

Project Number: HN000087-A



# ABORIGINAL CULTURAL HERITAGE ASSESSMENT REPORT – 18 MAC LEAY AVENUE, WOY WOY

FINAL 11/11/2020 PUBLIC VERSION

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# Executive Summary

Heritage Now has been engaged by Pacific Link Housing Limited, a tier 1 Registered Not for Profit Community Housing Provider, to conduct an Aboriginal Cultural Heritage Assessment (ACHA) for 18 Macleay Avenue, Woy Woy.

The Project Area is located at 18 MacLeay Avenue, Woy Woy (Lot 16 DP 255220). It is in the Central Coast Local Government Area (LGA) and within the Darkinjung Local Aboriginal Land Council (DLALC).

The proponent is rezoning the land for medium density residential development comprising villas, townhouses, or similar.

The AHIMS search results showed that there were no previously registered Aboriginal sites within the Project Area.

The Project Area was surveyed on 1 September 2020. The survey was attended by Amanda Shields from DLALC and Crystal Phillips from Heritage Now.

No Aboriginal sites or potential archaeological deposit were identified during the survey. No further archaeological investigation is required for the Project Area.

The report was sent to the Registered Aboriginal Parties and 28 days was provided for comment. All Parties that responded agreed with the recommendations provided in this report.

The works are to proceed in accordance with the recommendations below.

## **Recommendation 1**

All on-site personnel are to be made aware of their obligations under the *National Parks and Wildlife Act 1974*, through an onsite induction or other suitable format.

## **Recommendation 2**

In the unlikely event that Aboriginal or suspected Aboriginal archaeological material is uncovered during the development, then works in that area are to stop and the area cordoned off. The project manager is to contact the heritage consultant to make an assessment as to whether the material is classed as Aboriginal object/s under the *National Parks and Wildlife Act* and advise on the required management and mitigation measures. Works are not to re-commence in the cordoned off area until heritage clearance has been given and/or the required management and mitigation measures have been implemented.

## **Recommendation 3**

In the unlikely event that human remains, or suspected human remains are uncovered during the development, then works in that area are to stop and the area cordoned off. The project manager is to contact the NSW Police to establish whether the area is a crime scene. If it is not a crime scene, then Heritage NSW is to be notified via the Environment Line on 131555 and management measures are to be devised in consultation with RAPs. Works are not to recommence in the area until the management measures have been implemented.

# Acronyms, Terms and Definitions

Acronym	Definition
ACHA	Aboriginal Cultural Heritage Assessment
AHD	Australian Height Datum
AHIMS	Aboriginal Heritage Information System
AHIP	Aboriginal Heritage Impact Permit
DLALC	Darkinjung Local Aboriginal Land Council
DP	Deposited Plan
EP&A Act	Environment and Planning Act
ESD	Ecologically Sustainable Development
ICOMOS	International Council on Monuments and Sites
LEP	Local Environmental Plan
LGA	Local Government Area
NPW Act	National Parks and Wildlife Act
NPWS	National Parks and Wildlife Service
NSW	New South Wales
OEH	Office of Environment and Heritage
PAD	Potential Archaeological Deposit
RAPs	Registered Aboriginal Parties



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# 1 Introduction

Heritage Now has been engaged by Pacific Link Housing Limited, a tier 1 Registered Not for Profit Community Housing Provider, to conduct an Aboriginal Cultural Heritage Assessment (ACHA) for 18 Macleay Avenue, Woy Woy.

The aim of the ACHA is to identify Aboriginal cultural heritage values through consultation with Registered Aboriginal Parties (RAPs). The ACHA enables those values to be respected throughout the process through the identification of appropriate mitigation measures to avoid and/or minimise harm to Aboriginal cultural heritage and values.

## 1.1 Project Area

The Project Area is located at 18 MacLeay Avenue, Woy Woy (Lot 16 DP 255220) (Figure 1). It is in the Local Government Area (LGA) of Central Coast and within the Darkinjung Local Aboriginal Land Council (DLALC). The Project Area extent is approximately 5650 square metres.

## 1.2 Project Proposal

The proponent is rezoning the land for medium density residential development comprising villas, townhouses, or similar.

The residential development will involve clearing of vegetation as well as cut and fill to prepare the Project Area. It will require the installation of below and above ground services including water and sewer, telecommunications and electricity. It will also require the formation of roads and access ways to the residential lots as well as the building of individual residences.

## 1.3 Project Methodology

This ACHA report has been prepared in accordance with, but not limited to, the National Parks and Wildlife Act 1974, the National Parks and Wildlife Regulations 2009, the Environmental Planning and Assessment Act 1979, Gosford Local Environmental Plan. The following guidelines and codes of practice have been used in preparing this ACHA report:

- Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW (OEH 2011)
- Aboriginal Cultural Heritage Consultation Requirements for Proponents (DECCW 2010a)
- Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW (DECCW 2010b)

In accordance with the guidelines this report has outlined the:

- The Project Area and proposed activity (project proposal) (Section 1.2 and 6.1)
- the Aboriginal consultation process (Section 3 and Appendix 1),
- provided relevant background information (Section 4.1 and 4.2),
- undertaken an assessment of cultural heritage values (Section 5),
- undertaken an impact assessment, including consideration of avoidance and/or mitigating harm (Section 6), and

- provided recommendations (Section 7).

## 1.4 Authorship and Copyright

This report has been written by Heritage Now Consultant Crystal Phillips with assistance from Trishia Palconit Heritage Consultant at Heritage Now. Technical input and quality review have been provided by Tessa Boer-Mah Principal Heritage Consultant at Heritage Now.

Heritage Now Pty Ltd retains the copyright of this report.





Legend

 Project Area

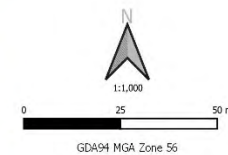


Figure 1: Project Area

## 2 Legislative Context

This section provides an outline of the Acts, Regulations and guidelines under which this assessment has been undertaken. It is for information purposes only and should not be taken as legal advice.

### 2.1 National Parks and Wildlife Act 1974

This Act contains the provisions for protecting Aboriginal objects in NSW. Aboriginal objects are protected regardless of whether they are in their original context (location) or not and it is an offence to harm an Aboriginal object regardless of whether you know it is an Aboriginal object or not. Protection under Section 86 of the Act is as follows:

- s86(1) A person must not harm or desecrate an object that the person knows is an Aboriginal object.
- s86(2) A person must not harm an Aboriginal object.
- s86(3) A person must not harm or desecrate an Aboriginal place.

Penalties for harming Aboriginal objects or Places range from \$80,000-\$800,000 for individuals and \$330,000-\$1,650,000 for corporations and may also include imprisonment. Under Section 87 there are certain defences from prosecution, these include that harm was authorised under an Aboriginal Heritage Impact Permit (AHIP) and actions were in accordance with the AHIP, that due diligence was exercised in relation to Aboriginal object/s and/or the activity was classified as low impact.

Under Section 89A Aboriginal object/s must be reported to the Office of Environment and Heritage (OEH) within a reasonable timeframe, unless it has previously been recorded and submitted to the Aboriginal Heritage Information Management System (AHIMS). Penalties for failure to report an Aboriginal object range from \$16,500 for individuals and \$33,000 for corporations.

### 2.2 National Parks and Wildlife Regulations 2009

This Regulation provides a framework for exercising due diligence and provides codes of practice in respect to Aboriginal objects (Section 80A) as well as defences for carrying out certain low impact activities (Section 80B). The Regulation also outlines requirements for Aboriginal consultation (Section 80C), particularly in relation to an Aboriginal Heritage Impact Permit. Under the Regulation the following codes of practice and guidelines are recognised, amongst others:

- *Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW*(DECCW 2010c),
- *NSW Minerals Industry Due Diligence Code of Practice for the Protection of Aboriginal Objects* (NSW Minerals Council 2010),
- *Aboriginal Cultural Heritage Consultation Requirements for Proponents*.(DECCW 2010a),
- *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW* (OEH 2011), and
- *Code of Practice for Archaeological Investigation of Aboriginal objects in NSW*(DECCW 2010b).



## 2.3 Aboriginal Land Rights Act 1983

This Act provides land rights to Aboriginal people through the Local Aboriginal Land Councils. It outlines a process for claiming unused Crown Land in NSW and for creating land use. It also allows for agreements to permit traditional hunting, fishing and gathering.

## 2.4 Environmental Planning and Assessment Act 1979

The Environmental Planning and Assessment (EP&A) Act provides triggers for undertaking environmental and heritage assessments as part of the wider land use planning framework. This 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 proves for local government (consent) authorities and Part 5 which relates to activity approvals by governing (determining) authorities. Planning decisions within Local Government Areas (LGAs) are guided by Local Environmental Plans (LEPs). Each LGA is required to develop and maintain an LEP that includes Aboriginal and historical heritage items which are protected under the EP&A Act and the NPW Act.

The Project Area is located within the Central Coast LGA and falls under the Gosford LEP.

## 2.5 Gosford Local Environmental Plan 2014

The Gosford LEP 2014 requires development consent to demolish, disturb, excavate or develop land on which an Aboriginal object is located or that is within an Aboriginal place of significance. Council must consider the effect of a proposal on an Aboriginal Place and any Aboriginal object located within an area of works. Council must inform the local Aboriginal community about the application where impacts to Aboriginal cultural heritage may occur. Protected heritage under the LEP is listed in Schedule 5.

There are no Aboriginal sites in the Project Area listed on the LEP.

## 3 Aboriginal Consultation

This section documents the Aboriginal Consultation that has been undertaken for the project in accordance with the *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (DECCW 2010a) and will be referred to as the 'Aboriginal Consultation Requirements'. The four stages of Aboriginal consultation were undertaken and additional documentation is available in Appendix 1.

### 3.1 Stage 1

In accordance with Stage 1 of the Aboriginal Consultation Requirements requests for information on knowledge holders were sent to the Heritage NSW Hunter and Central Coast division, the Darkinjung Local Aboriginal Land Council, the Registrar of Aboriginal Owners, Native Title Services, the Central Coast Local Council and the Greater Sydney office of Local Land Services. The National Native Title Tribunal only accepts searches of crown land for Aboriginal knowledge holders. There is no crown land in the Project Area.

Based on information collected from government agencies, expressions of interest were sent to each knowledge holder inviting them to become a Registered Aboriginal Party for the Project.

A public notice was placed in the Central Coast local newspaper.

As a result of the expressions of interest invitations and the public notice 6 Aboriginal representatives nominated to become Registered Aboriginal Parties for the Project (Table 1).

*Table 1 Registered Aboriginal Parties*

Organisation/Individual	Representative Name/s
A1 Indigenous Services	Carolyn Hickey
Amanda Hickey Cultural Services	Amanda DeZwart
Darkinjung Local Aboriginal Land Council	Amanda Shields and Barry Williams
Confidential Registration	Confidential
Individual	Tim Selwyn
Individual	Trudy Smith

### 3.2 Stages 2 and 3

In accordance with Stages 2 and 3 details of the project and the assessment methodology was sent out to the RAPs and opportunities for feedback were provided (Table 2). Opportunities for feedback were also provided during the fieldwork.



*Table 2 Responses to Assessment Methodology by Registered Aboriginal Parties*

Organisation/Individual	Representative Name/s	Response summary (full response in Appendix 1)
A1 Indigenous	Carolyn Hickey	Agrees with the methodology
Amanda Hickey Cultural Services	Amanda DeZwart	Agrees with the methodology

### 3.3 Stage 4

The draft report was sent to the Registered Aboriginal Parties and 28 days provided for comment. Two RAPs responded to the draft report. Their comments are summarised in Table 3.

*Table 3 Responses to Draft Report by Registered Aboriginal Parties*

Organisation/Individual	Representative Name/s	Response summary (full response in Appendix 1)
A1 Indigenous	Carolyn Hickey	Agrees with the recommendations in the report
Confidential Registration	Confidential	Agrees with the recommendations in the report

### 3.4 Summary

As a result of the Aboriginal consultation process 6 Registered Aboriginal Parties were identified. Feedback from the Aboriginal consultation. The feedback provided by RAPs has been incorporated into the assessment of significance and the development of heritage management and mitigation strategies for the Project.

## 4 Archaeological Assessment

The archaeological assessment outlines the environmental and heritage context for the Project Area. It also reports on the archaeological survey.

### 4.1 Environmental Context

This section provides the environmental context for the assessment of past Aboriginal occupation in the Project Area.

#### 4.1.1 Geology and Soils

The geology of the area consists of a beach ridge plain with coarse grained quartz sand, shell fragments and gravel, which dates to the Quaternary Period (Geological Services of NSW 2015).

Soils in the area consist of a black coarse loamy sand A Horizon from 0-0.3 m, a light grey coarse sand A2 Horizon from 0.3 to 2 m (Murphy 1985). Shell material has been known to occur in these sand layers.

#### 4.1.2 Topography and Hydrology

The western portion of the Project Area is on flat low-lying land, approximately 6 m above sea level. The land then slopes gradually east towards the creek.

A first order stream flows through the Project Area near the eastern boundary. This flows into Brisbane Water just 250 m north of the Project Area. Brisbane Water is a major estuary.

#### 4.1.3 Flora and Fauna

This section is intended to give a general overview of the flora and fauna that may have been used by Aboriginal people in the past. The information has been supplied for understanding the past Aboriginal use of the landscape and is not intended for ecological assessment purposes.

Past vegetation in the Project Area is likely to have been Coast Dune Dry Sclerophyll Forests as based on Keith (2006).

Trees in this vegetation class include Sydney red gum, red bloodwood, blackwood and bastard tallowwood. Shrubs include old man banksia, egg and bacon pea, large wedge pea, golden glory pea, burrawang, tree broom heath, *Personia virgate*, *Xanthorrhoea glauca*, and woody pear. Wallum banksia may be present in old dunes north of Sydney. Common forbs include blue flax lily, rasp wort, bracken, tassel rope-bush, blady grass and spiny-headed mat-rush.

Bark of these trees could have provided resource material for creating shields, weapons, canoes, bags and vessels. Gum of the *Xanthorrhoea* was also used as an adhesive (Nash 2004).

This environment would have provided habitat for possums, bats, gliders, wallabies, birds and reptiles. These would have provided local Aboriginal people with food resources as well as hair and skin for clothes.

#### 4.1.4 Land Use

The land is currently a vacant block in a residential district. The most western part of the lot is cleared while the remainder of the lot is heavily vegetated.

#### 4.1.5 Synthesis

The location of the Project Area alongside a creek line and the proximity to Brisbane Water would have provided a wealth of estuarine resources and suggests that midden sites may be present in the area. Additionally, the local vegetation would have provided resources for food, weapons and clothing, adding to its value as a resource gathering area. The beach ridge geological formation would not have provided appropriate materials for stone tools and thus stone material would have been brought from elsewhere.

## 4.2 Heritage Context

A review of the archaeological, ethno-historical and post-contact history of an area provides contextual information for Aboriginal sites within the local and regional landscape. Previous archaeological research undertaken in the region as well as a review of environmental factors can inform predictive models for the locations of Aboriginal sites. Predictive models can be further refined by the consideration of the post-contact land use of the area which may identify potential sources of post-depositional disturbances that may have occurred.

### 4.2.1 Ethnohistorical Context

Aboriginal people have lived in Australia for at least 50,000 years. The land and waters at Brisbane Waters were occupied by the Guringai (also Kuringai) and Darkinjung peoples for thousands of years and used for cultural purposes (Central Coast Council, 2018). The Central Coast today is home to one of the largest and fastest growing populations of First Nations people in Australia.

### 4.2.2 Regional Archaeological Background

Aboriginal occupation in the area has been dated to 11,000 years before present which precedes the rise of sea levels around 6000 years before present (Attenbrow 2006, 8). This date comes from a rockshelter site in Mangrove Creek, 20 km North West of Gosford. Due to the limitations in dating techniques, this figure may be even older.

There are a variety of site types in the Central Coast Region, including grinding grooves, art sites, artefacts, middens, scarred trees and water holes. Within the Darkinjung Local Aboriginal Land Council (DLALC) boundaries 2,985 registered Aboriginal sites have been located. This includes several Aboriginal Places protected by the state.

#### **Middens**

Middens are found throughout the Central Coast Region. They provide evidence for the types of food consumed by Aboriginal people. Middens are often located near waterways as they were a prime location for food resources. Brisbane Water, which is only 250 m from the Project Area has been found to contain a high density of midden sites (Vinnicombe, 1980).

#### **Sandstone sites**

Sandstone sites in the Central Coast Region occur on outcrops of Hawkesbury Sandstone.

Art sites often take the form of rock engravings in the Central Coast Region. These engravings were usually made on flat sandstone sheets and represented hundreds of spiritual figures including ancestral beings (sky heroes) and a wide range of animals and objects and normal-sized human beings. There are very little historical accounts of their use, as it appears they were mainly used for ceremonial activities and thus under Aboriginal custom their use was not openly discussed. The oldest of these art sites in the region has been dated to 4000 years old (Taçon et al. 2007).

Although less common than engraving sites, art may also take the form of pigment drawings. These are found on sandstone formations. Warre Warren Aboriginal Place contains a high density of unique Aboriginal art pigment sites, rare for the Sydney Basin (Heritage NSW 2019).



Grinding grooves were important to stone tool maintenance and food preparation. Grinding grooves are commonly found in sandstone sheets associated with creeks and water holes. Water was needed to be able to sharpen stone tools on the sandstone.

### **Shields, Tools and Weapons**

Shields were often made from the buttress of the giant nettle tree (*Dendrocnide excelsa*) or fig tree (*figus spp*). Usually about 1 m long and 0.5 m wide, with a handle on the inner side and soft paperbark padding. Bark was also removed to make vessels for food. Hardwood Eucalypt species were important for hunting sticks, throwing sticks, digging sticks, boomerangs and clubs. Although these types of artefacts are unlikely to survive due the nature of the organic material, the modifications made to trees for their creation can survive as they often left a distinctive scar on the tree.

Fish hooks were also an important part of local Aboriginal people's tool kits. Documentary sources indicate that fish hooks were predominantly made and used by women (Bradley 1786-1792 [1969]). The hooks were shaped from shell as turban shells or oyster shells (Attenbrow, Fullagar, and Szpak 1998, 129–30). Fish hooks have been found on the surface of and within midden deposits dating to 900 years ago (Attenbrow, Fullagar, and Szpak 1998, 135).

### **4.2.3 Aboriginal Heritage Information Management System (AHIMS)**

The AHIMS database was searched from latitude -33.5176 to -33.4808 and longitude 151.2819 to 151.3292 and produced a result of 89 sites. The location of these sites were plotted based on the coordinates provided in the extensive search (Figure 2).

Majority of the sites identified are associated with sandstone formations, including rock engravings, rockshelters, stone arrangements and grinding grooves; with rock engravings being the most common (Table 3). Rockshelters are another common site type in the area. They have been found in association with art, middens, and potential archaeological deposits (PAD) as well as one rockshelter containing both art and a midden. Other sites include surface artefacts, resource and gathering areas, and middens, although these appear to be rarer site types. The site types identified in the AHIMS search are summarised in Table 3.

All sites in the AHIMS search are valid, meaning they have been subject to salvage under an AHIP.

Table 4 AHIMS Search Summary

Site types	Number	Percent
Rock Engraving	27	30.34%
Rockshelter + Art	12	13.48%
Axe Grinding Groove	7	7.87%
Rockshelter + Midden	7	7.87%
Rock Engraving + Axe Grinding Groove	6	6.74%
Grinding Groove	6	6.74%
Art	5	5.62%
Stone Arrangement	5	5.62%
Rock Engraving + Stone Arrangement	4	4.49%
Art + Grinding Groove	2	2.25%
Rock Engraving + Grinding Groove	1	1.12%
Artefact/s	1	1.12%
Rockshelter + Art + Midden	1	1.12%
Habitation Structure	1	1.12%
Rockshelter + PAD	1	1.12%
Isolated Find	1	1.12%
Aboriginal Resource and Gathering	1	1.12%
Midden	1	1.12%
<b>Total</b>	<b>89</b>	<b>100.00%</b>





### Legend

 Project Area

#### AHIMS Sites

-  Aboriginal Resource and Gathering
-  Art
-  Art + Grinding Groove
-  Artefact/s
-  Axe Grinding Groove
-  Grinding Groove
-  Habitation Structure
-  Isolated Find
-  Midden

-  Rock Engraving
-  Rock Engraving + Axe Grinding Groove
-  Rock Engraving + Grinding Groove
-  Rock Engraving + Stone Arrangement
-  Rockshelter + Art
-  Rockshelter + Art + Midden
-  Rockshelter + Midden
-  Rockshelter + PAD
-  Stone Arrangement
-  Water Bodies
-  Creeks/Rivers

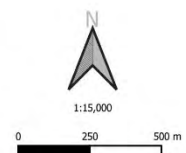


Figure 2 AHIMS Sites Map



#### 4.2.4 Heritage Report Summaries

Heritage reports relevant to the Project Area have been summarised in this section to provide an understanding of the previous assessments that have been undertaken and the implications for Aboriginal site patterning.

##### **Dallas & Bickford (1985) The Main Northern Railway Woy Woy Tunnel Project**

A survey was conducted near the Woy Woy tunnel for the upgrade of access tracks to the tunnel. The surveyed area is approximately 2.5 km west of the Project Area. Sites had been previously identified in the area by Ian Webb who was with NPWS. Two Aboriginal sites were identified. One site was an engraving of an emu on sandstone, located 2 m from a track (Dallas & Bickford, 1985, p. 16). The other site identified was an artefact scatter consisting of 37 artefacts (Dallas & Bickford, 1985, p. 19). The scatter extended over 30 m along a disused access track for a transmission line. Previous use of the track had disturbed the archaeological context of the scatter. The most common artefact material type was chert (Dallas & Bickford, 1985, p. 20). The scatter was considered significant as the site type is rare for the Gosford area. It was also considered significant due to its proximity to an engraving site. Both Aboriginal sites were outside the impact zones of the track upgrade.

##### **Heritage Concepts (2007) Aboriginal Archaeological Assessment: Proposed Woy Woy Foreshore Cycleway**

A survey was completed along the proposed route of a cycleway on the Woy Woy foreshore, approximately 2.8 km east of the Project Area. The survey identified two midden sites and tree PADs/Middens. The proposed cycleway would impact including AHIMS 45-3-0708, 45-3-0709, 45-3-0710, 45-3-0711, 45-3-0712, 45-3-0713, 45-3-0714, 45-3-0715. The construction design did not include any drilling or driving of piles but would use reinforced concrete that would sit on top of the sites, so the impacts would be indirect. It was recommended that archaeological testing be conducted and that the PADs be fenced off prior to construction. Further discussion would be required following the results of the test excavation.

#### 4.2.5 Predictive Model

The most common site in the Woy Woy Area are rockshelters and other sites associated with sandstone. However, based on the geology, the Project Area lies outside the Hawkesbury sandstone formation, making this site type unlikely to be present in the Project Area.

Although there are three rock shelter with midden sites less than 800 m west of the Project Area (AHIMS 45-6-3569, 45-6-3573, and 45-3-4058) they are at a much higher elevation, sitting at 26 m to 74 m AHD, where the Project Area is just 4 m above sea level. Midden site AHIMS 45-6-0889 is recorded as 500 m east of the Project Area; however the site card shows it is in similar proximity to AHIMS 45-6-3573 and at a similar elevation to this site and includes cockle, mussel, mud elks an oyster.

The proximity of the Project Area to Brisbane Water and the presence of a first order stream within the Project Area, as well as the presence of previously identified midden sites nearby suggests that midden sites are the most likely site type to occur in the Project Area.

Although less common in the Woy Woy area, there is also some potential for stone artefacts as 45-6-0889 included stone artefacts along with the midden material.



Overall midden sites are the most likely site type to be identified in the Project Area.

#### 4.2.6 Synthesis

There are many different site types that occur in the Central Coast region with majority of these being associated with Hawkesbury sandstone. Along the low-lying areas along creek lines and Brisbane Water, midden sites are more common, where estuarine resources were more readily available.

## 4.3 Archaeological Survey

The survey was undertaken on 1<sup>st</sup> of September 2020 by Crystal Phillips, Heritage consultant at Heritage Now and Amanda Shields from Darkinjung Local Aboriginal Land Council.

### 4.3.1 Survey Units

#### Survey Unit Summary

The Project Area was surveyed in 2 survey units (Figure 3). The survey units were separated by landform and by land disturbance. The survey coverage is summarised in Table 4.

Survey Unit 1 fronts Macleay Avenue and is positioned between existing residents (Plate 1). Majority of the area has been cleared, with a few trees near the fence lines. A large portion of the Survey Unit had been disturbed by recent activity (Plate 2). Local residents have been using the space to park vehicles. Consequently, there were areas of good exposure, showing a light grey sandy topsoil (Plate 3). Additionally, litter was found scattered in the area.

Survey Unit 2 contained denser vegetation and poorer ground surface visibility with large amounts of leaf litter covering the ground (Plate 5). Vegetation was a mixture of introduced species such as lantana and native species such as banksia, paperbark and casuarina. The land sloped gently towards the creek (Plate 6 and Plate 7). The soil profile was visible along the bank (Plate 8). There was more evidence of recent disturbances with litter as well as modifications to provide an embankment (Plate 9).

Table 5 Survey Coverage

Survey Unit	Landform	Survey Unit Area	Visibility %	Exposure %	Effective Coverage Area (m2)	Sample Fraction (%)	Number of Sites Identified
1	Coastal Plain	2810	40	30	337.2	12	0
2	Creek terrace	3854	15	10	57.81	1.5	0

### 4.3.2 Aboriginal Sites Identified

No Aboriginal sites, areas of archaeological sensitivity or potential archaeological deposits were identified.

### 4.3.3 Aboriginal Consultation

Amanda Shields from DLALC agreed that there were no sites observed in the area. However, it was still important for site personnel to receive an induction regarding Aboriginal cultural heritage and their obligations under the *NSW National Parks and Wildlife Act*.

### 4.3.4 Summary

The Project Area has been subject to previous disturbances as being adjacent to an existing residential area. No Aboriginal sites were identified during survey.





Figure 3 Survey Units

## 5 Significance Assessment and Aboriginal Cultural Values

Cultural heritage refers to the tangible and intangible values that we choose to pass on to future generations. In order to identify the values worth passing on, a significance assessment needs to be undertaken. The significance assessment needs to: identify the range of values present across the Project Area and assess their importance.

### 5.1 Methodology

Identifying the Aboriginal cultural values is part of the significance assessment process and is guided by the Burra Charter and the *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW*.

There are four recognised classes of values under the Burra Charter (Australia ICOMOS 2013):

- Social,
- Historical,
- Aesthetic, and
- Scientific

Within this significance assessment, Aboriginal cultural values are captured within social, historical and aesthetic values. The archaeological values are contained within scientific values.

Social value refers to the spiritual, traditional, historical or contemporary associations that Aboriginal people have for place. Historical value refers to the associations of a place with a historically important person, event, phase or activity in the Aboriginal community. Aesthetic value refers to the sensory, scenic, architectural and creative aspects of the place.

Archaeological values refer to the importance of the landscape, area, place or object because of its rarity, representativeness and the extent to which it may inform our understanding of Aboriginal culture.

#### 5.1.1 Aboriginal Cultural Values

Aboriginal cultural values are identified through the Aboriginal consultation process. Formal opportunities for the Aboriginal community to contribute to identifying cultural values are provided in the ACHA methodology review period, during fieldwork and during the draft report review period. In addition, RAPs are invited to provide feedback at anytime through the consultation process, by phone or in writing (email or letter).

#### 5.1.2 Archaeological (Scientific) Values

Archaeological (scientific) values relate to whether the Project Area can contribute to our understanding of Aboriginal culture. Under the *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW*, archaeological values are to be considered within the below sub-categories:

- Representativeness,



- Rarity,
- Research potential, and
- Educational potential.

## 5.2 Aboriginal Cultural Values of the Project Area

There are no specific cultural values associated with the Project Area, but it is important within the general context of the surrounding landscape of Brisbane Water.

## 5.3 Archaeological Values of the Project Area

This section assesses the archaeological values of the Project Area according to the criteria in the *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW*.

No archaeological values were identified in the Project Area

## 5.4 Summary

No Aboriginal sites, Aboriginal cultural values or archaeological values were identified in the Project Area.

## 6 Impact Assessment and Mitigation

This section assesses the potential impact of the proposed works in relation to Aboriginal heritage values in the Project Area and provides options for mitigating loss of Aboriginal cultural values.

### 6.1 Proposed Works

The proponent is rezoning the land for medium density residential development comprising villas, townhouses, or similar.

Developing the land for residential purposes will involve clearing of vegetation as well as cut and fill to prepare the Project Area. It will require the installation of below and above ground services including water and sewer, telecommunications and electricity. It will also require the formation of roads and access ways to the residential lots as well as the building of individual residences.

### 6.2 Impact Assessment

No Aboriginal sites were identified during the site inspection. There will be no impacts to Aboriginal sites.

### 6.3 Mitigation

The below strategies have been developed to mitigate harm and/or loss of Aboriginal cultural values as a result of the proposed works.

All on-site personnel are to be made aware of their obligations under the *National Parks and Wildlife Act 1974*, this includes protection of Aboriginal sites and the reporting of any new Aboriginal, or suspected Aboriginal, heritage sites. This may be done through an onsite induction or other suitable format.

In the unlikely event that Aboriginal or suspected Aboriginal archaeological material is uncovered during the development, then works in that area are to stop and the area cordoned off. The project manager is to contact the heritage consultant to make an assessment as to whether the material is classed as Aboriginal object/s under the *National Parks and Wildlife Act* and advise on the required management and mitigation measures. Works are not to re-commence in the cordoned off area until heritage clearance has been given and/or the required management and mitigation measures have been implemented.

In the unlikely event that human remains, or suspected human remains are uncovered during the development, then works in that area are to stop and the area cordoned off. The project manager is to contact the NSW Police to establish whether the area is a crime scene. If it is not a crime scene, then Heritage NSW is to be notified via the Environment Line on 131555 and management measures are to be devised in consultation with RAPs. Works are not to recommence in the area until the management measures have been implemented.

### 6.4 Sustainable Development

Under the NSW *Protection of the Environmental Administration Act 1991* Ecologically sustainable development principles (ESD) are to be considered in the assessment of environmental impacts; and

this includes impacts to heritage. The consideration of ESD principles is required under the *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in New South Wales 2010*. In particular, the precautionary principle and the principle of inter-generational equity are to be considered where there are proposed impacts to the environment (which includes heritage).

#### 6.4.1 Precautionary Principle

The precautionary principle states that if there are threats of serious or irreversible damage to the environment, then a lack of full scientific certainty should not be used as a reason to postpone measures to prevent environmental degradation.

The proposed works do not pose a threat of serious or irreversible damage to the environment as part of the proposal.

#### 6.4.2 Inter-generational Equity & Cumulative Harm

The principle of inter-generational equity states that the present generation should ensure the health, diversity and productivity of the environment are maintained or enhanced for the benefit of future generations. Cumulative harm is understanding how the cumulative effects of the Proposal.

The Proposal does not diminish inter-generational equity and will not contribute to cumulative harm of Aboriginal objects.

### 6.5 Summary

No Aboriginal sites will be impacted by the proposed works and thus no further archaeological investigations are required. It is recommended that all on-site personnel are made aware of their obligations under the *National Parks and Wildlife Act* and that the procedure for assessment and management is implemented in the unlikely event that Aboriginal sites are identified during the development. As well as the protocol followed for the identification of human remains, or suspected human remains.

## 7 Conclusions and Recommendations

No Aboriginal sites were identified during the survey of the Project Area. No further archaeological investigation is required for the Project Area. The works are to proceed in accordance with the recommendations below.

### **Recommendation 1**

All on-site personnel are to be made aware of their obligations under the *National Parks and Wildlife Act 1974*, through an onsite induction or other suitable format.

### **Recommendation 2**

In the unlikely event that Aboriginal or suspected Aboriginal archaeological material is uncovered during the development, then works in that area are to stop and the area cordoned off. The project manager is to contact the heritage consultant to make an assessment as to whether the material is classed as Aboriginal object/s under the *National Parks and Wildlife Act* and advise on the required management and mitigation measures. Works are not to re-commence in the cordoned off area until heritage clearance has been given and/or the required management and mitigation measures have been implemented.

### **Recommendation 3**

In the unlikely event that human remains, or suspected human remains are uncovered during the development, then works in that area are to stop and the area cordoned off. The project manager is to contact the NSW Police to establish whether the area is a crime scene. If it is not a crime scene, then Heritage NSW is to be notified via the Environment Line on 131555 and management measures are to be devised in consultation with RAPs. Works are not to recommence in the area until the management measures have been implemented

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## 9 Plates



*Plate 1 Survey Unit 1 view to east*



*Plate 2 Vehicles parked in Survey Unit 1 and disturbed top soil, view to north east*





*Plate 3 Area of exposure with sandy topsoil, Survey Unit 1*



*Plate 4 Survey Unit 1, view to north*





*Plate 5 Mixed vegetation and thick leaf litter, Survey Unit 2*



*Plate 6 Creek view to south*





*Plate 7 Creek view to north*



*Plate 8 Soil exposure in creek bed, view to east*





*Plate 9 Landscape modification in Survey Unit 2, view to west*

# Appendix 1 Aboriginal Consultation

Not included in public version

## Appendix 2 AHIMS Search Results

Not included in public version