

CASEY & LOWE Pty Ltd

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29 July 2010

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Lend Lease
30 The Bond, 30 Hickson Road
Millers Point NSW 2000

Dear Paula

**Re: Archaeological Issues relating to the proposed Concept Plan
Amendment (MP 06_0162 MOD 4)**

Casey & Lowe have reviewed the proposed Concept Plan amendments (Modification 4). We note that the proposed Concept Plan Amendment (MP 06_0162 MOD 4) seeks the Minister's consent for:

- additional GFA within Blocks 1 to 4, predominantly related to an increase in residential GFA;
- redistribution of the land use mix;
- an increase in height of a number of the proposed towers within Blocks 1 to 4;
- the establishment of the new pier and landmark building extending into the Harbour; and
- reconfiguration and activation of the public waterfront area through the introduction of uses including retail and residential to the west of Globe Street.

Casey & Lowe's reports on Barangaroo Stage 1 *Archaeological Assessment*, *Barangaroo Stage 1* (June 2010) and the *Archaeological Research Design & Management Strategy* (May 2010) identified and addressed the non-indigenous archaeological issues at the site. In addition Comber Consultants addressed the Indigenous archaeological issues in *Aboriginal Archaeological and Cultural Heritage Assessment* (May 2010) and *Aboriginal Archaeological Management Plan and Research Design, Barangaroo Stage 1* (May 2010) and identified that the significant archaeological resource was limited to segments of the original foreshore likely to survive in the eastern 10 to 30m of Blocks 2 and 3.

These reports assessed the whole of the footprint of development Blocks 1 to 4 and identified that the archaeological issues were restricted to the eastern 70m of Barangaroo Stage 1 for non-indigenous archaeology and 10 to 30m for Indigenous archaeology. No significant archaeological remains are considered likely to survive to the west of the 70m zone as this area was within the water until the 1960s wharfage was constructed.

The proposed Concept Plan amendment is either within the area as currently assessed or to the west of the 70m zone of archaeology and therefore there are no archaeological issues. There are no additional impacts on the identified archaeological resource from the following proposed amendments:

- additional GFA within Blocks 1 to 4, predominantly related to an increase in residential GFA;
- redistribution of the land use mix;
- an increase in height of a number of the proposed towers within Blocks 1 to 4;
- reconfiguration and activation of the public waterfront area through the introduction of uses including retail and residential to the west of Globe Street.

The currently approved impacts will remove all archaeological remains within Blocks 1 to 4 so there are no changes to impacts on the archaeological resource as a result of this proposal.

In relation to the new pier and landmark building this will impact on modern wharfage to the west of the 70m archaeology zone and therefore there are no impacts on non-indigenous or Indigenous archaeology.

We understand that Lend Lease (Millers Point) has consulted with the Barangaroo Delivery Authority in the preparation of the documentation for this concept plan amendment.

Please contact the undersigned if you wish to discuss this letter.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Mary Casey', with a stylized, cursive script.

Dr Mary Casey
Director

Non-Indigenous Archaeological Assessment

Barangaroo Stage 1

(Barangaroo South)



Central part of the Stage 1 study area with Sussex Street on the left and the Grafton Bond in the middle ground and left. Kerry & Co., ML, SLNSW, PXA 449.

Report to

Lend Lease (Millers Point) Pty Ltd

July 2010

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EXECUTIVE SUMMARY

RESULTS

The study area contains a mixture of maritime infrastructure, shipbuilding and industrial land uses. The significant archaeological resource survives in the eastern 70m or so of the study area.

The approved Concept Plan provides for the Barangaroo Stage 1 site (also known as Barangaroo South) to be developed for a range of uses including commercial, retail, residential and public recreation. The Concept Plan also makes provision for a large basement within Blocks 1-4 and for the excavation to create an enlarged Southern Cove. In this regard, the redevelopment of the site does not anticipate or provide for the retention of any archaeology *in situ*. The impact on the archaeology within the four development blocks was outlined in the two previous archaeological reports for the whole of the Barangaroo redevelopment.¹

The archaeological remains in Blocks 1, 2, 3 and 4 will be impacted by the excavation for basements. A program of archaeological investigation will need to be undertaken to record aspects of the archaeological remains prior to development of the site. This should be undertaken in accordance with best practice standards.

Archaeological Potential

Much of the study area was originally below the high water mark with staged private reclamations from the 1820s, early 1830s and 1840s. Block 1 is considered to have no significant archaeological remains as it appears to be mostly limited to cut-off timber piles. Blocks 2, 3 and 4 contain a range of archaeological resources:

- Early maritime infrastructure (1810s-1830s) with associated stores and reclamation processes, notably Portion 20 associated with Prosper de Mestre and Francois Girard.
- Henry Bass' early shipyard.
- The AGL gasworks (1839-1921) which is highly contaminated.
- Mid 19th-century wharfage which was augmented, demolished and upgraded through time until it became the Grafton wharf which was associated with the nearby bond stores.
- New wharfage in the 1880s which involved the raising of street levels (0.60m) to accommodate larger ships.
- It is noted that some of northern sections of the eastern part of the study area will contain evidence of the original foreshore.

The study area has a moderate to high level of archaeological potential across most of the study area.

Heritage Significance

The heritage significance of the following was assessed as part of writing this report.

Archaeological remains which do not reach the Local significance threshold

- Cut off timber piles of late 19th-century and 20th century wharfage at some distance from seawall. These are not included with similar piles under the Local significance because they do not have their relationship to the land and seawalls and it is unlikely we could relate them to any specific wharf or phase or actually be able to record them in a meaningful way.

¹ Austral Archaeology 2009, 2010

Archaeological remains of Local Significance within the Barangaroo Stage 1 Study Area

- Most of the 19th-century wharfage, yards and stores, and reclamation where we can relate it to the foreshore and reclamation phases and associated storehouses - Blocks 2 and 3.
- The reduced ability to record the remains of the gasworks, the extensive rebuilding which will have removed early phases of technology and the excavation of the western part of Block 4 means that it potentially does not reach the State significance threshold.

Archaeological remains of potential State significance within the Barangaroo Stage 1 Study Area

- Possibly the early remains of the maritime infrastructure and phased reclamation most likely established by Prosper de Mestre and then occupied by Francois Girard. This has significance as both a relatively early example of maritime construction and foreshore remodelling and may allow us to further our understanding of reclamation prior to the building of semi-circular quay in 1838 by Colonel Barney.
- Henry Bass' shipyard but there may be issues of integrity arising from contamination that make this significance hard to realise.

Impact from Proposed Development

The excavation for the basement car parks below the new buildings will remove all archaeological deposits within Blocks 1, 2, 3, and 4. The perimeter retention system will be excavated initially around the outside of the basement with dewatering also required. The enlarged southern cove may have some additional impacts on the gasworks archaeology and remains of a jetty in Block 4. It is noted that Block 4 is covered by the DECCW declaration.

RECOMMENDATIONS

1. A program of archaeological investigation should be undertaken and an excavation director appointed to manage the program.
2. A Research Design and Management Strategy report needs to be written to guide this investigation. This report needs to draw on a range of Heritage Council guidelines.
3. Testing of areas of impact within the study area should be carried out to determine the nature and depth of archaeological remains and to assist the development of an archaeological management strategy.
4. Based on the archaeological integrity of the remains, a program of archaeological salvage and recording will be required. Salvage would include sampling sections of the site, such as:
 - Recording a number of sections of the later 19th-century wharfage, notably the Grafton wharf.
 - The maritime infrastructure, stores and reclamation in Portion 20, Block 2.
 - If possible the remains of Henry Bass' early shipyard and associated reclamation and expansion of the site, but dependent on contamination issues.
 - The nature of the area's reclamation fills should be investigated – these will be present throughout the study area.
 - Evidence for the early topography and natural landform and how this was modified through time.
5. Develop a strategy for recording as much of the gasworks as possible within the constraints of the contamination to human health and safety (Appendix 1).
6. The archaeological sampling and recording need to be undertaken according to Heritage Branch, Department of Planning guidelines and best practice archaeological

methodologies. This will then feed into the future interpretation and produce a detailed record of the site.

7. The client or the Barangaroo Delivery Authority will need to provide a repository for the artefacts recovered from the site.
8. An interpretation plan is to be developed for the site, and the results of the archaeological program, with all its types of evidence, needs to be incorporated into the interpretation plan. The archaeologists need to have a central role in the development of ideas and themes and interpretative concepts.

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Appendix 1: AECOM letter

Appendix 2: Gasworks chronology

Document Status

Name	Date	Purpose	Author	Approved
DRAFT Issue 1	7/5/2010	Draft for LL	Mary Casey	Tony Lowe
Final draft	24/5/2010	Final draft	Mary Casey	Tony Lowe
Final	26/5/2010	Final for EA submission	Mary Casey	Tony Lowe
Final (2)	14/6/2010	Minor BDA requirements	Mary Casey	Tony Lowe
Final (3)	29/7/2010	Minor BDA requirements	Mary Casey	Tony Lowe

Non-Indigenous Archaeological Assessment Barangaroo Stage 1

1.0 Introduction

1.1 Background

This archaeological assessment is an analysis of the non-indigenous archaeological potential of the Stage 1 development area at Barangaroo Development Blocks 1 to 4, (Figs 1.1, 1.2). The Barangaroo development is to include commercial, retail and residential buildings and public recreational uses. This report has been prepared to respond to the relevant Statement of Commitments as outlined in Section 1.6.1.

The development of Barangaroo is part owned and currently controlled by the Barangaroo Delivery Authority (BDA). Lend Lease is the selected development proponent for the redevelopment of Barangaroo, Stage 1.

The project has been classified as a 'major project' to be determined under Part 3A of the EP&A Act. This archaeological assessment will determine the nature and heritage significance of any archaeological remains and put forward recommendations to record or mitigate impacts on these remains depending on the nature of the development in their vicinity.

The redevelopment of Barangaroo is proposed to be undertaken in stages:

1. Preliminary works involves the demolition of above ground structures and site establishment. Archaeological testing will be undertaken at this time as part of the Environmental Assessment. The aim of the testing is to confirm the accuracy of the model of the site's archaeological potential and refine our approach to dealing with the most significant archaeological resource.
2. Archaeological salvage works are to commence once the project approval has been given and in conjunction with the start of works such as the perimeter retention system. It is currently expected that the archaeological program for Stage 1A/1B basement will be completed prior to bulk excavation commencing in February 2011.
3. Archaeological work for Stages 1C and 1D is likely to commence after the initial stages are completed but prior to bulk excavation.

Lend Lease is submitting separate Project Application for Blocks 1 to 4 and this report aims to identify the archaeological resource within that part of the Barangaroo area and provide a management strategy for the archaeological resource.

1.2 Site Description

Barangaroo Stage 1 is located along the eastern side of Darling Harbour precinct with Hickson Road forming the eastern boundary of the study area and Shelly Street the southern end. The western boundary is within the existing concrete wharfage and the northern border is also within the wharfage. The Stage 1 site comprises Lots 3, 5 and 6 in DP 876514. Development blocks 1 to 4 form the basis of the Stage 1 development (Figs 1.1, 1.2). There is an area of contamination associated with the operation of the historic gasworks (c1840-1910s) that was located within the northern part of the site (Blocks 4 and 5). The Stage 1 redevelopment will provide for a range of commercial, residential, tourist, retail and community spaces as well as 3ha for public recreation. Stage 1 also includes basement carparking and an enlarged southern cove.

The existing site consists of the 1960s concrete wharfage along Hickson Road. This was recently used for container wharfage, World Youth Day and for docking of cruise ships.



Figure 1.1: Barangaroo Stage 1 (red outline) showing the basement (purple outline) and the DECCW declared area (blue outline). Historical Atlas of Sydney, City of Sydney Archives

1.3 Previous Archaeological and Heritage Reports

There are two main archaeological reports that were commissioned by the Barangaroo Development Authority from Austral Archaeology which relate to this site and have informed this report.

Barangaroo Archaeological Strategy, Final Report, 2009, by Austral Archaeology for the Barangaroo Delivery Authority

Barangaroo Archaeological Assessment & Management Plan 2010 by Austral Archaeology for the Barangaroo Delivery Authority

1.3.1 Reports relating to the gasworks site

Archaeology & Heritage 2004 *Archaeological recording of the Annulus of 1882 gasholder and details of the 19th century gasmaking, part of former AGL Site 30-34 Hickson Road, Sydney, for Bovis Lend Lease.*

Archaeology & Heritage 2003 *Archaeological recording and excavation, former AGL Site 38 Hickson Road, Sydney, rock shelf at rear, for Bovis Lend Lease.*

Broomham, Rosemary 2007 *Land at Millers Point, ownership and usage.*

Broomham, Rosemary 1987 *First Light, 150 years of gas, Hale & Iremonger, Marrickville, Sydney.*

Godden Mackay Logan 2001 *Conservation Management Plan, 30-38 Hickson Road, Sydney, for Delmo Pty Ltd.*

Godden Mackay Logan 1999 *Archaeological Assessment, Former AGL Site, Hickson Road, for Delmo Pty Ltd.*

1.3.2 Darling Walk, Darling Harbour

The Archaeological Assessment and the Preliminary Results of the excavation program are available on the Casey & Lowe webpage: <http://www.caseyandlowe.com.au/sitedw.htm>. The overall reporting for this site is in progress. The Darling Walk excavation is relevant for the analysis of the Barangaroo Site as it has considerable similarities in the way the foreshore was reclaimed and built up and the development of the model of archaeological potential and significance we undertook for that site. See Section 1.4.3.

1.4 Methodology

1.4.1 Reporting

The production of an Archaeological Assessment is a systematic methodological process that involves a series of phases:

1. Historical research utilising primary material such as maps, pictorial material, directories and council records, and secondary sources. Through this process sub-surface remains may be located on plan and an analysis made of their historical development, construction and use. This provides a picture of the likely extent of archaeological remains and a mini-picture of land use for the site within the context of a wider land use scenario.
2. This analysis is then compared to the extant structures and vacant spaces of the site. From this synthesis an assessment can be made of the nature and extent of existing archaeological deposits. In addition archaeological deposits associated with extant structures can be identified. This leads into a discussion of the archaeological potential of the site.
3. The heritage significance of the site's archaeological deposits is addressed through criteria listed in the NSW *Heritage Act 1977* (amended) and implemented through the *Burra Charter* and the *State Heritage Inventory Program*. They include the nature and

degree of heritage significance such as historical, social, research potential, rarity and representativeness and other types of significance.

4. Based on this assessment of archaeological potential and significance, policy and recommendations are produced regarding the management of the archaeological deposits and mitigating actions in light of a proposed development.
5. The above process is based on the *Burra Charter* guidelines and the *Archaeological Assessment Guidelines* for the establishment of heritage significance and the development of a conservation policy. Through this methodology the archaeological resource will be best served and delays to or interference with development proposals will be minimised.

1.4.2 Map Overlays

Lend Lease commissioned Rygate & Co, surveyors, to do a series of baseline overlays onto the main historic plans to inform this Archaeological Assessment: Harper 1823, Russell 1834, Woolcott & Clarke 1854, *Trigonometrical Survey* 1865, Wansbrough 1875, Dove's 1880 plan, The *Metropolitan Detail Series* 1891, and a 1903 plan. These are included in the report in Sections 2 and 3. These overlays have informed the study areas Casey & Lowe have marked on a range of other historic plans. We note that the accuracy of the overlays is always affected by the accuracy of the original map and the elements into which the modern overlay can be keyed into. On the earlier plans these are few and therefore there is a level of inaccuracy in the 'fit' between the two plans. Generally the east-west fit is reasonably accurate while there is likely to be some north-south shift. These inaccuracies are factored into the assumptions we make about the site and the potential surviving archaeological resource.

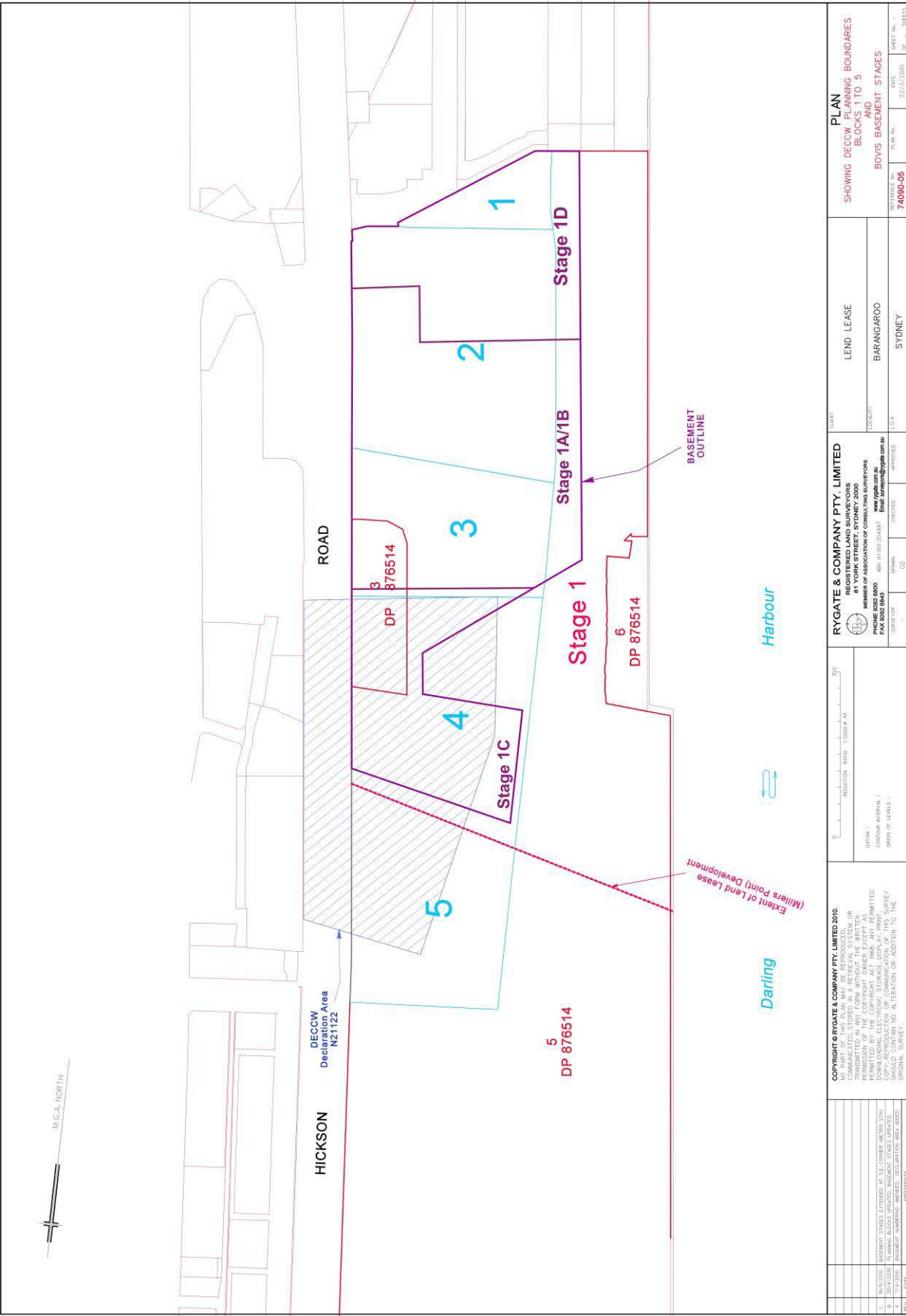


Figure 1.2: Plan showing the five development blocks, basement excavations (purple lines), and the main areas of contamination (hatched). Rygate & Co for Land Lease.

Figure 1.3: Aerial photo showing the location of Blocks 1 to 5 and the identified contaminated areas (blue hatched lines). Rygate & Co for Lease

1.4.3 Comparative Sites

The 5-month archaeological project Casey & Lowe undertook for Lend Lease at Darling Walk, Darling Harbour has strongly influenced our understanding of this type of foreshore development and the nature of how a site was built up by phases of reclamation. One of the main underlying assumptions with this type of site is that the aim was usually to increase the amount of usable land which involved reclaiming and raising levels to keep the water out. This is crucial to understanding how we arrive at conclusions in Section 4.1. For an overview of the results of this Darling Walk site see: <http://www.caseyandlowe.com.au/sitedw.htm>. The other most relevant site is the KENS site. This excavation report is near completion and we hope to have access to the detailed results at that site prior to undertaking the excavation phase. For general sites in the CBD see Section 4.

1.5 Proposed Development

The area of the proposed development is shown in Figures 1.1, 1.2, 1.3. The existing buildings and wharfage will be demolished and commercial buildings erected in the eastern half of the study area, along with a basement carparking. The basement construction will be staged to accommodate the development. There will be public open space along the foreshore within the Stage 1 study area.

European or Non-indigenous archaeological remains of local or State significance are protected under Sections 139 and 140 of the *Heritage Act*. Where the development is being undertaken under a Part 3A process there is no requirement to apply for a S140 approval but there is an expectation that the required archaeological work will conform to best practice established by the Heritage Council and their various guidelines (see Section 1.6.1 below). The Heritage Branch will be required to review relevant documentation and provide advice as to whether it is acceptable as per the Commitments, Modification 3.

1.6 Statutory Constraints

1.6.1 Part 3A, Environmental Planning and Assessment Act, 1979

Barangaroo is listed as a State Significant Site under Schedule 3 of the State Environmental Planning Policy (Major Development) 2005 and is therefore subject to the provisions of Part 3A of the Environmental Planning and Assessment Act, 1979. Under Part 3A the Minister for Planning is generally the consent authority for development on State Significant Sites.

The Barangaroo development site currently has a Part 3A concept plan approval which covers the archaeological areas which are the subject of this report. This Stage 1 Assessment & Management Strategy report forms part of the Environmental Assessment Lend Lease is completing for the Project Approval under Part 3A.

Comber Consultants is writing a report on the Aboriginal archaeology for the Stage 1 development. While Aboriginal archaeology has not been specifically identified in the Director-Generals Requirements (DGRs) or the Commitments (Modification 3) Casey & Lowe and Comber Consultants experience at the nearby Darling Walk site where the remains of a midden were found suggests that this site may also contain Aboriginal relics or artefacts as protected under the National Parks Act. To make sure these are covered by the Part 3A Project Approval a report and management plan has been undertaken.

What does Part 3A do?

The client will respond to the Director-General's Requirements with a Statement of Commitments. The Commitments relating to Non-indigenous Archaeology will be based on

the recommendations provided at the end of this report. A Statement of Commitments has already been issued for this project under Modification 3 for Barangaroo.

The relevant Commitments for Archaeology and Heritage are:

- 60. All affected potential historical archaeological sites or 'relics' of Local and State significance are to be subject to professional Archaeological Assessment in accordance with Heritage Council guidelines. The Assessment must address both terrestrial and maritime archaeological resources and must be prepared by a practitioner (or practitioners) with both terrestrial and maritime experience. The Assessment must consider the desirability and staging of any proposed archaeological excavation and/or recording before the construction works commence and also other mitigation strategies such as archaeological monitoring (or 'watching brief') during construction works.
- 60A. A Research Design including an Archaeological Excavation Methodology will be prepared in accordance with Heritage Council guidelines for each site which is to be impacted by the proposal. Those documents will be prepared for the approval of the Director of the Heritage Branch, Department of Planning. The Archaeological Excavation Director will be a qualified archaeologist, and will meet the current Excavation Director Criteria for State significance sites as published by the NSW Heritage Council.
- 60B. After archaeological works are undertaken, a copy of the final excavation report(s) will be prepared and lodged with the Heritage Branch, Department of Planning, to the State Library of NSW and also to the Local Studies Library in the City of Sydney. The information within the final excavation report will be in accordance with the Heritage Branch requirements.
- 60C. A repository for the relics salvaged from any historical archaeological excavations will be nominated by the Barangaroo Delivery Authority.
- 61. An appropriately experienced and qualified heritage practitioner will be engaged to prepare an Interpretation Plan for the whole Barangaroo site in accordance with the NSW Heritage Office Heritage Interpretation Policy. The Plan will explore various cultural, social and environmental themes related to the site including, but not limited to:
 - The natural landscape
 - Aboriginal history
 - Manipulation of the landscape
 - Maritime industry, trade and commerce
 - Labour, workers and social movements
 - Archaeology

The plan will make recommendations for:

- Public Art
- Naming
- Interpretive Signage and Installations
- Display of Archaeological Deposits
- Built Form Strategies

The plan will also include strategies for:

- Staged Implementation
- Ownership
- Identification of Responsible Stakeholders
- Future Maintenance
- Any individual demolished, dismantled or buried heritage items;
- Historic/significant buildings retained within the precinct; and
- The public domain areas of the precinct.

- 61A. After completion of the archaeological fieldwork, the findings of the archaeological work should be incorporated into the Interpretation Plan.

Under the definitions of Part 3A:

approved project means a project to the extent that it is approved by the Minister under this Part, but does not include a project for which only approval for a concept plan has been given.

project means development that is declared under section 75B to be a project to which this Part applies.

75U Approvals etc legislation that does not apply

The following authorisations are not required for an approved project (and accordingly the provisions of any Act that prohibit an activity without such an authority do not apply):

(c) an approval under Part 4, or an excavation permit under section 139, of the [Heritage Act 1977](#),

(d) a permit under section 87 or a consent under section 90 of the [National Parks and Wildlife Act 1974](#),

A reference in this section to an approved project includes a reference to any investigative or other activities that are required to be carried out for the purpose of complying with any environmental assessment requirements under this Part in connection with an application for approval to carry out the project or of a concept plan for the project.

Therefore under 75U once the project application is approved then the archaeological work has been approved, as assessed and outlined by this Archaeological Assessment and the subsequent Research Design. Therefore if the values have been assessed for Non-indigenous and Aboriginal archaeology and a Research Design written which outlines how the proposed archaeological program is to be undertaken then there is no statutory requirement to apply for a S139 or a S87.

1.6.2 Statutory and Non-statutory Guidelines

The management of heritage sites in NSW should conform to the requirements of the *Burra Charter* of Australia ICOMOS. Many of the following guidelines provide for best practice conservation approaches and can be used to inform all the management of the archaeological remains. There are a range of archaeological guidelines which inform the management of the place:

Archaeological Assessment Guidelines, NSW Heritage Office, Department of Urban Affairs & Planning, 1996. A new draft of this has been prepared but not yet published.

Assessing Significance for Archaeological Sites and 'Relics', Heritage Branch, Department of Planning, 2009.

NSW Heritage Manual, NSW Heritage Office, Department of Urban Affairs & Planning, 1996.

Historical Archaeological Investigations: A Code of Practice, NSW Department of Planning, 2006.

Historical Archaeological Sites, Investigation and Conservation Guidelines, Department of Planning and NSW Heritage Council, 1993.

Excavation Director's Assessment Criteria, NSW Heritage Office.

ICHAM Charter, The ICOMOS Charter for the Protection and Management of Archaeological Heritage, ICOMOS International, 1990.

Recommendation on International Principles Applicable to Archaeological Excavations, UNESCO, 1956.

Heritage Interpretation Policy and Guidelines, Heritage Information Series, NSW Heritage Office, August 2005.

Photographic Recording of Heritage Items, Heritage Information Series, NSW Heritage Office, 2006.

1.7 Authorship

The historical background (Section 2) for this assessment was researched and written by Dr Rosemary Annable, historian and archaeologist. Existing research on the gasworks by Dr Rosemary Broomham was the basis for our understanding of the development and operation of the gasworks; no additional historical research was undertaken on the gasworks for this report other than to review a range of reports on the gasworks site. Section 3 was written by Dr Mary Casey, Director, Casey & Lowe and Abi Cryerhall, Casey & Lowe. Cos Coroneos, Cosmos Archaeology, maritime archaeologist, wrote Section 3.2 and contributed to Section 4.2. Some overlays onto the historic plans were produced by Abi Cryerhall, Casey & Lowe while the base maps were undertaken by Rygate & Co. surveyors. Dr Bernadette McCall, Casey & Lowe, undertook proofing and Robert Maxwell assisted with analysis of the gasworks. The report was reviewed by Tony Lowe, Director, Casey & Lowe Pty Ltd.

1.8 Acknowledgements

Paula Mottek and Michelle Mason, Lend Lease Point commissioned and project managed this report. Warwick Bowyer, Lend Lease, provided plans and descriptions of the proposed development, copies of geotechnical reports and the Remediation Action Plan (RAP) on remediation and considerable other assistance. The overlay plans by Rygate & Co were important for understanding the extent and nature of the potential archaeological resource within the study area. Maritime archaeologists Cos Coroneos provided considerable assistance in understanding the nature of the maritime archaeological resource and its significance. Anne Bickford, Archaeology and Heritage Pty Ltd generously loaned copies of various archaeological and heritage reports on the gasworks.

1.9 Limitations

There was sufficient time and funding to complete this report to a quality standard. We had to supplement the limited site specific research undertaken for previous reports on the archaeology of Barangaroo.² The absence of an Archaeological Zoning Management Plan for Darling Harbour makes it difficult to determine the nature of the surviving resource for this area generally which can affect the values identified in the Statement of Significance but this report is considered to be robust enough to deal with this situation.

² Austral Archaeology 2009 and 2010

1.10 Terminology

Historical Archaeology (Non-Indigenous/European)

Historical Archaeology (in NSW) is the study of the physical remains of the past, in association with historical documents, since the British occupation of NSW in 1788. As well as identifying these remains the study of this material can help elucidate the processes, historical and otherwise, which have created our present surroundings. Historical archaeology includes an examination of how the late 18th and 19th-century arrivals lived and coped with a new and alien environment, what they ate, where and how they lived, the consumer items they used and their trade relations, and how gender and cultural groups interacted. The material remains studied include:

Archaeological Sites:

- below ground: these contains relics which include building foundations, occupation deposits, rubbish pits, cesspits, wells, other features, and artefacts.
- above ground: buildings, works, industrial structures and relics that are intact or ruined.
- cultural landscapes: major foreshore reclamation
- maritime sites: infrastructure and shipbuilding
- shipwrecks
- structures associated with maritime activities.

Archaeological Potential

Archaeological potential is here used and defined as a site's potential to contain archaeological relics which fall under the provisions of the *Heritage Act* 1977 (amended). This potential is identified through historical research and by judging whether current building or other activities have removed all evidence of known previous land use.

Archaeological Site

A place that contains evidence of past human activity. Below ground sites include building foundations, occupation deposits, features and artefacts. Above ground archaeological sites include buildings, works, industrial structures and relics that are intact or ruined.

Archaeological Investigation or Excavation

The manual excavation of an archaeological site. This type of excavation on historic sites usually involves the stratigraphic excavation of open areas.

Archaeological Monitoring

Archaeological monitoring is recommended for those areas where the impact of the works is not considered to mean the destruction of significant archaeological fabric. Nevertheless the disturbance of features both suspected and unsuspected is possible. In order to provide for the proper assessment and recording of these features an archaeologist should inspect the works site at intervals they consider to be adequate and to be 'at call' in case the contractor uncovers remains that should be assessed by the archaeologist.

It is not anticipated that monitoring would impact on the planned works or unduly hold up the contractors' work schedules. If recording of features is necessary it would be carried out as quickly as possible so that any time delays are minimised.

Monitoring is a regular archaeological practice used on many building and development sites.

Research Design

A set of questions which can be investigated using archaeological evidence and a methodology for addressing them. A research design is intended to ensure that archaeological investigations focus on genuine research needs. It is an important tool that

ensures that when archaeological resources are destroyed by excavation, their information content can be preserved and can contribute to current and relevant knowledge.

Research Potential

The ability of archaeological evidence, through analysis and interpretation, to provide information about a site that could not be derived from any other source and which contributes to the archaeological significance of that site and its 'relics'.

Relic

Means any deposit, artefact, object or material evidence that:

- (a) relates to the settlement of the area that comprises New South Wales, not being Aboriginal settlement, and
- (b) is of State or local heritage significance.

(NSW *Heritage Act 1977*, Definitions, Part 1.4)

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2.0 History of Barangaroo Stage 1

The area encompassed by Stage 1 of the Barangaroo development comprises much of the former Section 67 of the City of Sydney (bounded by the waters of Darling Harbour on the west, the northern boundary of the former AGL site on the north, Kent Street on the east and Margaret Street on the south), together with a small area to the south-west of the west end of Margaret Street. Like much of Darling Harbour this is an area of extensive reclamation, a process that began within a few decades of British settlement. The main recognisable elements of the original Sydney Section 67 have been obliterated by 20th century wharf developments in Darling Harbour.

2.1 Early occupation 1788-1830s

The configuration of the original shoreline is shown in a number of charts, hydrographic surveys and early maps, including Captain John Hunter's 1788 'Chart of Port Jackson New South Wales', Grimes c1800, James Meehan's plan of the town of Sydney of 1807 and an 1822 plan, probably by J S Roe (Fig. 2.2).³ By the mid-1830s, when the first parish maps were being prepared, parts of the shoreline had already been modified for wharfage.

The first British settlement in 1788 centred around Sydney Cove and along the Tank Stream, but within a few years occupation had begun on the western ridge overlooking Darling Harbour. The 1792 'Survey of the Settlement in New South Wales New Holland', on which Governor Phillip marked the extent of the settlement, shows four clearly delineated areas to the west of what would later become the main military barracks (Fig. 2.1). Identified as the officers' quarters and the magazine, two of these areas were in close proximity to the shoreline of the, as then un-named, cove to the west of Sydney Cove, first known as Cockle Bay and later as Darling Harbour. By 1802 a track had been established along the western ridge, serving allotments and premises further to the south on the shore of Cockle Bay, indicating that there was already interest in these waterfront sites (Fig 2.3).⁴

The earliest buildings that can, with some confidence, be identified as located within what later became Sydney Section 67 are shown in Meehan's 1807 plan (Fig. 2.4). These comprise the western of two long thin rows of buildings to the west of lot 89 and southwest of the government windmill. These buildings were in a line with the continuation of Soldiers' Back Row, (renamed Kent Street in 1810), and it seems likely that these are the allotments and houses, readily identifiable by their orientation at an angle to the continuation of Kent Street, shown in later plans and surveys.⁵ Few of the early maps give a true impression of the topography of Sydney Harbour and it is only the location and orientation of the earliest buildings that help to identify the realities of the shoreline contours.

³ 'Chart of Port Jackson New South Wales Survey'd by Capt John [sic] Hunter Second Captain of His Majesties Ship the Sirius 1788. Drawn from the original by George Raper Midn', Mitchell Library ZM2 811.15/1788/1, reproduced in *Eora Mapping Aboriginal Sydney 1770-1850*, State Library of New South Wales, 2006 and Max Kelly & Ruth Croker: *Sydney Takes Shape. A collection of contemporary maps from Foundation to Federation*, Doak Press, 1978, pp 12 & 14

⁴ Max Kelly & Ruth Croker: *Sydney Takes Shape. A collection of contemporary maps from Foundation to Federation*, Doak Press, 1978, pp 8 & 10

⁵ *Sydney Gazette* 6 October 1810, p 1; Harper's survey of Sydney SZ 434 and Parish of St Philip AO Maps 286 & 6219 (State Records NSW)

REFERENCE.

A—Signal Battery.	I—Workshops.
B—Observatory.	K—Government House.
C—Hospital.	L—Palmer's Farm.
D—Prison.	M—Officers' Quarters.
E—Barracks.	N—Magazine.
F—Store Houses.	O—Gallows.
G—Marine Barracks.	P—Brick-kiln.
H—Prisoners' Huts.	Q—Brickfields.

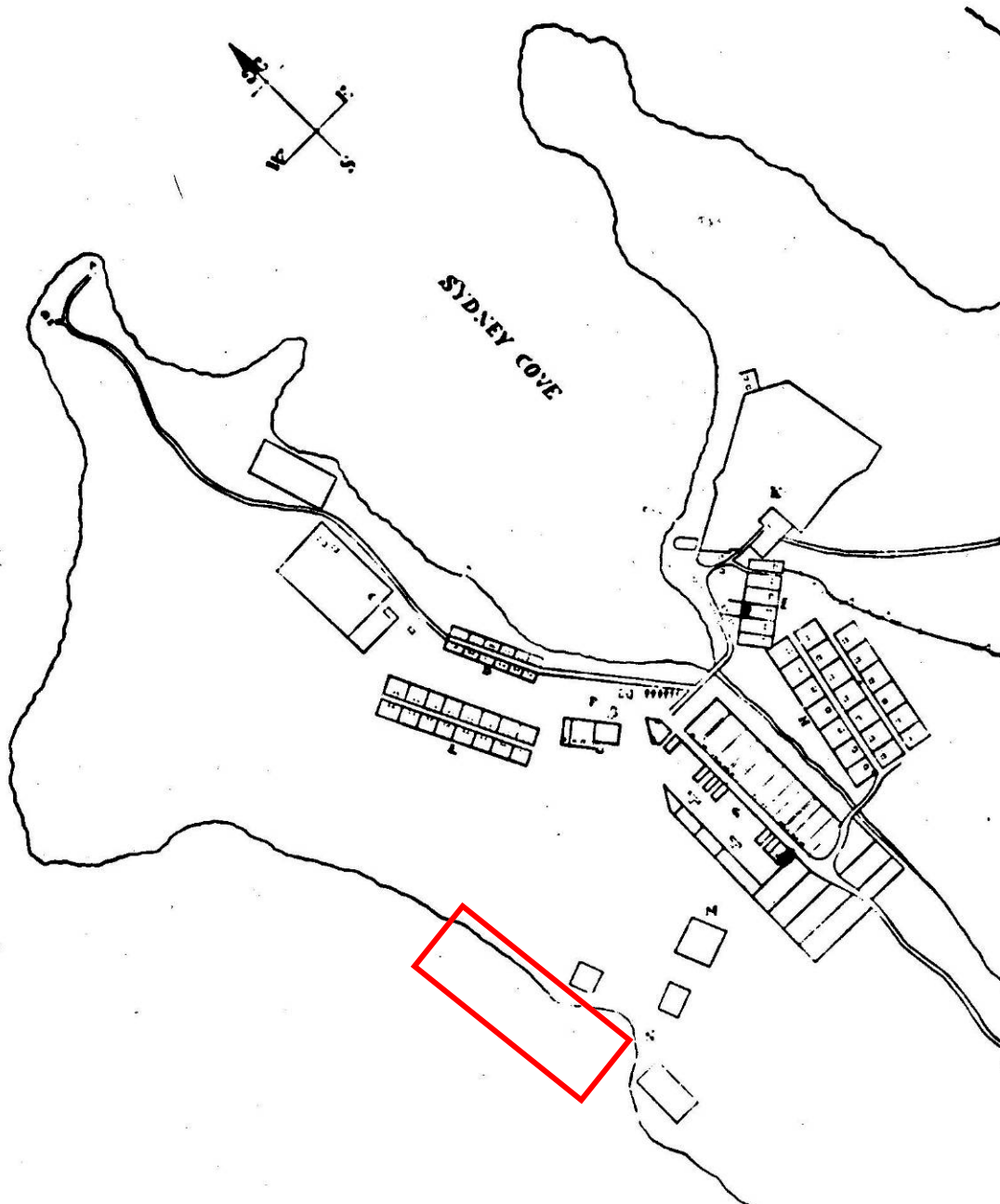


Figure 2.1: A Survey of the Settlement in NSW, New Holland, 1792 with indicative location for Barangaroo Stage 1. While there are some indicative structures nearby such as powder magazines these are oddly located. This map indicates there was some limited use of this area by the soldiers from the barracks on the higher ground. Max Kelly & Ruth Croker: *Sydney Takes Shape. A collection of contemporary maps from Foundation to Federation*, p8.

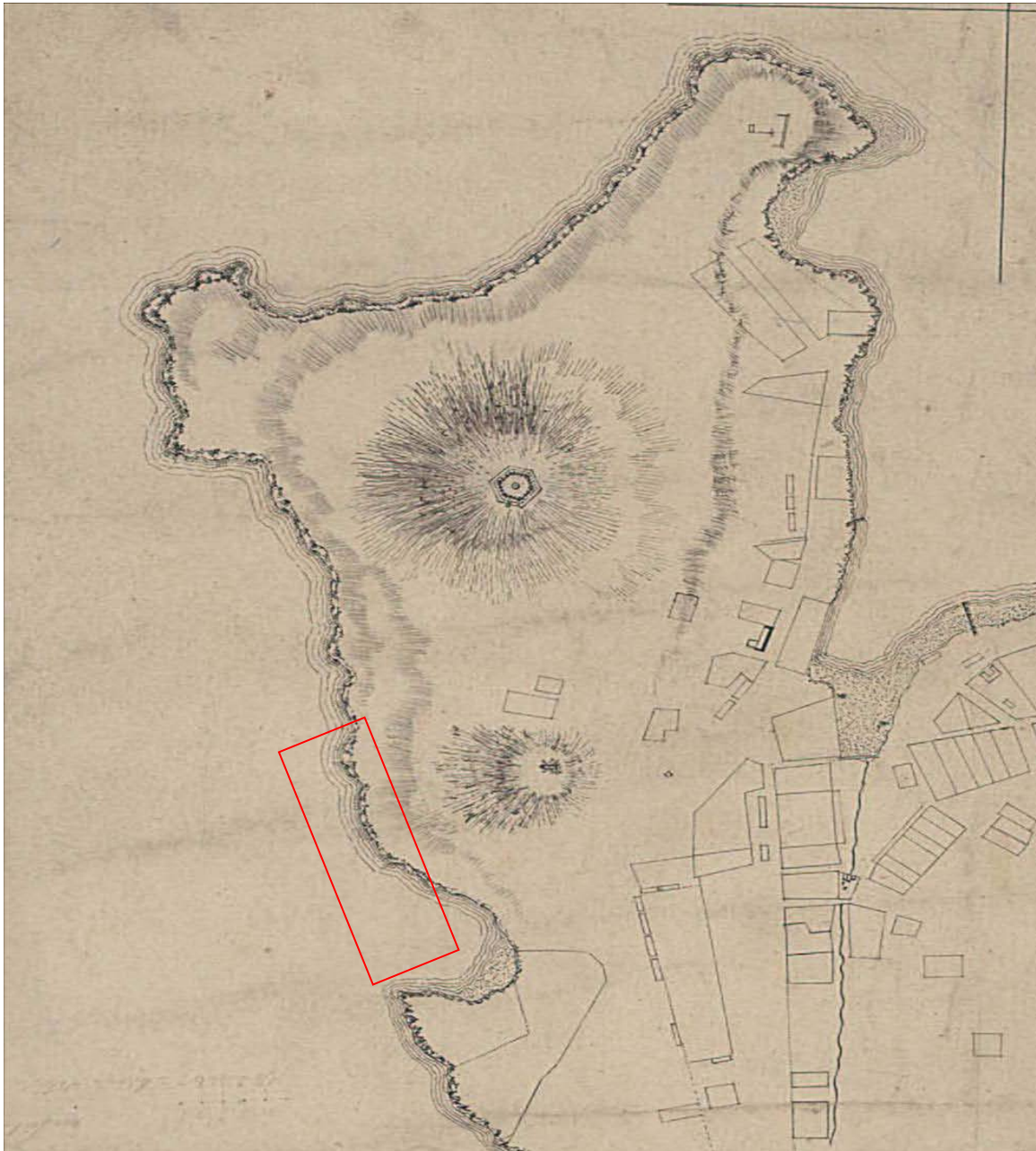


Figure 2.2: Plan of eastern side of Darling Harbour, c1800 by Surveyor Grimes. This shows the rocky foreshore and the approximate location of the study area with the focus of development around Sydney Cove and the rocky nature of the foreshore but with a narrow sandy beach. CO 700/NSW/18, UK National Archives.

Lesueur and Meehan's plans of Sydney drawn in 1802 and 1807 respectively show little occupation along the east side of Cockle Bay, and there are, similarly, few references to the place in the earliest editions of the *Sydney Gazette*. Amongst brief mentions of a cottage or two with well stocked gardens, the concealment of stolen goods, other felonious dealings and a shark attack, perhaps the most important was the announcement in January 1809 of the construction in Cockle Bay of a vessel of 60 tons for James and William Jenkins, the aptly named *Brothers*, an indication of the potential importance of the area in Sydney's maritime trade.⁶

⁶ *Sydney Gazette* 1 January 1809 p 1 b-c and other references to Cockle Bay in issues of the *Gazette* from 1803-1809



Figure 2.3: Lesueur's 'Plan of the Town of Sydney', 1802. By this time there were some early grants for small farms, mostly for soldiers in the vicinity of the study area. There are access road somewhere near the modern alignment of Margaret Street and Sussex Street. Max Kelly & Ruth Croker: *Sydney Takes Shape. A collection of contemporary maps from Foundation to Federation*, p10.



Figure 2.4: James Meehan's 1807 'Plan of the Town of Sydney in NSW'. Max Kelly & Ruth Croker: *Sydney Takes Shape. A collection of contemporary maps from Foundation to Federation*, p10.

Governor Macquarie's wide-ranging orders of October 1810 concerning the 'Ornament and Regularity of the Town of Sydney' confirmed the inclusion of Cockle Bay as part of the maritime and mercantile life of the town: a wharf would immediately be built in Cockle Bay to receive produce from outlying settlements and to service the new Market-square on George Street.⁷ This wharf was located near Market Street.

The first detailed evidence for occupation along the shores of Cockle Bay is provided by Harper's c.1823 survey of Sydney and, more specifically for the area west of Kent Street and north of Erskine Street, a sketch in the Surveyor General's sketch books of approximately the same date (Fig. 2.5). These two plans show the same details with the

⁷ *Sydney Gazette* 6 October 1810 p 1c

sketch book plan providing greater clarity for that part of the Harper survey that is damaged by staining.⁸ The pattern of allotments of the early 1820s is repeated on the earliest parish maps that were produced in the mid-1830s.⁹

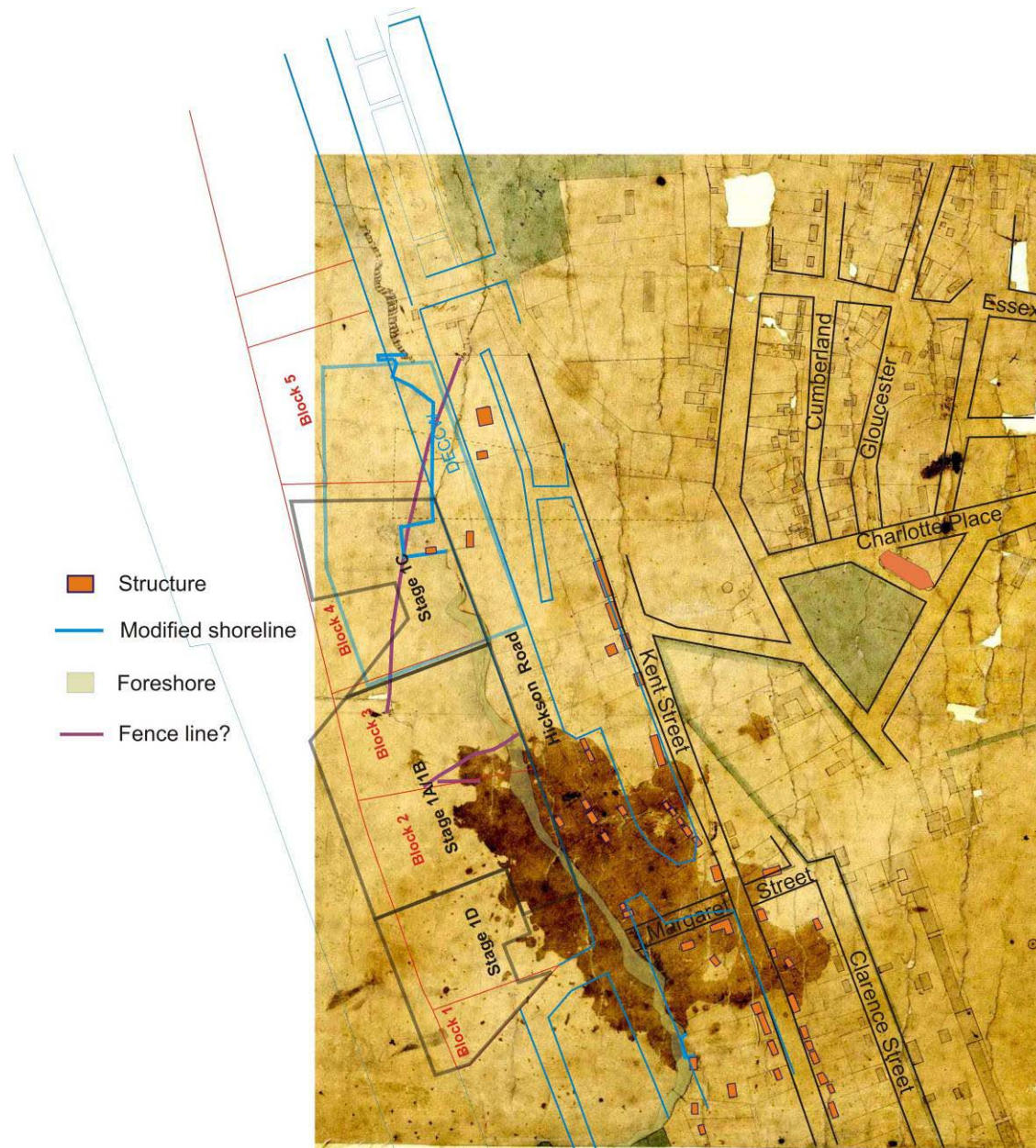


Figure 2.5: Harper's 1823 plan showing the approximate position of Barangaroo Stage 1 and the development blocks. The foreshore has been highlighted in green, this would be above the high tide line. There is thought to be evidence of fence lines indicating that these were probably part of early leases or grants. The squarish modified section of shoreline, highlighted, is part of Portions 16 and 15 which became the site of the gasworks. State Records. Abi Cryerhall, Casey & Lowe. Development blocks (red) basement (grey) DECCW declared area (aqua).

⁸ Harper's Survey of Sydney c. 1823 SZ 434 and Surveyor General's Sketch Books Vol. 1 Fol. 82, Reel 2778 (SRNSW)

⁹ Land & Property Management Authority, Parish Maps on-line, Parish of St Philip Reference nos. 14073701 and 14061501 (LPMA website)



Figure 2.6: Approximate location of the study area development blocks and basement stages and the DECCW declared area. This sketch shows the same buildings and portions as on the 1823 plan (Fig. 2.5). Overlay is indicative use only. Surveyor General's Sketch Books Vol. 1 Fol. 82, Reel 2778 [nd but early 1820s], SRNSW. Development blocks (red) basement (purple) DECCW declared area (aqua).

By the early 1830s formal ownership of town allotments was being determined by the Court of Claims. Robert Russell's plan of Sydney Section 67 dated November 1834 identifies the boundaries of the allotments in this area, and the ownership of these grants as decided (where required) by the Court (Fig. 2.7).¹⁰ The section plan also shows the buildings on the allotments, some of which can be identified on the earlier 1820s plans.

By 1834 the Kent Street North frontage of Section 67 was fully occupied and divided into comparatively small allotments. To the west, behind the Kent Street frontage, and with access to the Cockle Bay shoreline (now officially renamed Darling Harbour), the allotments were considerably larger.

To the south of Macarthur's grant these lots were granted in the 1830s as follows, from north to south, to Margaret Place:

- Lot 11 Richard Aspinall, Warham Jennett Browne and Edward Aspinall (Aspinall Browne & Co.) – granted 1835¹¹
- Lot 17 Henry Thomson Bass – granted 1837¹²
- Lot 18 Samuel Thompson and his wife Elizabeth – granted 1834¹³
- Lot 19 Edward Boulger – granted 1835¹⁴
- Lot 5 William Macquarie Molle & others
- Lot 20 Francis Girard

Where the shoreline was unaltered, the High Water Mark formed the western boundary of these grants.

Documentary and oral evidence supplied to the Commissioners of Claims at their hearings provided evidence about the ownership of these allotments in earlier years.

- Edward Boulger's grant (Lot 19) had a chain of title from at least 1810 although there is no evidence from the 1823 survey of any occupation on the site. By 1830 there was a building by the northern boundary of the grant and this might account for the purchase price of £190 when Boulger bought it that year.¹⁵
- Samuel and Elizabeth Thompson's grant (Lot 18) had also had a succession of owners since it was acquired on lease in 1824 by Stephen Milton. The Thompson's had attempted to erect a wooden building on the land in 1833, but group of men, acting for Messrs Cooper and Levy who claimed ownership, tore the building down resulting in a case in the Supreme Court.¹⁶ No buildings are shown in the 1834 Russell plan on what became the Thompsons' grant or on the land granted to Aspinall Browne & Co. (Lot 11).¹⁷

By 1834 two allotments were notable for the number and size of their buildings and for evidence of wharf construction and hence reclamation; these were Henry Bass' property and that belonging to Francis Girard, at the corner of Margaret Place (later Margaret Street).

¹⁰ Sydney Section 67, Crown Plan S.45.684 by R Russell dated 18 November 1834, AO Map 5421 (SRNSW)

¹¹ Ser. 39 p 29 dated 5 July 1835 1a 0r 27p (LPMA)

¹² Ser. 47 p 232 dated 17 November 1837 3r 21p (LPMA)

¹³ Ser. 29 p 165 dated 16 August 1834 2r 0p (LPMA)

¹⁴ Ser. 39 p 77 dated 8 August 1835 1r 16p (LPMA)

¹⁵ Edward Boulger, Court of Claims Memorial 523, NRS 913, 2/1790, Reel 1205 (SRNSW). The building is shown on Surveyor General sketch books Vol. 1 Fol. 18, Reel 2778 with correspondence references dated 1830 (SRNSW)

¹⁶ S & E Thompson, Court of Claims Memorial 3, NRS 913, 2/1777, Reel 1234 and Surveyor General's Sketch Books Vol. 1 Fols. 18 & 19, Reel 2778 (SRNSW)

¹⁷ Sydney Section 67, Crown Plan S.45.684 by R Russell dated 18 November 1834, AO Map 5421 (SRNSW)

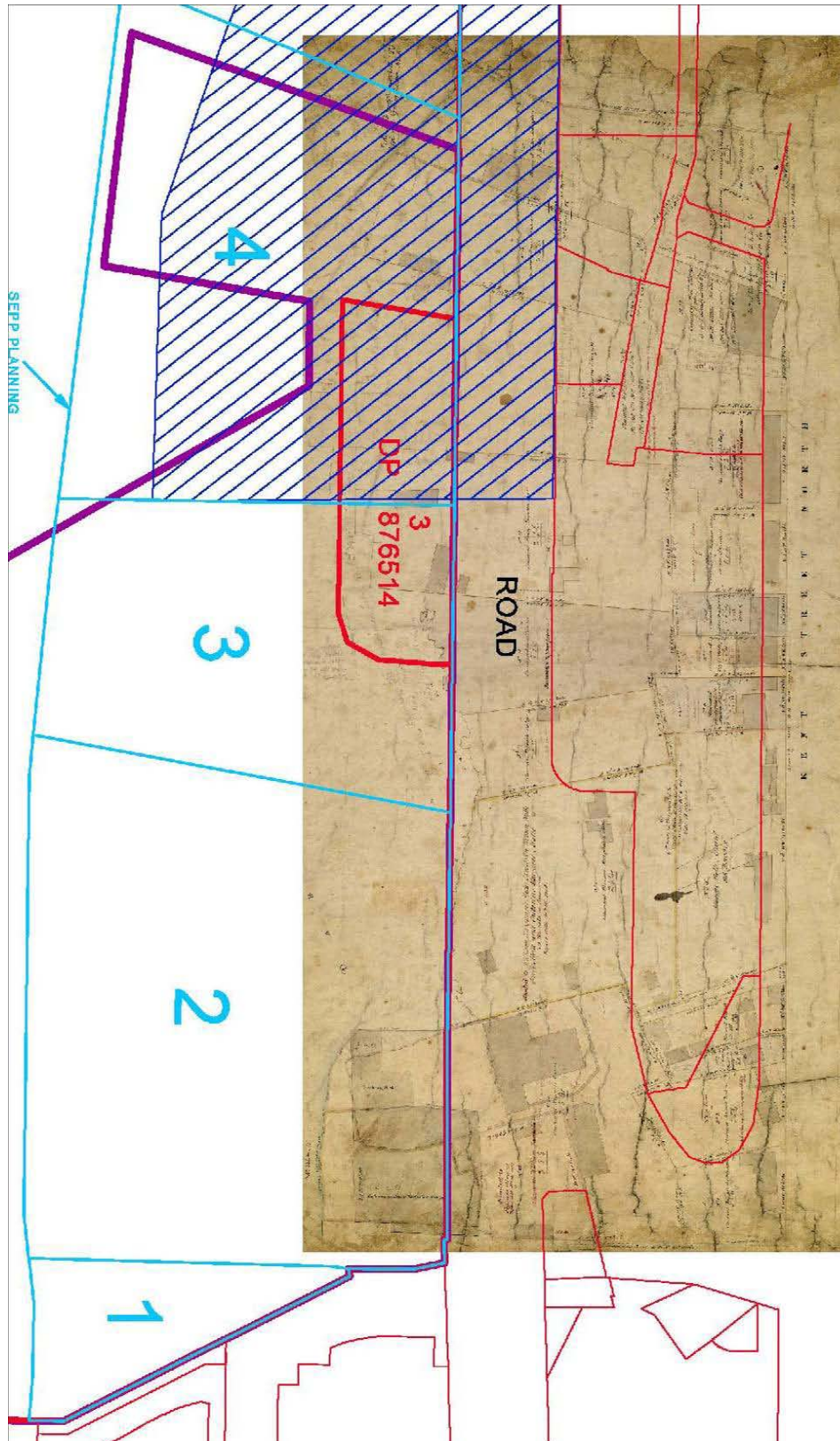


Figure 2.7: This map shows the reclamation of the foreshore is limited to the northern and southern sections while the middle area remains unchanged. Sydney Section 67 (Crown Plan S.45.684) by Robert Russell dated 18 November 1834, AO Map 5421, SRNSW. Rygate & Co surveyors Development blocks (aqua) basement (purple) DECCW declared area (blue hatched).

From the mid-1830s, with the ownership of the waterfront lots finally determined, Henry Bass and Francis Girard began to consolidate their interests in Darling Harbour.

2.2 Henry Bass, shipbuilder 1830s-1853 – Lots 17 and 18

Evidence for the history of the two lots purchased by Henry Bass in 1832 for £350 dated from 1819. A building (Lot 17) is shown towards the southern boundary of the area in an 1830 sketch and a rapid increase in value between 1831 and 1832 suggests that some of the other improvements shown on the 1834 plan could have been made at this date.¹⁸ This coincided with Bass' appearance as a 'shipbuilder Darling Harbour' in the *NSW Calendar and Post Office Directory for 1833* a publication in which he had a full page advertisement, complete with illustration, two years later (Fig. 2.8). The wharfage on the shoreline of his grant and the large buildings were presumably his ship building enterprise where 'Every description of Vessels under 500 Tons register built by the most approved Models & repaired – Boats, Spars &c'.¹⁹



Figure 2.8: Sketch of Mr Bass' ship yard in 1835. *NSW Calendar & Post Office Directory* 1835, opp. Page 8.

Henry Bass acquired Samuel and Elizabeth Thompson's grant (Lot 18) in 1836; Lot 9 on the Kent Street North frontage that gave him access to the street in 1837 and in 1845 also purchased a small part of Lot 11 adjoining the northwest corner of his property on the

¹⁸ H T Bass, Court of Claims Memorial 352, NRS 913, Reel 1203 (SRNSW) and PA 569 (LPMA) and The building is shown on Surveyor General sketch books Vol. 1 Fol. 18, Reel 2778 with correspondence references dated 1830 (SRNSW)

¹⁹ *NSW Calendar & Post Office Directory* 1835, Alphabetical section opposite p 8

boundary of the Gas Company's site, giving him more water frontage.²⁰ In combination with his original grant, these became his waterside premises.²¹

From the 1830s to the 1850s reclamation within Bass' land consisted of wharfage parallel with the original shoreline and what may have been in effect a small dock, or shallow inlet.²² In addition to the wharf, the premises included a workshop and two houses.²³ By 1850 Bass had also built a row of very small houses off Kent Street North on the east side of his property, known as Bass' Buildings; no doubt a lucrative source of income. Wells' map of the City of Sydney in 1850 shows the property and buildings.²⁴ By comparison with his neighbours the rateable valuation of Bass' property was quite low, suggesting that his waterside premises were perhaps not very sophisticated or up to date.²⁵ By at least the early 1850s the premises were leased out by Bass who was presumably no longer an active shipbuilder.²⁶

In 1853 Bass sold his land to John Reeve and in 1854 it was purchased by merchants Charles Smith and John Henry Challis. A year later Smith and Challis also purchased Edward Boulger's Lot 19, immediately to the south, which appears to have remained undeveloped since the 1830s, and with this extension to Bass' original holdings began to redevelop the property.²⁷

2.3 Smith & Challis and the Grafton Wharf 1854-1880

Scottish born Charles Smith had been in the merchant navy serving in the Baltic and West Indies before turning to whaling after his arrival in New South Wales in 1836 and eventually settled down to life as a shipping merchant after his final voyage in 1852. Smith's appointment as manager of Flower, Salting & Cos' whaling fleet in 1850 would have brought him into contact with J H Challis, a partner in the firm, who acquired considerable wealth in real estate, wharves and pastoral properties.²⁸ Given Challis' much higher social profile, it was his name that appeared on maps showing the Darling Harbour wharfage in the 1850s (Fig. 2.10).²⁹ Challis had however left the Colony in 1855, shortly after his joint acquisition of the land and returned to England to live and it was Captain Charles Smith who continued as the active partner in Sydney.

²⁰ PA 569 (LPMA)

²¹ PA 569 (LPMA)

²² This can be seen in the 1875 plan on which the shoreline as in Russell's 1834 survey is also shown, see C H Wansbrough, Darling Harbour Frontage Section No. 2, 1875, (Crown Plan P.26.574) AO Map 4775 (SRNSW)

²³ Rate Assessment Gipps Ward 1845 (City of Sydney Archives)

²⁴ W H Wells: 'Map of the City of Sydney 1850', Mitchell Library on-line

²⁵ The Hunter River Company's wharf and Breillat's wharf were assessed at £400 and £500 and Bass' wharf at £50, Rate Assessment Gipps Ward 1845 (City of Sydney Archives)

²⁶ Rate Assessment Gipps Ward 1851 (City of Sydney Archives) leased to Laurence Corcoran and Archibald Rodgers and also Surveyor General Sketch Books Vol. 7 Fol. 19 [nd] showing area leased to Coredran [sic]. Reel 2780 (SRNSW)

²⁷ PA 569 (LPMA)

²⁸ *Australian Dictionary of Biography Volume 6 1851-1890 R-Z*, Melbourne University Press, 1976, entry for Charles Smith pp 141-142 and *Volume 3 A-C*, 1969, entry for John Henry Challis pp 374-375

²⁹ For example Woolcott & Clarke's Map of the City of Sydney, 1854 and Smith & Gardiner's Map of Sydney and Suburbs 1855

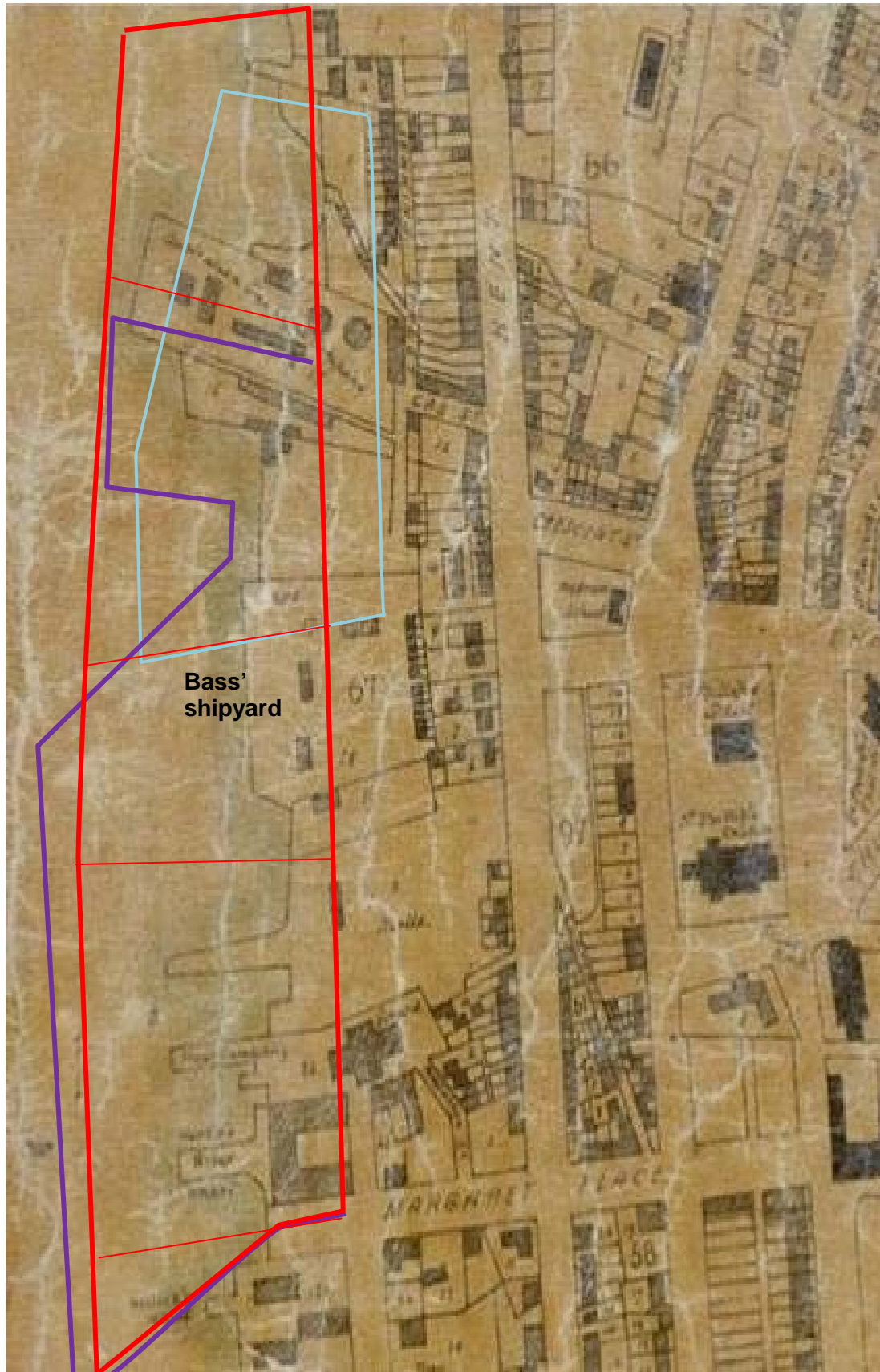


Figure 2.9: This 1850 plan is similar to the 1854 plan, Figure 2.10. Location of Barangaroo Stage 1 is approximate only. W H Wells: 'Map of the City of Sydney 1850', ML NSW. Development blocks (red) basement (purple) DECCW declared area (blue).

Archaeological Assessment, Barangaroo Stage 1

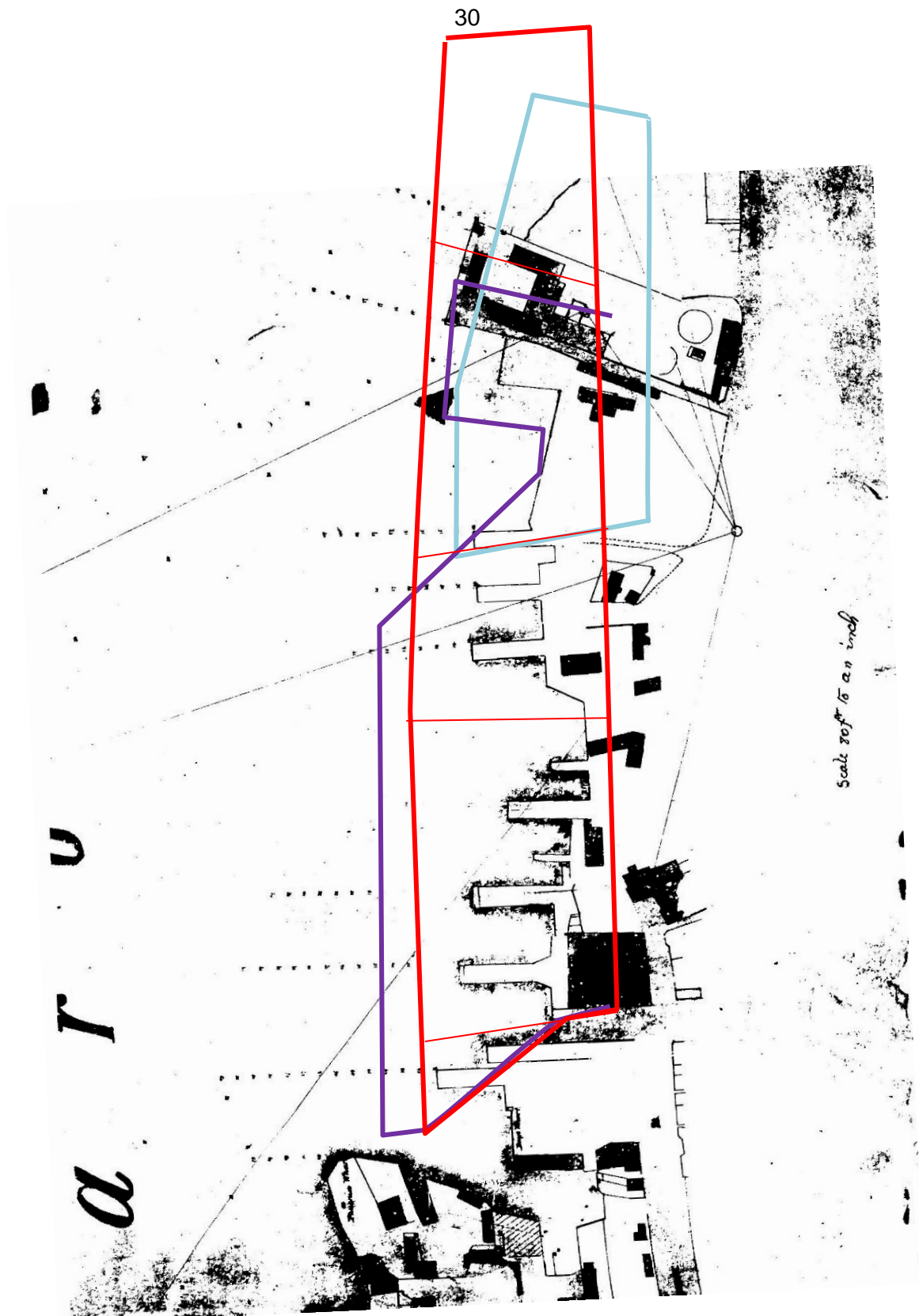


Figure 2.11: Substantial changes had been made to the wharfage by c1861, location of study area approximate. Key: purple W G Bennett: Plan for office use of Darling Harbour taken from plan of Chief Engineer, September 1863 (Crown Plan D.2a.1628) AO Map 2633 (SRNSW) [Documentary evidence indicates that the original plan is earlier than 1863, the date when it was copied as it does not show a new jetty that was leased in 1861]. Development blocks (red) basement (purple) DECCW declared area (blue).