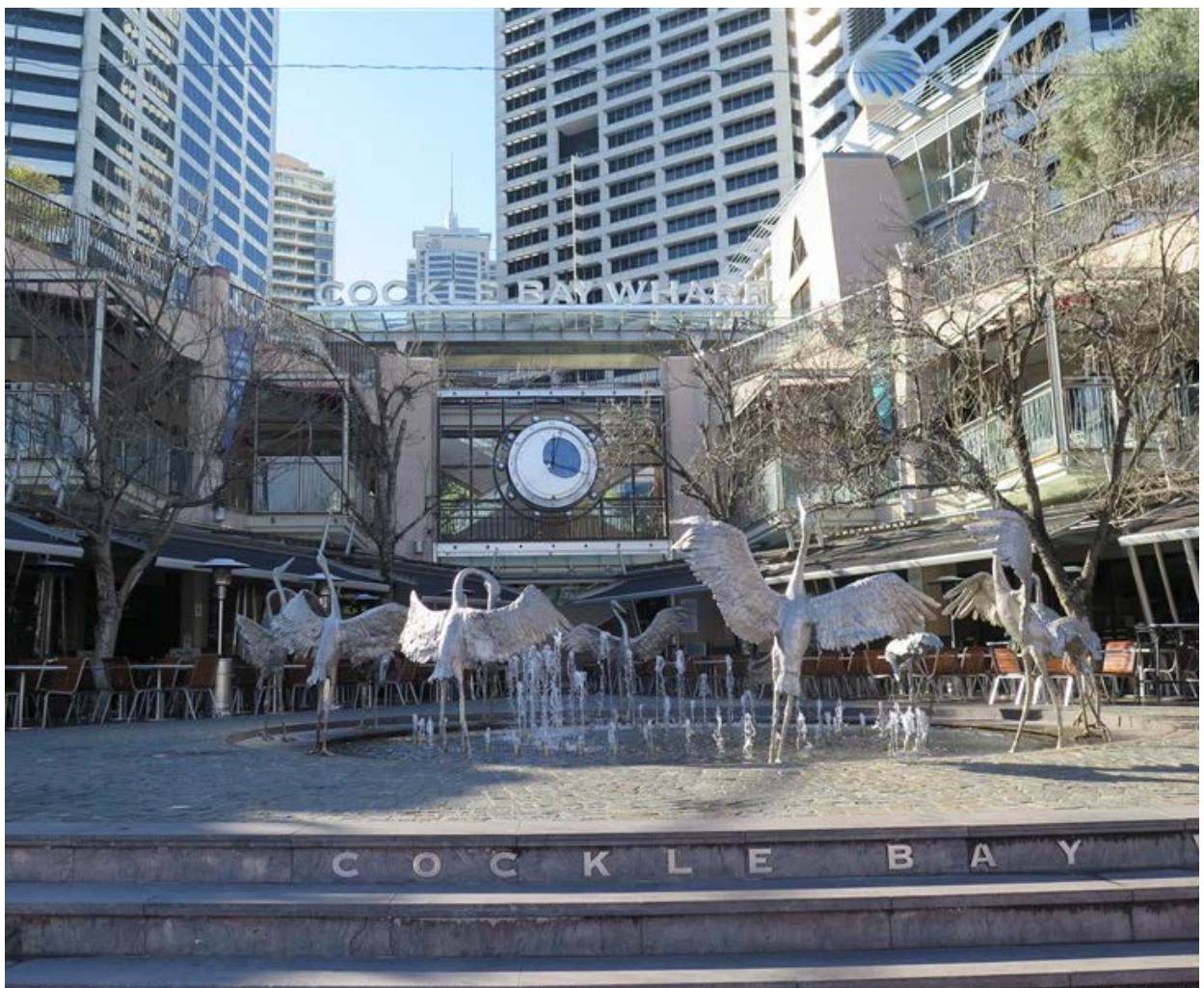


Cockle Bay Park

Aboriginal Heritage Due Diligence Report

Report prepared for DPT and DPPT

August 2017



Report Register


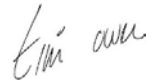
The following report register documents the development and issue of the report entitled Cockle Bay Park—Aboriginal Due Diligence, undertaken by GML Heritage Pty Ltd in accordance with its quality management system.

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17-0225	4	Final Report—reissued to include updated site plan and client comments	4 August 2017
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Quality Assurance

GML Heritage Pty Ltd 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.

The report has been reviewed and approved for issue in accordance with the GML quality assurance policy and procedures.

Project Manager:	Sophie Jennings	Project Director & Reviewer:	Dr Tim Owen
Issue No.	5	Issue No.	5
Signature		Signature	
Position:	Consultant	Position:	Senior Associate
Date:	22 August 2017	Date:	22 August 2017

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1.0 Introduction

GML Heritage Pty Ltd (GML) has been engaged by DPT and DPPT Pty Ltd to update the Due Diligence Aboriginal Heritage report for the Cockle Bay Park development. The proposal is for demolition of the existing buildings and associated infrastructure, with construction of a new retail and commercial development including a multistorey office tower and redevelopment of the public space.

DPT Operator Pty Ltd and DPPT Operator Pty Ltd (the Proponent) are seeking approval for a Concept Proposal for the redevelopment of the Cockle Bay Wharf Building and the surrounding area to create new open space and a commercial, retail and tourist precinct in the heart of the CBD (now referred to as Cockle Bay Park). The amended Concept Proposal includes:

- a large area of publicly accessible open space;
- new retail outlets, including new food and beverage destinations;
- new cultural and entertainment destinations; and
- a new commercial office tower.

The project will add new open space to the Sydney CBD and help to reconnect the city to the Darling Harbour waterfront. Cockle Bay Park will take its place in a revitalised Sydney CBD and speaks directly to local government objectives to create a 'Green, Global and Connected City' (City of Sydney) as well as the strategic vision outlined in 'Towards Greater Sydney 2056' to grow the "developing central city". The vision for this project was developed with consideration for the NSW Government objectives to support and "grow the knowledge industry", double tourism expenditure and "strengthen our local environment and communities" as outlined in 'NSW 2021: A Plan to Make NSW Number One'.

This report informs a response to submissions and amended development application associated with a State Significant Development Application (SSDA) (Application No. SSD 7684) submitted to the Minister for Planning pursuant to Part 4 (Division 4.1) of the Environmental Planning and Assessment Act 1979 (NSW) (EPA Act). The Secretary's Environmental Assessment Requirements (SEARs) were reissued on 23 June 2016. The relevant requirements for Aboriginal archaeology are as follows:

Heritage. The EIS shall:

Provide a detailed Heritage Impact Statement (HIS) that identified and addresses impacts of the proposal:

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

The Due Diligence Aboriginal Heritage Report as part of the Environment Impact Statement (EIS) was submitted to the Department of Planning and Environment (DPE) in December 2016 for comment. This report has been updated to assess changes to the proposed development, including the relocation of the proposed commercial tower, and to address comments received in response to the EIS.

The purpose of this report is to identify whether the study area possesses or has the potential to possess Aboriginal heritage sites, places, objects and/or values, in accordance with the Office of Environment and Heritage (OEH) guidelines for due diligence. An assessment of the significance of any Aboriginal sites, places and/or values has not been undertaken as part of this report. This project does not follow the OEH guidelines for Aboriginal community consultation. Recommendations are provided as to whether further Aboriginal heritage assessment and management would be necessary.

Please note that all plans, diagrams, images and graphics within this report and the supporting documentation (excluding the amended Concept Proposal Envelope Plans prepared by Francis-Jones Morehen Thorp Pty Ltd) are indicative only and have been included to communicate the intent of the amended Concept Proposal, including representative building shapes, forms, locations, layouts and relationships. It is proposed that these representations, together with acceptance of the building envelopes and massing, and associated design principles, will then be used to inform the Design Excellence process to follow the Stage 1 SSD Determination. Design Excellence outcomes will form the basis of the Stage 2 SSDA.

1.1 Response to OEH Comments on Environmental Impact Statement

As part of the EIS process, OEH was invited to comment on the proposed development with regards to potential impacts to Aboriginal archaeology and cultural heritage. The response from OEH noted that the due diligence report is not considered adequate to assess potential impacts to cultural heritage values of the site, and recommends that further Aboriginal cultural heritage assessment is undertaken.

The comments received from OEH are consistent with the recommendations of the GML Aboriginal Due Diligence report prepared in October 2016. This report was prepared as the first stage in the process of assessing whether the site has potential for Aboriginal heritage sites, places, objects and/or values, and identifying whether these would be impacted by the proposed development in accordance with OEH policy guidelines. As the site is considered to have Aboriginal archaeological potential, the report identified that Aboriginal community consultation should be undertaken as part of the conditions of consent. These recommendations for Aboriginal heritage management are outlined in the following section.

1.2 Background

The Proponent controls the lease of the Site, and also of the adjacent Darling Park precinct. The Darling Park site is a successful premium grade office precinct located on the west of the Sydney CBD, the associated Crescent Garden, located to the west of the three existing Darling Park towers, is a key area of open space in this part of the city.

The Proponent has recognised a number key issues with the existing layout of the Darling Park and Cockle Bay precinct, these being:

- The existing Cockle Bay Wharf building is not well integrated with the city, the Western Distributor freeway currently acts as a barrier to separate this area from the CBD;
- Publicly accessible open space is limited to the existing Crescent Garden in Darling Park; and
- The existing Cockle Bay Wharf building is outdated and is not in keeping with the future of Darling Harbour area as a vibrant entertainment and tourist destination.

The Cockle Bay precinct is at risk of being left behind and undermining the significant investment being made in Darling Harbour that will see it return to the world stage as a destination for events and entertainment. Accordingly, the Proponent is taking a carefully considered and staged approach to the complete revitalisation of the site and its surrounds. The envisaged development, which will be facilitated by the proposed building envelopes will:

- Reconnect the city with the Darling Harbour waterfront;
- Create new publicly accessible open space in the heart of the Sydney CBD;

- Create new public land above the Western Distributor;
- Provide new access routes between the city and the ICC Sydney / Darling Harbour Live precinct;
- Support the Sydney economy by providing a new premium commercial building; and
- Refresh and renew an existing entertainment and tourist destination.

1.3 Study Area Description

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

The Study Area is located at 241-249 Wheat Road, Cockle Bay to the immediate south of Pyrmont Bridge, within the Sydney CBD on the eastern side of the Darling Harbour precinct, and is situated between Market Street to the north; Sussex Street to the east; Druitt Street to the south; and the waters of Darling Harbour to the West.

The Study Area is also located within the City of Sydney local government area (LGA). A locational context area plan and location plan are provided at Figure 1.1 below.

The project Study Area has been slightly amended by this Response to Submissions, a comparison of the exhibited and now-proposed Site area is provided as Figure 1.2, and the now proposed Site area is shown below as Figure 1.3.

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

1.4 Overview of Amended Concept Proposal

The proposal relates to a staged SSDA and seeks to establish amended concept proposal details for the renewal and re-imagining of the Cockle Bay precinct. The amended Concept Proposal establishes the vision, planning and development framework which will be the basis for the consent authority to assess future detailed development proposals. The Cockle Bay Park Site is to be developed for a mix of Retail, Cultural and Commercial (Office) uses including retail and restaurants, offices, and publicly accessible open space.

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

- Demolition of existing site improvements, including the existing Cockle Bay Wharf building complex, pedestrian bridge links across the Western Distributor, and obsolete monorail infrastructure;
- Building envelopes;
- Land uses across the Site;
- A maximum total Gross Floor Area (GFA) across the Cockle Bay Park of 75,000m² for commercial development and 14,000m² for retail (including food and beverage) development;

- Urban Design and Public Realm design principles to provide a Design Excellence framework; and
- Strategies for utilities and services provision, drainage and flooding, and ecological sustainable development.

1.5 NSW Legislation Relevant to Aboriginal Heritage

In NSW Aboriginal heritage is principally protected under two Acts:

- the *National Parks and Wildlife Act 1974* (NPW Act 1974); and
- the EPA Act.

1.5.1 Environmental Planning and Assessment Act 1979 (NSW)

The EPA Act is administered by the NSW Department of Planning and provides for environmental planning instruments to be made. These planning instruments guide the process of development and land use while providing for the protection of local heritage items and conservation areas through listing on Local Environmental Plans (LEPs). They provide local councils with the framework required to make planning decisions.

Part 4 (Division 4.1) of the EPA Act

Division 4.1—State Significant Development of Part 4—Development Assessment of the EPA Act applies to a development approved by the Minister for Planning (Minister), who has been advised and made publicly available advice from the Planning Assessment Commission about state or regional planning significance of the development. The Minister for Planning is usually the consent authority for State Significant Developments (SSD) unless he/she delegates the function to the Planning Assessment Commission, the Secretary, or to the relevant council if a staged development application is made or the stage of the development ceases to be SSD.

Under Section 89J the projects that fall within ambit of Division 4.1 of the EPA Act do not require authorisations under a number of Acts including:

1(d) an Aboriginal heritage impact permit under section 90 of the National Parks and Wildlife Act 1974.

In accordance with Section 89E the Minister may determine a SSD application by:

a) granting consent to the application with such modifications of the proposed development or on such conditions as the Minister may determine.

Projects approved as SSD under Part 4, Division 4.1 of the EPA Act do not require approvals under the NPW Act, however it is expected that the management of Aboriginal heritage resources be undertaken in accordance with the established guidelines issued by the OEH and best practice as well as any Statement of Commitments or consent conditions that form part of the SSD approval. The Minister may also include conditions that include the adherence to the NPW Act in which case relevant approvals and permits would need to be obtained prior to the commencement of any ground works with potential to disturb Aboriginal archaeological remains.

1.5.2 National Parks and Wildlife Act 1974

The NPW Act provides statutory protection for all Aboriginal 'objects' (consisting of any material evidence of the Indigenous occupation of New South Wales) under Section 90 of the NPW Act, and for 'Aboriginal places' (areas of cultural significance to the Aboriginal community) under Section 84 of the

NPW Act. Aboriginal objects and places are afforded automatic statutory protection in NSW whereby it is an offence (without the Minister's consent) to harm an Aboriginal object or declared Aboriginal Place.

As this project has been declared as SSD, Section 90 of the NPW Act 1974 has been 'switched off'. However, the definitions and intent of the Act are relevant to this assessment.

The NPW Act defines an Aboriginal object as:

any deposit, object or material evidence (not being a handicraft made for sale) relating to the Aboriginal habitation of the area that comprises New South Wales, being habitation before or concurrent with (or both) the occupation of that area by persons of non-Aboriginal extraction, and includes Aboriginal remains.

The protection provided to Aboriginal objects and places applies irrespective of the level of their significance or issues of land tenure. Sites of traditional significance that do not necessarily contain material remains may be gazetted as 'Aboriginal Places' and thereby be protected under the NPW Act. However, areas are only gazetted if the Minister is satisfied that sufficient evidence exists to demonstrate that the location was and/or is of special significance to Aboriginal culture.

1.6 Approach to Aboriginal Heritage Management

In order to administer the NPWS Act and EP&A Act, the OEH has issued a series of best practice guidelines and policies. The applicability of these depends upon the approval mechanism for a project. The current project will be assessed and granted approval under Part 4 of the EP&A Act. The approach to the preparation of this document was based on the following current best practice guidelines:

- DECC, *Operational Policy: Protecting Aboriginal Cultural Heritage* (February 2009);
- DECCW, *Aboriginal cultural heritage consultation requirements for proponents 2010. Part 6 National Parks and Wildlife Act 1974* (April 2010);
- DECCW, *Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW* (13 September 2010);
- DECCW, *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (24 September 2010); and
- the *Australia ICOMOS Burra Charter, 2013* (the Burra Charter).

1.7 Due Diligence Approach

The OEH has issued a code of practice guideline that defines a 'due diligence' approach to Aboriginal heritage: *Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW* (13 September 2010) (Due Diligence Code of Practice). This 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 they should apply for consent in the form of an AHIP.

DPT and DPPT has adopted the Due Diligence Code of Practice as a best practice management tool for potential Aboriginal heritage objects, place and values which could be associated with the project.

The Due Diligence Code of Practice sets out the reasonable and practicable steps which individuals and organisations need to take in order to:

- identify whether or not Aboriginal objects are, or are likely to be, present in an area;

- determine whether or not their activities are likely to harm Aboriginal objects (if present); and
- determine whether an AHIP application (or further investigation under Part 3 of the EP&A Act) is required.

Due diligence is a legal concept that describes a standard of care in considering the likely risks a proposed activity may have and any obligations that may apply. In the case of the NPW Act, the OEH has defined due diligence as

*taking reasonable and practical steps to determine whether a person's actions will harm an Aboriginal object and, if so, what measures can be taken to avoid that harm.*¹

The steps that are required to follow the due diligence process are:

- searching the Aboriginal Heritage Information Management System (AHIMS);
- checking for landscape features which may indicate the presence of Aboriginal objects;
- identifying strategies to avoid harming Aboriginal objects; and
- undertaking desktop assessment and visual inspection to confirm the presence of Aboriginal objects.²

In preparing this report, GML complied with the guidelines set out in the Due Diligence Code of Practice. The extent of land covered by the due diligence process is described as the study area, see below.

1.8 Due Diligence Process

In accordance with Step 1 of the OEH Due Diligence Code of Practice it is identified that the proposed activity will disturb the ground surface of the study area. Therefore, the following due diligence steps are presented in this report:

- Step 2a—Aboriginal Heritage Information Management System (AHIMS) database search;
- Step 2b—the identification of landscape features that indicate the presence of Aboriginal objects;
- Step 3—discussion with respect to the extent of the development footprint;
- Step 4—desktop assessment and visual inspection; and
- Step 5—further investigation and impact assessment.

1.9 Author Identification

This report was prepared by Jodi Cameron, GML Graduate Consultant, with input and review by Dr Tim Owen, GML Senior Associate. Sophie Jennings, GML Consultant updated the report in July 2017 with review by Shezani Nasoordeen, GML Consultant.

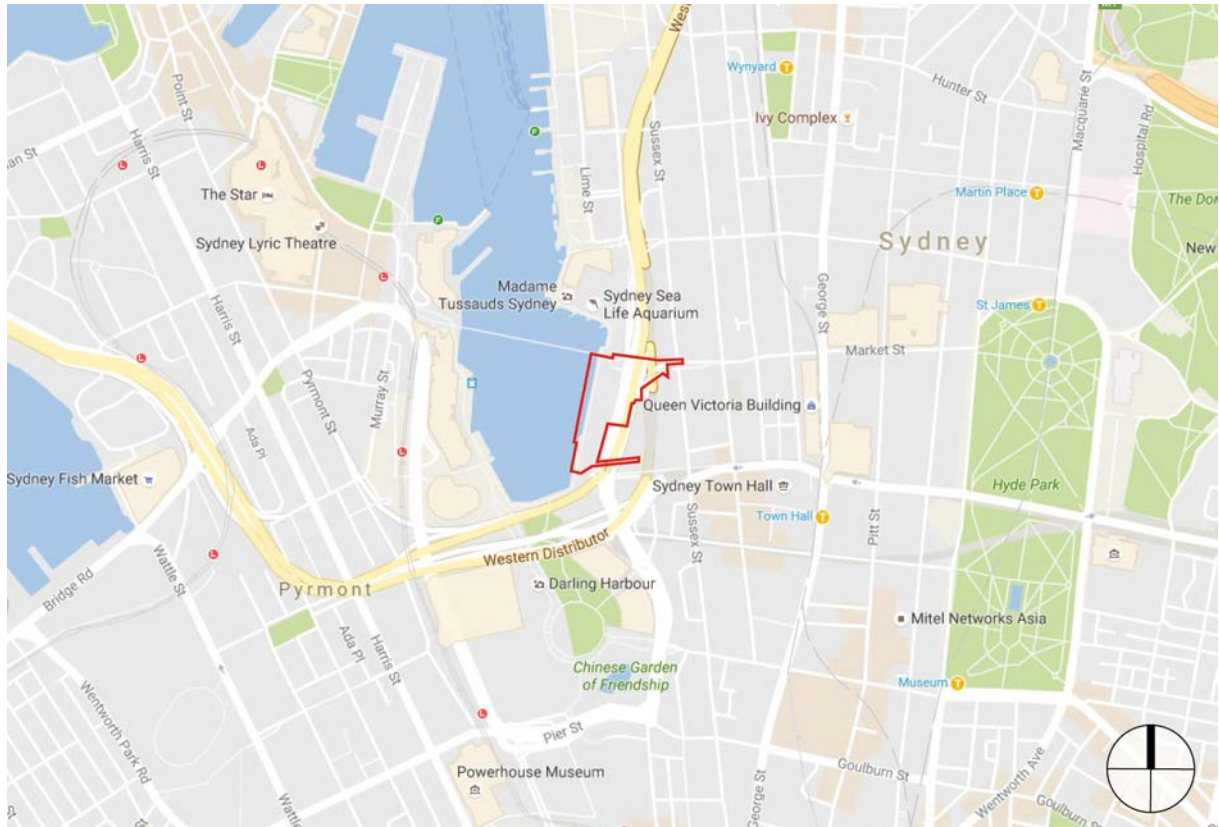


Figure 1.1 The study area location within the Sydney CBD. (source: Google Maps with GML overlay 2017)

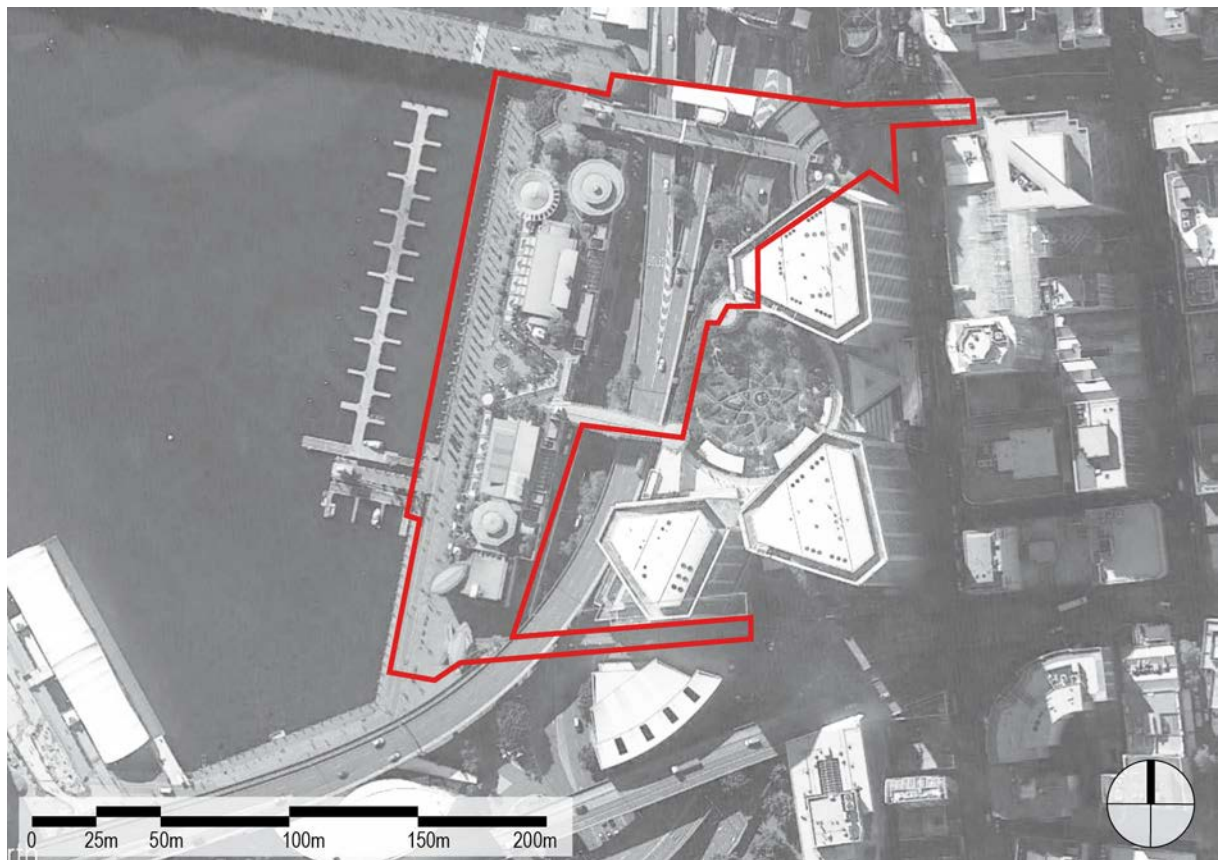
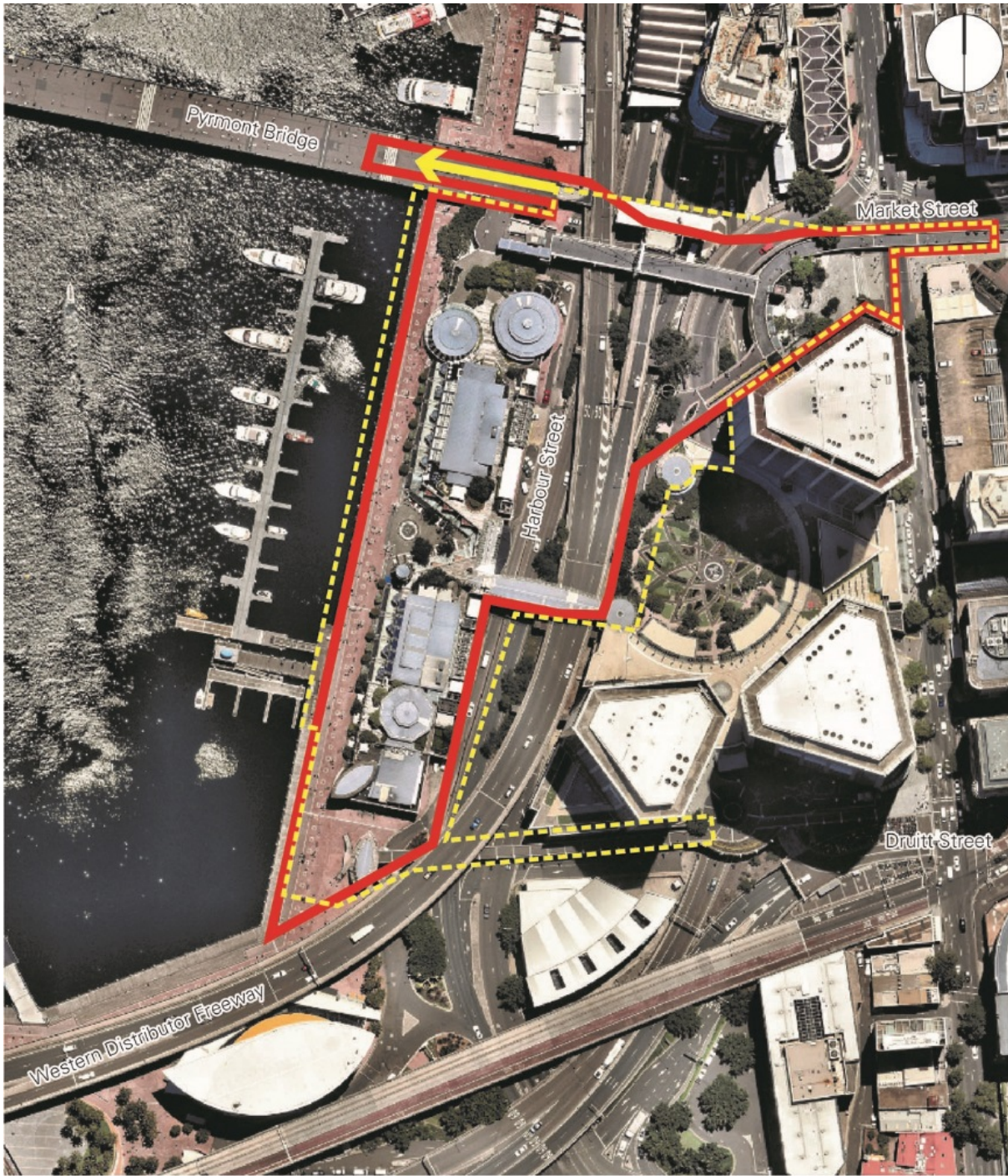


Figure 1.2 The subject site on the eastern side of Cockle Bay.



- Exhibited Site Area
- - - Amended Site Area

Figure 1.3 Plan showing a comparison of the exhibited site area (in red) assessed under the 2016 due diligence report, and the amended site area assessed in this report. (Source: Thelem Consulting 2017)

2.0 AHIMS and Environment Context

2.1 AHIMS Search

An extensive search of the OEH AHIMS database was undertaken on 19 August 2016. The search area was conducted from Latitude -33.8807, Longitude 151.1839 to Latitude -33.8598, Longitude 151.217 and included a buffer zone of 1km, around the study area.

There are currently no registered sites or Aboriginal places identified within the study area. The search identified 39 recorded Aboriginal sites outside of the study area, though one of these sites appears to be an exact duplicate of another (45-6-3071 and 45-6-3064 are both identified as 445-473 Wattle Street PAD). Three of the registered sites have been destroyed (45-6-1939, 45-6-1615 and 45-6-0030). Three registered Potential Archaeological Deposits (PAD) have been updated as 'Not a Site' (45-6-2838, 45-6-3081 and 45-6-3152). Therefore, 32 sites within the AHIMS search are classified as valid sites.

The location of these sites is shown on Figure 2.1. Table 2.1 provides an overview of the different site features identified within the bounds of the AHIMS search, and their frequency.

Table 2.1 Results of AHIMS Search.

Site Feature	Frequency
Aboriginal Ceremony and Dreaming and Burial Site	1
Aboriginal Ceremony and Dreaming, Shell and Artefact Site	1
Aboriginal Resource and Gathering Site	1
Art Site	1
Art Site—Destroyed	2
Art with Artefact Site	1
Artefact Site	4
Duplicate	1
Midden	1
Midden with Artefact	2
Midden with Artefact—Destroyed	1
Midden, Shelter with Art and Artefact	1
Open Camp Site with Artefact	3
Potential Archaeological Deposit (PAD)	13
Potential Archaeological Deposit (PAD) relisted as Not a Site	3
Potential Archaeological Deposit (PAD) with Artefact	2
Shelter with Midden and Artefact	1
Total	39

The general patterning of Aboriginal sites in the local area indicates that PADs constitute the predominant remnants recorded in this area. Artefact sites and open camp sites with artefacts are also common in the Sydney region, and can be found in a variety of locations and landforms. The pattern revealed is likely to have been heavily skewed by the nature of urban development in Sydney's CBD. While this patterning indicates that a range of Aboriginal archaeological sites are found in central Sydney and provides scientific evidence that Aboriginal people used this landscape in a range of ways, it is not necessarily closely demonstrative of specific patterns of Aboriginal landscape use. The high level of ground disturbance resultant of urban development has most certainly destroyed and/or damaged large amounts of Aboriginal archaeological evidence within the CBD, however pockets of intact archaeological deposit have been found. For instance, intact deposits were identified at the KENS (#45-6-2647) and Wynyard Walk (#45-6-3116) sites; both located on a steep slope abutting the foreshore of Cockle Bay. The sites comprised sedimentary deposit most likely formed as a result of colluvial and fluvial movement of sediments from further upslope and from the foreshore environment.

In addition to PADs, there are small numbers of other site types recorded in the vicinity of the study area. The single Aboriginal Ceremony and Dreaming with shell and artefact feature is Goat Island (#45-6-2382), identified for its association with the large-scale and special imprisonment of Aboriginal people, and its historical association with Bennelong. Similarly, the single Aboriginal Ceremony and Dreaming burial site (#45-6-2299) is identified from historical records of three Aboriginal people being buried in the governor's garden at First Government House during the early years of the colony. The single Aboriginal Resource and Gathering site (45-6-2767) is the location of the tent embassy in Victoria Park, Broadway. It has contemporary social significance for its role in protests for Aboriginal Civil Rights. The significance of these sites relates to historical events and information records which do not have a bearing on the archaeological potential of the study area.

Art and rock engraving sites in the vicinity of the study area were recorded on rocky outcrops on the foreshore of the harbour. They are recorded on the basis of historical information or anecdotal information and have largely been destroyed by development.

Middens have been identified on the foreshore of the harbour, on sandstone cliffs, and rock platforms. Others are located on Goat Island. These middens are all recorded as contained of shell fish, fish, faunal remains, and charcoal. Yurong 1 (#45-6-2935) is located on the northern tip of the Yurong Peninsula, in the Royal Botanic Gardens. It is located within a rock shelter (Yurong Cave #45-6-2934), and is now overlain by historical European refuse, topsoil and grass. One midden within this AHIMS search has been destroyed, from both the collection of shells for lime burning, and modern development.

2.2 The Local Landscape Context

The purpose of this section is to provide environmental contextual information for use in developing a predictive model of Aboriginal site locations associated with the study area. Interactions between people and their surroundings are of integral importance in both 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 whilst current vegetation and erosional regimes affect the visibility and detectability of Aboriginal sites and objects. For these reasons, it is essential to consider the environmental context as a component of any heritage assessment.

2.2.1 Geology and Soils

The study area contains two geological profiles and soil landscapes (Figure 2.2). The western section of the study area is reclaimed land, with deep layers of fill. These were introduced into the precinct in the early-to-mid nineteenth century, primarily as part of land reclamation activities associated with Darling Harbour (Figure 2.2). Prior to historical landscape modification, this area would have been located on the tidal, sloping foreshore of the Gymea landscape.

The eastern section of the study area is located on the Gymea soil landscape, which is underlain by Hawkesbury Sandstone (Figure 2.2). This is an erosional soil landscape characterised by shallow to moderately deep soils with frequent rock outcrops.³

Succinctly, the parts of the study area associated with fill hold no Aboriginal archaeological potential for intact Aboriginal sites. The parts of the study area associated with the Gymea soil landscape could hold archaeological potential, depending on their recent land use history—notably whether there has been excavation for development.

2.2.2 Landforms and Landscape Features

Although the natural landscape has been substantially modified since European settlement, it is possible to understand the nature of the original landforms throughout the CBD. The study area was on the sloping foreshore of Cockle Bay, within Darling Harbour. The Darling Harbour catchment, just south of the study area, was associated with swampy mudflats. The landscape gradually sloped up towards Central Station in the southeast (Figure 2.3). To the east, the land slopes more steeply towards a rocky ridge line which is now York Street (Figure 2.3).

Landforms associated with lower slopes, raised terraces above mudflats and the ridgelines have been previously associated with Aboriginal heritage sites. Whilst not containing any identifiable landforms which could have held particular interest for Aboriginal occupation activities (which may have resulted in an archaeological signature), the remnant areas associated with the Gymea soil landscape may have been used by Aboriginal people over the past 10,000 years.

2.2.3 Hydrology

A number of small gullies and intermittent watercourses flowed into Darling Harbour.⁴ The most reliable was the unnamed freshwater creek which was recorded running from Surry Hills (close to Albion Street) northwest to Darling Harbour, traversing Belmore Park and then crossing George Street at Hay Street.

The Tank Stream was also a notable permanent freshwater source close to the study area. Originally, the Tank Stream—which is formed by seepage springs in underlying sandstone in the vicinity of what is now Hyde Park—formed a definitive creek around King Street, before flowing into Circular Quay close to the intersection of Pitt and Alfred Streets.⁵

Both the unnamed creek at Darling Harbour and the Tank Stream would have provided a freshwater source for local Aboriginal people. There are no creeks or other fresh water sources directly associated with the study area.

2.2.4 Fauna and Flora

The study area lies in close proximity to the recorded swampy region, which existed between Darling Harbour and Central Station.⁶ This area would have supported a swamp forest dominated by swampy oak (*Casuarina glauca*), ti-tree (*Melaluca sp.*) and swamp mahogany (*Eucalyptus robusta*).⁷ The landscape just beyond the mudflats supported scrub, giving way to forested ridges further upslope.⁸

The fauna of the CBD area at the time of European settlement is well documented and includes many species still present in other Sydney regions like the nearby Cumberland lowlands. The various species included kangaroo, wallaby, wombat, echidna, flying fox, emus, quolls, various native rats and mice, snakes and lizards.⁹ Marine resources such as fish would have been plentiful and easily accessed from the northern part of the study area, although Watkin Tench described the fish at Port Jackson less plentiful than at Botany Bay.¹⁰ 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.*¹¹

The swampy marshland at Haymarket was noted for supporting a wide variety of waterbirds that may have been an important resource for the local Aboriginal population.¹²

2.3 Synopsis of the AHIMS Search and Landscape Context

Sydney's CBD and immediate surrounds contain 32 registered Aboriginal sites—none are directly associated with the study area. The study area contains a combination of reclaimed land (with no Aboriginal archaeological potential) and remnant Gymea soil landscape.

Subject to an analysis of land use history, the assessment of the environmental context suggests there could be potential for physical Aboriginal sites to be located on the Gymea soil landscape component of the study area. This unspecified potential would be based on general Aboriginal landscape use; there was no specific environmental focus, or traditional connection (such as ceremonial place, or walking route), which suggests the study area was a focus for Aboriginal activities. The Aboriginal archaeological potential would be associated with the original Cockle Bay foreshore.

Further investigations into the history of the study area have been undertaken to refine our knowledge and understanding of Aboriginal archaeological potential.

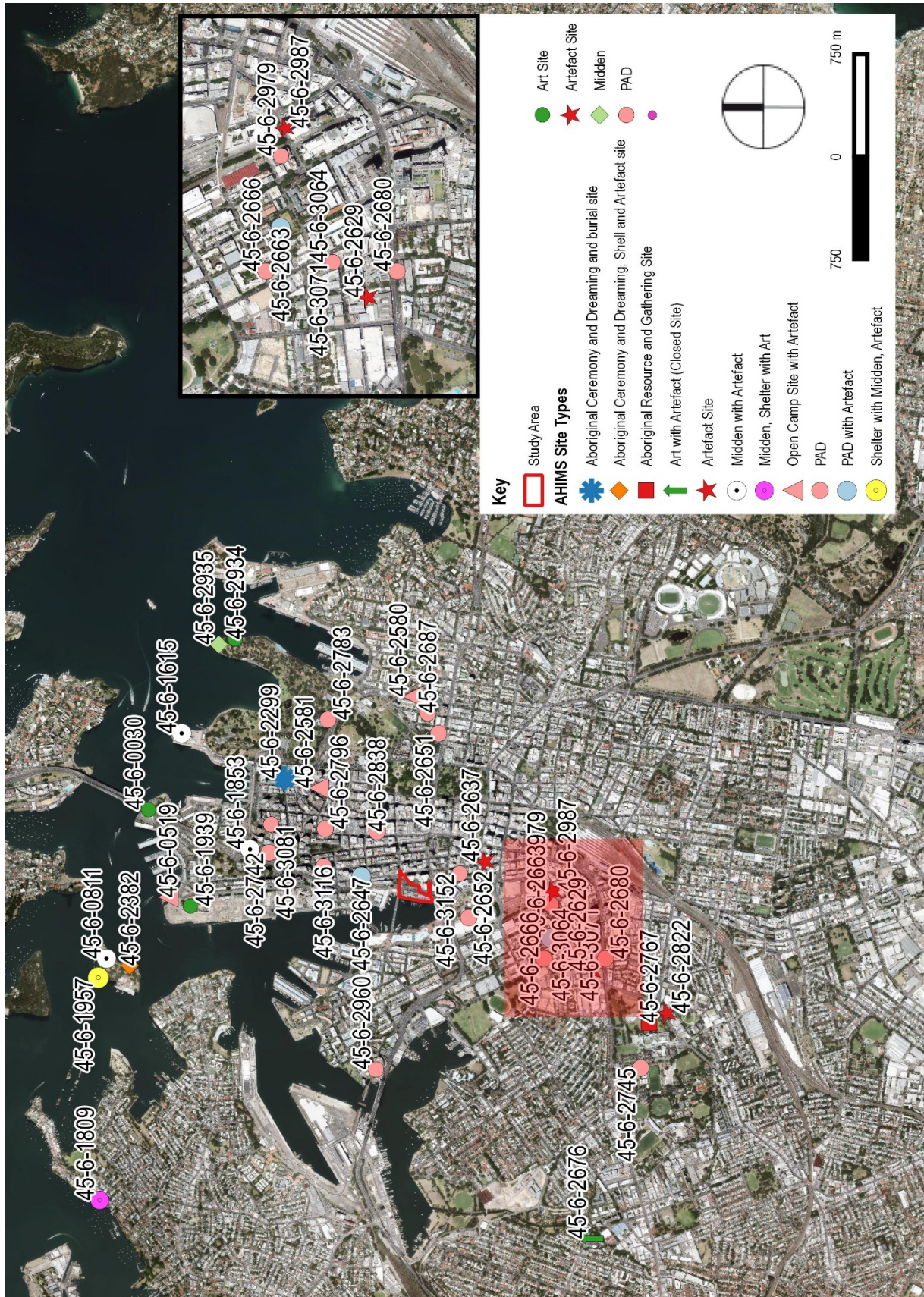


Figure 2.1 AHIMS Extensive Search Results. Study areas are outlined in red. (Source: Google Earth and OEH AHIMS, with GML additions, 2017)

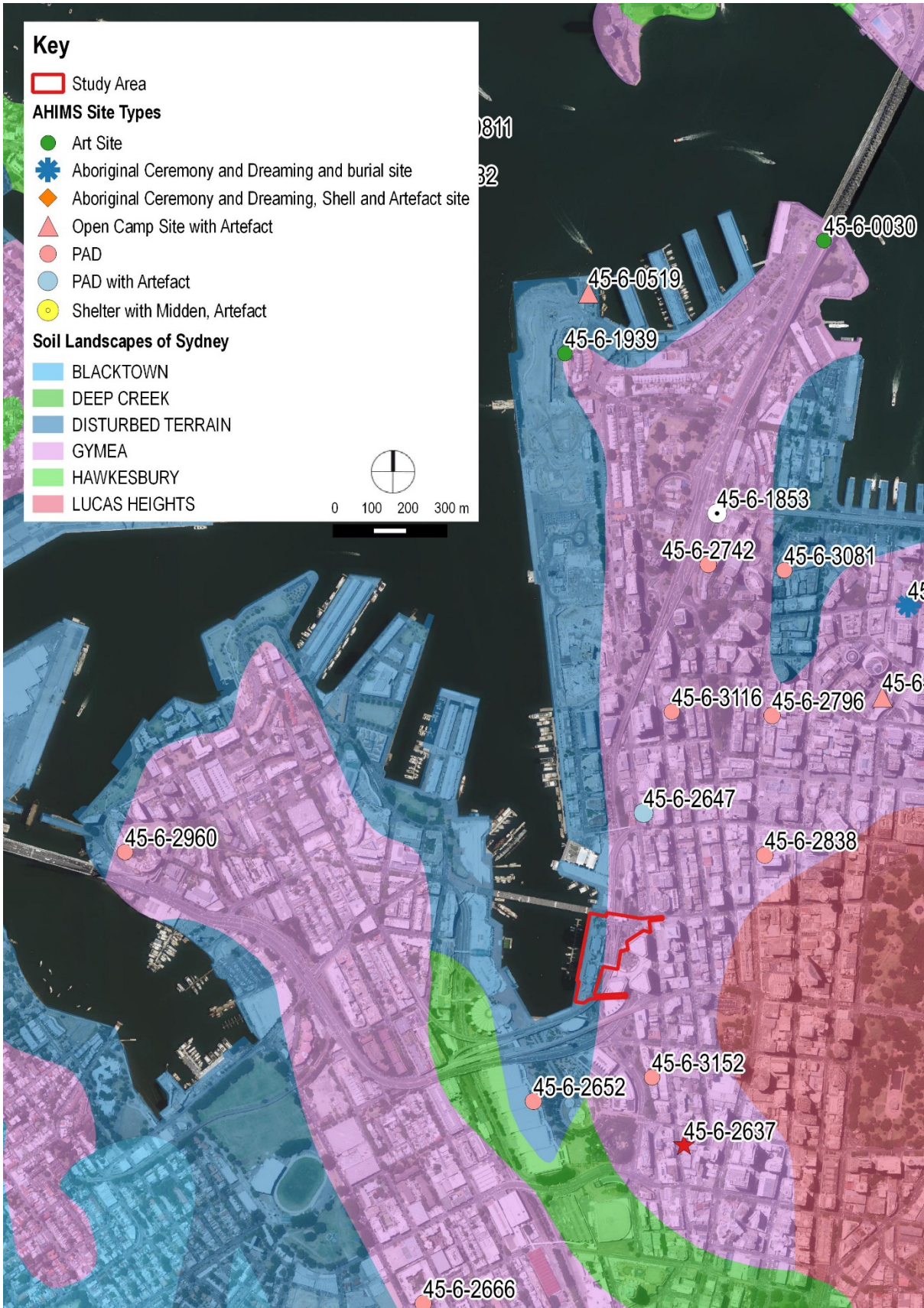
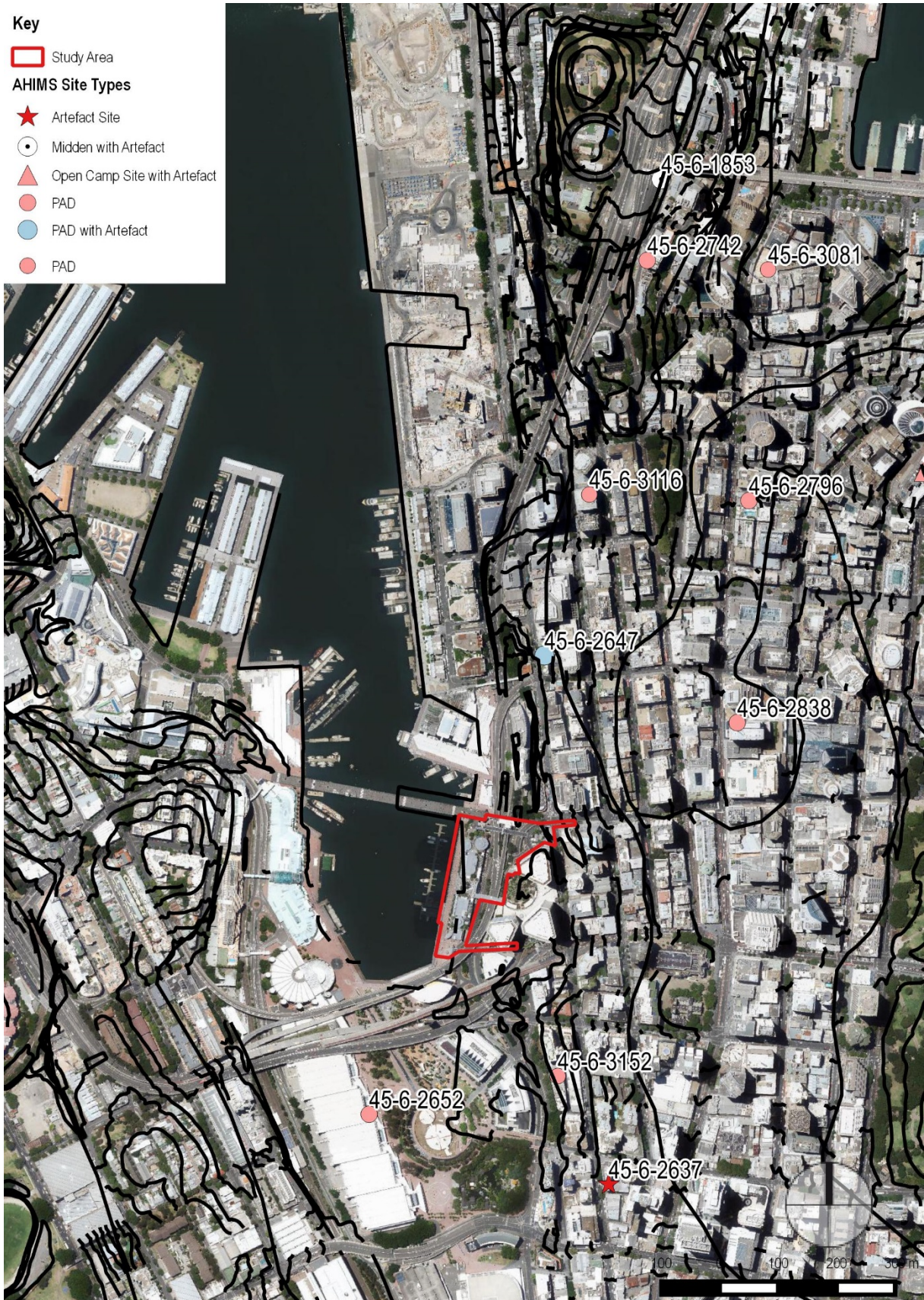


Figure 2.2 Soil Landscapes of Sydney with AHIMS sites. The study area is outlined in red. (Source: Google Earth with GML additions, 2016)



3.0 Aboriginal Heritage Desktop Assessment and Visual Inspection

3.1 Aboriginal Ethno-history

Most of the available ethnohistorical information for the Aboriginal people who lived around Sydney's CBD comes from the writings of officials who travelled to NSW 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. These depicted Aboriginal people, camps, tools and weapons.¹³ A wealth of information is contained in such documents, despite the European bias inherent in the recording of this data.

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*.¹⁴ 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 in order to develop an understanding of the likelihood of Aboriginal objects to be present at the study area, along with their potential social, aesthetic and historical values.

Accounts of Governor Arthur Phillip and Philip Gidley King identified the Gadigal (also spelt Cadigal) people as the inhabitants of the area between South Head and Darling Harbour. The Wangal were said to have occupied the land from Darling Harbour west to Rose Hill (Parramatta).¹⁵ This indicates that the study area was likely to have been located within Gadigal lands, and was close to the tribal boundary with the Wangal.

The Gadigal, and other nearby clan groups of the Darug people, would have been among the first Aboriginal 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. Furthermore, epidemics of smallpox dramatically affected the Aboriginal population in Sydney. 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 out in 1789.¹⁶ Other effects of European colonisation on local Aboriginal populations included loss of access to traditional lands and resources, intertribal 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.

3.1.1 Subsistence Activities

The people who inhabited the coastal regions of the Port Jackson area had access to a wide range of natural resources, including terrestrial and marine flora and fauna. For coastal Aboriginal people, marine resources are most likely to have been a vital part of their diet. This is supported by the archaeological evidence collected from excavations in the CBD. Watkin Tench, a military officer on the First Fleet, 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 ...*¹⁷

Other marine resources such as shellfish and crustaceans were likely to have been frequently collected and eaten.

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 consumed as a food resource.

Written accounts describe the use 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 coastal Aboriginal people. This is largely a result of the discrepancies in recording this information, including the widely different names and descriptions given to different native plant species in the late-eighteenth and early-nineteenth centuries.

3.1.2 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 examples of glass, and sometimes ceramic, being knapped in the same way as stone to form tools.

Many other types of tools would have been made of organic materials and most, 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. Historical accounts indicate that in the Port Jackson area fish hooks were only used by women and spears were only used by men—although both genders engaged in fishing.

3.1.3 Patterns of Land Use

Many written European 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 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.¹⁸ Attenbrow's Port Jackson Archaeological Project (described below) demonstrated that archaeological sites were similarly patterned in a way that supports this focus.¹⁹ She does, however, caution reliance on these patterns as they are skewed by archaeological preservation factors, as well as biases in what has been portrayed in the historical record.²⁰

3.2 Relevant Local Literature

A number of archaeological studies and academic works have been prepared that include the study area. Those works and reports of direct relevance to this due diligence assessment are detailed below.

3.2.1 Lampert and Truscott 1984—Bond Store, Moore’s Wharf (#45-6-0519)

In 1980 archaeological excavations were undertaken at the Bond Store, Moore’s Wharf (Lampert and Truscott 1984). Lampert undertook the Aboriginal archaeological component of investigation. The excavations recovered 392 stone artefacts and included two scrapers, two 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. None of the 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, suggesting that the site may have continued to be used post-contact.²¹

This excavation is significant as the site discovered (#45-6-0519) is situated on disturbed terrain similar to the western side of the current study area (Figure 2.2).

3.2.2 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 per cent 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 the land area of each sub-catchment and the intensity of residential and industrial development—but it was clear that middens and deposits occurred in higher densities in sub-catchments that included an estuary.²²

This study is significant as the current study area contains the Gynea soil landscape, which overlays Hawkesbury Sandstone (see Section 2.2.1) as well as being in close proximity to the Darling Harbour sub-catchment.

3.2.3 Godden Mackay 1998—Angel Place (#45-6-2581)

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 to be identified at the Tank Stream as a result of development works. The assemblage comprised of 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.²³

The Angel Place site (#45-6-2581) is approximately 1km northeast of the current study area and like the eastern section of the current study area, lies on the Gynea soil landscape.

3.2.4 Dominic Steele Consulting Archaeology 2006—KENS Site (#45-6-2647)

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 program. 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 (last 2,800 years), 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—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 phases of historical development and disturbance.²⁴

The current study area is located approximately half a kilometre southwest of the KENS site. Both the KENS site and the eastern side of the current study area are located on the Gynea soil landscape.

3.2.5 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 Darling Walk site is located along the original foreshore of Cockle Bay (Darling Harbour). The excavations identified the remains of a shell midden, which included some stone artefacts. The midden deposit was located on an exposed area of sandstone bedrock approximately three to four metres east of the natural high water mark. From the dispersed nature of the material across the rocky outcrop and into the intertidal zone, it was concluded that the material was redeposited.²⁵ This site has not been listed on the AHIMS database.

The Darling Walk study area is close to the current study area (~100m south) and therefore shares many landscape features including a portion of the study area on disturbed terrain and the GyMEA soil landscape.

3.2.6 GML Heritage 2013—200 George Street, Sydney (#45-6-3081)

Natural soil profiles were identified in two areas of the site during historical archaeological excavation, but Aboriginal objects were not identified in either area during consequential archaeological works. It was found that despite extensive reclamation activity throughout the 1800s, which preserved the pre-European landscape, the geomorphology of this area (stepped sandstone and highly organic estuarine soils) made it unsuitable to Aboriginal people or unsuitable for conserving an archaeological signature relating to any activity which did occur.²⁶ This site has been updated in the AHIMS database as Not a Site.

200 George Street is approximately one kilometre northeast of the current study area. It is relevant to this due diligence assessment as it is situated on and adjacent to reclaimed land, like the western section of the current study area. The presence of small pockets of remnant sand and soil beneath a large developed area demonstrates that remnant soils with archaeological potential can remain below apparently developed sites.

3.2.7 GML Heritage 2013–2014—Wynyard Walk (#45-6-3116)

The Wynyard Walk site, located on the lot immediately neighbouring the KENS site, has been subject to archaeological investigations by GML since mid-2013. This site is steeply sloped and located on the mid-slope to the original Cockle Bay foreshore. The preliminary conclusions found deep, stratified historical remains overlying natural sediment profiles containing Aboriginal artefacts. The sandy sediments were found to be truncated at the highest point of the sloping site with deeper profiles towards the base, closer to the original Cockle Bay foreshore. Preliminary assessment of the geomorphological context of this site indicates that the deep profiles are a result of both colluvial and alluvial inputs, with sediments being washed down from upslope as well as being deposited from the foreshore. In situ Aboriginal artefacts were found in profiles at the highest point of the site at depth just above the natural bedrock. Aboriginal artefacts were also found across the site within reworked historical deposits.

Like the KENS site, Wynyard Walk is approximately half a kilometre from the current study area and lies on the GyMEA soil landscape.

3.2.8 Barani—Sydney's Aboriginal History

The Barani website provides histories of people, places and events in the City of Sydney local government area that are associated with the histories of Sydney's Aboriginal and Torres Strait Islander communities.²⁷

Online mapping provides a spatial appreciation of Aboriginal heritage sites, both contemporary and pre-1788. A search of the mapping identifies the Darling Walk site being the closest recorded Aboriginal site to the study area.

3.3 Predictive Model

Through an analysis of previous research in the surrounding area, potential Aboriginal archaeology within the study area would most likely be in the form of stone artefacts or shells. Open camp sites and isolated finds have been identified across Sydney in similar conditions to the current study area. The proximity of the current study area to Comber Consultants' work on the Darling Walk²⁸ suggests that shell or remnant midden could exist within the current study area.

It is predicted that any surviving Aboriginal deposits could be located on the original foreshore of the GyMEA soil landscape. Whilst it is unlikely that artefacts would be identified within the disturbed terrain landscape of Cockle Bay (Figure 2.2), prior evidence of Aboriginal artefacts being recovered from excavations in the disturbed terrain has occurred in the CBD²⁹ and PADs have been identified in this landscape (#46-6-2652). As such, given that the precise location of the 1788 landscape is unknown care should still be taken when excavating these areas.

3.4 History of Land use

A desktop analysis of historical aerial photographs and plans, and the natural landscape has been undertaken to assess the correlation between specific building footprints and the recorded disturbance to intact soil horizons and subsurface potential archaeological deposits to provide an overall picture of the study area's land use history.

For the purpose of this assessment low, moderate and high levels of disturbance are defined as follows:

- low disturbance—minimal and/or superficial impact to the landscape which has resulted in little or no disturbance to subsurface remains, characterised by such activities as capping of areas with introduced fill, or construction of roads and pathways;
- moderate disturbance—shallow or localised impacts to the landscape, characterised by excavations for shallow building footings or service trenches; and
- high disturbance—largely disturbed landscape, characterised by such land use impacts as deep building footings (piled foundations, deep slab foundations), basements, or quarrying. High levels of disturbance are likely to have removed Aboriginal archaeological signatures.

3.1.1 Assessment of Impacts and Disturbance

Original 1788 Shoreline and Land Reclamation

Documentary evidence indicates that the study area underwent a number of phases of land reclamation which progressively extend west into Cockle Bay. Deposition of fill material as part of the reclamation process will have buried earlier remains which potentially survive intact within later fill deposits, in particular in eastern half of the study area where the evidence of occupation along the eastern foreshore of Darling Harbour may be present below several metres of historic fill. This has been demonstrated by Comber Consulting³⁰ during archaeological excavations at the Darling Quarter to the south of the current study area.

Analysis of the possible extent of the original shoreline has been based on the Harper 1823 plan and the 1893 Darling Harbour Jetties (Figure 3.1). The 1823 Harper plan shows the formed curtilage of Sussex Street; land to the west is shaded green and contains no development or improvement. This land was possibly tidal and marginal and thus subject to consequential reclamation. Land west of the marked shoreline would have been subject to reclamation. The 1893 Darling Harbour jetties plan contains an annotation 'High Water Mark at date of original grant'; comparison of this mark with the earlier 1823 plan indicates that the former lay further west indicative of foreshore reclamation suggesting that the 'high water mark' marked on the 1893 plan likely shows the extent of the eastern foreshore around 1836 when the first phase of wharf construction is known to have been undertaken within the site.³¹

Figure 3.1 shows the locations of the 1823 and c1836 foreshores, with the area shaded yellow indicating areas which have undergone reclamation since European occupation of the site. On the basis of the

above analysis, the areas shaded yellow on Figure 3.1 hold little potential to contain Aboriginal archaeological remains, as these were positioned within a tidal zone or below the 1788 waterline. Land to the east of the indicative 1823 high water mark may have been subject to reclamation, however, this land could contain Aboriginal archaeology in association with extant soil deposits and thus holds some archaeological potential.

Building Construction Impacts

Historic plans and photographs of the twentieth century wharves and adjacent warehouses provide information on the construction methods and the resulting impacts that these developments may have had on archaeological deposits.

The c1923 plan by the Fire Underwriters Association of NSW (Figure 3.2) records a series of larger brick warehouses extending west from the water's edge across the study area to the extant alignment of Sussex Street. The warehouses were constructed on cement pad foundations, with shallow cuts for any external walls. This construction method was relatively low impact, with shallow cuts for foundation trenches. Excavation of similar footings in the CBD has confirmed that remnant soils can remain beneath such buildings. As such, the disturbance from this construction was low-to-moderate impact. A photograph from 1937 looking southeast at the study area (Figure 3.3) confirms the pattern of warehouse building within the study area.

The existing Cockle Bay Wharf building was constructed in 1998; this occupies the western half of the study area and does not contain a basement level.³² The western half of the Cockle Bay building and the adjacent public walkway overlies a concrete deck which was constructed c1972–1973 (Figure 3.6). The depth of the raft is unknown, but has been estimated to be 0.8m thick based on the recent geotechnical report.³³ The western edge of this deck extends beyond the edge of the underlying retaining wall and out over the waters of Darling Harbour. Construction of this deck is likely to have resulted in a low-to-moderate level of impact on archaeological remains which may be present within the uppermost levels of the underlying reclamation deposits, although deeper remains would potentially survive intact below.

An aerial photo of the study area from 1972 (Figure 3.4) shows the completed first stage of the Western Distributor roadway which runs north–south through the northeast of the study area. The northwest portion of the study area immediately south of the Pyrmont Bridge appears to be under construction—it is possible that this area was used to stockpile materials during construction of the adjacent road. A photo of the study area dating to 1977³⁴ indicates that the northwest portion of the study area had been sealed with a concrete surface in use at the time as a carpark. It is probable that the existing deck structure dates to before this time and was likely constructed concurrently to or shortly after completion of the Western Distributor.

The eastern half of the Cockle Bay Wharf building is founded on pile foundations—the approximate extent of the area subject to piling is highlighted in pink and yellow on Figure 3.6. The pile size and density is not currently known.³⁵ Construction of the piled foundations and associated pile caps and ground beams will have removed any archaeological remains within their footprint resulting in a high degree of disturbance. However, given the size and height of the building the piles were not relatively wide and thus have impacted a small extent of the potential underlying soil deposit.

The Western Distributor roadway was constructed between 1972 and 1980 by the Department of Main Roads, NSW and runs north–south through the eastern half of the study area. The roadway consists of multiple southbound lanes at ground level and two northbound lanes elevated above the ground surface supported on concrete piers. Plans showing the structural detail of the roadway indicate that the

concrete piers are supported by pile caps c1.6m deep³⁶ which will have resulted in a high level of disturbance within each pier footprint. Outside of each pier footprint, works associated with construction of the elevated roadway and the earlier southbound lanes will have had a moderate-to-high level of impact across the northern half of the study area resulting primarily from levelling of the study area and excavation for services.

The location of the existing retaining wall is mapped on the services plan—the retaining wall, comprising a concrete beam and a rock rubble batter, runs north–south through the western part of the study area beneath the concrete deck. Comparison of the alignment of the existing retaining wall with historic plans suggests that the retaining wall has remained on the same alignment since the site was redeveloped between the 1920s and 1940s.

Aerial photographs taken in 1991, 1994 and 1998 show the progressive development of the Darling Park Complex at 201 Sussex Street and provide information on recent developments along the eastern portion of the site. In particular these images indicate that the area in the northeast of the site bounded by Market and Sussex Streets has been levelled during construction of Darling Park 1, which is likely to have resulted in some disturbance to remnant soil deposits within this area. The Crescent Garden in the centre of Darling Park is built upon a concrete slab that straddles the underlying south-bound Western Distributor roadway and is supported along its western boundary by a substantial concrete structure, which sits within the eastern edge of the subject site. Although details of the construction and foundations of this structure are not available, it is considered that the building will have substantial foundations to support the overlying crescent garden which will have resulted in the partial or complete removal of archaeological deposits within its footprint.

The Druitt Street pedestrian bridge that extends along the southern boundary of the site sits immediately south of the Darling Park building complex and is comprised of a suspended walkway supported by pillar foundations. Construction of the foundations will have removed archaeological deposits within each pillar footprint. Between the foundations there is potential for remains to survive as this area sits outside of the footprint of the Darling Park building and historically has remained in use as a road. Localised impacts will have resulted from excavation for service trenches and similar shallow impacts, although it is considered that there is potential for archaeological remains to survive below this.

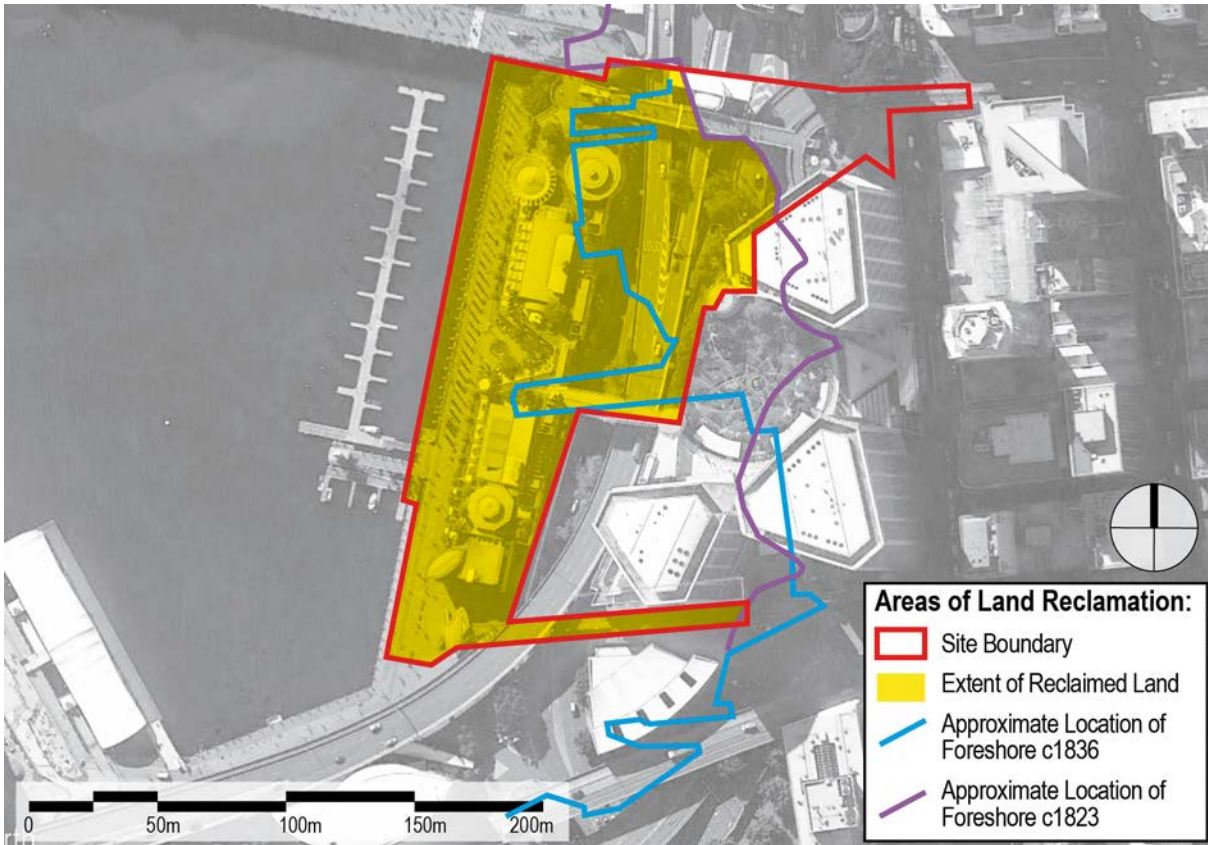


Figure 3.1 Indicative 1788 shoreline, and possible extent of land reclamation, based on Harper 1823 and 1893 Darling Harbour jetties. (Source: Google Earth with GML overlay 2017)



Figure 3.2 Fire Underwriters Association of NSW c1923. (Source: City of Sydney Archives with GML overlay 2017)

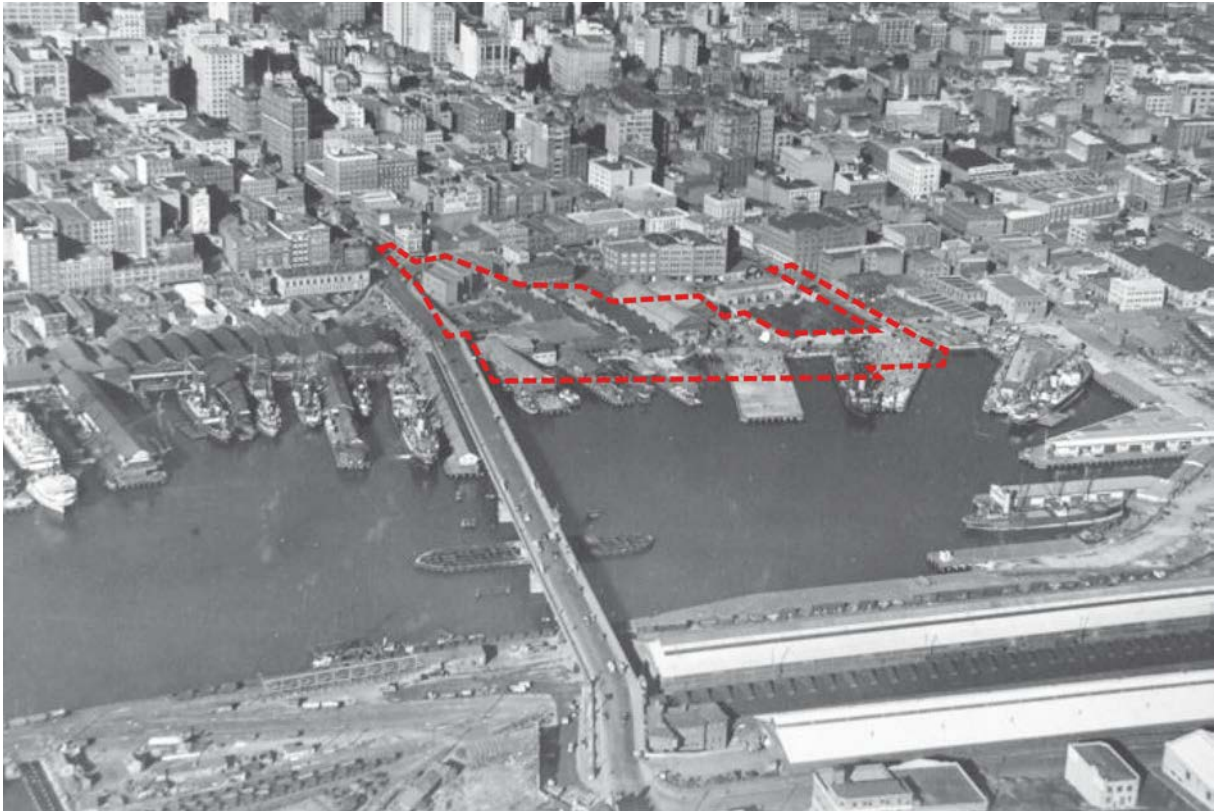


Figure 3.3 Oblique view southeast towards Cockle Bay, dated 1937. (Source: City of Sydney Archives, No 005-005998 with GML overlay 2017)

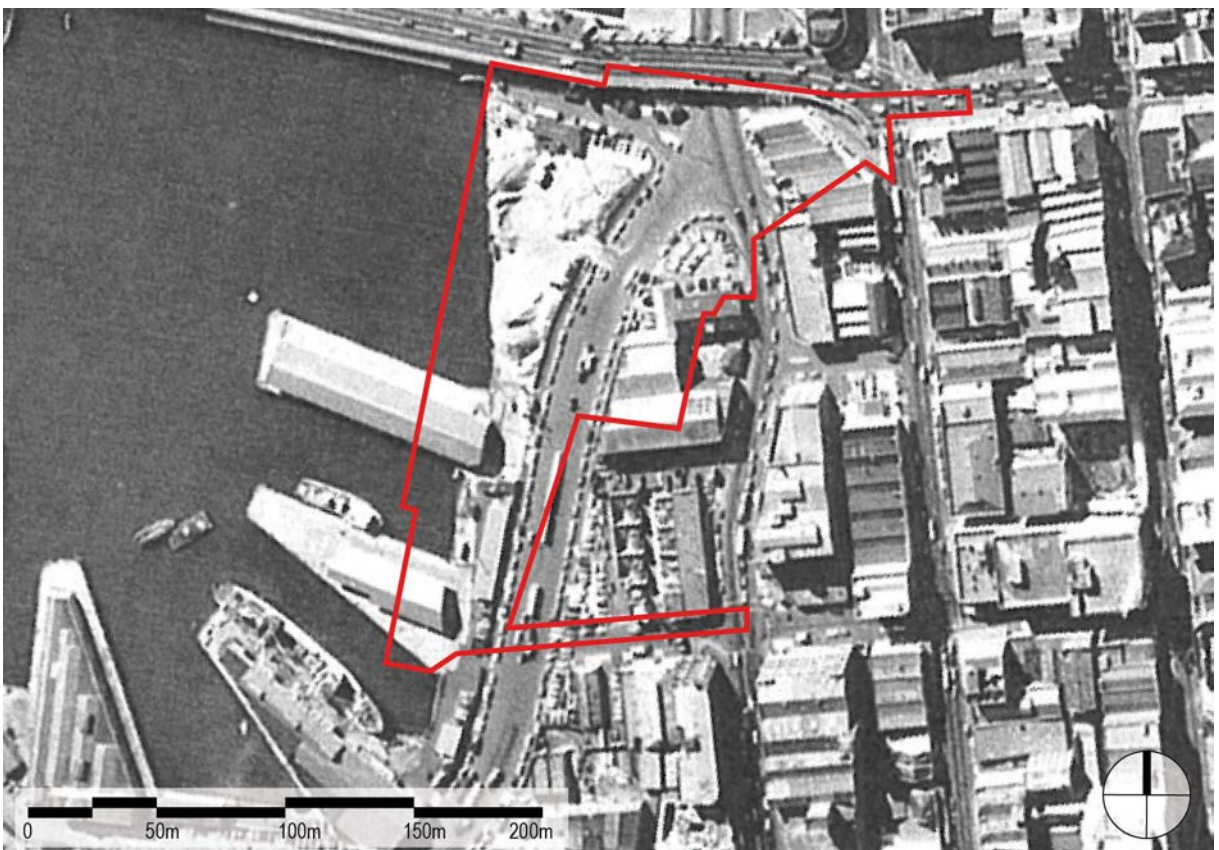


Figure 3.4 1972 aerial photograph (Source: NSW LPI with GML overlay 2017)



Figure 3.5 1991 aerial photograph. (Source: NSW LPI with GML overlay 2017)

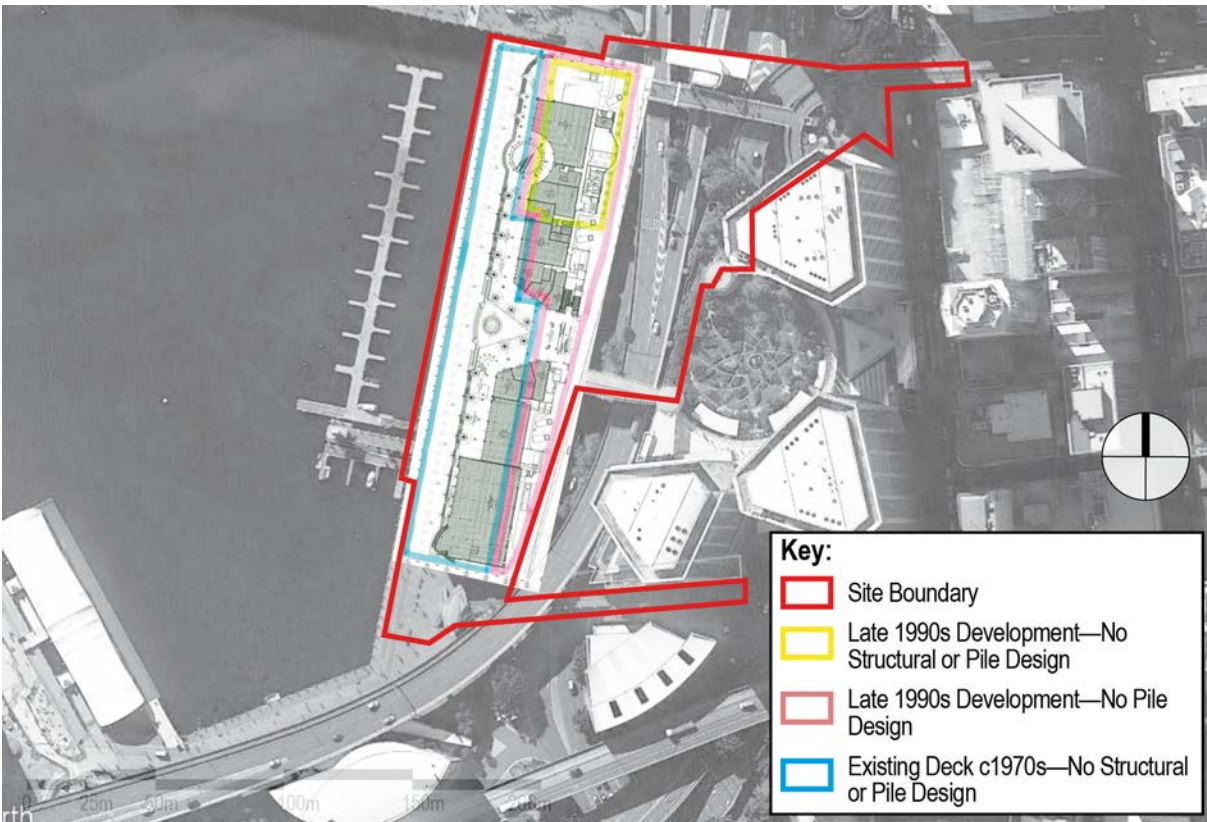


Figure 3.6 Plan of existing building showing extent of varying foundation structures. (Source: LendLease with Brookfield Partners Ltd and GML overlays 2017)

3.5 Visual Inspection of the Study Area

A visual inspection of the study area was undertaken by Sophie Jennings and Jodi Cameron on 23 August 2016, to observe current study area conditions and record any evidence of former development activities that could be used to inform the assessment of the area's potential to contain archaeological remains. These are described below and shown in Figure 3.7 to Figure 3.21.

The study area extends over the water of Darling Harbour (Figure 3.7). The entire study area has been developed with buildings, roads, hard landscaping and public amenities (Figure 3.8). There are no exposed natural surfaces within the study area, trees and plants have all be grown in prepared garden boxes (Figure 3.9).

The western side of the study area, on Cockle Bay Wharf is the main public thoroughfare (Figure 3.10Figure 3.11Figure 3.12). It is well maintained and presented while providing access to the commercial building and views across Darling Harbour (Figure 3.13). Commercial buildings line the wharf, including cafes and restaurants. The northern section of the study area contains public access from the wharf to Sussex and Market Streets and towards Town Hall (Figure 3.14).

The eastern side of the study area, behind the wharf is primarily road infrastructure, the most obvious being the Western Distributor (Figure 3.15 to Figure 3.19). The majority of the Western Distributor is a flyover within the study area, therefore ground disturbance in construction would have been focused on the supporting pylons (Figure 3.16). Other roads within the study area include Wheat Road and Harbour Street which provide access to the commercial buildings and Cockle Bay Wharf (Figure 3.20 and Figure 3.21). Both of these roads are on the current ground surface and therefore have a different impact area to the Western Distributor.

The visual inspection of the study area did not identify any Aboriginal or historical archaeology. This was due to modern developments, including hard landscaping which has removed visibility of natural ground surfaces. The visual inspection did not identify any major ground disturbances in the form of basements or underground carparks which would have destroyed any potential archaeological deposits.



Figure 3.7 Looking southeast towards the study area from Pyrmont Bridge. (Source: GML, 2016)

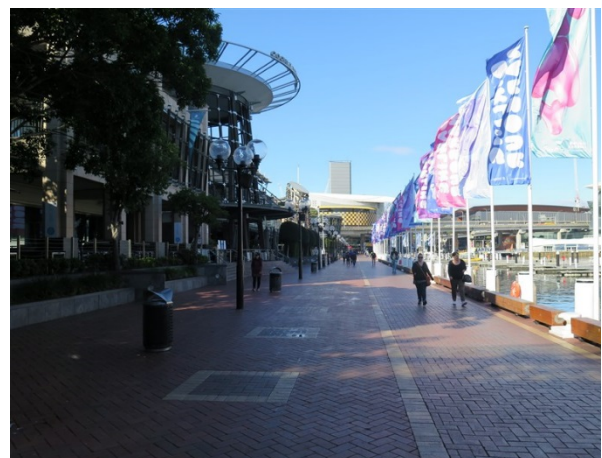


Figure 3.8 Looking south along public domain space on the western edge of the study area. (Source: GML, 2016)



Figure 3.9 Looking southeast at the northern end of the existing Cockle Bay Wharf. (Source: GML, 2016)



Figure 3.10 Looking southeast towards the southern half of the existing Cockle Bay Wharf. (Source: GML, 2016)



Figure 3.11 Looking east at the staircase in the southern part of the study area; the stairs link to a public footpath. (Source: GML, 2016)



Figure 3.12 Looking north along the public domain space on the western edge of the study area; the staircase and Cockle Bay Wharf are visible on the right-hand side of the image. (Source: GML, 2016)



Figure 3.13 Looking south down Darling Harbour, from the Pymont Bridge. Cockle Bay Wharf is on the left. (Source: GML, 2016)



Figure 3.14 Looking west across the public domain space in the northeast of the study area. (Source: GML, 2016)



Figure 3.15 Looking southwest across the Western Distributor flyovers located in the northern part of the study area. Cockle Bay Wharf is visible in the background of the image (Source: GML, 2016)



Figure 3.16 Looking south along Wheat Road in the northern part of the study area. Cockle Bay Wharf is visible on the right and the Western Distributor northbound flyover is on the left. (Source: GML, 2016)



Figure 3.17 Looking south across the Western Distributor northbound flyover lanes in the northern part of the study area. (Source: GML, 2016)

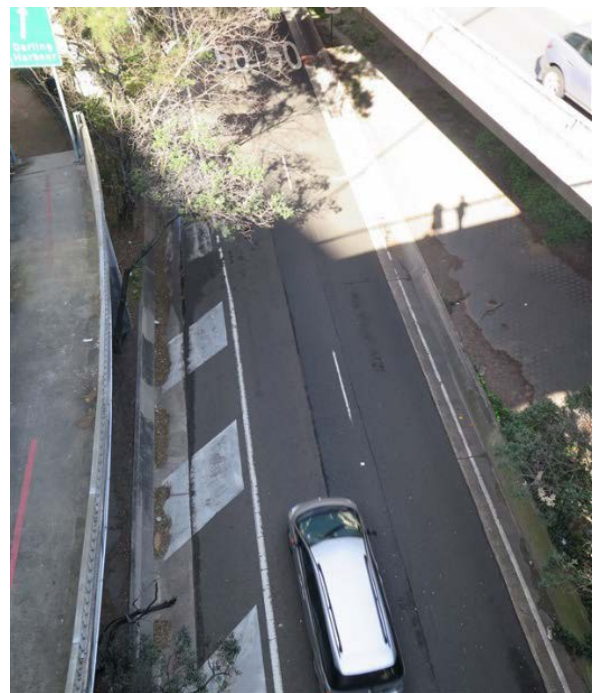


Figure 3.18 Looking down on the Western Distributor southbound lane from the pedestrian footbridge on the northern edge of the study area. The northbound flyover is visible in the top right corner of the image. (Source: GML, 2016)

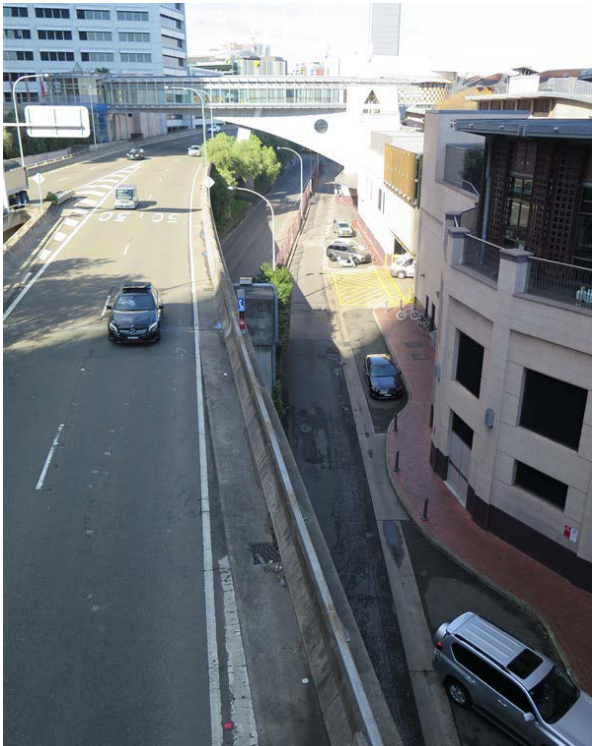


Figure 3.19 Looking south across the Western Distributor northbound flyover lane, Wheat Road, and the eastern façade of Cockle Bay Wharf from the pedestrian footbridge on the northern edge of the study area. (Source: GML, 2016)



Figure 3.20 Looking north along Wheat Road; the eastern façade of Cockle Bay Wharf is visible on the left-hand side. (Source: GML, 2016)



Figure 3.21 Looking north along Wheat Road in the eastern part of the study area and the Western Distributor from a public footpath. (Source: GML, 2016)

3.6 Synopsis of the Desktop Assessment and Visual Inspection

The desktop assessment and visual inspection indicates that there is potential for Aboriginal objects to be present in natural soil profiles as they may remain within the study area (Figure 3.22).

As existing development and road surfacing across the study area has modified and obscured the natural landforms and covered all natural ground surfaces, it is difficult to further define specific areas of Aboriginal archaeological potential. The outcomes of other archaeological investigations undertaken in the CBD indicate that Aboriginal archaeological deposits have survived in Sydney—even in highly developed locations. Some of these archaeological deposits have been subjected to varying levels of disturbance but still survive in small pockets of natural soil and/or at depth in truncated soil profiles. The study area has been separated into three zones of Aboriginal archaeological potential—assessed as either high, moderate or low (Figure 3.22).

An area assessed as having high potential is to the east of the original shore line and has potential for intact Gymea soil landscape. Both the KENS site³⁷ and 200 George Street³⁸ are examples of the Gymea soil landscape being identified under modern development (see also Section 3.2). The level of high potential considers the potential condition and integrity of intact soils being good, combined with the likelihood that some type of archaeological evidence was created within the zone.

The first phase of land reclamation has been zoned as having a moderate potential for Aboriginal archaeological remains. This accounts for inaccuracies in mapping the original shoreline, the initial reclamation covering small areas of intact shoreline with intact Aboriginal archaeological deposits or the possibility of Aboriginal artefacts being located within the introduced fill, as demonstrated at other sites. The excavations at Moore's Wharf (Section 3.2.1) and Darling Walk (Section 3.2.5) are examples of Aboriginal artefacts being recovered within reclaimed land. Darling Walk is of particular note as it is in close proximity to the current study area.

The second phase of land reclamation (the western half of the site) is zoned as having low potential. This area would have been fully submerged prior to European reclamation of the area and is unlikely to contain evidence of Aboriginal occupation. While there is still potential to identify artefacts within the fill, it is less likely due to the degree of modern disturbance to the area.

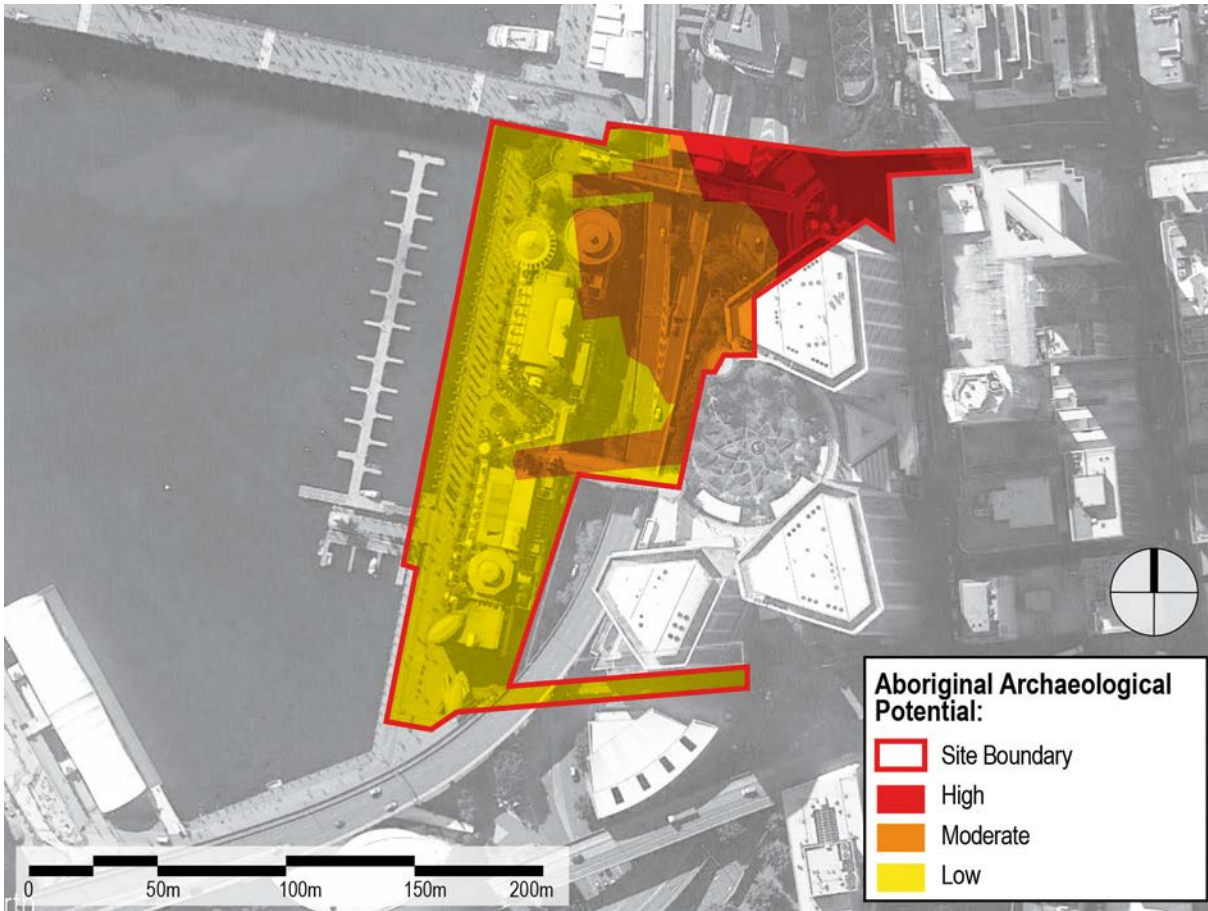


Figure 3.22 Zone with Aboriginal archaeological potential. (Source: Google Earth with GML overlay, 2017)

4.0 The Proposed Works and Potential Impacts

4.1 Description of the Proposed Works

This section provides an outline of the impacts on historical archaeological remains which potentially survive within the site. As the details of the proposed development have yet to be finalised, this assessment focuses on the range of potential impacts which would likely result from the development as advised by the client. These include:

- site testing/geotechnical investigations;
- demolition of the existing structures;
- construction impacts within the building envelopes;
- works to the existing seawall;
- road realignments and potential construction of intersections;
- construction of utilities/civil infrastructure including electricity, gas, communications, water, sewer, stormwater etc in and adjoining the site; and
- landscaping of the site and its surrounds.

4.2 Possible Impacts Arising from the Proposed Works

4.2.1 Western Portion of the Study Area (Cockle Bay Park Commercial Tower)

The western portion of the study area is situated on reclaimed land. Therefore, it is unlikely that works would impact on any potential Aboriginal archaeology. If, however, works are carried out on the original foreshore, there is potential for Aboriginal archaeology that may be impacted by the following:

- Demolition of the existing Cockle Bay Wharf building, in particular the removal of below ground footings and piles, could potentially have an impact on archaeological deposits depending on the depth and extent of the existing footings which is currently unknown.
- The proposed high-rise commercial office tower would be located in the central section of the study area (Figure 4.2). Works associated with the proposed building foundations—such as excavation for pile caps and the insertion of piled foundations—would result in an impact on potential archaeological deposits either removing entirely any remains or making these inaccessible in the future due to the density of the piles.
- Construction of new foundations, lift pits, services, roadways and other works requiring localised excavation would potentially impact any archaeological deposits to the maximum depth of excavation—although based on the predicted depths of the deposits in this area there is potential that archaeological deposits may survive below some of these impacts.
- The impacts arising from landscaping across this area are likely to be limited given the extent of the development works outlined above and would not result in any additional impacts to archaeological deposits and structures.

4.2.2 Eastern Portion of the Study Area (Publicly Accessible Open Space)

The eastern portion of the study area is situated on the original Cockle Bay foreshore and therefore has the potential to impact any existing Aboriginal archaeology. The potential impacts are:

- The land bridge would be supported by columns with pier foundations. Construction of the land bridge foundations would have localised impacts within the footprint of each pier, disturbing or entirely removing any archaeological remains in each location.
- Along the eastern edge of the study area it is proposed to undertake landscaping and localised works associated with construction of the podium/deck where it connects to the existing public space at the corner of Market Street and Sussex Street. Any impact to archaeological remains would depend on the depth and extent of the works required in this area which is currently unknown.

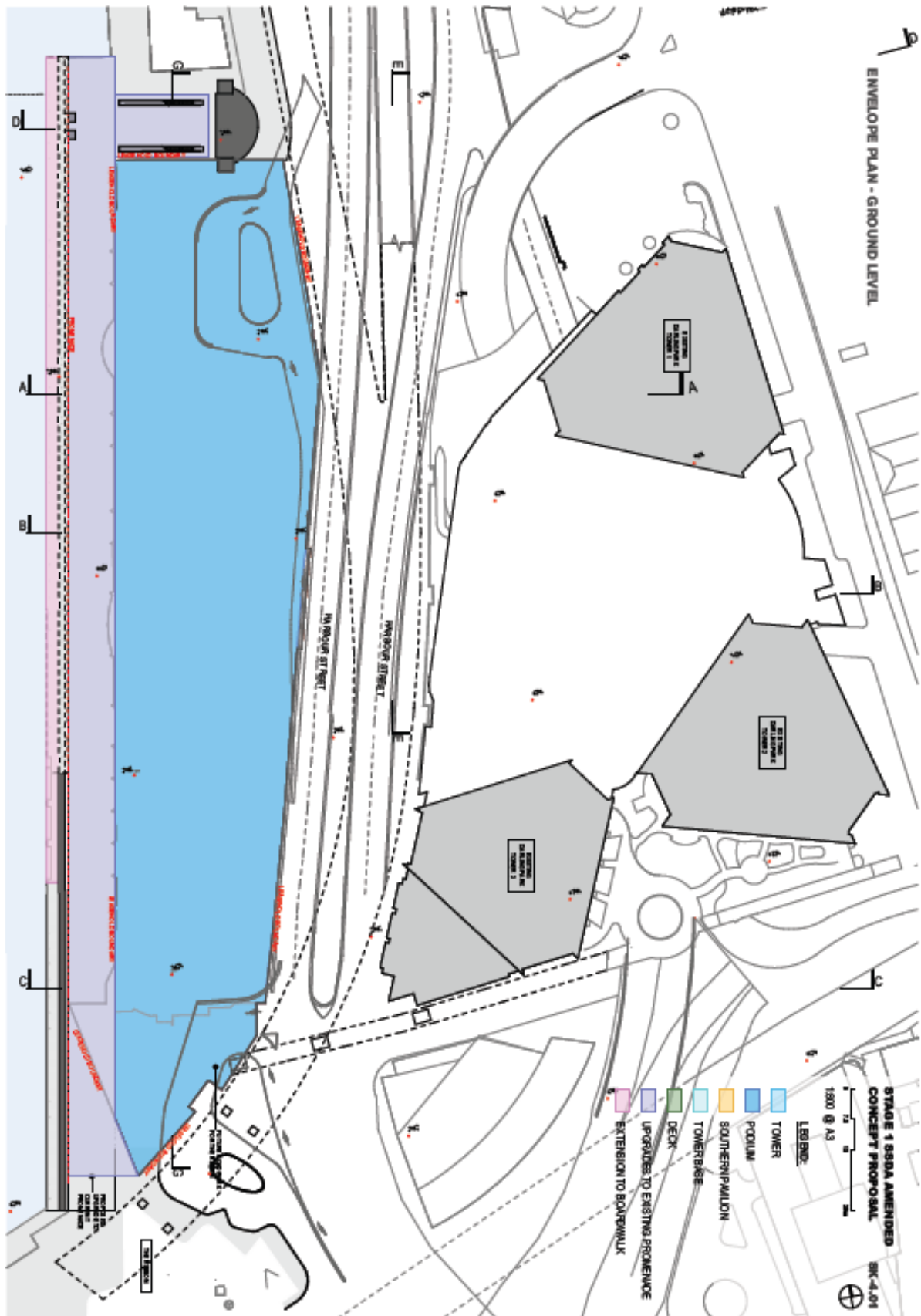


Figure 4.1 Proposed site layout at ground floor level. (Source: FJMT, dwg SK-4.-01, received 15/08/17)

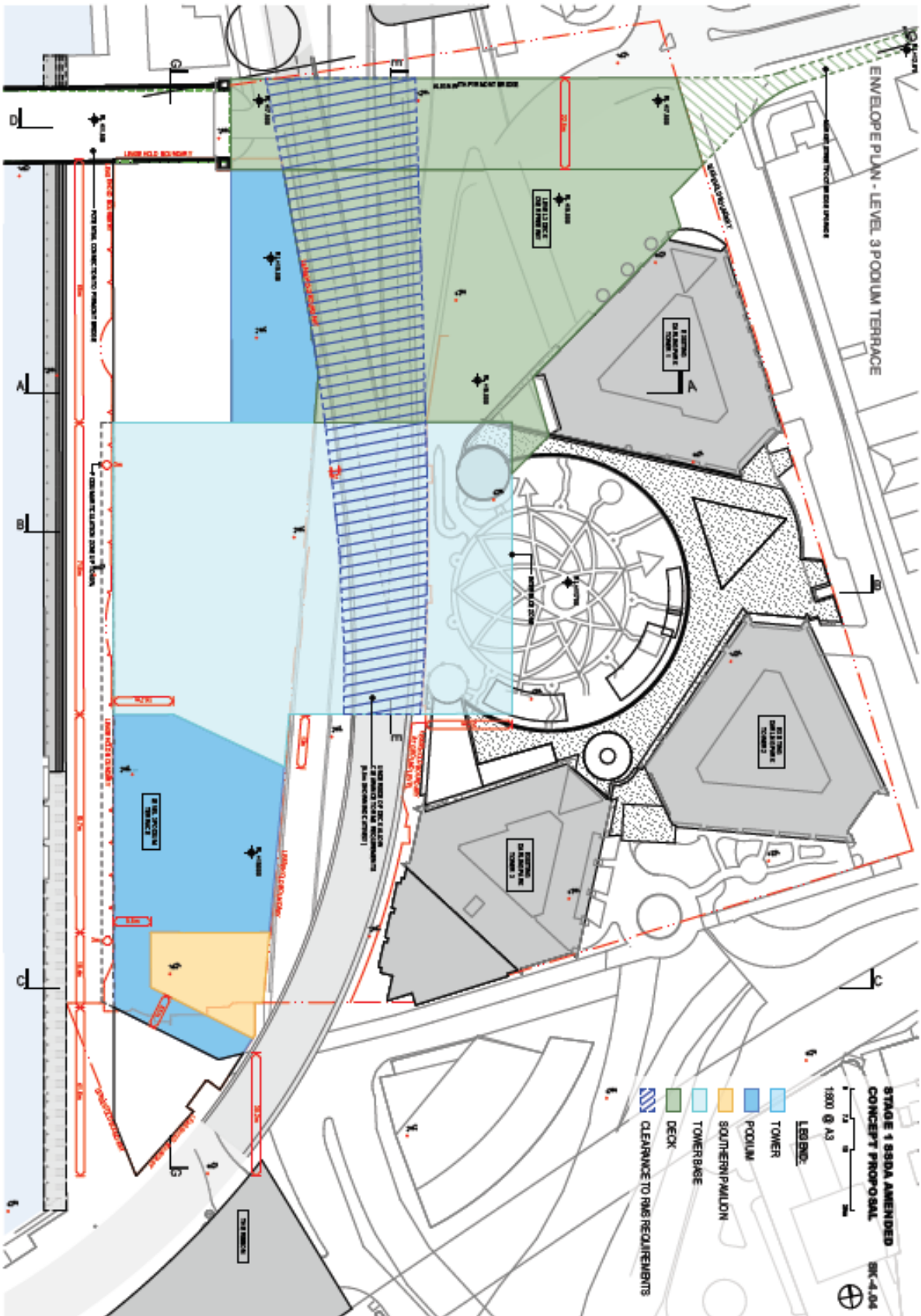


Figure 4.2 Proposed site layout at third floor level. (Source: FJMT, dwg SK-4.04, received 15/08/2017)

5.0 Recommendations and Conclusions

5.1 Findings of the Due Diligence Process

An understanding of the local Aboriginal archaeological landscape around Cockle Bay has demonstrated that midden deposits (shell) and stone artefact deposits, are the most likely physical evidence that could be present. If extant, these sites could be held within soils that retain a palynological (pollen) signature which could provide further insight into the natural landscape and Aboriginal use of plants associated with Cockle Bay.

The assessment of archaeological potential has defined the extent of areas subject to historic land reclamation, and locations where deeper development impacts have occurred. The outcome is the eastern portions of the study area hold Aboriginal archaeological potential for Aboriginal sites within remnant soils.

5.2 Required Aboriginal Heritage Management

The impact assessment has shown that some works may impact the zone with Aboriginal archaeological potential. Given the nature and constraints associated with the study area, the following recommendations are made.

5.2.1 Zones with Low Aboriginal Archaeological Potential

In areas identified with low Aboriginal archaeological potential (see Figure 3.22), the proponent can proceed, with caution. An 'unexpected finds' procedure should be developed. Should any intact soil horizon, or suspected Aboriginal archaeological deposit be identified, works should cease and a qualified Aboriginal archaeologist should be consulted.

If positively identified, the area should be managed in accordance with requirements for zones with Aboriginal archaeological potential.

5.2.2 Zones with Moderate or High Aboriginal Archaeological Potential

Consequential management of the study area's Aboriginal heritage will depend on whether DPT and DPPT are able to avoid impacts to the areas identified as having a moderate or high potential for Aboriginal archaeological remains. An investigation should be made to determine whether the project can avoid all ground impacts to the area designated with Aboriginal archaeological potential.

If the proposed development cannot be re-designed to avoid the areas with moderate or high Aboriginal archaeological potential, a program of Aboriginal archaeological mitigation will be required, prior to and during demolition and development works. It is not possible to undertake Aboriginal archaeological works prior to demolition, as there is no access to the potential remnant soil horizons. The following Aboriginal heritage requirements should form a component of the proponent's approval for the project. These recommendations follow current OEH policy and best heritage practice:

- Aboriginal community consultation should be undertaken, following the OEH's guidelines for consultation, 2010.
- An Aboriginal archaeological research design (ARD) should be prepared that details how the study area will be archaeological tested and, if relevant, subject to salvage excavation. Development of this document will require consultation and collaboration with DPT and DPPT to

determine how and when the archaeological investigations can occur, eg within demolition or construction works.

- This due diligence report and the ARD should be provided to all Registered Aboriginal Parties (RAPs) for their review and comment. RAPs should be allowed 20 working days to review the document.
- The program of Aboriginal archaeological test and/ or salvage excavation should be implemented in accordance with the ARD. Test excavation should aim to sample a representative portion of all intact soil profiles. Salvage would be necessary for any Aboriginal archaeological deposit identified. It is anticipated that salvage would require 100% removal of the Aboriginal archaeological resource.
- Once clearance has been provided by the Aboriginal archaeological excavation director, development in the area of clearance can proceed.
- DPT and DPPT will need to provide the archaeological team with a safe work environment, sufficient time to undertake the work, and sufficient funds to pay for the work (including post excavation analysis and reporting). The program of Aboriginal archaeological work is likely to occur concurrently with any requirement for historical archaeology. Representatives from the RAPs who have demonstrated experience in undertaking archaeological work in the Sydney CBD should be engaged to assist with the work.
- A post excavation report will need to be prepared within 12 months of completing the excavation work. All Aboriginal archaeological deposit removed from the site will need to be subject to expert analysis. This may include analysis of shell material, lithics (stone objects), geomorphology and palynology. Reporting on these analyses should be included in the post excavation report.
- Any Aboriginal sites identified will need to be recorded on OEH AHIMS. The archaeological excavation report would need to be lodged with AHIMS.
- A process and mechanism for post excavation management of excavated Aboriginal archaeological material must be agreed with the RAPs prior to any site works commencing (including demolition). This could include onsite interpretation or reburial on site, and should be detailed in the ARD.
- Should the archaeological excavation identify an Aboriginal site/deposit of exceptional value, there may be a need to cease work and discuss options for its conservation and mitigation.

6.0 Endnotes

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- ³¹ For a detailed assessment of the European history of the site, refer to GML 2016, *Cockle Bay Redevelopment Historical Archaeological Assessment Draft Report*, report prepared for Brookfield Property Partners, September 2016
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