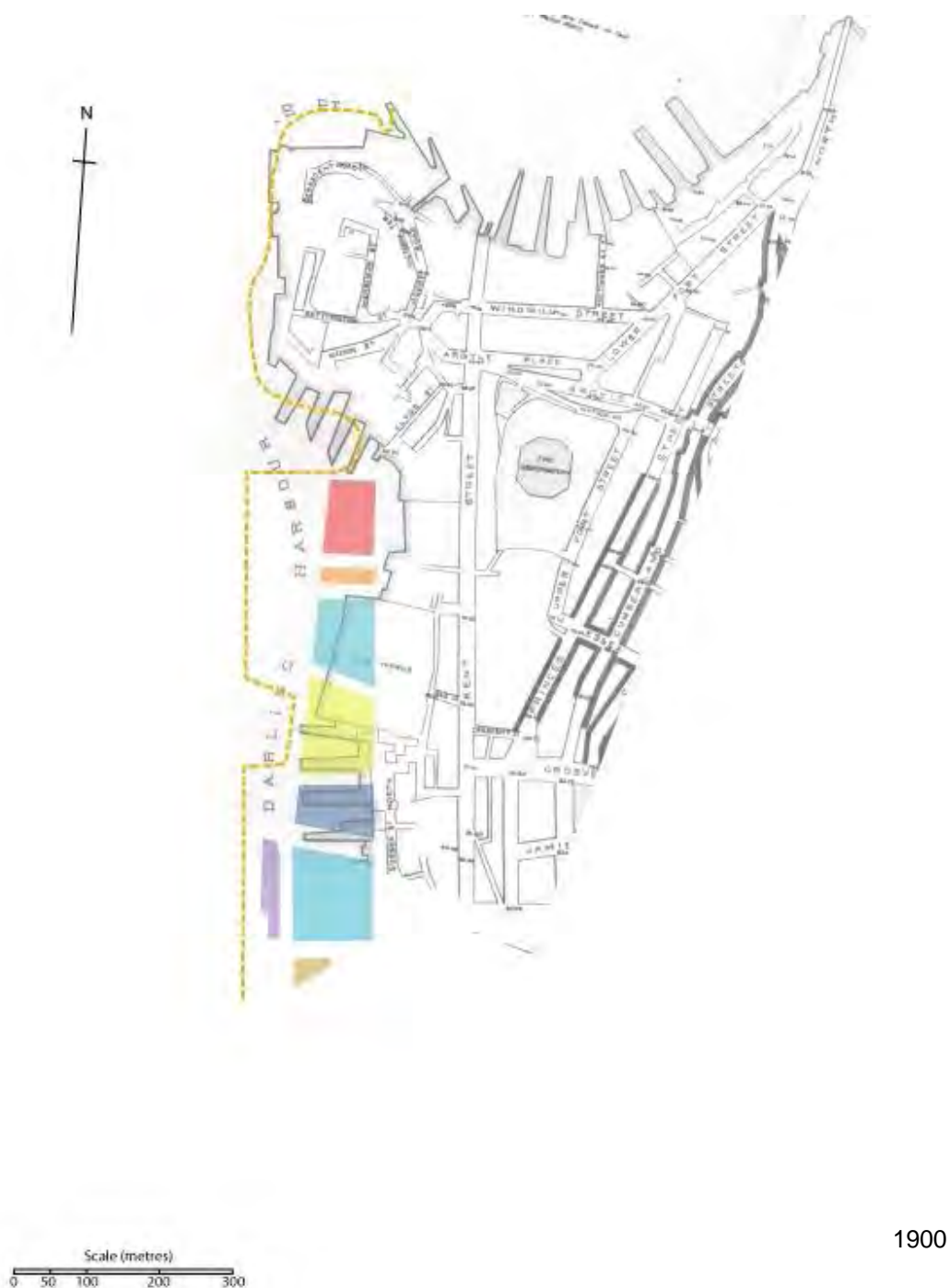
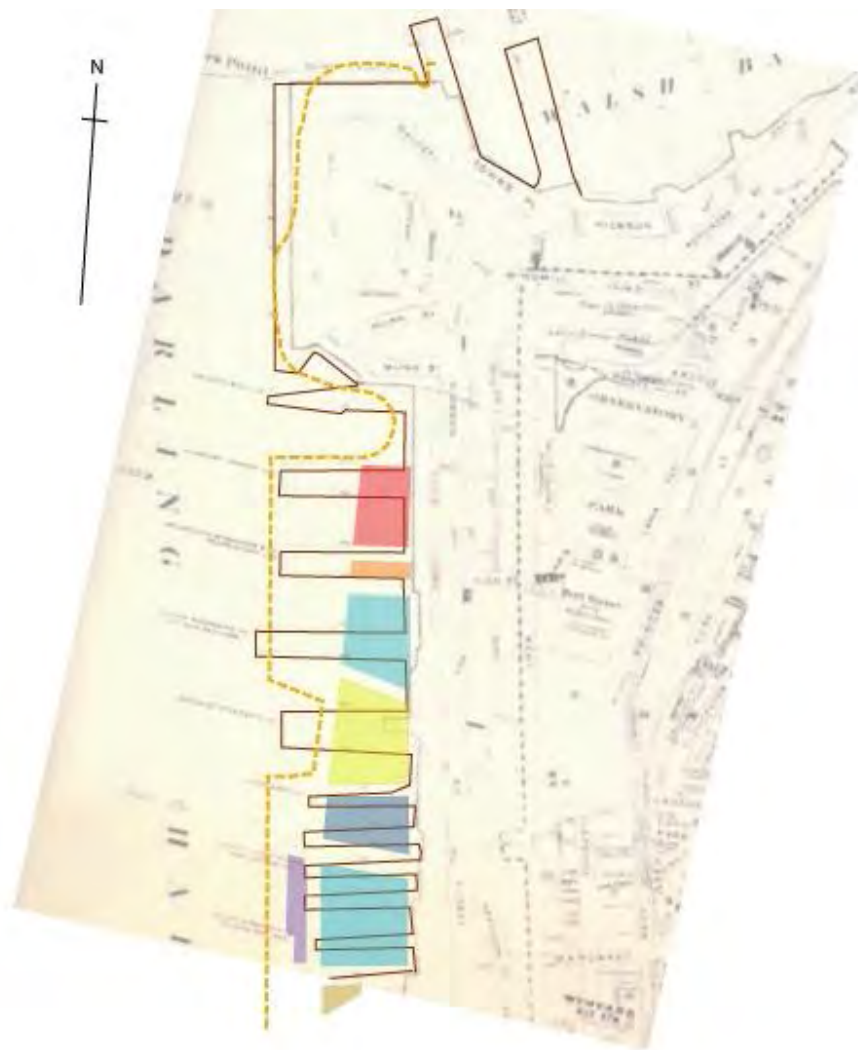


Figure 10.6. Approved Concept Plan shoreline (yellow dotted line) and development blocks (coloured) overlaid onto *Plan of the North West Portion of the City of Sydney Locally Known as The Rocks with its Surroundings From Darling Harbour to Circular Quay...* WA Gullick Government Printer 1900. (Source Ashton and Waterson 2000:49). This image shows the formation of the wharves prior to government resumption of the Millers Point and Darling Harbour foreshore. At this time the gas works had become a very large site, there were at least six wharves at the south of the headland, and the headland had been extensively modified to create long docks on the north and west shores. The outline of the concept plan clearly shows that the position of the Northern Cove will impact on the wharves at the south of the headland and development blocks 2-5 will impact on the position of the gas works and the wharves to the south.



1930

Scale (metres)  
0 50 100 200 300

Figure 10.7. Approved Concept Plan shoreline (yellow dotted line) and development blocks (coloured) overlaid onto *Parish of St Philips 1930* (Source Sydney Harbour Foreshore Authority Historic Maps & Plans Collection). This map shows further modification has occurred at the northern headland and four new wharves had been constructed between the former northern cove and the gas works. The smaller wharves to the south of the gas works were also reconfigured, although not to the same extent.

## **10.2 HISTORIC OVERLAYS- PROPOSED PLAN**

The following images are composed from a series of historic plans that have been manipulated to best fit the current site plan and overlaid on the proposed plan. These images may not be an entirely accurate depiction of wharf development and location as many of them had no common points of reference or scale and are thus an attempted "best fit". They are however, indicative of the expansion of wharfage and modification of the shoreline over time.



Figure 10.8. Purple outline of *Sketch of Sydney Cove, Port Jackson count of Cumberland NSW 1788 by William Dawes and Captain Hunter*. (Source Ashton and Waterson 2000:9) overlaid onto the proposed plan shoreline (red dotted line) and development blocks (yellow).

This image shows the proposed development to be located predominantly within the current deck apart from the hotel that extends into the harbour. The development has the potential to impact the original shore line at the southern end of the site and within the northern cove..



Figure 10.9. Blue outline of *Plan of the Town of Sydney in New South Wales 1807* by James Meehan (Source Ashton and Waterson 2000:17) overlaid onto the proposed plan and shoreline (red dotted line).

This image is similar to the previous in that the potential impact would affect the original harbour shoreline.





Figure 10.10. The pink outline of *Map of the Town of Sydney, 1831*. Lanner and Mitchell (Source Ashton and Waterson 2000:17) overlaid onto the proposed Plan shoreline (red dotted line) and development blocks.

This image shows the development blocks and the headland park will impact onto the original shoreline and any early modification such as reclamation and construction of wharfs. Streets, paths, subdivided allotments and numerous buildings were present in the area during this time. Munn was ship building at this time and a number of small wharves are likely to be present on the southern shore of the headland.





Figure 10.11. Green outline of *Map of the City of Sydney, 1843* William Henry Wells Land Surveyor (Source Ashton and Waterson 2000:25) overlaid onto proposed Plan shoreline (red dotted line) and development blocks.

This map shows the location of the gas works and the Hunter River Wharf to the south of the southern cove and a number of wharves around the headland to the north. The proposed development has the potential to impact on remnants of the original shoreline, wharfage reclamation and industry.



Figure 10.12. Dark blue line represents the shoreline of the 1875 plan illustrated in the *Supplement to Sydney Mail* (Source: Sydney Harbour Foreshore Authority Historic Maps & Plans Collection) overlaid onto the proposed Plan shoreline (red dotted line) and development blocks

This image shows the development of the shoreline with a large number of wharfs occupying the southern part of the site and the extension of the gas works into the harbour. The proposed development has the potential to impact on remnants of the original shoreline, wharfage reclamation and industry.



Figure 10.13. Grey outline of *Plan of the North West Portion of the City of Sydney Locally Known as The Rocks with its Surroundings From Darling Harbour to Circular Quay...* WA Gullick Government Printer 1900. (Source Ashton and Waterson 2000:49) overlaid onto the proposed plan shoreline (red dotted line) and development blocks.

This image shows the intensive formation and modification of the wharves as well as the expansion of the gas works prior to government resumption of the Millers Point and Darling Harbour foreshore.

The outline of the proposed plan shows that Northern Cove will impact on the wharves situated at the south of the headland and the southern cove and proposed development at the south of the site will impact on the gas works and wharves.



Figure 10.14. Brown outline of 1930 shoreline *Parish of St Philips 1930* (Source Sydney Harbour Foreshore Authority Historic Maps & Plans Collection) overlaid onto Proposed Plan shoreline (red dotted line) and development blocks.

This plan shows further modification has occurred at the northern headland and the post resumption reconstruction of the new SHT wharves between the former headland and the gas works. The development blocks as well as the northern and southern cove of the proposed plan will clearly impact on previous wharfs.



Figure 10.15 Overlay of previous wharf construction onto the proposed plan. This is not intended to be a precise account of change over time but is indicative of the expansion of wharfage and modification of the shoreline, the many layers of history and the impact of the proposed development on the potential archaeological resource.