

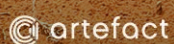
Sydney Harbour Bridge Cycleway Northern Access

Aboriginal Heritage Due Diligence
Assessment

Report to Arcadis / Transport for NSW

November 2022

North Sydney LGA



Artefact Heritage
ABN 73 144 973 526
Level 4, Building B
35 Saunders Street
Pyrmont NSW 2009
Australia

+61 2 9518 8411
office@artefact.net.au

Document history and status

Revision	Date issued	Reviewed by	Approved by	Date approved	Revision type
1	2 February 2022	Sandra Wallace	Sandra Wallace	3 February	First draft
2	1 March 2022	Scott MacArthur			Second draft
3	14 March 2022	Michael Lever	Sandra Wallace	16 March 2022	Third draft
4	11 November 2022	Scott MacArthur	Sandra Wallace	11 November 2022	Final

Last saved:	11/15/22
File name:	Aboriginal Heritage_Due diligence_FINAL_2022_11_07
Project name:	Sydney Harbour Bridge Cycleway
Author:	Isabel Wheeler
Project manager:	Scott MacArthur
Project number:	21266
Name of organisation:	Artefact Heritage
Document version:	Final

© Artefact Heritage Services

This document is and shall remain the property of Artefact Heritage Services. This document may only be used for the purposes for which it was commissioned and in accordance with the Terms of the Engagement for the commission. Unauthorised use of this document in any form whatsoever is prohibited.

Disclaimer: Artefact Heritage Services has completed this document in accordance with the relevant federal, state and local legislation and current industry best practice. The company accepts no liability for any damages or loss incurred as a result of reliance placed upon the document content or for any purpose other than that for which it was intended.

EXECUTIVE SUMMARY

Transport for NSW proposes to upgrade the existing cycleway connection between the Sydney Harbour Bridge Cycleway and the bike network in Milsons Point (the proposal). Artefact Heritage have been engaged by Arcadis on behalf of Transport for NSW to prepare an Aboriginal heritage due diligence assessment in accordance with Stage 1 of the *Procedure for Aboriginal Cultural Heritage Consultation and Investigation* (PACHCI) (Roads and Maritime 2011) for the project Review of Environmental Factors (REF).

The location of the proposal and the study area of this report are shown in Figure 1. The study area is within the North Sydney Council Local Government Area (LGA) and the boundaries of the Metropolitan Local Aboriginal Land Council (MLALC).

This report has been prepared in accordance with the Due Diligence Code of Practice for the Protection of Aboriginal Heritage Objects in NSW (the Due Diligence Code of Practice) (Office of Environment and Heritage [OEH] 2010).

FINDINGS

After considering previous archaeological work, the nature of the environment of the study area and the results of the site inspection, it was concluded that:

- No AHIMS sites are listed within the study area. One AHIMS site is located 60 the *National Parks and Wildlife Act 1974*
- The Due Diligence Code of Practice
- The results of background research, site survey, and assessment
- The likely impacts of the proposal.
- In accordance with the Due Diligence Code of Practice, the proposed activity can proceed with caution with no further Aboriginal archaeological investigation or assessment.
- The nearest AHIMS site (AHIMS ID 45-6-1271) should be marked on all construction plans, to ensure inadvertent impacts are avoided.
- This report assessed the potential for Aboriginal archaeology only. Social, cultural, and contemporary values should be considered for the proposal. This should be done through consultation with the Aboriginal community as well as through the preparation of an interpretive plan for Aboriginal cultural heritage values.
- If changes are made to the proposal that may result in impacts to areas not assessed by this report, those will need to be assessed and further archaeological assessment may be required.
- Unexpected Aboriginal objects remain protected by the *National Parks and Wildlife Act 1974*. If any such objects, or potential objects, including potential human remains are uncovered during the activity, all work in the vicinity should cease immediately in accordance with the Transport for NSW Unexpected Heritage Items Procedure.

CONTENTS

1.0	Introduction.....	1
1.1	Project background.....	1
1.2	The proposal and study area.....	1
1.3	Report limitations	4
1.4	Authorship.....	4
2.0	Legislative context	5
2.1	National Parks and Wildlife Act 1974	5
2.2	Native Title Act 1994	5
2.3	Environmental Planning & Assessment Act 1979	5
2.3.1	Local Environmental Plans	6
2.4	Environmental Protection and Biodiversity Conservation Act 1999	6
2.4.1	NHL items	6
2.5	Sydney Harbour Bridge Conservation Management Plan	7
3.0	Background.....	8
3.1	Environmental context.....	8
3.2	Ethnographic context.....	8
3.3	Historical background	9
3.3.1	Development of Milsons Point and Kirribilli	9
3.3.2	Construction of the Sydney Harbour Bridge.....	9
3.3.3	Establishment of Bradfield Park	11
3.4	Aboriginal Heritage Information Management System database search results	12
3.4.1	Sites within proximity to the study area	13
3.5	Archaeological context	16
3.5.1	Previous archaeological assessments	16
3.6	Predictive model	17
4.0	Site inspection	18
5.0	Discussion	21
5.1	Due diligence landform assessment	21
5.2	Synopsis of desktop research and site inspection	21
5.3	Impact assessment.....	22
5.3.1	Proposed works	22
5.3.2	Impact of the proposal on Aboriginal archaeology	23
5.4	Due diligence process	25
6.0	Recommendations.....	26
7.0	References	27

FIGURES

Figure 1: The study area	3
Figure 2: Historical photograph of construction of Sydney Harbour Bridge showing building standing within the study area prior to demolition, circa 1920s (source: North Sydney Council).....	10
Figure 3: Historical image of the construction of the Sydney Harbour Bridge approaches at Dawes Point, demonstrating the ground disturbance during construction, circa 1920s (source: North Sydney Council).....	11
Figure 4: Historical aerial showing extensive urban development in the study area in 1943 (source: SIXMaps).....	12
Figure 5: AHIMS sites within 1 km buffer of the study area	14
Figure 6: AHIMS sites in proximity to the study area	15
Figure 7: Alfred Street South, facing south	19
Figure 8: Bradfield Park North memorial fountain, facing southeast.....	19
Figure 9: Bradfield Park North - stone block on former property boundary, facing west	19
Figure 10: Bradfield Park North – East footpath (to be widened), facing south	19
Figure 11: Burton Street footpath and bocce court, facing east.....	19
Figure 12: Bowls Club, southwest corner of green, facing east.....	19
Figure 13: Harbour Bridge Stairs top landing, facing north	19
Figure 14: Burton Street tunnel footpath, facing north	19
Figure 15: Bradfield Park, Alfred Street South, facing northeast	20
Figure 16: Bradfield Park, Fitzroy Street - view of viaduct facing northeast	20
Figure 17: Proposal boundary with nearby AHIMS sites.....	24

TABLES

Table 1: Frequency of site features from AHIMS data	12
Table 2: Sites in proximity to the study area	13
Table 3: Responses to the due diligence process	25

1.0 INTRODUCTION

1.1 Project background

Transport for NSW proposes to upgrade the existing cycleway connection between the Sydney Harbour Bridge Cycleway and the bike network in Milsons Point (the proposal). Artefact Heritage have been engaged by Arcadis on behalf of Transport for NSW to prepare an Aboriginal heritage due diligence assessment in accordance with Stage 1 of the *Procedure for Aboriginal Cultural Heritage Consultation and Investigation* (PACHCI) (Roads and Maritime 2011) for the project Review of Environmental Factors (REF).

This report has been prepared in accordance with the Due Diligence Code of Practice for the Protection of Aboriginal Heritage Objects in NSW (the Due Diligence Code of Practice) (Office of Environment and Heritage [OEH] 2010).

1.2 The proposal and study area

Transport for NSW (Transport) proposes to upgrade the existing cycleway connection between the Sydney Harbour Bridge Cycleway and the bike network in Milsons Point. The cycleway connection would interface with a new cycle path along Alfred Street South (the proposal).

The proposal is located on Cammeraygal land and is in Milsons Point, within the North Sydney Local Government Area (LGA). The proposal is bounded by Middlemiss Street to the north, the Sydney Harbour Bridge to the east, Fitzroy Street to the south and Alfred Street South to the west (Figure 1).

The proposal would consist of a three-metre-wide elevated linear bike ramp that extends 200 metres from Bradfield Park North, near Burton Street, interfacing with the Sydney Harbour Bridge Cycleway south of the existing stair access. The ramp would connect to a new cycle path which would extend along the east side of Alfred Street South, between Middlemiss Street and Burton Street, and include a new street crossing on Alfred Street South. The two-way cycle path would be 2.5 metres wide and connect to the existing bike network in Milsons Point.

Key features of the proposal include:

- A design-led approach to the integration of new cycling infrastructure with its existing important open space and heritage setting
- A new elevated linear bike ramp, with deck about three metres wide and about 200 metres in length between the Sydney Harbour Bridge Cycleway and Bradfield Park North including:
 - Steel ramp structure with deck incorporating Designing with Country motifs, and balustrade with integrated lighting
 - Precast columns carefully sited within Bradfield Park North and Central
 - Provision of a bike riders rest area next to the Sydney Harbour Bridge Cycleway connection
 - A gathering space, lighting and cycle path within Bradfield Park North connecting the elevated linear bike ramp and the proposed Alfred Street South cycle path
- Alfred Street South pedestrian and cycle path upgrade including:
 - New 2.5-metre-wide two-way cycle path on Alfred Street South from the ramp landing, linking to the existing bike network in Middlemiss Street. The cycle path would be

located on the east side of Alfred Street South between the ramp landing and the new street crossing at 110 Alfred Street South. On the west side of Alfred Street South the cycle path would be located between the new crossing and Lavender Street

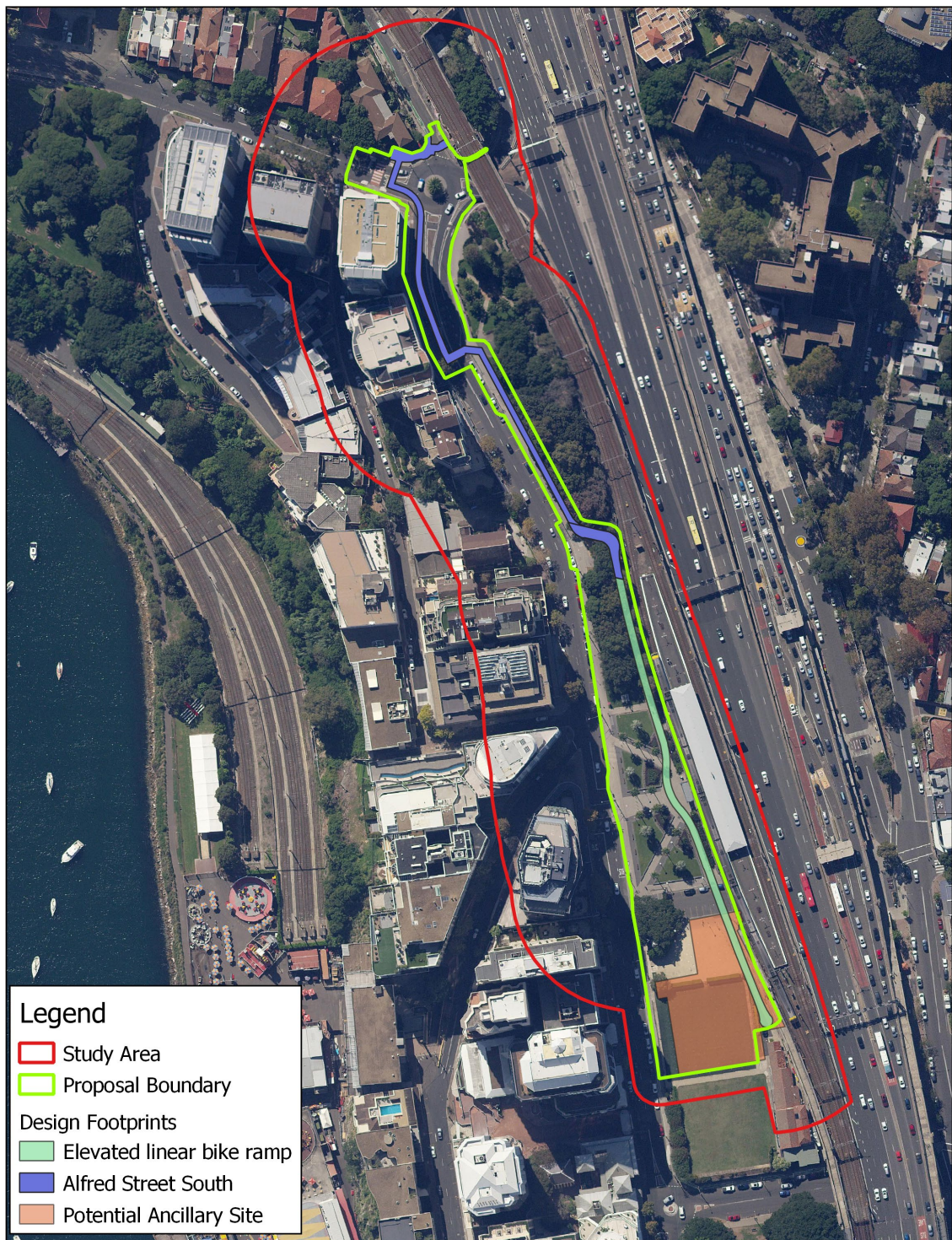
- Replacement of the existing pedestrian refuge crossing at the north end of Alfred Street South with a pedestrian and bike rider crossing located near 110 Alfred Street South and an upgrade to the pedestrian crossing at Lavender Street
- Low speed shared path and verge widening on the north side of Lavender Street
- Adjustments to the Lavender Street roundabout
- New street tree planting, shrub planting and footpath paving
- Relocation of the existing bus stop on Alfred Street South near Lavender Street, about 60 metres to the south of its current location
- Permanent removal of up to 15 parking spaces along Alfred Street South.

The proposal, would also include, but not be limited to:

- Kerb and pavement work, and line marking
- Drainage and utility adjustments
- Street furniture adjustments
- Changes to street parking, parking meter locations and regulatory signage
- Minor lighting upgrades to Bradfield Park North and in other locations where required to meet safe lighting standards.

Construction of the proposal would take around 18 months and, subject to planning approval, is expected to commence mid-2023.

Figure 1: The study area



Source: C:\Users\MDouglas\Box\Projects\2021\02 Active Projects\21266 Sydney Harbour Bridge Cycleway Access Program\3. Mapping\3.1 GIS\Gareth, April mapping\Northern SHB.qgz



Proposed Design

21266 SHB Northern Cycleway

LGA: North Sydney

Scale: 1:2,000

Size: A4

Date: 10-11-2022

0 50 100 m



1.3 Report limitations

This report provides the results of a due diligence-level assessment of the Aboriginal archaeological potential of the study area only. Non-Aboriginal archaeological values are not assessed in this report. Cultural, social and contemporary Aboriginal values, whilst they may be identified, are not the primary focus of this assessment.

1.4 Authorship

This report was prepared by Isabel Wheeler (Heritage Consultant, Artefact Heritage) and Gareth Holes (Heritage Consultant, Artefact Heritage). Scott MacArthur (Principal, Artefact Heritage) and Sandra Wallace (Managing Director, Artefact Heritage) provided management input and review. All site photographs were taken by Artefact in 2022 unless otherwise noted.

2.0 LEGISLATIVE CONTEXT

2.1 National Parks and Wildlife Act 1974

The *National Parks and Wildlife Act 1974* (NPW Act) provides statutory protection to all Aboriginal places and objects. An Aboriginal Place is declared by the Minister, under Section 84 of the NPW Act in recognition of its special significance with respect to Aboriginal culture. Under Section 86 of the NPW Act, objects and places are protected. An Aboriginal object is defined 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 applies irrespective of the level of their significance or issues of land tenure. All Aboriginal objects, whether recorded or not are protected under the NPW Act.

Areas are only gazetted as Aboriginal Places if the Minister is satisfied that sufficient evidence exists to demonstrate that the location was and/or is of special significance to Aboriginal culture. There are no gazetted Aboriginal places in the study area.

The aim of the Due Diligence Code of Practice is to assist individuals and organisations to exercise due diligence when carrying out activities that may harm Aboriginal objects and to determine whether they should apply for consent in the form of an Aboriginal Heritage Impact Permit (AHIP).

A due diligence assessment should take reasonable and practicable steps to ascertain whether there is a likelihood that Aboriginal sites will be disturbed or impacted during the proposed development. If it is assessed that sites exist or have a likelihood of existing within the development areas and may be impacted by the proposed development, further archaeological investigations may be required along with an AHIP. If it is found to be unlikely that Aboriginal sites exist within the study area and the due diligence assessment has been conducted according to the Due Diligence Code of Practice, work may proceed without an AHIP.

This due diligence assessment seeks to comply with the NPW Act by assisting the proponent in meeting their obligations under the NPW Act.

2.2 Native Title Act 1994

The *Native Title Act 1994* was introduced to work in conjunction with the *Commonwealth Native Title Act 1993*. Native Title claims, registers, and Indigenous Land Use Agreements are administered under the Act. A search of the Register of Native Title Claims (National Native Title Tribunal) was completed on 18 January 2022. No active Native Title claims were identified in the study area.

2.3 Environmental Planning & Assessment Act 1979

The *Environmental Planning & Assessment Act 1979* (EP&A Act) is administered by the Department of the Premier and Cabinet and provides planning controls and requirements for environmental assessment in the development approval process. The EP&A Act has three main parts of direct relevance to Aboriginal cultural heritage. Namely, Part 3 which governs the preparation of planning

instruments, Part 4 which relates to development assessment process for local government (consent) and Part 5 which relates to activity approvals by governing (determining) authorities.

The REF is being prepared under Part 5, Division 5.1 of the EP&A Act to determine the potential environmental impacts of the proposal.

2.3.1 Local Environmental Plans

Local Environmental Plans (LEPs) are prepared by councils in accordance with the EP&A Act to guide planning decisions for Local Government Areas (LGAs). The aim of LEPs in relation to heritage is to conserve the heritage significance within each LGA. If agreement is reached with the Aboriginal community, items or Aboriginal places of heritage significance are also listed within this schedule.

The study area falls within the North Sydney LEP 2013. No Aboriginal places or heritage significance are identified on the North Sydney LEP 2013 in the vicinity of the study area.

2.4 Environmental Protection and Biodiversity Conservation Act 1999

The *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) provides a legislative framework for the protection and management of matters of national environmental significance, that is, flora, fauna, ecological communities, and heritage places of national and international importance. Heritage items are protected through their inscription on the World Heritage List (WHL), National Heritage List (NHL) or the Commonwealth Heritage List (CHL).

The EPBC Act stipulates that a person who has proposed an action that will or is likely to have a significant impact on a World, National or Commonwealth Heritage site must refer the action to the Minister for the Environment (hereafter the Minister). The Minister would then determine if the action required approval under the EPBC Act. If approval is required, an environmental assessment would need to be prepared. The Minister would approve or decline the action based on this assessment.

2.4.1 NHL items

The study area is located within one NHL item and one potential NHL item:

- Sydney Harbour Bridge, Bradfield Hwy, Dawes Point – Milsons Point, NSW (Place ID 105888)
- Sydney Cultural Crescent Rock Art (Place ID 106369).

Sydney Harbour Bridge (Place ID 105888)

The study area is within one gazetted Listed Place on the NHL – “Sydney Harbour Bridge, Bradfield Hwy, Dawes Point – Milsons Point, NSW” (Place ID 105888). The item is listed for historic attributes. Aboriginal heritage values are not included as part of the listing.

Sydney Cultural Crescent Rock Art (Place ID 106369)

The study area is within one potential NHL item with Aboriginal heritage values, the “Sydney Cultural Crescent Rock Art” (Place ID 106369). The curtilage of this potential item is expansive, ranging from Lake Macquarie in the north, inland west to Mogo Creek and Pitt Town, and as far south as Shell Cove. The potential significance of the item is provided on the Priority Assessment List for the National Heritage List for 2020-2021 (AHC: 2020):

Based on the information considered by the Australian Heritage Council, the place may meet one or more of the National Heritage criteria. This place may have outstanding heritage value to the nation due the place's significant density of rock

art over area of approximately two million hectares of eastern NSW. Rock art is described by Indigenous elders as their history books, with the largest sites being libraries and provides a tangible record of the Aboriginal peoples' traditions, presence, cultural practices and knowledge systems.

The status of this item is “assessment initiated by AHC”.

2.5 Sydney Harbour Bridge Conservation Management Plan

A Conservation Management Plan (CMP) is a heritage management document which, according to Section 38A (3) of the *Heritage Act 1977* (NSW):

- Identifies the state heritage significance of an item,
- Sets out policies and strategies for the retention of that significance, and,
- Is prepared in accordance with the guidelines for the preparation of conservation management plans (if any) publicly issued from time to time by the Heritage Council.

As a requirement under Section 38A (1) of the Heritage Act, CMPs were required to be submitted to the NSW Heritage Council for endorsement. From December 2020, this requirement was removed, bringing the NSW Heritage process in line with other jurisdictions across Australia.

A CMP for the Sydney Harbour Bridge was prepared in 2021 by GML Heritage for Transport for NSW.

Policy 29 relates to archaeological potential, both Aboriginal and non-Aboriginal. The policy does not include legislative requirements for impacts to Aboriginal objects as the CMP assesses (in line with this document) that Aboriginal objects are unlikely to occur within the Milsons Point section of the Sydney Harbour Bridge curtilage. If archaeological remains are found the CMP recommends that the results are included in heritage interpretation.

Relating to archaeological resources, the 2021 CMP states the following:

The description of the archaeological resources within the curtilage of the bridge in Section 3.1.5 concludes that the construction of the bridge and the demolition that occurred in the Bradfield Park area at Milsons Point disturbed any potential sub-surface remains relating to the previous Aboriginal and European occupations on the site..

3.0 BACKGROUND

The purpose of this section is to assist in the prediction of:

- The potential of the landscape over time to have accumulated and preserved Aboriginal objects
- The ways Aboriginal people have used the landscape in the past with reference to the presence of resource areas, surfaces for art, other focal points for activities and settlement
- The likely distribution of material traces of Aboriginal land use based on the above.

3.1 Environmental context

The study area is located within the Sydney Harbour foreshores area of the wider Sydney Basin. The Sydney Basin is a large depositional geological feature that spans from Batemans Bay to the south, Newcastle to the north, and Lithgow to the west. The underlying geology of the Sydney Basin consists of Triassic-aged Hawkesbury Sandstone.

Across most of the study area Hawkesbury Sandstone is overlaid by the Gymea soil landscape, with a small portion by the western boundary falling within the Hawkesbury soil landscape. The Gymea soil landscape comprises of shallow to moderately deep sandy soils with frequent rock outcrops and is associated with undulating to rolling rises and low hills.

3.2 Ethnographic context

Prior to the settlement of Europeans in 1788, areas surrounding Sydney basin including the North Shore were occupied by the Eora people for thousands of years. The name Eora is derived from Ea, meaning yes and ora, meaning this place or here (Smith 2006). The Eora inhabited a territory bordered by the coast to the east, the northern shores of Port Jackson to Pittwater and the mouth of the Hawkesbury River to the north and the Georges River and Botany Bay to the south.

The Eora were distributed into family and clan groups, which included different languages and varying settlements around the harbour. These groups comprised three main clans, the Gadigal, the Wanegal and the Cammeraygal.

On the North Shore of Sydney two Aboriginal clans occupied the area the Cammeraygal and the Wallumedegal, who were part of the larger Kuringgai Tribe. Boundaries were not clearly defined, but Governor Phillip noted that the Cammeraygal peoples occupied the 'north-west part of this harbour', and Wallumedegal the 'opposite shore' (North Sydney Heritage Centre 2020). The Cammeraygal land covered most of the lower north shore including Kirribilli and Milsons Point extending north to Careening Cove called Weeyah Weeyah by the Cammeraygal people (Hoskins 2008a). Kirribilli and Milsons Point are the traditional lands of the Cammeraygal people. The name 'Kirribilli' most likely derives from the Aboriginal word 'kiarabilli', a reference to the place being a good fishing spot (Hoskins 2008b). Radiocarbon dating of the archaeological material from Cammeray proves Aboriginal occupation of the area from at least 5800 years ago.

Various camp sites were used by these groups depending on the seasonal availability of food or other resources, indicating settlement patterns were transient. Their geographical location meant that Aboriginal groups subsisted on a predominantly marine based diet of fish, shellfish, and edible plants from the shoreline. Today their occupation is evident from various middens, rock shelter art and engravings along the coastline. Sandstone rock shelters which lined waterways were used for shelter, as well as various types of huts made of bark and branches were constructed (GML 2019:6). The

clans developed a complex cultural life, with distinct languages and customs and a rich spirituality (AHO 2006).

The arrival of Europeans had a rapid effect on the Cammeraygal population due to introduced disease. Further impacts resulted from the physical dislocation of population, from disruption of traditions and the disruption to traditional lifestyles. By the early 1800s, the area was hit by an epidemic of smallpox, syphilis and influenza leading to a significant drop in population and by the 1820s, the number of Aboriginal people inhabiting the area had been irreversibly reduced (Curon 2003:9). However, one Aboriginal group during this period continued to frequent the area (Hoskins 2006a), observed by Europeans explorers such as Captain Bellingshausen who encountered:

Aboriginal people feasting, dancing and singing in a clearing amongst the banksia trees... Their bodies and faces were painted with patches of red ochre.

Soon after this, the land frequented by the Cammeraygal became subdivided, and traditional groups dispersed from this area.

3.3 Historical background

3.3.1 Development of Milsons Point and Kirribilli

The study area was part of an early land grant to Robert Ryan. Little evidence exists of farming or subdividing taking place until 1806, when prominent merchant Robert Campbell purchased the grant. In 1822, the area was leased to James Milson, the first European to settle permanently in the area and after whom Milsons Point is named. Milson kept cattle and grew various crops on the land.

Sale and subdivision of the land began in the mid-nineteenth century, with the development of Milsons Point Wharf and Lane Cove Road (Alfred Street South) in 1861 (HLA Envirosiences 2003:3). Development in the area increased after the establishment of the North Shore Steam Ferry Company that year and facilitated the consolidation of the road and network of services in the area. Urban development continued in the area in the decades that followed, with working class terrace housing taking effect in the Milsons Point area until construction of the Sydney Harbour Bridge northern approaches in 1924. Areas away from the harbour frontage were particularly popular for the site of the worker's terraces and cottages (HLA Envirosiences 2003:3).

3.3.2 Construction of the Sydney Harbour Bridge

During the early 1920s, hundreds of buildings on either side of the harbour were resumed and demolished to construct the bridge and approaches. A total of 438 houses were demolished, and the reclamation works that followed resulted in a more usable foreshore (HLA Envirosiences 2003:3). In 1924, construction of the northern approaches commenced, with the tipping of soil from the North Sydney railway site and tunnels to form a ramp up to the start of the bridge. Concrete walls were constructed along Broughton Street, Alfred Street South, Bradfield Highway and Pacific Highway, and reinforced concrete arched bridges were completed at Fitzroy Street, Burton Street, Lavender Street and Arthur Streets between 1928 and 1929. Construction of the bridge continued until 1932.

Figure 2: Historical photograph of construction of Sydney Harbour Bridge showing building standing within the study area prior to demolition, circa 1920s (source: North Sydney Council)



Figure 3: Historical image of the construction of the Sydney Harbour Bridge approaches at Dawes Point, demonstrating the ground disturbance during construction, circa 1920s (source: North Sydney Council).



3.3.3 Establishment of Bradfield Park

In 1932, following completion of the Sydney Harbour Bridge, the northern approach area was named after Dr J.J. Bradfield, chief engineer for the bridge construction. In 1934, a comprehensive plan for the layout of the park was adopted that had been developed by Council engineers, although despite large scale rehabilitation plans, little was done beyond general clearing and provision of plantings (HLA Envirosciences 2003:3). In 1934, the planned rockery garden at the northern portion of the park was completed. In 1935, public discussion prompted North Sydney Council to purchase approximately 14 acres of land beneath the newly completed Sydney Harbour Bridge.

During World War Two, Bradfield Park was temporarily handed to the Royal Australian Air Force for use as a mobilisation and demobilisation depot. At this time, several huts were established on the site and were later removed (HLA Envirosciences 2003:3).

In 2003, Bradfield Park North was significantly upgraded with substantial landscaping works. During the works, archaeological excavations were carried out that uncovered footings and remains of houses and other structures that existed on the site prior to the construction of the Sydney Harbour Bridge.

Figure 4: Historical aerial showing extensive urban development in the study area in 1943 (source: SIXMaps)



3.4 Aboriginal Heritage Information Management System database search results

Note: The location of Aboriginal sites is considered culturally sensitive information. It is advised that this information should be removed from this report if it is to enter the public domain.

An extensive search of the Aboriginal Heritage Information System (AHIMS) database was undertaken on 20 January 2022.

A one kilometre buffer zone around the study area was included in the search. The AHIMS search provides archaeological context for the area and identifies whether any previously recorded Aboriginal sites are located within or near the study area. The parameters of the search were as follows:

GDA 1994 MGA 56	332943-33613
Buffer	0 metres
Number of sites	42
AHIMS search ID	653097

A total of 42 registered sites were identified within the extensive AHIMS search area. The distribution of recorded sites is shown in Figure 5. Heritage NSW lists 20 standard site features that can be used to describe a site registered with AHIMS, and more than one feature can be used for each site. The frequency of recorded site types is summarised in Table 1.

Table 1: Frequency of site features from AHIMS data

Site feature	Frequency	Percentage (rounded %)
Artefact, shell	17	40.5
Art (pigment or engraved)	12	28.6
Shell	6	14.3

Site feature	Frequency	Percentage (rounded %)
Artefact	3	7.1
Artefact, shell, Aboriginal Ceremony and Dreaming	1	2.4
Art (pigment or engraved), shell, artefact, burial	1	2.4
Aboriginal resource and gathering, shell	1	2.4
Shell, artefact, art (pigment or engraved)	1	2.4
Total	42	100.1

The nature and location of the registered sites are a reflection of the past Aboriginal occupation from which they derive, but is also influenced by historical land-use, and the nature and extent of previous archaeological investigations. Certain site types, such as culturally modified trees, are particularly vulnerable to destruction through historical occupation.

3.4.1 Sites within proximity to the study area

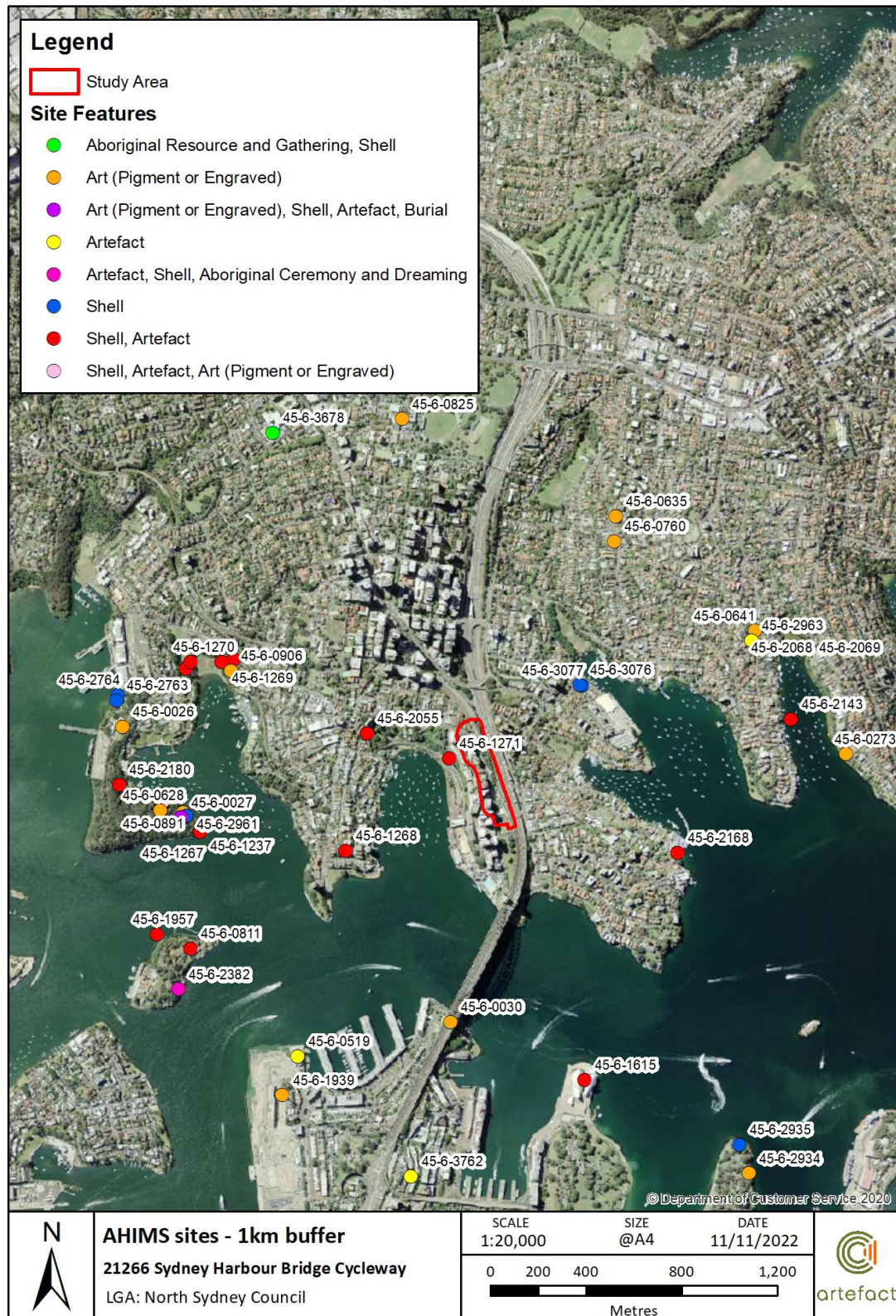
Shell middens are particularly prevalent given the proximity of the study area to Sydney Harbour and the Parramatta River. Art sites are also common given the underlying sandstone geology which is found across much of the region.

No sites are registered within the study area. Four sites are within 500 metres of the study area. These are summarised in Table 2.

Table 2: Sites in proximity to the study area

Site name (AHIMS ID)	Description	Distance from the study area
Lavender Bay Milsons Point (45-6-1271)	Midden within rock shelter, situated at the eastern end of Clark 60m west Park.	
Lavender Bay 2 (45-6-2055)	Shelter with midden	370m east
Adderstone Shelter 1 NSC-081 (45-6-3077)	Midden within rock shelter in an established urban context.	440m northeast
Adderstone Shelter 2 NSC-082 (45-6-3076)	Midden	470m northeast

Figure 5: AHIMS sites within 1 km buffer of the study area



Document Path: D:\GIS\GIS_Mapping\21266_SHB Cycleway\MXD\Nov2022\SHB_Cycleway_AHIMS_v2_221111.mxd

Figure 6: AHIMS sites in proximity to the study area



Document Path: D:\GIS\GIS_Mapping\21266_SHB Cycleway\MXD\Nov2022\SHB_Cycleway_AHIMS_Detail_v2_221111.mxd

3.5 Archaeological context

3.5.1 Previous archaeological assessments

A number of archaeological investigations have been completed in the vicinity of the study area. A discussion of relevant studies to the current study area is provided below.

Port Jackson Archaeological Project (Attenbrow 1991)

Val Attenbrow undertook a project within the urbanised area of Port Jackson, relocating previously recorded sites and some survey and recording of any newly identified sites. The main focus of the assessment was on the role of marine and land animals in the diet (evidenced by shell middens and faunal remains), and the role of stone, bone, and shell in the implements and weapons. The project assessment area was divided into eight sub-catchments. Attenbrow identified a several patterns of site distribution based on aquatic zones (proximity to freshwater, estuarine, or ocean resources), geological zones, and landform.

Attenbrow identified that 98 per cent of midden sites across the whole of the project assessment area were located on Hawksbury Sandstone, despite Wianamatta Shale comprising the majority of the assessment site. It was suggested that this is due to middens being more prevalent, or at least better preserved, in rock shelters as opposed to open sites. Middens were also less prevalent in freshwater catchments, which includes the current study area. It was noted that the assessment area is highly developed, and that development may have altered the site distribution patterns.

The current study area is situated on Hawksbury Sandstone, and fits within the model identified by Attenbrow for midden sites.

Bradfield Park North, Milsons Point Archaeological Assessment (Di Fazio 2001)

This archaeological assessment was carried out by Di Fazio in 2001 at Bradfield Park North, in the southern portion of the study area as part of an Assessment of Heritage Impact for the proposed landscaping upgrades to Bradfield Park North. The assessment concluded that due to the evidence of demolition and subsequent use of the site for construction works, which involved heavy disturbance combined with levelling and dumping of soil from outside the site, archaeological material was likely to have been removed or damaged. This has implications for Aboriginal archaeology, as it demonstrates significant ground disturbance including the complete removal of the soil profile within the investigation area. It is noted this archaeological assessment was not able to be accessed during the preparation of this report and was not available at the Heritage Division library.

KENS site (Dominic Steele Consulting Archaeology 2006)

The Kent Erskine Napoleon and Sussex Streets (KENS) site is located within Gympie soils and a similar sloping landform to the current study area. An Aboriginal test and salvage program was triggered by the historical archaeological investigation, which identified a buried soil profile in the north-east portion of the site underneath a basement floor level.

The stratigraphic record from the Aboriginal excavations revealed that natural soil profiles were truncated by historical European activity and rapidly buried, evidenced by a distinction between contexts containing Aboriginal and historical artefacts. The excavations also revealed that sheet erosion in the eighteenth century and additional mixing of the natural soil profiles through human activities occurred. The investigations identified that impact on the site through changing land practices (hunting and gathering to clearing to urbanisation) was relatively early in the post contact period.

Some artefacts which were recovered from truncated silty soils were fragmented, with chipped edges, and artefacts damaged by heat. This was interpreted to be the result of extensive trampling, suggesting that despite the quick burial, traffic was substantial enough to damage artefacts. Post-

contact artefacts were identified through the presence of two glass tools displaying retouch and use-wear characteristics.

Whilst the recovered assemblage and related contexts were not particularly significant in terms of the nature of the technology identified, the KENS site demonstrated that this area on the outskirts of the early European Sydney colony was intensively used by Aboriginal populations both prior to and also, at least for a short period, following 1788. It demonstrates that early historical land-use activities such as land clearing and increased traffic (humans and/or horses) significantly impacts the survival of the archaeological record. However, the assessment also contributes an understanding of how the Aboriginal archaeological record can survive through multiple phases of historical development and disturbance in the CBD.

Loreto Kirribilli – Aboriginal heritage due diligence report (GML Heritage 2017)

GML prepared a due diligence report for the proposed redevelopment of the Loreto school, approximately 300 metres east of the current study area. The investigation area comprised of GyMEA and Hawkesbury soil landscapes across a ridge landform, with rocky slopes running towards the harbour. The investigation examined the environmental context, historical land-use, and archaeological background of the investigation area.

The investigation identified through desktop research that Aboriginal land-use was focussed on particular landforms and proximity to water, and permanent areas of activity were likely to include shorelines, estuarine, riverbanks, rock shelters near water and valley bottoms. It did not identify the study area location as a focus of Aboriginal activity, therefore assessing it to demonstrate low archaeological potential. Furthermore, it concluded that the historical land-use had significantly impacted both the condition and integrity of any remaining soil horizons. No further archaeological assessment was recommended.

3.6 Predictive model

Previous archaeological investigations in the locality have identified significant landforms as the primary identifier of archaeological sensitivity, particularly associated with permanent watercourses. The level of ground disturbance such as cultivation is also a factor in determining the likelihood of intact archaeological deposits surviving. Based on the review of previously archaeological investigations, the following sites are considered the most likely to be present within the study area:

- Midden sites – there are several midden sites within 500 metres of the study area. These are particularly identified within rock shelters.
- Engraving sites – engraving sites are also common in the region. Engraving sites are generally recorded on flat and open sandstone exposures.
- Sandstone shelter sites – there is potential for sandstone shelter formations to occur at the break of slope or cliff faces.
- Artefact/ Potential Archaeological Deposits (PADs) – artefacts and PADs may occur in any area with remnant in-situ soil, in either open contexts or within sandstone shelter formations.

4.0 SITE INSPECTION

An inspection of the study area was conducted by Scott MacArthur (Principal) on 18 January 2022. During the site inspection, observations were made about the overall intactness of the study area, with the intention of identifying if Aboriginal objects are likely to occur beneath the ground surface.

The study area was traversed on foot and photographs were taken of landforms and local features. All ground exposures were examined. The inspection targeted the proposed design boundary, as seen in Figure 1.

Landforms across the inspection area have been extensively modified. The study area is predominantly existing road surfaces and areas of public park associated with Alfred Street South and Bradfield Park North. There were no exposed natural soil landscapes identified within the inspection area. Buildings, road construction, and landscaping have cut into the natural slope, and, at times, created artificial building platforms or slopes. No sandstone outcrops or shelter formations were noted.

Figure 7: Alfred Street South, facing south



Figure 8: Bradfield Park North memorial fountain, facing southeast



Figure 9: Bradfield Park North - stone block on former property boundary, facing west



Figure 10: Bradfield Park North – East footpath (to be widened), facing south



Figure 11: Burton Street footpath and bocce court, facing east



Figure 12: Bowls Club, southwest corner of green, facing east



Figure 13: Harbour Bridge Stairs top landing, facing north



Figure 14: Burton Street tunnel footpath, facing north

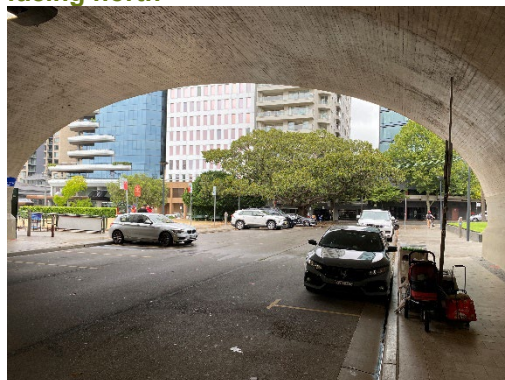


Figure 15: Bradfield Park, Alfred Street South, facing northeast



Figure 16: Bradfield Park, Fitzroy Street - view of viaduct facing northeast



5.0 DISCUSSION

5.1 Due diligence landform assessment

Certain landform contexts are more likely to retain an archaeological signature of past Aboriginal land-use. This may be as a result of the resources that were associated with these landforms, their suitability for long-term and/or repeated occupation, or their suitability for the preservation of archaeological deposits.

The Due Diligence Code of Practice lists five such landforms:

- Within 200 metres of a watercourse.
- Within a sand dune system.
- On a ridge top, ridge line or headland.
- Within 200 metres below or above a cliff face.
- Within 20 metres of or in a cave, rock shelter, or a cave mouth.

The study area is 130 metres from Lavender Bay, part of Sydney Harbour. The natural landform has been extensively modified within the proposal boundary, and there are no sandstone outcrops or sandstone formations within 20 metres of the proposal.

The study area is considered to be an archaeologically sensitive landform according to the Due Diligence Code of Practice.

5.2 Synopsis of desktop research and site inspection

Previous archaeological work in the region of Sydney Harbour identified several common site types within the harbour foreshore. These assessments indicate how landforms and landscape features, hydrology, geology, and soil landscapes can suggest the type of Aboriginal site in the study area and indicate the likelihood of Aboriginal objects being identified within the study area. The proximity of the study area to the estuarine resource zone of Lavender Bay would suggest that midden sites were likely, and the GyMEA soil profile and underlying Hawkesbury sandstone would indicate a potential for engraving sites.

However, urban development and historical land-use also affects the potential for subsurface areas of archaeological potential. These factors have been considered in the assessment of Aboriginal archaeology within the study area.

The study area has been subject to extensive land-use since 1822, including the clearing of all native vegetation, construction, and demolition activities. This is considered to have resulted in significant ground disturbance. Given the shallow, erosional nature of both the GyMEA and Hawkesbury soil landscapes, it is considered unlikely that remnant in-situ soil profiles or sandstone rock outcrops remain beneath the current development. Therefore, no Aboriginal archaeological sensitivity has been identified within the study area.

5.3 Impact assessment

5.3.1 Proposed works

Key features of the proposal would include:

- A design-led approach to the integration of new cycling infrastructure with its existing significant open space and heritage setting
- A new elevated linear bike ramp, with deck about three metres wide and about 200 metres in length between the Sydney Harbour Bridge Cycleway and Bradfield Park North including:
 - Steel ramp structure with deck incorporating Designing with Country motifs, and balustrade with integrated lighting
 - Precast columns carefully sited within Bradfield Park North and Central
 - Provision of a bike riders rest area next to the Sydney Harbour Bridge Cycleway connection
 - A gathering space, lighting and cycle path within Bradfield Park North connecting the elevated linear bike ramp and the proposed Alfred Street South cycle path
- Alfred Street South pedestrian and cycle path upgrade including:
 - New 2.5-metre-wide two-way cycle path on Alfred Street South from the ramp landing, linking to the existing bike network in Middlemiss Street. The cycle path would be located on the east side of Alfred Street South between the ramp landing and the new street crossing at 110 Alfred Street South. On the west side of Alfred Street South the cycle path would be located between the new crossing and Lavender Street
 - Replacement of the existing pedestrian refuge crossing at the north end of Alfred Street South with a pedestrian and bike rider crossing located near 110 Alfred Street South and an upgrade to the pedestrian crossing at Lavender Street
 - Low speed shared path and verge widening on the north side of Lavender Street
 - Adjustments to the Lavender Street roundabout
 - New street tree planting, shrub planting and footpath paving
 - Relocation of the existing bus stop on Alfred Street South near Lavender Street, about 60 metres to the south of its current location
 - Permanent removal of up to 15 parking spaces along Alfred Street South.

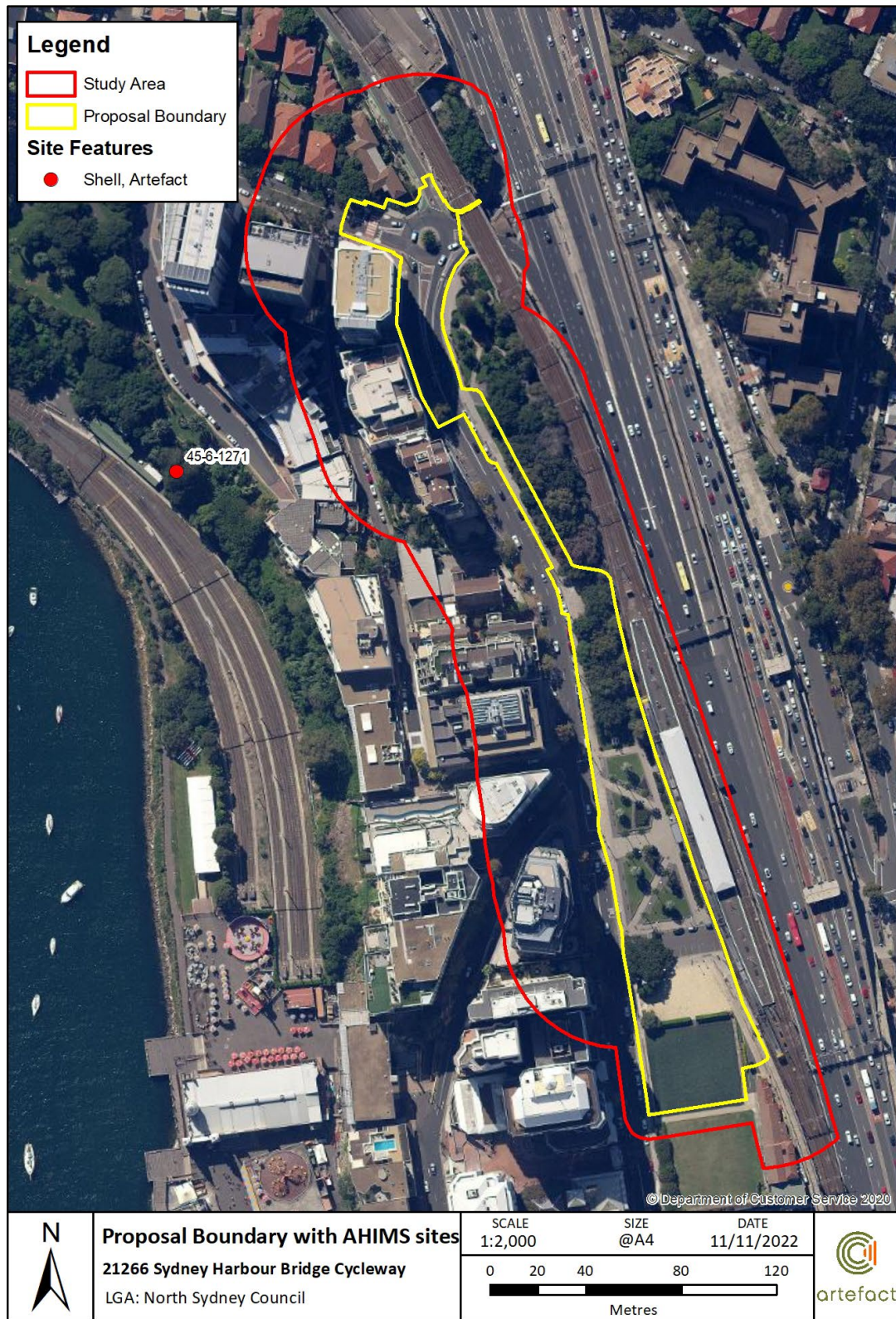
The proposal, would also include, but not be limited to:

- Kerb and pavement work, and line marking
- Drainage and utility adjustments
- Street furniture adjustments
- Changes to street parking, parking meter locations and regulatory signage
- Minor lighting upgrades to Bradfield Park North and in other locations where required to meet safe lighting standards.

5.3.2 Impact of the proposal on Aboriginal archaeology

This assessment has identified no Aboriginal archaeological sensitivity within the study area. It is not considered likely that any subsurface intact soil profiles remain, and therefore ground disturbing works associated with the proposal would not impact Aboriginal archaeological deposits. The nearest AHIMS site (AHIMS ID 45-6-1271) is 60 metres west of the study area, 100 metres west of the proposal boundary. The proposal would not impact the ground in the vicinity of AHIMS ID 45-6-1271. As there are no sandstone outcrops or Aboriginal art sites identified within the study area, the proposal will not impact any heritage values of the potential NHL item “Sydney Cultural Crescent Rock Art” (Place ID 106369).

Figure 17: Proposal boundary with nearby AHIMS sites



Document Path: D:\GIS\GIS_Mapping\21266_SHB Cycleway\MXD\Nov2022\SHB_Cycleway_AHIMS_proposal_v2_221107.mxd

5.4 Due diligence process

The results of the due diligence process are outlined in Table 3. The table contains a response to the questions included in the Due Diligence Code of Practice. These questions are intended to assist in determining whether a proposed activity may result in harm to Aboriginal objects, which are protected by the *National Parks and Wildlife Act 1974*.

Table 3: Responses to the due diligence process

1.	<i>Will the activity disturb the ground surface or any culturally modified trees?</i>
	Yes, the proposal would disturb the ground surface. The proposal would not impact any culturally modified trees.
2a.	<i>Are there any relevant confirmed site records or any other associated landscape feature information on AHIMS?</i>
	There are no AHIMS sites within the study area, and one AHIMS site within 200m of the study area. No AHIMS sites would be impacted by the proposal.
2b.	<i>Are there any other sources of information of which a person is already aware?</i>
	No.
2c.	<i>Are there any landscape features that are likely to indicate the presence of Aboriginal objects?</i>
	Yes, the study area is within 200m of water. However, the landforms within the study area have been extensively modified through various construction and demolition activities associated with urban development, the Sydney Harbour Bridge, and Bradfield Park North.
3.	<i>Can harm to Aboriginal objects listed on AHIMS or identified by other sources of information and/or can the carrying out of the activity at the relevant landscape features be avoided?</i>
	This report has assessed that the proposal would not impact any Aboriginal sites or areas of potential.
4.	<i>Does a desktop assessment and visual inspection confirm that there are Aboriginal objects or that they are likely?</i>
	No, this assessment has concluded that it is unlikely for the study area to contain Aboriginal archaeological deposits, based on previous ground disturbance as well as the shallow, erodible soil landscapes within the Sydney Harbour foreshore.

6.0 RECOMMENDATIONS

The following recommendations regarding Aboriginal heritage are based on consideration of:

- Statutory requirements under the NPW Act
- The Due Diligence Code of Practice
- The results of background research, site survey, and assessment
- The likely impacts of the proposal.

After considering previous archaeological work, the nature of the environment of the study area and the results of the site inspection, it was concluded that:

- No AHIMS sites are listed within the study area. One AHIMS site is located 60metres from the study area.
- The available evidence indicates that the study area has been significantly disturbed and the landscape modified through foreshore modification, historic building and demolition, the construction of the Sydney Harbour Bridge approaches, and the landscaping of Bradfield Park.

The following recommendations are made:

- In accordance with the Due Diligence Code of Practice, the proposed activity can proceed with caution with no further Aboriginal archaeological investigation or assessment.
- The nearest AHIMS site (AHIMS ID 45-6-1271) should be marked on all construction plans, to ensure inadvertent impacts are avoided.
- This report assessed the potential for Aboriginal archaeology only. Social, cultural, and contemporary values should be considered for the proposal. This should be done through consultation with the Aboriginal community as well as through the preparation of an interpretive plan for Aboriginal cultural heritage values.
- If changes are made to the proposal that may result in impacts to areas not assessed by this report, those will need to be assessed and further archaeological assessment may be required.
- Unexpected Aboriginal objects remain protected by the NPW Act. If any such objects, or potential objects, including potential human remains are uncovered during the activity, all work in the vicinity should cease immediately in accordance with the Transport for NSW Unexpected Heritage Items Procedure.

7.0 REFERENCES

Aboriginal Heritage Office 2006 *A Brief Aboriginal History*, accessed <http://www.aboriginalheritage.org>, 01 Feb 2022

Attenbrow, V. 2003, *Sydney's Aboriginal Past*, University of New South Wales Press, Kensington, 9;
North Sydney Council 1996, *Margaret Park Naming North Sydney*, 2nd edition, 74

Curon 1985:9; Aboriginal Heritage Office, 'A Brief Aboriginal History', accessed

<http://www.aboriginalheritage.org> 01 Feb 2022

GML Heritage 2017, *Loreto Kirribilli Masterplan Stage 1 and Heritage Impact Assessment Statement*.
Report prepared for Loreto Kirribilli

GML Heritage 2019, *Loreto Kirribilli Western Precinct Historical Archaeological Research Design*.
Report prepared for Bloompark Consulting Pty Ltd

GML Heritage 2021 *Sydney Harbour Bridge Conservation Management Plan*, Transport for NSW

HLA Envirosciences 2003, 'Statement of Heritage Impact, Sandstone Walls Bradfield Park North', p3

Hoskins, I. 2008 *Kirribilli Dictionary of Sydney*. Accessed <https://dictionaryofsydney.org/entry/kirribilli>
01 Feb 2022

Hoskins, I. 2008, *Aboriginal North Sydney: an outline of Indigenous History*, North Sydney Council,
North Sydney

North Sydney Heritage Centre, *North Sydney heritage Leaflet 1 North Sydney's Aboriginal Past*,
accessed <http://www.northsydney.nsw.gov.au> 01 February 2022

Smith 2006

Transport for New South Wales 2021 *Sydney Harbour Bridge Cycleway Northern Access Planning
Pathway and Environmental Risk Assessment Memo*.



artefact

Artefact Heritage
ABN 73 144 973 526
Suite 56, Jones Bay Wharf
26-32 Pirrama Road
Pyrmont NSW 2009 Australia
+61 2 9518 8411
office@artefact.net.au
www.artefact.net.au