

LONG REEF BOARDWALK, COLLAROY, NSW

ABORIGINAL CULTURAL HERITAGE ASSESSMENT REPORT

Report to Northern Beaches Council

LGA: Northern Beaches

December 2023





EXECUTIVE SUMMARY

Apex Archaeology has been engaged by Northern Beaches Council to assist in preparing an Aboriginal Cultural Heritage Assessment (ACHA) for the proposed realignment and replacement of the existing boardwalk and bridge that is situated on the southern side of Long Reef Headland in Collaroy, NSW. The proposed works will impact on sections within Long Reef Golf Club and Long Reef Beach in Collaroy. The study area is within the Northern Beaches Local Government Area (LGA).

This ACHA has been prepared in accordance with the *Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW* (April 2011); the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (DECCW, April 2010) (the ACHCRs). A separate Archaeological Report (AR) detailing the results of the assessment prepared in line with the *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (September 2010) (the Code of Practice) is attached as an appendix to this report.

An Aboriginal site is registered on the Aboriginal Heritage Information Management Services (AHIMS) as being within the study area. It is AHIMS #45-6-741 (QP3) and is recorded as an Aboriginal shell midden. It has been mapped as being on the northern side of the current boardwalk and approximately 50 m west of the bridge that crosses the man-made creek that drains onto Long Reef Beach. As the proposed works have the potential to impact on this registered site, an assessment is necessary to determine whether an application for an Aboriginal Heritage Impact Permit (AHIP) prior to the commencement of works will be required.

A total of ten Aboriginal people and organisations registered an interest in being consulted for the project. The following list comprises the registered Aboriginal parties (RAPs) for the project:

- A1 Indigenous Services
- BH consultants
- Butubarbin
- Raw Cultural Healing
- Darug Custodian Aboriginal Corporation
- Didge Ngunawal Clan
- Thomas Dahlstrom
- Goobah Cultural Heritage Services
- Guringai Tribal link
- Kamilaroi Yankuntjtjara Working group
- Murrabidgee Mullangari Wailwan

Consultation with the RAPs has been conducted in accordance with the ACHCRs.

A site inspection and pedestrian survey of the study area was undertaken by Jenni Bate, Leigh Bate and Rebecca Bryant from Apex Archaeology, and Justine Coplin from Darug Custodian Aboriginal Corporation on 21 July 2023. No shell or remnants of a shell midden were identified within the study area, nor were any other Aboriginal material such as stone artefacts located.



Given the extensive historical disturbance and that no areas of potentially intact archaeological deposits were identified, no further archaeological assessment is considered necessary for the site. The previously registered site is considered to have been completely impacted by natural forces and no longer exists. The site card for this site has been updated to reflect the destroyed status of the site.

The Aboriginal Heritage Office requested that the initial earthworks be monitored by a suitably qualified representative from the Aboriginal community. Monitoring of the initial works in this instance is not considered warranted on archaeological grounds due to the wholesale disturbance to the area. The Aboriginal Heritage Office also requested that all personnel working on site are provided with an Aboriginal heritage site induction prior to the commencement of works.

Further, the Aboriginal Heritage Office and representatives of the Registered Aboriginal Parties (RAPs) for this project also requested that information signs on Aboriginal sites found within Long Reef Headland be erected along the new boardwalk or an appropriate viewing area to inform the public about the rich and diverse Aboriginal cultural heritage that would have been present within the area.

No further Aboriginal heritage investigations or approvals are considered warranted prior to the commencement of the proposed works.

The following recommendations are based on the research and conclusions of our assessment outlined in this report, and in consultation with the RAPs and the Aboriginal Heritage Office.

RECOMMENDATION 1: NO FURTHER ARCHAEOLOGICAL ASSESSMENT REQUIRED

The Aboriginal archaeological potential of Long Reef Boardwalk, Collaroy, NSW has been assessed as negligible. No further archaeological assessment is required for the site prior to the commencement of proposed development activities. No Aboriginal Heritage Impact Permit (AHIP) is required prior to works commencing.

RECOMMENDATION 2: ABORIGINAL HERITAGE SITE INDUCTION

An Aboriginal heritage site induction should be presented to the site workers by a suitably qualified person. This induction will include the possible kinds of Aboriginal archaeological remains that may be contained within the sand bodies and it will outline the 'unexpected finds policy'.

RECOMMENDATION 3: INSTALLATION OF INTERPRETATION

It is recommended that consideration is given to installation of interpretive signage along the boardwalk to explain the Aboriginal history of the place and the continuing connection to Country.

RECOMMENDATION 4: DEVELOPMENT BOUNDARIES

The proposed development works must be contained within the assessed boundaries for this project. If there is any alteration to the boundaries of the proposed development to include areas not assessed as part of this archaeological



investigation, further investigation of those areas should be completed to assist in managing Aboriginal objects and places which may be present in an appropriate manner.

RECOMMENDATION 5: REPORTING

One digital copy of this report should be forwarded to Heritage NSW for inclusion on the Aboriginal Heritage Information Management System (AHIMS).

One copy of this report should be forwarded to each of the registered Aboriginal stakeholders for the project.

RECOMMENDATION 6: STOP WORK PROVISIONS

Should unanticipated Aboriginal archaeological material be encountered during site works, all work must cease in the vicinity of the find and an archaeologist contacted to make an assessment of the find and to advise on the course of action to be taken. Further archaeological assessment and Aboriginal community consultation may be required prior to the recommencement of works. Any objects confirmed to be Aboriginal in origin must be reported to Heritage NSW.

Human remains of Aboriginal people have previously been recorded in sand bodies in coastal bays and open beaches within Sydney area including Long Reef headland. In the unlikely event that suspected human remains are identified during works, all activity in the vicinity of the find must cease immediately and the find protected from harm or damage. The NSW Police and the Coroner's Office must be notified immediately. If the finds are confirmed to be human and of Aboriginal origin, further assessment by an archaeologist experienced in the assessment of human remains and consultation with both Heritage NSW, the Aboriginal Heritage Office and the RAPs for the project would be necessary.



Apex Archaeology acknowledges and pays respect to the past, present and future Traditional Custodians and Elders of this nation and in whose land this assessment took place, and to the continuation of cultural, spiritual and educational practices of Aboriginal and Torres Strait Islander peoples.

DOCUMENT CONTROL

The following register documents the development and issue of the document entitled 'Long Reef Boardwalk, Collaroy, NSW: Aboriginal Cultural Heritage Assessment Report', prepared by Apex Archaeology in accordance with its quality management system.

Revision	Prepared by	Reviewed by	Comment	Issue Date
1 – Draft	Rebecca Bryant	Jenni Bate	Client issue	27 October 2023
2 – Draft	Jenni Bate	Eliza Halsey	Issue for RAP	11 November 2023
3 – Final	Jenni Bate	RAPs	Issue of final	11 December 2023



GLOSSARY OF TERMS

Aboriginal Object	An object relating to the Aboriginal habitation of NSW (as defined in the NPW Act), which may comprise a deposit, object or material evidence, including Aboriginal human remains.
ACHA	Aboriginal Cultural Heritage Assessment
ACHAR	Aboriginal Cultural Heritage Assessment Report
ACHCRs	<i>Aboriginal cultural heritage consultation requirements for proponents 2010</i>
AHIMS	Aboriginal Heritage Information Management System maintained by Heritage NSW, detailing known and registered Aboriginal archaeological sites within NSW
AHIP	Aboriginal Heritage Impact Permit
ASIRF	Aboriginal Site Impact Recording Form
BP	Before Present, defined as before 1 January 1950.
Code of Practice	The DECCW September 2010 <i>Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales</i>
Consultation	Aboriginal community consultation in accordance with the DECCW April 2010 <i>Aboriginal cultural heritage consultation requirements for proponents 2010</i> .
DA	Development Application
DECCW	The Department of Environment, Climate Change and Water (now Heritage NSW)
Disturbed Land	If land has been subject to previous human activity which has changed the land's surface and are clear and observable, then that land is considered to be disturbed
Due Diligence	Taking reasonable and practical steps to determine the potential for an activity to harm Aboriginal objects under the <i>National Parks and Wildlife Act 1974</i> and whether an application for an AHIP is required prior to commencement of any site works, and determining the steps to be taken to avoid harm
Due Diligence Code of Practice	The DECCW Sept 2010 <i>Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales</i>
GIS	Geographical Information Systems
GSV	Ground Surface Visibility
Harm	To destroy, deface or damage an Aboriginal object; to move an object from land on which it is situated, or to cause or permit an object to be harmed
Heritage NSW	Heritage NSW within the Department of Premier and Cabinet; responsible for overseeing heritage matters within NSW
ka	Kiloannus, a unit of time equating to 1,000 years
LALC	Local Aboriginal Land Council
LGA	Local Government Area
NPW Act	<i>NSW National Parks and Wildlife Act 1974</i>
NPWS	National Parks and Wildlife Service
OEH	The Office of Environment and Heritage of the NSW Department of Premier and Cabinet (now Heritage NSW)
PAD	Potential Archaeological Deposit
RAPs	Registered Aboriginal Parties



CONTENTS

1.0	Introduction.....	1
1.1	Project Proponent.....	1
1.2	Study Area and Project Brief.....	1
1.3	Statutory Context	2
1.3.1	National Parks and Wildlife Act 1974.....	2
1.3.2	NSW National Parks and Wildlife Regulation 2019.....	2
1.4	Objectives of the Aboriginal Cultural Heritage Assessment	7
2.0	Aboriginal Consultation Process	8
2.1	The Consultation Process	8
2.2	Stage 1 Consultation: Commencement	9
2.3	Stage 2 & 3 Consultation: Presentation and Gathering of Information.....	10
2.4	Stage 4: Review of Draft Report	11
3.0	Summary and Analysis of Background Information.....	12
3.1	Existing Environment	12
3.1.1	Geology, Soils and Topography	12
3.1.2	Flora and Fauna.....	13
3.1.3	Hydrology	13
3.2	Material Evidence of Aboriginal Land Use	14
3.2.1	AHIMS	14
3.2.2	Previous Archaeological Assessment.....	16
3.3	Ethnohistory	17
3.4	Limitations.....	21
4.0	Aboriginal Cultural Heritage Significance Assessment	23
4.1	Introduction	23
4.2	Criteria	23
4.3	Significance Assessment	23
4.4	Cultural Significance Assessment	24
5.0	Proposed Activity	25
5.1	Potential Impact	25
5.2	Impact to Cultural Heritage Values.....	25
5.3	Justification.....	26
6.0	Avoiding and Minimising Harm.....	27



6.1	Avoidance of Harm.....	27
6.2	Ecologically Sustainable Development	27
6.2.1	Intergenerational Equity.....	28
6.2.2	Cumulative Impacts.....	28
6.3	Aboriginal Community Input	28
7.0	Recommendations	29
8.0	Bibliography	31

APPENDICES

Appendix A: Correspondence Log

Appendix B: Step 1 Letters and Responses

Appendix C: Step 2 Letters and Responses

Appendix D: Advertisement

Appendix E: Methodology, Cover Letters and Responses

Appendix F: Draft Report Emails and Responses

Appendix G: Archaeological Report

FIGURES

Figure 1: Study area in its regional context	3
Figure 2: Study area within Long Reef Headland.....	4
Figure 3: Close up of study area with location of registered AHIMS Site # 45-6-0741	5
Figure 4: preliminary draft of proposed works within the study area	6
Figure 5: The Strahler system (Source: Department of Planning and Environment 2016).....	14
Figure 6: AHIMS sites within the study area and immediate surrounds	15
Figure 7: Excerpt of Tindale’s 1940s Tribal Names map	19
Figure 8: Aboriginal language groups that are labelled in entirely in capital letters (Attenbrow 2010: 23)	20



1.0 INTRODUCTION

Apex Archaeology have been engaged by Northern Beaches Council to assist in preparing an Aboriginal Cultural Heritage Assessment (ACHA) for the proposed realignment and replacement of the existing boardwalk and bridge that is situated between Long Reef Golf Club and Long Reef Beach in Collaroy, NSW. It is within the Northern Beaches Local Government Area (LGA).

An Aboriginal site is registered on the Aboriginal Heritage Management Services (AHIMS) as being within the study area. It is AHIMS #45-6-741 (QPS) and is recorded as an Aboriginal shell midden. The site is mapped as being on the northern side of the current boardwalk and approximately 50 m west of the current bridge that crosses the man-made creek that empties drains into the ocean shoreline.

The proposed works have the potential to impact on this registered site and as such, an assessment is necessary to determine whether an application for an Aboriginal Heritage Impact Permit (AHIP) prior to the commencement of works. Is required.

This report details the results of the archaeological assessment of the site, prepared in accordance with the *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (September 2010) (the Code of Practice). It has been prepared to inform Northern Beaches Council prior to the proposed realignment and replacement of the existing boardwalk and bridge.

1.1 PROJECT PROPONENT

The proponent for the project is Northern Beach Council and Environment. The client contact for the project was Senior Project Officer, Eliza Halsey.

1.2 STUDY AREA AND PROJECT BRIEF

The study area is located on Long Reef Beach, with a small section being within the Long Reef Golf Course. It is located on the southern side of Long Reef Headland and is bound by the Pacific to the south and Long Reef Golf Course to the north (Figure 1 and Figure 2). The study area is located approximately 10 km north of Manly and 21 km northeast of the Sydney CBD. It is within the Northern Beaches LGA.

An Aboriginal site registered on AHIMS as #45-6-0741 (QPS) has been identified as being within the study area. It is recorded as an Aboriginal shell midden and mapped as being on the northern side of the current boardwalk and approximately 50 m west of the current bridge that crosses the man-made creek that empties into the ocean shoreline.

As the proposed works have the potential to impact on this registered site an assessment is necessary to determine whether an application for an Aboriginal Heritage Impact Permit (AHIP) prior to the commencement of works is required.



The subject land is within Crown Lands, which are managed by the Northern Beaches Council.

1.3 STATUTORY CONTEXT

Heritage in Australia, including both Aboriginal and non-Aboriginal heritage, is protected and managed under several different Acts. The following section presents a summary of the applicable Acts which provide protection to cultural heritage within NSW

1.3.1 NATIONAL PARKS AND WILDLIFE ACT 1974

The *National Parks and Wildlife Act 1974* provides protection for all Aboriginal objects and places within NSW. Aboriginal objects are defined as the material evidence of the Aboriginal occupation of NSW, while Aboriginal Places are defined as areas of cultural significance to the Aboriginal community. All Aboriginal objects are protected equally under the Act, regardless of their level of significance. Aboriginal Places are gazetted if the Minister is satisfied that the location was and/or is of special significance to Aboriginal people.

Following amendments to the NPW Act in 2010, approval to impact Aboriginal cultural heritage sites is only granted under a Section 90 AHIP, which is granted by Heritage NSW in the Department of Premier and Cabinet.

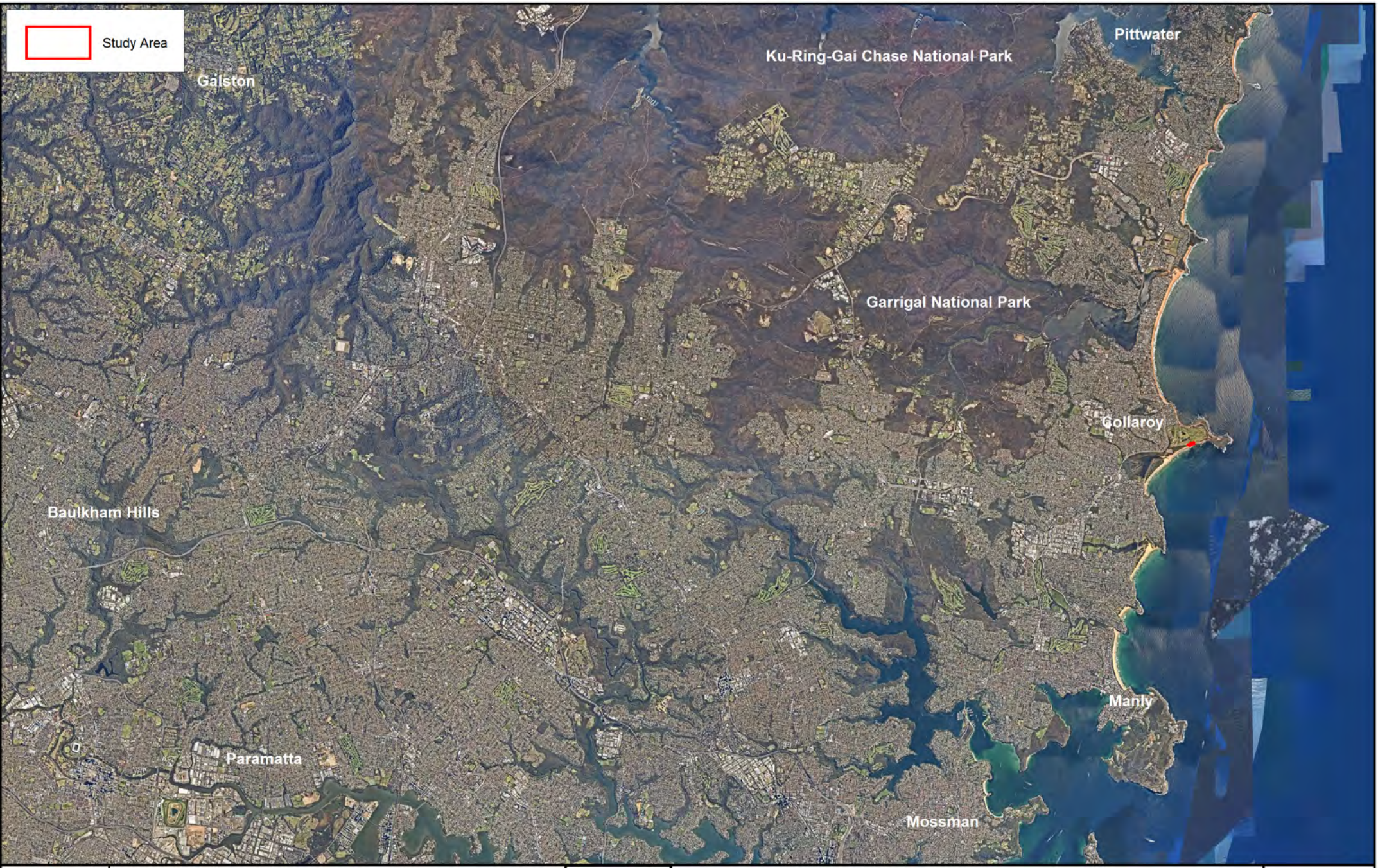
1.3.2 NSW NATIONAL PARKS AND WILDLIFE REGULATION 2019

Part 5, Division 2 of the *National Parks and Wildlife Regulation 2019* addresses Aboriginal objects and places in relation to the NPW Act 1974, and outlines how compliance with relevant codes of practice can be met.

Clause 58(1) outlines the defence of low impact acts or omissions to the offence of harming Aboriginal objects, which includes maintenance works on existing roads and fire trails, farming and land management work, grazing of animals, activities on land that has been disturbed that is exempt or complying development, mining exploration work, removal of vegetation (aside from Aboriginal culturally modified trees), seismic surveying or groundwater monitoring bores on disturbed ground, or environmental rehabilitation work (aside from erosion control or soil conservation works such as contour banks).

Clause 58(4) outlines the definition of 'disturbed land', as land that "has been the subject of a human activity that has changed the land's surface, being changes that remain clear and observable".

Clause 59 relates to the notification of Aboriginal objects and sites and Clause 60 relates to the requirements for the consultation process to support an AHIP application. The regulation sets out the requirements broadly in line with those outlined in the ACHCRs.



Study Area

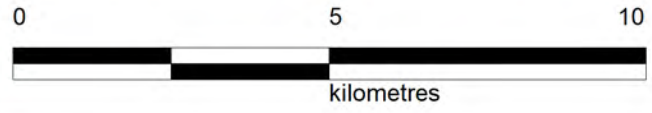


Figure 1: Study area within its regional context.



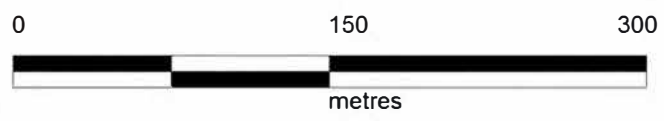


Figure 2: Study area within its local context.





Figure 3: Close up of study area with location of registered AHIMS Site # 45-6-0741

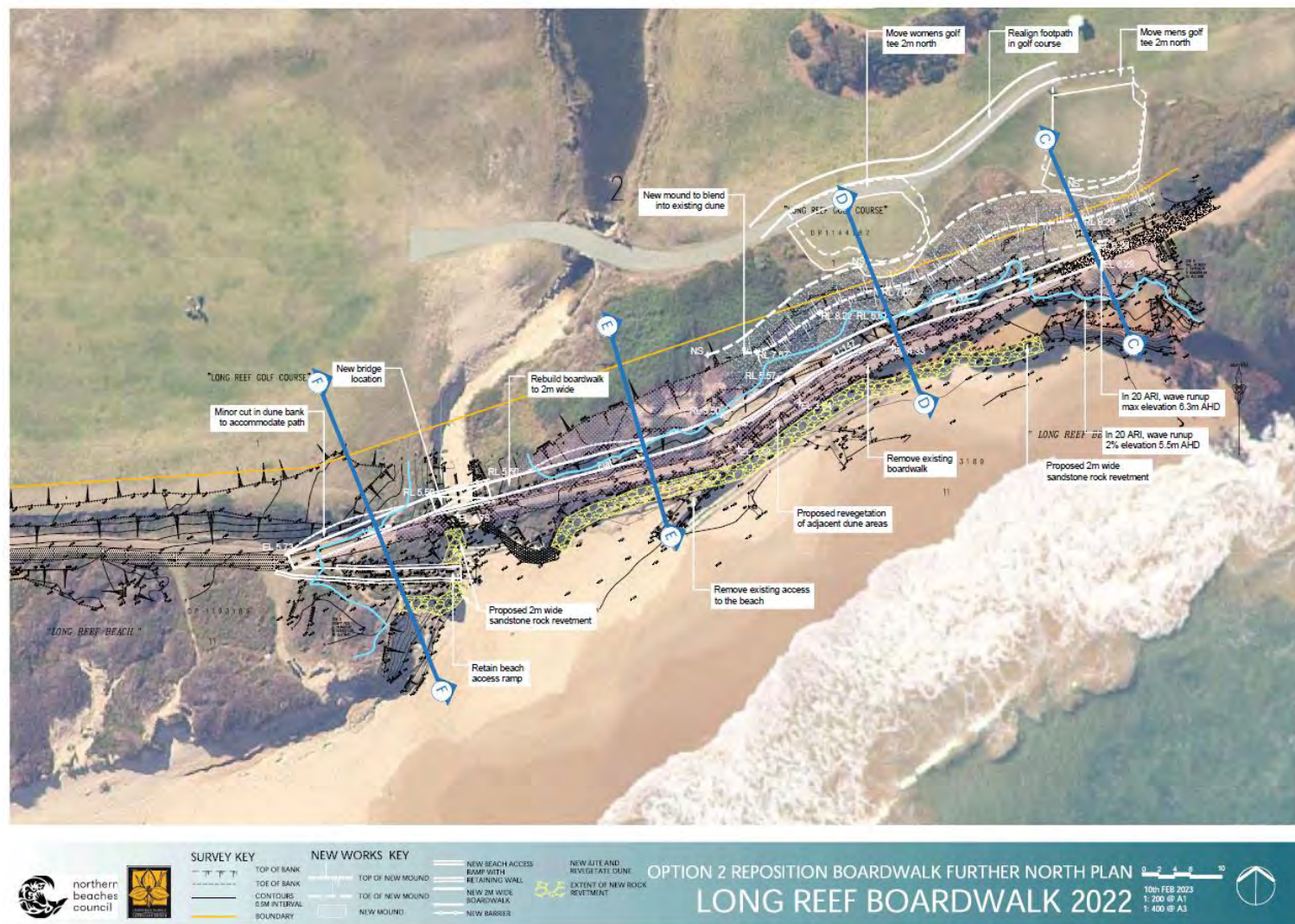


Figure 4: preliminary draft of proposed works within the study area



1.4 OBJECTIVES OF THE ABORIGINAL CULTURAL HERITAGE ASSESSMENT

The archaeological investigation was undertaken to meet the requirements of the Code of Practice and ACHCRs.

The purpose of the archaeological investigation is to understand and establish the potential harm the proposed development may have on Aboriginal cultural heritage within the study area, both tangible and intangible.

Aboriginal community consultation was undertaken for the project with the aim of:

- Identifying the Aboriginal community members who can speak for Country within which the study area is located;
- Involving the Aboriginal community in making decisions about the management of their cultural heritage;
- Identifying, assessing and recording Aboriginal heritage values within the study area;
- Preparing an assessment of the cultural heritage values in consultation with the Aboriginal community;
- Identifying the potential impact of the proposed development on the assessed cultural heritage values; and
- Developing conservation and mitigation strategies for these values, with the aim of minimising impacts to cultural heritage wherever possible.

In addition, this report provides a significance assessment of the identified Aboriginal heritage values, as defined by the registered Aboriginal stakeholders (RAPs) for the project. Aboriginal people are the primary determinants of the significance of their cultural heritage and therefore Apex Archaeology cannot make a determination on the cultural significance without the input of the RAPs.

Any works which disturb the ground surface have the potential to impact Aboriginal archaeological deposits and therefore an assessment of whether the study area contains such deposits is required prior to the commencement of remediation works. An assessment of whether the proposed works would impact these deposits (if present) is also necessary, and identification of to what extent the deposits would be impacted is also required. The degree of impact which may be allowable is determined, in part, with consideration of the level of cultural significance attributed to the cultural values of the study area, both tangible and intangible.



2.0 ABORIGINAL CONSULTATION PROCESS

This section details the Aboriginal community consultation undertaken to assist in the heritage assessment of the study area. Aboriginal consultation in accordance with the *Aboriginal cultural heritage consultation requirements for proponents 2010* was undertaken by Apex Archaeology for this project.

Aboriginal community consultation is a requirement in order to make assessments of Aboriginal cultural values, as Aboriginal people are the primary determinants of the significance of their cultural heritage and therefore Apex Archaeology cannot make a determination on the cultural significance without the input of the RAPs. Aboriginal people often have a strong connection to their Country, and to their ancestors, both past and present.

Material evidence of past Aboriginal occupation of an area is a tangible link to the intangible traditions, lore, customs, beliefs and history. These intangible values provide a sense of belonging for Aboriginal people, and cultural heritage and cultural practices are kept alive through being incorporated into everyday life, which helps maintain a connection to the past and to the present. It is a vital part of the identity of Aboriginal people.

Therefore, it is important that Aboriginal people are afforded the opportunity to understand, comment on and have input into projects that may impact areas which may be culturally sensitive, or damage items of cultural significance. The process of Aboriginal community consultation provides this opportunity, and this ACHAR details the results of the consultation undertaken for this project.

2.1 THE CONSULTATION PROCESS

The *Aboriginal cultural heritage consultation requirements for proponents 2010* provide the process for undertaking consultation with the Aboriginal community. This process includes identification, registration, engagement and consultation with those Aboriginal people who may have cultural knowledge which is relevant to determining the cultural significance of Aboriginal objects and places which may be within the study area.

The Consultation Guidelines detail a number of stages for consultation, as follows:

- Identification of those people who should be consulted for the project
- Inviting Aboriginal people to register their interest in being consulted for the project
- Providing information regarding the nature and scope of the project to the Aboriginal people who have registered an interest in being consulted – the registered Aboriginal parties (RAPs)
- Providing opportunities for RAPs to comment on the proposed methodology for cultural heritage consultation



- Presenting information about the potential impacts of the proposed development for the RAPs to comment on
- Providing opportunities for RAPs to comment on the cultural significance of the proposed development area
- Providing opportunities for RAPs to comment on the draft reports detailing the results of the archaeological and cultural assessments for the project

2.2 STAGE 1 CONSULTATION: COMMENCEMENT

Stage 1 requires a list of Aboriginal people who may have cultural knowledge relevant to the area to be prepared from several sources of information. The first step requires enquiries to be made of certain statutory bodies regarding whether they are aware of Aboriginal people or organisations that may have an interest in the study area, and their contact details. Any Aboriginal people or organisations identified in this step must be contacted and invited to register an interest in the project. In addition, a notification must be placed in local print media requesting Aboriginal people or organisations to register their interest in the project. A list of those who register an interest must be compiled. A minimum of 14 days from the date of the letter or newspaper advertisement must be allowed for registrations of interest.

As a result of the Stage 1 activities, a list of Aboriginal people who wish to be consulted for the project is developed. These Aboriginal people become the registered Aboriginal parties – the RAPS – for the project.

Letters requesting the details of Aboriginal people who may hold cultural knowledge relevant to the study area and who may wish to be consulted for the project were sent to several statutory agencies on 1 May 2023. Copies of these letters and responses are attached in Appendix B. These Step 1 letters were sent to the following agencies:

- Heritage NSW
- Aboriginal Heritage Office (AHO)
- Northern Beaches Council (NBC)
- Metropolitan Local Aboriginal Land Council (MLALC)
- Office of the Registrar, Aboriginal Land Rights Act 1983 (NSW) (ORALRA)
- Greater Sydney local Land Services (GSLLS)
- Native Title Services Corp (NTSCorp)

Responses were received from Heritage NSW, AHO and GSLLS. Heritage NSW provided a list of Aboriginal people and organisations. The AHO advised their office works in partnership with the Councils in northern Sydney and Strathfield and do not need to be consulted. GSLLS advised to contact the Heritage NSW. The individuals and organisations provided by the agencies were invited to participate in consultation for the project.

An online search of the National Native Title Tribunal (NNTT) did not identify any Native Title Claimants over the study.



The Aboriginal people and organisations identified during this initial stage were contacted via letter (email if provided or via post if no email address given) on 16th May 2023, inviting them to register an interest in the project. Registrations were accepted until 30th May 2023. This is Step 2 of Stage 1 of consultation. Copies of these letters are attached in Appendix C.

In addition, an advertisement was placed in the *Northern Beaches Advocate* on 16 May 2023, inviting registrations of interest from people who may have cultural knowledge of the project area. registrations were accepted until 30 May 2023. A copy of the advertisement is attached in Appendix D.

A total of twelve Aboriginal people and organisations registered an interest in being consulted for the project. The following list comprises the registered Aboriginal parties (RAPs) for the project:

- A1 Indigenous Services
- BH Consultants
- Butucarbin
- Raw Cultural Healing
- Didge Ngunawal Clan
- Thomas Dahlstrom
- Goobah Cultural Heritage Services
- Guringai Tribal Link
- Guntawang Aboriginal Resources
- Kamilaroi Yankunytjatjara Working Group
- Murrabidgee Mullangari Wailwan

2.3 STAGE 2 & 3 CONSULTATION: PRESENTATION AND GATHERING OF INFORMATION

During Stage 2, information about the proposed project is provided to the RAPs, including location, scale, proposed development plans, timeframes, methodologies and any other relevant details relating to the project. This information can be provided in writing or at a meeting (or both), and an opportunity for the RAPs to visit the site may also be provided.

During Stage 3, RAPs are invited to share information about the cultural significance of the study area, which can assist in the assessment of the cultural significance of the Aboriginal objects and/or places within the study area. The cultural heritage assessment informs and integrates with the scientific assessment of significance and therefore can assist in the development of mitigation and management measures for the project.

A methodology detailing how this information will be gathered must be provided to the RAPs for comment and a minimum of 28 days must be allowed for responses to be received. Any feedback must be considered and implemented as appropriate into the methodology.

Stage 2 and 3 can be undertaken concurrently. The information about the project and the methodology for seeking cultural knowledge can be provided in the same written documentation or at the same meeting.



Details of the proposed project and the proposed methodology for undertaking the cultural heritage and archaeological assessments for the project were provided in writing to each of the RAPs on 31 May 2023. Comments were accepted until 28 June 2023. A total of five responses were received. Three of the respondents; A1 Indigenous Services, Goobah Cultural Heritage Services, and Wailwan all supported the methodology. Kamilaroi-Yankuntjatjara Working Group supported the methodology and the potential test excavations.

Justine Coplin from Darug Custodian Aboriginal Corporation (DCAC) emailed a letter in response on the 1st June and advised that as the study area is on the coast there is a possibility for human burials. Justine recommended that archaeological test excavations be undertaken. Rebecca Bryant from Apex Archaeology replied to DCAC on the same day and advised that she has just commenced the background research but is aware that numerous burials have been found in the Northern Beaches within rockshelters, shell middens and sandbodies, and the potential for burials would be carefully considered as part of the assessment.

No other comments were received from any of the other RAPs for the project, and no specific cultural information pertaining to the study area was received from any of the RAPs for the project during this stage of consultation. The RAP responses are attached in Appendix E.

2.4 STAGE 4: REVIEW OF DRAFT REPORT

Stage 4 sees the preparation of the draft ACHAR, which details the results of the cultural heritage assessment. The draft is provided to the RAPs for their review and comment. A minimum of 28 days to comment on the ACHAR must be allowed. All comments must be addressed in the final document and the proponent's response to RAP comments must be included. Copies of any submissions received from RAPs must be included in the final ACHAR.

The draft report was sent to all RAPs on the 11th November 2023. Thomas Dahlstrom called Jenni Bate on 12th November 2023 and advised he disagreed with the ethnohistory provided in the report, but when JB asked if he was able to suggest other resources to consider, no further information was provided. As such, no amendment to the ethnohistory has been made. No other comment regarding the report recommendations was made by Mr Dahlstrom.

Goobah Developments provided a response on the 13th November 2023 and advised that they "support the following ACHA and AR for the works at Long Reef Boardwalk and wish to be kept informed on any further developments". Phil Khan from Kamilaroi-Yankuntjatjara Working Group responded on the 7th December 2023 and advised that they "agree and support the recommendations". No other comments were received from the RAPs.



3.0 SUMMARY AND ANALYSIS OF BACKGROUND INFORMATION

This section presents information about both the physical and cultural landscape in which the study area is located, as well as previous archaeological and ethnohistorical studies, to provide context and background to the existing knowledge of Aboriginal culture in the area.

3.1 EXISTING ENVIRONMENT

The study area is located within the geological structure known as the Sydney Basin, which is roughly bounded by the Great Dividing Range to the west, the coast to the east, Newcastle to the north and Durras, near Batemans Bay, to the south. More specifically, the study area is located on the southern side of Long Reef Headland within Sydney's Northern Beaches (Branagan & Packham 2000). The headland which slopes down in a westerly fashion from its eastern most point, is not a part of mainland Australia. It is a section of exposed bedrock that is connected by a tombolo, which comprise sand deposits and form a sand spit (Retallack 2015).

3.1.1 GEOLOGY, SOILS AND TOPOGRAPHY

The underlying geology of Long Reef Headland is varied and complex. The Narrabeen Group of sedimentary rocks that were formed in the Triassic period (approx. 250 mya to 200 mya) are exposed here. This stratum is not often seen along the Sydney Coast because it lies below the Hawkesbury Sandstone, that is the geological layer usually visible in the cliff lines. The Bulgo sandstone that is within the study area is within the Narrabeen Group and is not as fine-grained as the Hawkesbury. It is capped by the Bald Hill Claystone, which is a striking red colour due to the high iron content. (Retallack 2005).

There are also exposures of other claystones and shales that can contain fossils from ancient animals and plants. For example, the remnants of a jawbone measuring one meter from a giant salamander-like amphibian was found at Long Reef. Additionally, a 2 m volcanic dolerite dyke has also protruded through the sandstone but has largely been mined so has been significantly reduced in size.

Long Reef Headland contains three soil landscapes: the Newport, North Head and Ettalong. The Newport and North Head soil landscapes are sandy soils that can be quite deep, especially the North Head which can be over 2 m deep. The Ettalong soil landscape is mapped in a small swampy area in the lower-lying western portion of the headland. The soils in this type of landscape can also be very deep (>150 cm) but comprise of spongy dark organic peat that has a high component of decomposing vegetation.

The study area falls entirely within the Newport soil landscape which comprises gentling undulating plains to rolling rises of shallow wind-blown Holocene sands. The A1 topsoil can be up to 30 cm of loose dark brown loamy sand that overlies up to 50 cm of greyish yellow brown massive clayey sand, or this could be bleached loose sand. There can also be wind-blown sand that covers the underlying soil, or has been



deposited directly onto bedrock. Although archaeological remains tend to be contained in the top A1 horizon and A2 by downward movement, wind-blown sand accumulation in areas like this can mean that original surfaces may have been buried quite deeply, depending on the land scape formation.

3.1.2 FLORA AND FAUNA

The plants found within the Long Reef headland varied depending on the underlying soils. Around the edge of the swamp there would have been a variety of trees including: *Melaleucas* (paperbark), *Casuarinas*, (swamp-oak), *Livistona* (cabbage gum) and *Eucalyptus* (Gum trees). There also would have been sedges and rushes . plant species. The coastal sand dunes would have supported *Banksia* species as well as *Eucalyptus* like red bloodwood, and *Angophora*, such as smooth-barked apple.

There would have been a large variety of animals including brushtail and ringtail possums, eastern grey kangaroos, swamp wallabies, bats, parrots, as well as reptiles, amphibians and fish, crustaceans and shellfish on the rock platforms that border the beach.

Many of these plants and trees would have provided resources for Aboriginal people; to fulfill dietary needs, provide raw material for tools and implements, and used for medicinal purposes. For example: the various Eucalypts would have provided wood for shields, canoes and coolamons, and fur from possums would have been sewn together using a needle made from animal bones and thread made from the sinew of animal's muscles.

3.1.3 HYDROLOGY

There are no fresh-water creeks mapped within the study area itself. However, there is an unnamed drainage line that appears to originate in the southwestern section and extend to approximately 40 m to the north of the study area. Recent aerial photos shows a man-made channel has extended this drainage line, which now cuts through the study areas from north to south and empties onto Long Reef Beach. Although there may have a freshwater source within the headland from drainage line and springs that can be found in sandstone geology, it is not clear how reliable these would have been.

In general, remnants of former Aboriginal occupation sites tend to be found close to a reliable fresh water source that would be considered a higher-order water course. For example, watercourse classification ranges from first order through to fourth order (and above), with first order being the lowest, ie a minor creek or ephemeral watercourse, and fourth or above being a large watercourse such as a river, as defined by the Department of Planning and Environment (Figure 5). This classification is recognised as a factor which helps the development of predictive modelling in Aboriginal archaeology in NSW.

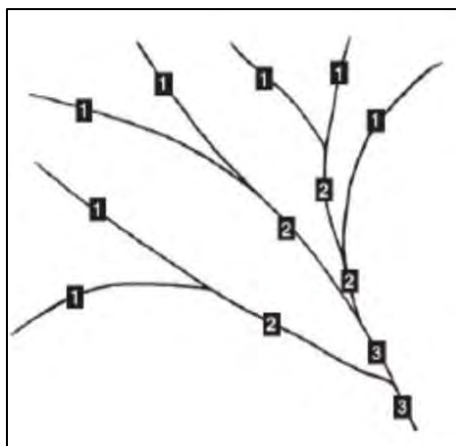


Figure 5: The Strahler system (Source: Department of Planning and Environment 2016).

3.2 MATERIAL EVIDENCE OF ABORIGINAL LAND USE

3.2.1 AHIMS

An extensive search centred on the study area and covering a 5,000 m x 10,000 m was conducted on 3 July 2023. This resulted in the identification of 62 registered sites including one within the immediate study area. This is registered as AHIMS #45-6-0741 (QPS). The site features listed are ‘shell’ and ‘artefact’.

Sites can be recorded as a particular site type: closed or open. For the 25 sites in the search area, 14 (56%) are registered as open sites and 11 (44%) are rockshelters. Rockshelters are generally present where bedrock outcrops in escarpments. Within the search area this landscape is seen in the elevated cliffs fringing Broad Water and Fagans Bay.

Sites are also recorded with one or more of a set of twenty-two site features specified by AHIMS. For the 62 sites in the search area, a total of 75 instances of six site features have been recorded (Table 1). The two site features that have been most commonly recorded are art (pigment or engraving), and shell, followed by stone artefacts. The site feature ‘shell’ generally indicates the presence of middens. Eight of the 18 midden sites are in rockshelters and the remaining ten are in open sites. There are four grinding groove sites that occur on exposed sandstone platforms. There are also two burials of Aboriginal people that have been recorded.

Table 1: Site features recorded for 62 sites within the 10 km x 5 km search area

Site Features	No. of instances	% of total
Art (Pigment or Engraved)	32	43
Shell	18	24
Stone artefacts	16	21
Grinding Grooves	4	6
Potential Archaeological Deposits	3	3
Burial	2	3
Total	75	100



Figure 6: AHIMS sites within the study area and immediate surrounds

FIGURE NOT INCLUDED IN PUBLIC REPORT



3.2.2 PREVIOUS ARCHAEOLOGICAL ASSESSMENT

a number of archaeological investigations have been undertaken within the Northern Beaches area including Long Reef Headland since the late 1800s. These have been for research projects and to fulfill statutory requirements prior to the construction of buildings and civil works. The results of these investigations have demonstrated that this resource-rich coastal area has been used by Aboriginal people for at least 4,000 years BP, but probably for much longer.

The excavations undertaken at the Angophora rockshelter in Avalon by McDonald in 1988 showed that the Aboriginal people that once lived in the Northern Beaches area for thousands of years used an extraordinarily wide-ranging selection of natural resources. This included shellfish collected from estuarine waterways and rocky coastal platforms that were eaten, and the shells modified to make implements such as fishhooks and scrapers. Native plants such as the *Xanthorrhoea* grass plant were processed to make resin to attach tools to wooden handle, twine was used to make baskets and nets, and seeds ground to make flour for food. Stone that was collected locally and brought into the area was used to make a wide variety of implements/weapons including, ground-edged artefacts (hatchets and Bulga knives), backed blades and scrapers. Small and large animals were caught for food and their bones were also sometimes used. For example, bone points were made by sharpening one or both ends. Some were used as tips on pronged fishing spears, and the large ones used as needles to puncture holes through animal skins to make cloaks. The discovery of the skeleton of the Aboriginal man at Narrabeen who had been speared to death over three thousand years ago, showed that that small stone backed blades were also used to inflict harm and could cause death.

Although the sandstone along the coastal area of the Northern Beaches was noted by previous investigations as generally unsuitable for engraving, a large number of interesting engravings of animals, tools and implements are found a little more inland on the western side of Pittwater Road around the Narrabeen Lake/Wakehurst area, Terry Hills and Belrose. Axe grinding grooves were also found in these areas along the creeks. However there was limited evidence found for occupation of these areas. This suggests that perhaps people visited here for more ceremonial activities but lived along the coast.

With regards to the current study area, except for sections within the coastal perimeter of Long Reef Headland, and its eastern point, the area now comprises Long Reef Golf Club. Prior to the construction of the golf club in the early 1920s, the area had been used for agricultural purposes since the early 1800s. These activities have resulted in large-scale disturbance and only a paucity of tangible evidence for previous Aboriginal visitation and/or occupation appears to remain. Eight of the nine sites currently registered as being within the headland are shell middens. The other is registered as a burial. Although another burial was noted to have been found during the construction of the Long Reef Golf Club on the northern side of the headland during construction,



this has not been verified¹. Additionally, the skull in the ‘burial’ was noted in 1940² to be eroding from an embankment on the northern side of the headland and registered as a site in 2005. However, there are no further details on the skull, including confirmation that it was a skull from an Aboriginal person.

These assessments are discussed in more detail in the Apex Archaeology (2023) Archaeological Report attached to this ACHA.

Table 2: Previous heritage assessments undertaken by archaeological consultants in the region

Consultant	Date	Sites Identified	Region
Campbell	1899	Numerous	Broken Bay
Ross	1974	Numerous	Deep Creek
Denis Byrne	1984	Numerous	Palm Beach
Brayshaw McDonald	1987	Numerous	Queenscliff – Palm Beach
McDonald	1988	One	Bilgola/Avalon
Mary Dallas	1990	One	Cromer
R.G. Gunn	1992	Numerous	Garigal National Park
Tessa Corkill	2005	None	Palm Beach to Botany Bay
Fullagar et al.	2009	One	Narrabeen
Artefact	2020	None	Frenchs Forest
Coast History and Heritage	2021	None	Manly
Bryant	2023	Numerous	Northern Beaches

3.3 ETHNOHISTORY

Ethnohistorical evidence is based on the reports of colonisers and do not tend to include the Aboriginal perspective, leading to a Eurocentric view of Aboriginality. Additionally, historical records can be contradictory and incomplete regarding the exact tribal boundaries and locations of ceremonial or domiciliary activities of Aboriginal people pre-contact within the Northern Beaches region. It is important to note that:

The problem associated with ethnohistoric documents include their tendency to record unusual, rather than everyday events, and their focus on religious behaviour to the exclusion of woman and children (Attenbrow 1976:34; Sullivan 1983:12.4).

The first recorded contact with Aboriginal people within the northern beaches area was detailed in the diaries of officers from the First Fleet less than two months after the colony established a settlement in Port Jackson in Sydney. An excerpt from Naval Officer, William Bradley’s 1788 journal details that a party of Marines and boat crew travelled by boat to Broken Bay at the northern end of Pittwater Peninsula on 2 March 1788. Along the way they stopped at Spring Cove, near Little Manly Beach. Here they

¹ Rebecca Bryant from Apex Archaeology contacted Ben Russell, the General Manger of Long Reef Golf Club in August 2023 for more details. Ben advised he would pass on Rebecca’s details to the authors to contact her. No communication from them has yet been received.

² The information relating to the skull was reported to the Aboriginal Heritage Office (AHO) in 2005 by a woman who saw the skull eroding in 1940.



observed many women fishing in canoes that came alongside the boats. Governor Philip also exchanged a straw hat for a spear. The crew next noted Aboriginal people on highland at Long Reef, and at Palm Beach they were met by three canoes with one man and five women in them(1788: 87-94) .

The following day on 3 March in Brisbane Waters in Broken Bay they saw a number of stick huts covered in bark. The party observed that nearly all the women, except two, had lost two joints of the little finger on the left hand and most of them had a hole bored through the nose, as did the men. Other encounters over the next few days around the Pittwater area were described including the kindness of an old Aboriginal man and child that showed the exploring party where to land and offered them shelter in a cave from the rain. Aboriginal women were observed manufacturing shell hooks out of 'pearl oyster shell' and the processing of plant kernels to feed their children (Bradley 1788:92). These kernels would have been the seeds, referred to as macrozamia nuts. They are highly toxic and can cause death if not leached of the toxins first. The party also observed a straw hat and some strings and beads which had been given to Aboriginal people at Botany Bay and Port Jackson. This gave the exploring party the impression that the Aboriginal occupants of the area moved up and down the coast.

Tragically about a year after these initial observations were made, small pox, known as 'galla-galla' by the local Aboriginal population, swept through their communities and carried off great numbers. The disease was most probably brought in with the Europeans and it was estimated that in just over a year, well over half the original inhabitants of Sydney had died (Attenbrow 2010:21).

A review of numerous historical maps and documents published since the late 1800s by white settlers regarding the original Aboriginal inhabitants of the Northern Beaches area were shows there are contradictory theories on the names of the peoples who lived here at the time of contact. The research, debates and discussions have, and continue, to be centred around two main language groups; the Kuri-gai (Guringai) and Dharug (Daruk; Darug).

John Fraser's 1892 book was the first to state that the 'Kuri-gai' was a 'tribe' that stretched from the Macleay River (Northern Tablelands and Mid North Coast) to south of Sydney. It was suggested that it is possible that Fraser was influenced by the name of the Gringai tribe of the Hunter River district and 'kuri' for men. According to Laurie Bimson (2022), a traditional owner and director of the Guringai Tribal Link Aboriginal Corporation, Guringai Country is considered to extend from the Lane Cove River in Sydney to Lake Macquarie. In 2015, the Aboriginal Heritage Office (AHO) that is based in Sydney and supports a number of local government councils issued a document titled 'Filling a Void'. This was in response to numerous inquiries they had received by local councils and the general public regarding the historical use of the word 'Guringai'. The AHO notes that regarding the Sydney area, original documents from those on the First Fleet recognised that there was a distinction in language or dialect between the



Aboriginal people of the coast, inland and those further north of Broken Bay, but there was no record of the word Kuring-gai in the early accounts.

In the 1940's anthropologist and archaeologist Norman Tindale, who produced one of the most influential assessments of Aboriginal language and clan groupings for the whole of Australia in 1940, shows 'Daruk' and 'Kameraigal' tribal names extending from around Penrith in the West to the east coast between Port Jackson and Broken Bay.



Figure 7: Excerpt of Tindale's 1940s Tribal Names map

In 2010 archaeologist Val Attenbrow published a second edition of her book 'Sydney's Aboriginal Past'. The book brings together and assesses primary and secondary archaeological, and historical sources. It also included a review of local clan names and languages. Attenbrow's considered opinion was that the boundaries are roughly as follows:

- Darug, coastal dialect/s – the Sydney Peninsula (north of Botany Bay, south of Port Jackson, west to Parramatta), as well as the country to the north of Port Jackson, possibly as far as Broken Bay;
- Darug, hinterland dialect – on the Cumberland Plain from Appin in the south to the Hawkesbury River in the north; west of the Georges River, Parramatta, the Lane Cover River and Berowra Creek;
- Dharawal – from south side of Botany Bay, extending south as far as the Shoalhaven River; from the coast to the Georges River and Appin, and possibly as far west as Camden,
- Gundungurra – southern rim of the Cumberland Plain west of the Georges River, as well as the southern Blue Mountains. (Attenbrow 2010: 34)



Attenbrow did not use Guringai as a name for the language spoken north of Port Jackson but rather extended the coastal dialect of Darug across from the Sydney Peninsula and possibly as far north as Broken Bay. Attenbrow (2010:35) also commented on the naming of languages and the modern use of these names by Aboriginal communities:

Naming languages and the groups who spoke them became important in the late 19th century when word lists and language distributions began to be discussed and published in the anthropological literature. The use of these language group names by present-day Aboriginal communities as a way of maintaining local identity and affiliations with land over areas that incorporated more than one clan estate has become common in recent time, especially for addressing issues such as land claims and funding. This is particularly the case in areas such as the Sydney region where the original land-based entities such as clans who had responsibilities for estates in pre-colonial times have not survived, though their descendants still live in many parts of the region. It is a valid use of the language names, but it also has to be remembered that, because of the history of events that has taken place in the Sydney region, the present composition of groups using the language names and the boundaries within which they operate are, in some places, quite different to those of the past. (Attenbrow 2010, p. 35)

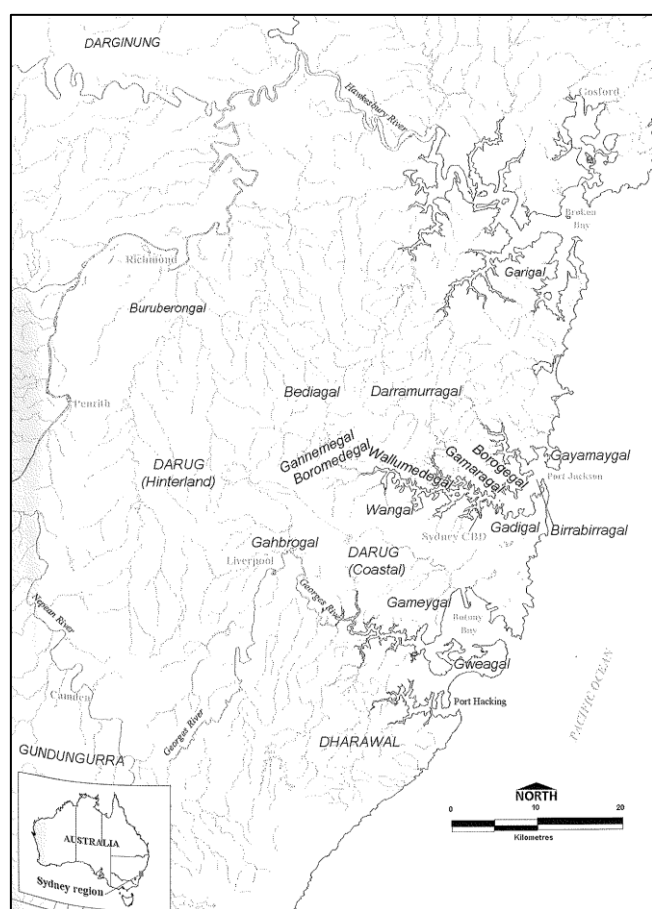


Figure 8: Aboriginal language groups that are labelled in entirely in capital letters (Attenbrow 2010: 23)



Although there is conflicting historical documentation of the people who once inhabited the Northern Beaches area it is apparent, as evidenced in historical and archaeological evidence, that a thriving Aboriginal population inhabited the area prior to colonisation. The arrival of European settlers dramatically and negatively impacted the Aboriginal people of the Northern Beaches area through the inadvertent introduction of disease such as small pox, and later through the appropriation of their native lands.

In general, it is believed that Aboriginal society was constructed of a hierarchy of social levels and groups, with fluid boundaries (Peterson 1976). The smallest group comprising a family of a man and his wife/wives, children and some grandparents, referred to as a 'clan' (Attenbrow 2010). These clans formed bands, which were small groups of several families who worked together for hunting and gathering purposes (Attenbrow 2010). Regional networks were formed containing a number of bands that generally shared a common language dialect and/or had a belief in a common ancestor. Networks would come together for specific ceremonial purposes.

As emphasised by Havergal, (cited in Penfold 2017), people's expert knowledge and ontological connections to land and Country was not defined by boundaries, white picket fences, or a legal document denoting ownership. As explained by Wellington (2017), it was "more like a connected feeling between everything, there was no such thing as fencing...It was like a fluid landscape".

According to Attenbrow (2010) the traditional lifestyles of Aboriginal groups depended largely on the environment in which they lived. For example, people with the hinterland region relied on animals such as wallabies, kangaroos, possums, small birds, freshwater fish and water birds for animal protein. This would have been complemented by berries, tubers, seeds, leaves and nectar. Coastal groups, such as those who would have lived within and/or visited the study area, would have also used these food resources. However they would also have had access to marine and estuarine resources within the Long Reef headland and Northern Beaches area As detailed in the Apex Archaeology Archaeological Report attached in the appendix to this report, a rock shelter that had been subject to archaeological excavation in Avalon within the Northern Beaches showed Aboriginal people living within this coastal region of Sydney used an extraordinary breadth and depth of natural resources within their surrounds.

3.4 LIMITATIONS

This report relies in part on previously recorded archaeological and environmental information for the wider region. This includes information from AHIMS, which is acknowledged to be occasionally inaccurate, due to inaccuracies in recording methods. No independent verification of the results of external reports has been made as part of this report.

It should be noted that AHIMS results are a record only of the sites that have been previously registered with AHIMS and are not a definitive list of all Aboriginal sites



within an area, as there is potential for sites to exist within areas that have not previously been subject to archaeological assessment.

Field investigations for this report included survey. The results are considered to be indicative of the nature and extent of Aboriginal archaeological remains within the study area, but it should be noted that further Aboriginal objects and sites which have not been identified as part of this assessment may be present within the wider area.

It is recognised that Aboriginal people are the primary determinants of the significance of their cultural heritage, and as such, Apex Archaeology have relied on the Aboriginal community to provide cultural knowledge regarding the site, where they are willing and able to share such knowledge. However, there may be occasions where RAPs are unwilling or unable to share cultural knowledge regarding the site and thus our assessment of significance relies on scientific assessment only.



4.0 ABORIGINAL CULTURAL HERITAGE SIGNIFICANCE ASSESSMENT

4.1 INTRODUCTION

Cultural or social significance can be defined as relating to the spiritual, traditional, historical and/or contemporary associations and values attached to a place or objects by Aboriginal people. Further, the tangible and intangible evidence of their cultural heritage is valued by Aboriginal people as it forms an essential part of their cultural identity and their connection to Country (DECCW 2010a).

The *Aboriginal cultural heritage consultation requirements for proponents 2010* (DECCW 2010a) acknowledge that:

- Aboriginal people have the right to maintain their culture, language, knowledge and identity
- Aboriginal people have the right to directly participate in matters that may affect their heritage
- Aboriginal people are the primary determinants of the cultural significance of their heritage

Undertaking consultation with Aboriginal people ensures that potential harm to Aboriginal objects and places from proposed developments is identified and mitigation measures developed early in the planning process.

4.2 CRITERIA

The Burra Charter is considered an appropriate framework for the assessment of cultural heritage, which can be made based on the following assessment criteria:

- **Social value:** Also referred to as cultural value, this criterion considers the spiritual, traditional, historical or contemporary associations an area or place has for Aboriginal people
- **Historic value:** the relationship between a place and people, events, phases or activities of importance to the Aboriginal community
- **Scientific value:** assessment under this criterion considered the ability of a landscape, place, area or object to inform scientific research and/or analysis and to assist in answering research questions
- **Aesthetic value:** the ability of a place, area, landscape or object to demonstrate aesthetic characteristics, or possess creative or technical values

These should be graded so as to allow the significance to be described and compared as high, moderate or low.

4.3 SIGNIFICANCE ASSESSMENT

SOCIAL VALUE

The Aboriginal community are best placed to make a determination of the social or cultural value of the study area. No comments were received from the RAPs



regarding the social value of the study area and therefore no comments regarding the specific social value of the study area can be made. It is important to note that many landscapes are considered part of a cultural landscape and therefore hold social and cultural significance to Aboriginal people. It is noted that Long Reef Headland region generally contains areas highly significant to the Aboriginal people of the region.

HISTORIC VALUE

One previously recorded site is within the study. Evidence of shell midden material would provide a link to Aboriginal people within the headland in the past. However, no evidence remains of the shell midden that was originally recorded. Shell deposit is not rare in and of itself, and therefore the site is considered to have little historical value with regard to Aboriginal heritage located within the assessed study area. The level of subsequent disturbance within the site has resulted in the historic value of the site being assessed as low.

SCIENTIFIC VALUE

The assessed study area is not considered to have any specific scientific value. The exposed shell deposit is of low research or educational value due to its fragmentary nature and lack of evidence of associated Aboriginal cultural material, such as stone and shell artefacts. Evidence of Aboriginal cultural material may be contained in subsurface deposits in the surrounding areas, but these will not be impacted by the proposed remediation works. As such, the scientific value of the study area is considered to be low.

AESTHETIC VALUE

Generally, aesthetic value is determined by the response evoked by a setting. The study area borders the Pacific Ocean on southern side of Long Reef Headland. It would not have been protected from the strong southerly winds that often impact the exposed area. However, when there is either no wind or light wind, it is a pleasant beach setting. Based on these considerations it would have high aesthetic value in certain weather conditions.

4.4 CULTURAL SIGNIFICANCE ASSESSMENT

Generally, all Aboriginal sites are of high significance and importance to the Aboriginal community, both locally and more broadly. The Aboriginal social or cultural value of the study area can only be determined by the Aboriginal community and to date, no specific comments have been received regarding the social significance of the study area. However, Justine Coplin from Darug Custodian Aboriginal Corporation noted that the area is highly significant the Darug people due to their connection to sites and continued occupation.



5.0 PROPOSED ACTIVITY

The proposed works will be within the study area that currently contains a boardwalk, bridge, drainage line and walking track on the southern side of Long Reef Headland. A small section of landscaped turf within the southern boundary of Long Reef Golf Course will also be impacted. Sections of the boardwalk have collapsed due to wave action from the beach and other sections have been subject to erosion of the underlying soil and geology due to pedestrian impacts and natural causes.

As such, the current draft plans propose to remove the existing boardwalk and bridge, and construct a new one further to the north away from the impact zone of the ocean waves. These activities would include the construction of a new 3-m wide fibreglass reinforced polymer (FRP) and wood board walk, which is approximately 110 m long. This boardwalk would also bridge the open man-made creek that provides a drainage line that flows from the golf course on to Long Reef Beach. A new board and chain ramp for beach access is also proposed, along with the installation of large sandstone boulders to stabilise the bank around the access ramp and both sides of the drainage line. The area will also be revegetated in sections through

The Men's and Women's Tees on the 17th hole would also be moved approximately 2 m to the north. This would involve the removal of the existing section of the walking path within the golf greens that measures approximately 47 m long x 2 m wide. A new section with the same dimensions would be installed approximately 2 m north from the existing footprint. The total excavation depth within the greens area is proposed by Thompson Berrill Landscape to be less than 300 mm (Pers coms Yan 24th January 2023).

5.1 POTENTIAL IMPACT

There is one Aboriginal site registered as being located within the study area. It is AHIMS #45-6-0741 that was recorded in 1988 and registered as a shell midden. An attempt was made to relocate the site during an inspection of the study area on 21st July 2023 by three archaeologists from Apex Archaeology and Justine Coplin from Darug Custodian Aboriginal Corporation. There was no evidence of the site within the registered coordinates. Instead, the area was severely eroded and the site is considered destroyed through erosion. As no other sites were identified during the inspection the proposed works will not be impacting a known registered Aboriginal site.

5.2 IMPACT TO CULTURAL HERITAGE VALUES

The level of disturbance present within the site has reduced the potential for the proposed works to impact on Aboriginal cultural heritage values to negligible. It is noted that areas which have evidence of Aboriginal occupation are of significance to Aboriginal people, even when that physical evidence no longer exists. Sites are



also considered to represent an element of a cultural landscape, and impact to the wider landscape must be considered as part of an assessment.

The proposed works are considered unlikely to impact on the Aboriginal cultural values of the area. Replacement of the boardwalk, albeit in a slightly different location, is unlikely to impact on the cultural values, particularly as the works are proposed within an area demonstrated to be highly disturbed (see attached AR for detailed assessment of previous disturbance).

5.3 JUSTIFICATION

The proposed works are required to provide safe pedestrian access through this section of Long Reef headland and to avoid damaging storm surges which have impacted the existing boardwalk.



6.0 AVOIDING AND MINIMISING HARM

6.1 AVOIDANCE OF HARM

The study area no longer contains the Aboriginal site AHIMS #45-6-0741 and no evidence of archaeological material was identified during the assessment. Therefore no harm avoidance or mitigation is necessary.

6.2 ECOLOGICALLY SUSTAINABLE DEVELOPMENT

It is a requirement of Section 2A(2) of the NPW Act to apply the principles of Ecologically Sustainable Development (ESD) when considering any impact to Aboriginal objects and places. ESD integrates economic and environmental considerations, which includes cultural heritage, into decision-making processes. In general, ESD can be achieved through consideration and implementation of two key principles, being intergenerational equity and the precautionary principle.

Intergenerational equity refers to the present generation having consideration for the health, diversity and productivity of the environment for those generations to come. In terms of Aboriginal cultural heritage, this relates to cumulative impacts to Aboriginal objects and places within a region. Intergenerational equity therefore relies on the understanding that a reduction in the number of Aboriginal objects and places within a region results in fewer opportunities for Aboriginal people to access their cultural heritage in the future. Thus, it is essential to understand what comprises the Aboriginal heritage resource, both known and potential, when assessing intergenerational equity within a region.

The precautionary principle relates to threats of serious or irreversible environmental damage, and that lack of scientific certainty regarding the degree of potential damage should not be a reason to postpone adequate reasonable measures to prevent harm to the environment. Regarding Aboriginal cultural heritage, the precautionary principle relates to where a proposed development may seriously or irreversibly impact Aboriginal objects or places, or their significance; and where there may be uncertainty relating to the integrity, rarity or representativeness of Aboriginal cultural values. The Code of Practice outlines that a precautionary approach should be taken to avoid or reduce damage to Aboriginal objects or places, with cost-effective measures implemented wherever possible. Additionally, a cumulative impact assessment should be completed to determine how the proposed development would impact the cultural resource in the wider region.

Consideration should be given to the significance of the sites present within an area, and whether they are able to transmit cultural information to future generations, or to act as teaching aids.

The site AHIMS #45-6-0741 that was recorded as being within the study area no longer exists. Additionally the whole area has been highly disturbed by man-made activities and natural erosion from the elements. This has been further exacerbated by rising sea levels, due to climate change.



Although the specific study area would have once had high cultural significance that could be seen in the archaeological evidence it is unlikely any would remain in context. Therefore the assessed study area is considered to have low cultural significance, based on the archaeological evidence and information available at this stage.

The study area had been highly disturbed by previous activities and the proposed works are considered unlikely to impact on any intact deposits in the area.

6.2.1 INTERGENERATIONAL EQUITY

As no Aboriginal cultural material was identified within the study area, it is considered that the impact of the proposed works within this site would be negligible with regards to the ongoing transmission of cultural knowledge to future generations. The proposal is not considered to impact on intergenerational equity.

6.2.2 CUMULATIVE IMPACTS

The cumulative impact of the project on the Aboriginal cultural resource must be considered as part of an assessment, and managed appropriately and sensitively. Avoidance of impact is the best practice approach wherever possible, particularly for sites that are intact, contain high numbers of artefacts, or are considered significant to the community.

In terms of cumulative impact, the site no longer contains evidence of the Aboriginal site AHIMS #45-6-0741. Overall, it is considered that the proposal would have negligible impact on the Aboriginal cultural heritage of the region.

6.3 ABORIGINAL COMMUNITY INPUT

The RAPs have been consulted as part of this project, and their input, where received, has been incorporated into the report and recommendations.



7.0 RECOMMENDATIONS

The following recommendations are made on the basis of:

- The statutory requirements of the NP&W Act 1974;
- The requirements of Heritage NSW;
- The results of the cultural and archaeological assessment;
- An assessment of the likely impacts of the proposed development; and
- The interests of the registered Aboriginal stakeholders and the cultural heritage record.

It was found that:

- There was one previously identified Aboriginal site located within the study area (AHIMS #45-6-0741).
- The study area was considered to be highly disturbed by man-made and natural impacts from review of the historical documents and aerial images. This assessment was confirmed during the pedestrian survey and no evidence of (AHIMS #45-6-0741) or any other cultural material was identified during the physical inspection of the area.
- As there is no evidence of (AHIMS #45-6-0741) present within the study area, and given the significant impact to the area by erosion and natural factors, the site is now considered destroyed.
- The proposed work required within the study area will involve the removal of sections of the existing dune on the northern side of the current board walk and within areas around the 17th tees within the Long Reef Golf Club.

The following recommendations have been made.

RECOMMENDATION 1: NO FURTHER ARCHAEOLOGICAL ASSESSMENT REQUIRED

The Aboriginal archaeological potential of Long Reef Boardwalk, Collaroy, NSW has been assessed as negligible. No further archaeological assessment is required for the site prior to the commencement of proposed development activities. No Aboriginal Heritage Impact Permit (AHIP) is required prior to works commencing.

RECOMMENDATION 2: ABORIGINAL HERITAGE SITE INDUCTION

An Aboriginal heritage site induction should be presented to the site workers by a suitably qualified person. This induction will include the possible kinds of Aboriginal archaeological remains that may be contained within the sand bodies and it will outline the 'unexpected finds policy'.

RECOMMENDATION 3: INSTALLATION OF INTERPRETATION

It is recommended that consideration is given to installation of interpretive signage along the boardwalk to explain the Aboriginal history of the place and the continuing connection to Country.



RECOMMENDATION 4: DEVELOPMENT BOUNDARIES

The proposed development works must be contained within the assessed boundaries for this project. If there is any alteration to the boundaries of the proposed development to include areas not assessed as part of this archaeological investigation, further investigation of those areas should be completed to assist in managing Aboriginal objects and places which may be present in an appropriate manner.

RECOMMENDATION 5: REPORTING

One digital copy of this report should be forwarded to Heritage NSW for inclusion on the Aboriginal Heritage Information Management System (AHIMS).

One copy of this report should be forwarded to each of the registered Aboriginal stakeholders for the project.

RECOMMENDATION 6: STOP WORK PROVISIONS

Should unanticipated Aboriginal archaeological material be encountered during site works, all work must cease in the vicinity of the find and an archaeologist contacted to make an assessment of the find and to advise on the course of action to be taken. Further archaeological assessment and Aboriginal community consultation may be required prior to the recommencement of works. Any objects confirmed to be Aboriginal in origin must be reported to Heritage NSW.

Human remains of Aboriginal people have previously been recorded in sand bodies in coastal bays and open beaches within Sydney area including Long Reef headland. In the unlikely event that suspected human remains are identified during works, all activity in the vicinity of the find must cease immediately and the find protected from harm or damage. The NSW Police and the Coroner's Office must be notified immediately. If the finds are confirmed to be human and of Aboriginal origin, further assessment by an archaeologist experienced in the assessment of human remains and consultation with both Heritage NSW, the Aboriginal Heritage Office and the RAPs for the project would be necessary.



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