



View southwest across the study area.

## **ABORIGINAL CULTURAL HERITAGE ASSESSMENT REPORT**

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### **WOY WOY WASTE MANAGEMENT FACILITY, SOUTH CELL**

CENTRAL COAST COUNCIL

NOVEMBER 2023

Report prepared by  
OzArk Environment & Heritage  
on behalf of Central Coast Council

**OzArk**

**OzArk  
Environment & Heritage**

145 Wingewarra St  
(PO Box 2069)  
Dubbo NSW 2830

Phone: (02) 6882 0118  
Fax: (02) 6882 0630  
[enquiry@ozarkehm.com.au](mailto:enquiry@ozarkehm.com.au)  
[www.ozarkehm.com.au](http://www.ozarkehm.com.au)

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Heritage NSW



## ABORIGINAL CULTURAL HERITAGE ASSESSMENT REPORT COVER SHEET

Report Title	Aboriginal Cultural Heritage Assessment Report: Woy Woy Waste Management Facility, South Cell
Author(s) Name	Stephanie Rusden
Author(s)' Organisation Name (if applicable)	OzArk Environment & Heritage
Author(s) contact details	145 Wingewarra St DUBBO NSW 2830 Email: stephanie@ozarkehm.com.au Phone: 02 6882 0118
Address of Subject Area	Address: Lot 110 DP755251, Nagari Road near Woy Woy, NSW. Local Government Area: Central Coast Local Government Area
Report prepared for	Company Name: GHD (Sydney) Pty Ltd Contact Person: Anna Montgomery Address: L15, 133 Castlereagh Street Sydney NSW 2000 Email: anna.montgomery@ghd.com
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Stephanie Rusden, OzArk Environment & Heritage Senior Archaeologist

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Prepared for		Prepared by
Anna Montgomery Technical Director – Waste Management GHD L15, 133 Castlereagh Street Sydney NSW 2000 Anna.montgomery@ghd.com		Jordan Henshaw Archaeologist OzArk Environment & Heritage 145 Wingewarra Street (PO Box 2069) Dubbo NSW 2830 P: 02 6882 0118 jordan@ozarkehm.com.au
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Enquiries should be addressed to OzArk Environment & Heritage.		

### **Acknowledgement**

OzArk acknowledge the traditional custodians of the area on which this assessment took place and pay respect to their beliefs, cultural heritage, and continuing connection with the land. We also acknowledge and pay respect to the post-contact experiences of Aboriginal people with attachment to the area and to the Elders, past and present, as the next generation of role models and vessels for memories, traditions, culture and hopes of local Aboriginal people.

## ABBREVIATIONS AND GLOSSARY

ACHAR	Aboriginal Cultural Heritage Assessment Report. As set out in the <i>Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales</i> , all developments where harm to Aboriginal objects is likely must be assessed in an ACHAR.
ACHCRs	<i>Aboriginal Cultural Heritage Consultation Requirements for Proponents</i> . Guidelines for conducting Aboriginal community consultation for developments where harm to Aboriginal objects is likely.
AHIMS	Aboriginal Heritage Information Management System. Administered by the DPE, AHIMS is the central register of all Aboriginal sites within NSW.
AHIP	Aboriginal Heritage Impact Permit. Issued by Heritage NSW to allow harm to Aboriginal objects.
BP	Years before present
Code of Practice	<i>Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales</i> under Part 6 of the <i>National Parks and Wildlife Act 1974</i> .
DPE	NSW Department of Planning and Environment
EIS	Environmental Impact Statement. A required document for major projects documenting all potential impacts to the environment, including heritage, that may arise due to the development.
GSE	Ground surface exposure. A measure of factors that may reveal surface artefacts such as erosion scalds.
GSV	Ground surface visibility. A measure of factors that may obscure the detection of surface artefacts such as leaf litter.
Heritage NSW	Government department tasked with ensuring compliance with the NPW Act. Heritage NSW is advised by the Aboriginal Cultural Heritage Advisory Committee (ACHAC).
Holocene	Geological epoch which lasted from around 12,000 years ago (10,000 BCE) to the present. This period is generally warmer and wetter than the preceding Pleistocene period.
NPW Act	<i>National Parks and Wildlife Act 1974</i> . Primary legislation governing Aboriginal cultural heritage within NSW.

PAD	Potential archaeological deposit. Indicates that a particular location has potential to contain subsurface archaeological deposits, although no Aboriginal objects may be visible.
Pleistocene	Geological epoch which lasted from about 2.5 million years ago to 10,000 BCE. This period spans the world's recent period of repeated glaciations. Aboriginal occupation of Australia occurs during the upper Pleistocene.
RAP	Registered Aboriginal Party. An individual or group who have indicated through the ACHCR process that they wish to be consulted regarding the project.
SEARs	Secretary's Environmental Assessment Requirements.



## EXECUTIVE SUMMARY

---

OzArk Environment & Heritage (OzArk) has been engaged by GHD on behalf of Central Coast Council (the proponent) to prepare an Aboriginal Cultural Heritage Assessment Report (ACHAR) for the proposed 'South Cell' and associated infrastructure at the Woy Woy Waste Management Facility (WMF) (the project). The project is in the Central Coast Council Local Government Area.

The project is deemed a regionally significant development (RSD) in accordance with Clause 7(1)(c) and Clause 3 in Schedule 6 of *State Environmental Planning Policy (Planning Systems) 2021* (Planning Systems SEPP) and is subject to approval by the Hunter and Central Coast Regional Planning Panel under the *NSW Environmental Planning and Assessment Act 1979* (EP&A Act).

The study area encompasses 5.5 hectares (ha) of land within Lot 110 DP755251 at Woy Woy, located approximately 10 kilometres (km) south of Gosford. The study area is highly disturbed as it forms part of the Woy Woy WMF and a former quarry.

The field survey was completed by OzArk Senior Archaeologist Stephanie Rusden on 18 May 2023. No Aboriginal sites were identified and no landforms within the study area were assessed as having potential to contain subsurface archaeological deposits due to the extent of landform modification. Further, no Aboriginal cultural heritage values have been identified through consultation with the Aboriginal community.

Recommendations concerning Aboriginal cultural values within the study area are as follows:

1. Following development consent of the project, the proposed work may proceed with caution. In the unlikely event of that unexpected Aboriginal heritage items are encountered during works, the *Unanticipated Finds Protocol* (**Appendix 4**) must be implemented. **Appendix 5** provides the appropriate procedure to be undertaken in the unlikely event that suspected human remains are encountered.
2. All land-disturbing activities must be confined to within the study area. Should the parameters of the proposed work extend beyond this, then further archaeological assessment will be required.
3. All staff and contractors involved in the proposed work should be made aware of the legislative protection requirements for all Aboriginal heritage items and the procedures for unanticipated Aboriginal objects or suspected skeletal material.

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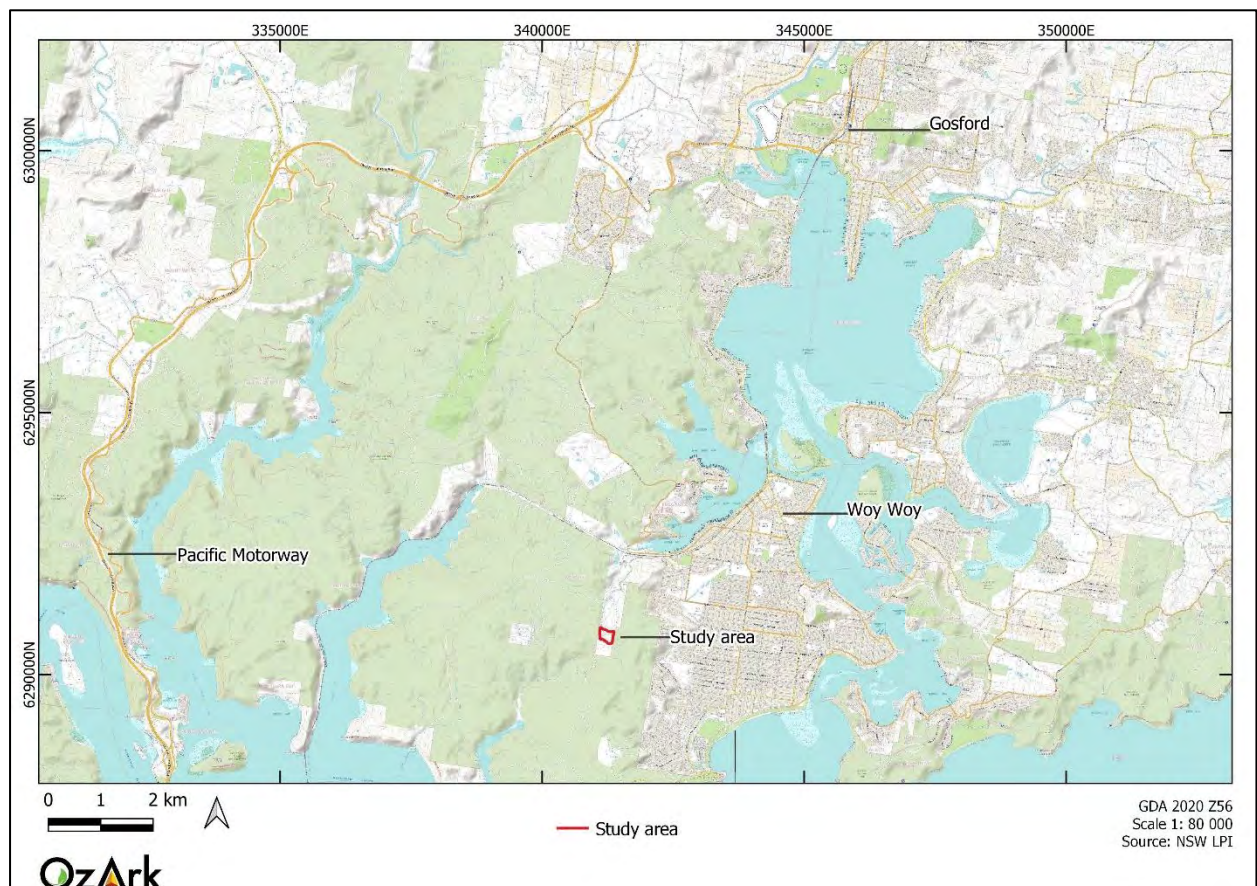
# 1 INTRODUCTION

## 1.1 PREAMBLE

OzArk Environment & Heritage (OzArk) has been engaged by GHD Pty Ltd on behalf of Central Coast Council (the proponent) to prepare an Aboriginal Cultural Heritage Assessment Report (ACHAR) for the proposed 'South Cell' and associated infrastructure at the Woy Woy Waste Management Facility (WMF) (the project). The project is in the Central Coast Local Government Area (**Figure 1-1**).

The project is deemed to be regionally significant development (RSD) and is subject to approval by the Hunter and Central Coast Regional Planning Panel, under Division 4.3 of the *Environmental Planning & Assessment Act 1979* (EP&A Act). This ACHAR forms part of the Environmental Impact Statement (EIS).

**Figure 1-1: Map showing the location of the project.**



## 1.2 STUDY AREA

The project would be located within the existing Woy Woy WMF. The WMF is about 10 kilometres south of Gosford across Brisbane Water, within the Central Coast LGA (refer **Figure 1-2**).

The WMF site consists of:

- Lot 110 DP 755251



- Lot 1 DP 126813
- Lot 1 DP 654885

The study area is about five hectares in area and located on the southern portion of the WMF. It comprises part of Lot 110 DP 755251.

**Figure 1-2: Aerial showing the study area.**



## 1.3 PROJECT OVERVIEW

### 1.3.1 Key features

Key features of the project include:

- Cell construction including excavation and earthworks to form the base of the cell and lining installation
- Development of associated access, stormwater and leachate management infrastructure
- Continuation of current landfilling operations in the new cell location
- Capping, closure and rehabilitation

The project is expected to provide up to approximately an additional 920,000 cubic metres of airspace or 7.7 years of filling capacity (based on current filling rates). It is also expected to generate additional cell construction and cover materials for the ongoing landfilling operations.

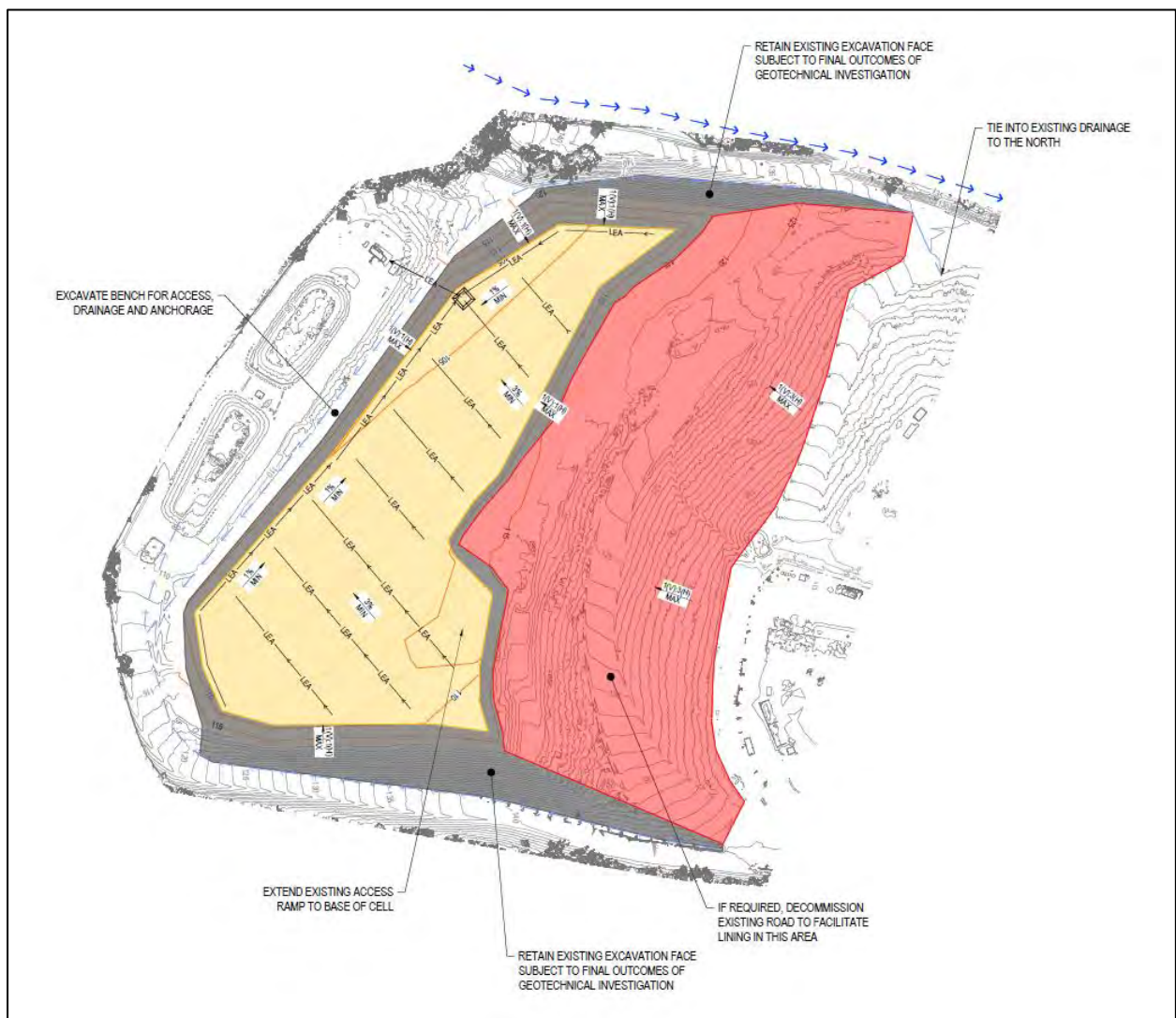
No change is proposed to the existing approved annual disposal capacity or waste types as per EPL 6053.

The other existing operations (weighbridge and office/education centre, transfer station, Garden organics (GO) facility etc) at the WMF would continue to be operated in conjunction with the project.

Further information on the project is provided in the EIS.

The project site layout is shown in **Figure 1-3**.

**Figure 1-3: Conceptual project layout.**



### 1.3.2 Construction overview

Construction of the project would be subject to the methods proposed by the construction contractor, but is expected to involve the following:

- Site establishment: establishment of site environmental controls including sediment and erosion controls



- Earthworks: excavation and grading along the base of the landfill cell in accordance with the requirements of the Environmental Guidelines: Solid waste landfills (NSW EPA, 2016)
- Lining and gravel placement: installation of basal, batter and sidewall liners systems
- Development of ancillary infrastructure including access roads, leachate and water management infrastructure.

Construction is expected to take about three months to complete.

The construction activities would be carried out during the following hours, consistent with the recommended standard hours of the Draft Construction Noise Guideline (NSW EPA, 2020):

- 7 am to 6 pm Monday to Friday
- 8 am to 1 pm Saturdays
- No work on Sundays or Public Holidays.

The construction workforce is expected to range between five and ten workers per day.

Further information on the construction of the project is provided in the EIS.

#### **1.4 SECRETARY'S ENVIRONMENTAL ASSESSMENT REQUIREMENTS**

The Planning Secretary's Environmental Assessment Requirements (SEARs) for the project were issued on 24 August 2023.

The SEARs recognise Aboriginal cultural heritage as a key component to be assessed for the project however no specific requirements from Heritage NSW relating to Aboriginal cultural heritage have been provided.

The SEARs do however require consultation to be undertaken with the Darkinjung Local Aboriginal Land Council (LALC). Consultation with Darkinjung LALC and other local Aboriginal stakeholders has been undertaken for the project. Results of this consultation is detailed in **Section 3**.

## 2 THE ABORIGINAL CULTURAL HERITAGE ASSESSMENT

### 2.1 RELEVANT LEGISLATION

Cultural heritage is managed by several state and national Acts. Baseline principles for the conservation of heritage places and relics can be found in the *Burra Charter* (Burra Charter 2013). The *Burra Charter* has become the standard of best practice in the conservation of heritage places in Australia, and heritage organisations and local government authorities have incorporated the inherent principles and logic into guidelines and other conservation planning documents. The *Burra Charter* generally advocates a cautious approach to changing places of heritage significance. This conservative notion embodies the basic premise behind legislation designed to protect our heritage, which operates primarily at a state level.

Several Acts of parliament provide for the protection of heritage at various levels of government.

#### 2.1.1 Commonwealth legislation

##### 2.1.1.1 *Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)*

The *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), administered by the Commonwealth Department of Climate Change, Energy, the Environment and Water, provides a framework to protect nationally significant flora, fauna, ecological communities, and heritage places. The EPBC Act establishes both a National Heritage List and Commonwealth Heritage List of protected places. These lists may include Aboriginal cultural sites or sites in which Aboriginal people have interests. The assessment and permitting processes of the EPBC Act are triggered when a proposed activity or development could potentially have an impact on one of the matters of national environment significance listed by the Act. Ministerial approval is required under the EPBC Act for proposals involving significant impacts to National/Commonwealth heritage places.

##### 2.1.1.2 *Aboriginal and Torres Strait Islander Heritage Protection Act 1984*

The *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* is aimed at the protection from injury and desecration of areas and objects that are of significance to Aboriginal Australians. This legislation has usually been invoked in emergency and conflicted situations.

#### Applicability to the project

It is noted there are no Commonwealth or National heritage listed places within or near the study area, and as such, the heritage provisions of the EPBC Act and other Commonwealth Acts do not apply.

## 2.1.2 State legislation

### ***Environmental Planning and Assessment Act 1979 (EP&A Act)***

This Act established requirements relating to land use and planning. The main parts of the EP&A Act that relate to development assessment and approval are Part 4 (development assessment) and Part 5 (environmental assessment). The Minister responsible for the Act is the Minister for Planning.

The EP&A Act currently provides the primary legislative basis for planning and environmental assessment in NSW. The objects of the EP&A Act include encouragement of:

- The proper management, development, and conservation of natural resources
- The provision and coordination of the orderly and economic use and development of land
- Protection of the environment, including the protection and conservation of native animals and plants, including threatened species, populations and ecological communities, and their habitats
- Ecologically sustainable development.

The objects also provide for increased opportunity for public involvement and participation in environmental planning and assessment.

The EP&A Act includes provisions to ensure that the potential environmental impacts of a development or activity are rigorously assessed and considered in the decision-making process.

The framework governing environmental and heritage assessment in NSW is contained within the following parts of the EP&A Act:

- Part 4: Local government development assessments, including heritage. May include schedules of heritage items
  - Division 4.3: Approvals process for regionally significant development

#### **Applicability to the project**

The project will be assessed under Division 4.3 of Part 4 of the EP&A Act.

The project is deemed to be RSD in accordance with Clause 7(1)(c) and Clause 3 in Schedule 6 of *State Environmental Planning Policy (Planning Systems) 2021* (Planning Systems SEPP).

### ***2.1.2.1 National Parks and Wildlife Act 1974 (NPW Act)***

The NPW Act provides for the protection of Aboriginal objects (sites, objects, and cultural material) and Aboriginal places. Under the Act (Part 6), an Aboriginal object is defined as: any deposit, object, or material evidence (not being a handicraft for sale) relating to Aboriginal

habitation of the area that comprises NSW, being habitation both prior to and concurrent with the occupation of that area by persons of European extraction and includes Aboriginal remains.

An Aboriginal place is defined under the NPW Act as an area which has been declared by the Minister administering the Act as a place of special significance for Aboriginal culture. It may or may not contain physical Aboriginal objects.

It is an offence under Section 86 of the NPW Act to 'harm or desecrate an object the person knows is an Aboriginal object'. It is also a strict liability offence to 'harm an Aboriginal object' or to 'harm or desecrate an Aboriginal place', whether knowingly or unknowingly. Section 87 of the Act provides a series of defences against the offences listed in Section 86, such as:

- The harm was authorised by and conducted in accordance with the requirements of an *Aboriginal Heritage Impact Permit* (AHIP) under Section 90 of the Act
- The defendant exercised 'due diligence' to determine whether the action would harm an Aboriginal object
- The harm to the Aboriginal object occurred during the undertaking of a 'low impact activity' (as defined in the regulations).

#### Applicability to the project

Any Aboriginal sites within the study area are afforded legislative protection under the NPW Act.

Under Section 89A of the Act, it is a requirement to notify the Secretary of the Department of Planning and Environment (DPE) of the location of an Aboriginal object. Identified Aboriginal items and sites are registered on Aboriginal Heritage Information Management System (AHIMS) that is administered by Heritage NSW.

## **2.2 PURPOSE AND OBJECTIVES**

The purpose of this study is to identify and assess heritage constraints relevant to the proposed works.

The study will apply the Code of Practice, the Guide, and the ACHCRs in the completion of the Aboriginal cultural heritage assessment to meet the following objectives:

- |                                |   |
|--------------------------------|---|
| <b><u>Objective One:</u></b>   | Undertake background research to formulate a predicative model for site location within the study area  |
| <b><u>Objective Two:</u></b>   | Identify and record Aboriginal objects or sites within the study area, as well as any landforms likely to contain further archaeological deposits   |
| <b><u>Objective Three:</u></b> | To undertake an Aboriginal cultural values assessment in consultation with Registered Aboriginal Parties (RAPs) of tangible and intangible cultural heritage values that have potential to be impacted by the project |

**Objective Four:** To assess the significance of any recorded Aboriginal sites, objects, or places likely to be impacted by the project, in consultation with RAPs

**Objective Five:** To assess the likely impacts of the proposed works to any recorded Aboriginal sites, objects, places, or intangible values and to develop management recommendations, in consultation with RAPs.

## 2.3 ASSESSMENT APPROACH

The archaeological assessment followed the *Code of Practice for the Investigation of Aboriginal Objects in New South Wales* (Code of Practice; DECCW 2010).

The Aboriginal cultural heritage assessment followed the *Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW* (the Guide; OEH 2011) and the *Aboriginal cultural heritage consultation requirements for proponents* (ACHCRs) (DECCW 2010b).

## 2.4 REPORT COMPLIANCE WITH THE CODE OF PRACTICE

The Code of Practice establishes requirements that should be followed by all archaeological investigations where harm to Aboriginal objects may be possible. **Table 2-1** tabulates the compliance of this report with the requirements established by the Code of Practice.

**Table 2-1: Report compliance with the Code of Practice.**

Code of Practice Requirement	Context of the Requirement	Concordance in this report
Requirement 1a	Review previous archaeological work	<b>Section 5.2</b>
Requirement 1b	Review AHIMS search	<b>Section 5.3</b>
Requirement 2	Review the landscape context	<b>Section 4</b>
Requirement 3	Summarise and discuss the local and regional character of Aboriginal land use and its material traces	<b>Section 5.1</b>
Requirement 4a	Develop predictive model	<b>Section 5.4</b>
Requirement 4b	Present predictive model results	<b>Section 5.4.2</b>
Requirement 5a	Archaeological survey sampling strategy	<b>Section 6.1</b>
Requirement 5b	Archaeological survey requirements	This Requirement was fulfilled during the undertaking of the survey
Requirement 5c	Archaeological survey units	<b>Section 6.2</b>
Requirement 6	Site definition	<b>Section 5.4.2</b>
Requirement 7a	Site recording information to be recorded	Not applicable to this report as no new sites were recorded.
Requirement 7b	Site recording: scales for photography	All artefact photographs employed a centimetre scale bar.
Requirement 8a	Geospatial information	All field data was logged using a non-differential handheld GPS.
Requirement 8b	Datum and grid coordinates	All coordinates are provided in GDA Zone 56.
Requirement 9	Record survey coverage data	<b>Section 6.2</b>
Requirement 10	Analyse survey coverage	<b>Section 6.2</b>
Requirement 11	Archaeological Report content and format	This report adheres to this Requirement.

Code of Practice Requirement	Context of the Requirement	Concordance in this report
Requirement 12	Records	OzArk undertakes to maintain all survey records for at least five years.
Requirement 13a	Notifying Heritage NSW of breaches	Not applicable
Requirement 13b	Providing Heritage NSW with information	Not applicable
Requirement 14-17	Test excavation which is not excluded from the definition of harm	Not applicable as test excavation was not warranted.
Requirement 18–20	Artefact recording	No artefacts were identified during this assessment.

## 2.5 DATE OF ARCHAEOLOGICAL ASSESSMENT

The fieldwork component of this assessment was undertaken by OzArk on 18 May 2023.

## 2.6 OZARK INVOLVEMENT

### 2.6.1 Field survey

The fieldwork survey was undertaken by Stephanie Rusden (OzArk Senior Archaeologist, BS University of Wollongong, BA University of New England)

### 2.6.2 Reporting

The reporting component of the heritage assessment was undertaken by:

- Report author: Jordan Henshaw (OzArk Archaeologist, Bachelor of Ancient History Macquarie University)
- Contributor / Reviewer: Stephanie Rusden (OzArk Senior Archaeologist, BS University of Wollongong, BA University of New England).

### 3 ABORIGINAL COMMUNITY CONSULTATION

#### 3.1 INTRODUCTION TO CULTURAL VALUES

*No matter who you are, we all have culture. Each person's culture is important; it's part of what makes us who we are.*

[australianstogether.org.au](http://australianstogether.org.au)

Many Aboriginal people in Australia have a unique view of the world that's distinct from the mainstream. Land, family, law, ceremony, and language are five key interconnected elements of Aboriginal culture. For example, families are connected to the land through the kinship system, and this connection to land comes with specific roles and responsibilities which are enshrined in the law and observed through ceremony. In this way, the five elements combine to create a way of seeing and being in the world that is distinctly Aboriginal.

Aboriginal and Torres Strait Islander peoples are connected to Country through lines of descent (paternal and maternal), as well as clan and language groups. Territory is defined by spiritual as well as physical links. Landforms have deep meaning, recorded in art, stories, songs, and dance. Songlines or Dreaming Tracks as well as kinship structures link Aboriginal peoples to the territories of other groups. In the past, these links were also used for trade.

Living on this land for more than 50,000 years, Aboriginal and Torres Strait Islanders established effective ways to use and sustain resources. One important aspect is the right of certain people to control the use of resources in a particular area, as well as cultural and spiritual values like totemism that were fundamental in resource management. There was a wide range of traditional methods for gathering food including fish traps, subsistence agriculture, hunting and harvesting a wide range of natural fruits and vegetables. Some groups of people would stay in one place, while others moved around the land according to the seasons, to ensure sustainable and rich food supplies, and to fulfil their spiritual and cultural obligations.

In much of eastern Australia, Aboriginal communities live their lives like most Australians. However, in certain crucial areas, particularly associated with family, leadership roles and caring for Country, Aboriginal lore continues, even in the most urbanised communities.

#### 3.2 ABORIGINAL COMMUNITY CONSULTATION

A major aim of this assessment is to identify any cultural values within the landscape in which the project is located so that those values can be recognised and incorporated into the project's management recommendations.

The Aboriginal cultural heritage assessment of the project has followed the *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (ACHCRs) (DECCW 2010b). A log and copies of correspondence with Aboriginal community stakeholders is presented in **Appendix 1 Table 1**.

The ACHCRs include four main stages, and these will be detailed in the following sections.

### 3.2.1 ACHCRs Stage 1

The aim of Stage 1 is to identify the RAPs who wish to be consulted about the project.

An advertisement was placed in the *Newcastle Herald* on 2 March 2023 to solicit expressions of interest (**Appendix 1 Figure 1**).

A letter seeking information from various agencies was sent on 20 February 2023 (**Appendix 1 Figure 2**). These agencies were: Office of the Registrar, *Aboriginal Land Rights Act 1983*; Heritage NSW; National Native Title Tribunal; National Native Title Services Corporation Ltd (NTSCORP); Darkinjung LALC, Central Coast Council, and the Greater Sydney Local Land Services.

Letters were sent to individuals and groups whose contact details had been provided by the government agencies (**Appendix 1 Figure 3**).

By the closing date for registration concerning this project, nine groups or individuals registered to be consulted as RAPs:

- Amanda Hickey Cultural Services
- Awabakal & Guringai Pty Ltd
- Darkinjung LALC
- Didge Ngunawal Clan
- Kevin Duncan
- Stakeholder 1<sup>1</sup>
- Stakeholder 2
- Trudy Smith
- Widescope Indigenous Group.

### 3.2.2 ACHCRs Stage 2

The aim of Stages 2 is to provide information about the project to the RAPs.

Detailed project information was provided in the assessment methodology that was issued to all RAPs for their consideration on 13 April 2023 (**Appendix 1 Figure 4** and **Appendix 2**)

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<sup>1</sup> RAPs listed as 'Stakeholder 1 etc have requested their details remain anonymous.



### 3.2.3 ACHCRs Stage 3

The aim of Stage 3 is to acquire information regarding Aboriginal cultural values associated with the project either through consultation and/or fieldwork.

To inform the RAPs of the assessment, an assessment methodology was issued to all RAPs for their consideration on 13 April 2023 (**Appendix 1 Figure 4** and **Appendix 2**). This document provided the archaeological context of the study area, a description of the proposed survey, and asked whether there were any cultural values that should be considered in the assessment.

RAPs were provided the stipulated 28 days in which to review and comment on the assessment methodology as per Stage 3 of the ACHCRs. The closing date for comment was 11 May 2023.

Three responses were received from Darkinjung LALC, Stakeholder 1 and Stakeholder 2 advising that they had reviewed and supported the methodology (**Appendix 1 Figure 5**).

### 3.2.4 ACHCRs Stage 4

Stage 4 involves the production of a draft ACHAR that is issued to all RAPs for their consideration. The ACHAR will document the results of the assessment, outline opportunities for the conservation of Aboriginal cultural values, and suggest recommendations for the management of Aboriginal objects should impacts to these objects be unavoidable.

A draft of this ACHAR was sent to all RAPs on 21 July 2023 with a closing date for comment on 18 August 2023 (**Appendix 1 Figure 6**).

One response was received on the draft ACHAR from Amanda Hickey Cultural Services on 26 August 2023 (**Appendix 1 Figure 7**). The response notes that Amanda Hickey Cultural Services supports the ACHAR.

## 3.3 ABORIGINAL COMMUNITY INVOLVEMENT IN THE ASSESSMENT

A representative from Darkinjung LALC was invited to participate in the survey however they were unable to provide a site officer on the requested date.

## 3.4 CULTURAL VALUES IDENTIFIED THROUGH THE ACHCR PROCESS

No specific cultural values have been identified by the RAPs regarding the study area, however, the strong cultural values of Aboriginal communities towards landscapes and cultural heritage sites are recognised.

## 4 LANDSCAPE CONTEXT

An understanding of the environmental context of a study area is required in any Aboriginal archaeological investigation (DECCW 2010). It is a particularly important consideration in the development and implementation of survey strategies for the detection of archaeological sites. In addition, natural geomorphic processes of erosion and/or deposition, as well as human-activated landscape processes, influence the degree to which the remains of material culture are retained in the landscape as archaeological sites; and the degree to which they are preserved, revealed and/or conserved in present environmental settings.

### 4.1 TOPOGRAPHY AND GEOLOGY

The study area is located at the eastern edge of the Sydney Basin bioregion, specifically, the Pittwater sub-bioregion. The Pittwater sub-bioregion landforms are characterised by small beach, dune and lagoon barrier systems; steep coastal cliffs and rock platforms (NPWS 2003: 193).

Most of the study area is within the Gosford-Cooranbong Coastal Slopes landscape unit, while a small section at the southern end is located within the Sydney Basin Diatremes landscape unit described by Mitchell (2002). The Gosford-Cooranbong Coastal Slopes landscape unit generally consists of rolling hills, sandstone plateaus, extensive rock outcrop and low cliffs along ridge margins with a general elevation between 0 to 75 metres (m) (Mitchell 2002: 123).

The landforms of the study area have been heavily modified but formerly the elevation ranged from 110-150 m above sea level (**Figure 4-1** and **Figure 1-2**). The topography formerly included ridges in the north, east and west with moderate slopes receding to a valley in the central portion of the study area.

**Figure 4-1: Overview of the study area.**





Figure 4-2: Aerial showing the topography and hydrology of the study area.



## 4.2 SOILS

The soils inside the study area consist primarily of Hawkesbury Sandstone overlain with alluvial and colluvial soils deposited by water (SMEC 2020). Hawkesbury Sandstone is known to comprise medium to coarse-grained quartz sandstone, very minor shale and laminate lenses. Alluvial soils are comprised of sandstone clays, silts, sands and gravel. Colluvial soils are comprised of a mixture of coarse granular material with fines (SMEC 2020).

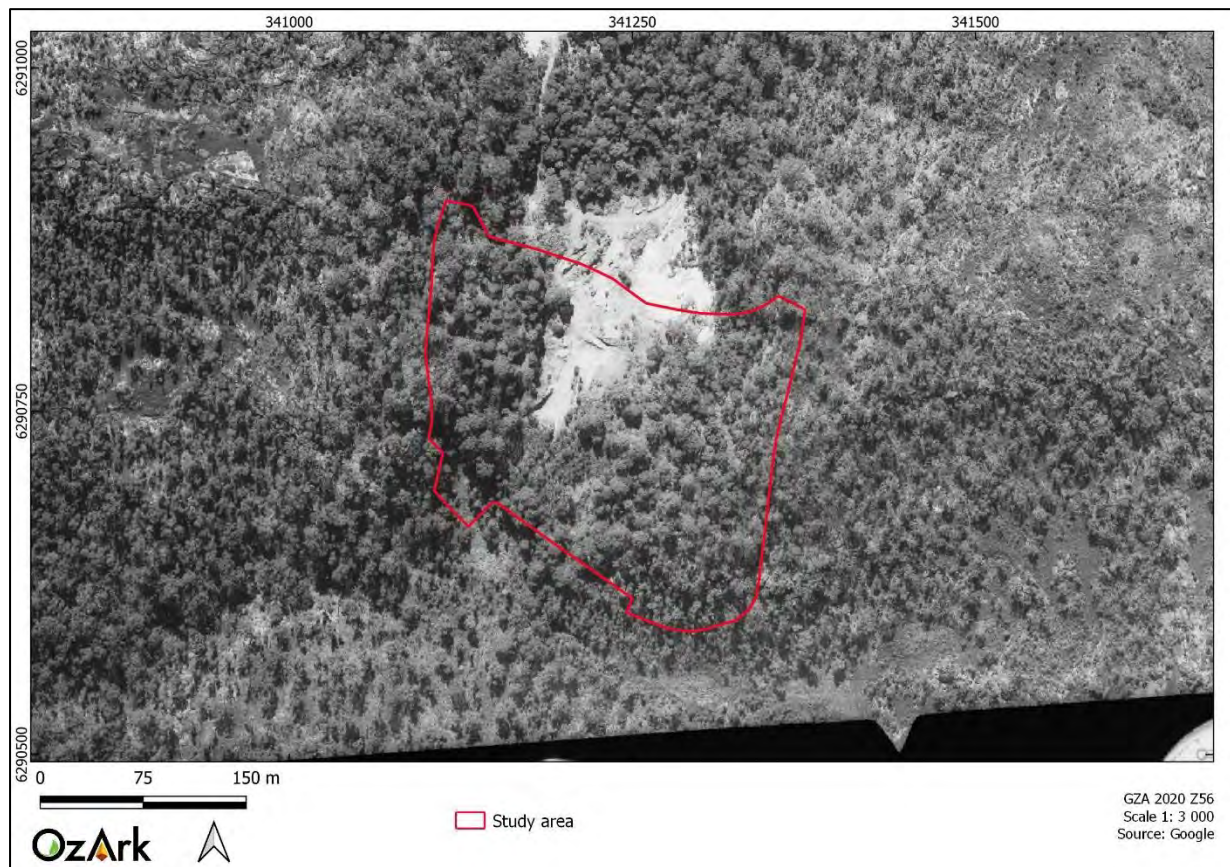
## 4.3 HYDROLOGY

Major watercourses in the region include Brisbane Water situated 1.7 km north of the study area and the Hawkesbury River located 4.1 km to the southeast. Patonga Creek is the closest semi-permanent watercourse to the study area, located approximately 60 m to the south (**Figure 4-2**). Patonga Creek flows in a general north to south direction into Brisk Bay, located approximately 5.2 km south of the study area. Several tributaries which form the headwaters of Woy Woy Creek are also located approximately 600 m north of the study area.

## 4.4 LAND USE HISTORY AND EXISTING LEVELS OF DISTURBANCE

The study area has experienced widespread disturbance, with all original vegetation removed historically. The study area is within the existing approved impact footprint of the Woy Woy WMF and as such has been impacted by approved WMF activities. An aerial from 1960 which covers the study area shows native open woodland surrounding the former basalt quarry which partially overlaps the study area (**Figure 4-3**).



**Figure 4-3: 1960 aerial with overlay of study area (source: SS 2023).**

## 4.5 CONCLUSION

The review of the environmental factors associated with the study area allows the following conclusions to be drawn in terms of past Aboriginal occupation:

- **Topography and hydrology:** the landforms have undergone considerable modification and none of the study area can be regarded as containing unmodified landforms. The former landforms are unlikely to have been utilised for long-term repeated occupation due to the moderately undulating slopes and ridges but is likely to have been traversed for specific resources, i.e. travelling towards Patonga Creek, located outside the study area.
- **Geology and soils:** geological mapping of the study area indicates it may have comprised sandstone plateaus and extensive rock outcrops. These geological features are suitable for site types such as rockshelters, grinding grooves and rock engravings. However, the landforms of the study area have been heavily modified which has removed potential for these site types to be present. Further, soils across the study area have been heavily modified meaning no intact deposits would remain.
- **Land use:** crucial for the preservation of archaeological deposits is the history of past land use in an area. The study area has been cleared of native vegetation and landforms modified for operation of the Woy Woy WMF and previous quarry activities. Prior to current disturbances, there may have been potential for grinding grooves, rock engravings, and campsites to be identified in the study area. This potential however has been removed by the high levels of modification present in the study area.

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## 5 ARCHAEOLOGICAL CONTEXT

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### 5.1 ABORIGINAL PEOPLE OF THE STUDY AREA

Although the exact position of traditional (pre-European) tribal boundaries is not clear, Tindale's 1974 map, with its obvious limitations, places the study area at the intersection of Daruk and Eora Country.

These neighbours lived by fishing, gathering bush foods and hunting. The region was part of an extensive trade network and large ceremonies were held at times of the year when fish were plentiful. Ourimbah, in the middle of the Central Coast region, was a ceremonial ground in which boys were initiated (Vinnicombe 1980). Only now gaining acceptance are the wide-ranging land management practices undertaken by Aboriginal people. This ranged from landscape management using fire (Gammage 2011) to various forms of subsistence (better termed agriculture) resulting in stored agricultural surpluses and semi-sedentary lifestyles (Pascoe 2014). Particularly in resource-rich environments such as the Central Coast, the common visualisation of Aboriginal people being purely hunters and gatherers is probably not an accurate representation of the more complex lifestyles practiced in the region of the study area over the past millennia.

### 5.2 REGIONAL ARCHAEOLOGICAL CONTEXT

The Aboriginal occupation of Australia begins prior to 40,000 BP (years before present) and possibly earlier than 50,000 BP. Dates exceeding 20,000 years occur in almost all parts of Australia resulting in the expectation that most areas should have a Pleistocene (>12,000 BP) occupational signature. However, such dates remain relatively rare due to a range of factors, both behavioural and post-depositional. These factors include a possible low density of occupation in the Pleistocene period and poor preservation of archaeological materials (particularly dateable organic materials).

Many hundreds of Aboriginal sites have been recorded within the Central Coast LGA and are listed on the AHIMS. The oldest date for the region (11,050 BP) is based on evidence from Logger's Shelter at Mangrove Creek, recorded by Attenbrow (as cited in Vinnicombe 1980).

#### 5.2.1 Vinnicombe (1980) Predilection and Prediction: A Study of Aboriginal Sites in the Gosford-Wyong Region

Vinnicombe (1980) undertook a major survey that sought to categorise and define Aboriginal heritage resources in the Gosford/Wyong area to integrate cultural heritage into the early stages of development planning. The project comprised thorough background research, detailed survey, and analysis of results to produce a predictive model for the region that was relevant to her 1,560 square kilometre study area. Vinnicombe's study area included the current study area.

As a result of this study, Vinnicombe identified various ecological zones within her study area and sought to determine the differences within and between these areas that might make Aboriginal site prediction more accurate. Three different environments were investigated, including open coastline and coastal estuary, riverine estuary and inland sclerophyll forest (with riverine estuary being most relevant to the current study area).

Vinnicombe conducted intensive 10 square kilometre (km<sup>2</sup>) surveys within each of these three zones, identifying an average of 11 sites/ km<sup>2</sup> in coastal estuary areas, eight sites/square kilometre in riverine estuary areas and six sites/square kilometre in inland sclerophyll zones. Given the (then) current levels of development and the ecological make-up of the Gosford/Wyong area, Vinnicombe predicted that there could be an overall total of 13,000 sites within the locality. Vinnicombe was also able to postulate that decreasing site densities are directly related to the distance from marine resources.

A total of 243 sites were recorded during intensive survey, as well as additional sites recorded in spot surveys and ad hoc inspections.

A total of 127 rock shelters with occupation evidence were located, along with another 469 shelters considered to be potentially habitable, thereby being the most common site type recorded during the survey.

Forty-nine middens were recorded in sandy alluvium and Narrabeen Group landscapes, and these were most often observed near freshwater creeks/aquifers at the bottom of slopes towards the valley floor.

Artefact scatters were not commonly observed during survey. Five were located (only one is recorded as a separate site, the others as middens or shelter with deposit), all of which were either associated with middens or found on creek banks or a high plateau. It was noted, however, that there was a reasonable likelihood that vegetation and/or accumulated deposits may have covered archaeological sites causing them to be invisible in terms of survey.

A total of 54 grinding grooves were found, mostly in and along creek beds at the heads of valleys on Hawkesbury Sandstone. These were also found on Narrabeen Group sandstone(s) although not as often as in Hawkesbury Sandstone. They were usually located near the tops of waterfalls, near rock pools or close to aquifers on rock platforms. The numbers of grooves varied from 1–81 and the average groove size was 29 x 7.5 x 1 centimetres (cm), making them likely to have been for spear/tool point sharpening rather than any sort of food preparation.

Engravings usually consisted of pecking, abrasion or both. Most motifs were human, fish or macropods, with birds and other animals, weapons and animal/human tracks also being observed. Of the 12 engravings recorded, they were usually found in Hawkesbury Sandstone on ridge tops and plateaus. Others were found on Narrabeen Group sandstone(s) at sea level.

As the Gosford-Wyong area has been heavily logged in the past, scarred trees were considered rare in the region and none were recorded during Vinnicombe's assessment.

### **5.2.2 Attenbrow (2004) What's Changing: Population Size or Land-Use Patterns? The archaeology of Upper Mangrove Creek, Sydney Basin**

Attenbrow undertook archaeological investigations in the Upper Mangrove Creek sandstone hinterland area and provides the largest systematic and best-published survey and excavation programme in the region.

Attenbrow's generated several predictive statements regarding Aboriginal site location:

- That ridge tops between major catchments are likely to have many sites including rock shelters with archaeological deposits and grinding areas. Density was predicted to be less than that for main creek valley bottoms and subsidiary creek sides, however. Ridge tops within catchments are likely to have few sites and the lowest density. If present, rock shelters will tend to be in cliff lines just below the flat ground of the ridge top.
- Main creek valley bottoms have a high density of sites, especially artefact sites with sub-surface deposits.
- Although ridge sides above main creeks have a high density of potentially habitable rock shelters or those with potential archaeological deposits (PAD), there will be an overall low density of sites while ridge sides above minor creeks have a relatively high density of sites and rock shelters with art will have the highest number of figures. Shelter archaeological deposits will be mainly small scale.

Attenbrow also investigated the Mangrove Creek alluvial flats from Wattle Creek to the site of the dam. This investigation was conducted specifically to search for open artefact scatters and was undertaken in two stages, the first being an opportunistic approach followed by a more systematic survey after logging had occurred in the area, thus exposing sub surface archaeological deposits. Excavations also later formed part of this study to further investigate numerous sites.

As a result of both the survey and excavation program, 179 sites were identified in the Upper Mangrove Creek. In terms of the site location of the isolated finds, 82% were identified in the main creek valley bottoms, 11% on ridge lines above main creeks and 7% on ridge tops. It was noted that the discrepancy in distribution might be a result of more intensive survey in valley floors. Of the open artefact scatters, 84% were identified in main creek valley bottoms with the remainder identified on ridge tops. The overall density of archaeological features was determined as 5.8 per km<sup>2</sup>.

A further noteworthy result of this project was the introduction of the concept of potential habitation shelters as it was realised that many rock shelters without any visible sign of Aboriginal use had deposits that looked as if they would contain archaeological materials. Important to future archaeological investigations, this work introduced the concept of PADs to Australia.



Twenty-eight rock shelters with archaeological deposit were excavated during the salvage component of this project, along with many open artefact scatter sites.

Of these, only 16 had been recorded as having archaeological deposit from the presence of surface artefacts sighted during the initial site survey. Of the twelve potential archaeological deposits in rock shelters that were test excavated, eight (67%) proved to contain sub-surface cultural materials. Additionally, this salvage program was among the first pieces of research aimed at the scientifically rigorous understanding of an environmentally defined area that was able to shed light on the processes of 'intensification' of Aboriginal occupation during the late Holocene around 4000 BP (Attenbrow 2004b).

#### **5.2.2.1     *Regional archaeological context: summary***

The regional archaeological review above allows the following observations to be made:

- Artefact scatters are possible in sloping landforms away from the alluvial areas, but these tend to be infrequent and of a low artefact density. Vinnicombe estimated that inland sclerophyll zones would contain six sites/ km<sup>2</sup>. In Vinnicombe's study artefact scatters were not commonly observed during her survey and only one was recorded that was not associated with other site types such as shelters or middens. In Attenbrow's study only 14% of recorded sites were artefact scatters showing a low representation of this site type.
- In the steep hills and valleys to the west of the study area, the main sites are centred on the available sandstone resources and sites associated with shelters are frequently recorded. In addition, sites such as axe grinding grooves that also utilise the available sandstone are frequently recorded. Attenbrow indicates that ridge tops between major catchments are likely to have many sites including rock shelters with archaeological deposits and grinding areas.
- A large number of grinding groove and rock engravings sites have been recorded, many of which are quite extensive. These site types are not commonly preserved in Narrabeen sandstones such as that within the study area (Vinnicombe 1980).

### **5.3     LOCAL ARCHAEOLOGICAL CONTEXT**

A desktop search was conducted on the following databases to identify any potential previously recorded heritage within the study area. The results of this search are summarised in **Table 5-1**.

**Table 5-1: Aboriginal cultural heritage: desktop-database search results.**

Name of Database Searched	Date of Search	Type of Search	Comment
Commonwealth Heritage Listings	29/3/23	Central Coast LGA	No places listed on either the National or Commonwealth heritage lists are located within the study area
National Native Title Claims Search	29/3/23	NSW	No Native Title Claims cover the study area.
AHIMS	29/3/23	3 x 3 km centred on the study area	59 sites returned within the designated search area. None of these sites are within the study area.
Local Environmental Plan (LEP)	29/3/23	Gosford LEP 2014	None of the Aboriginal places noted occur near the study area.

The search of the AHIMS on 29 March 2023 returned 59 results for Aboriginal sites within a 3 km radius of the study area (GDA Zone 56 Eastings: 339687–342687; Northings: 6289234–6292234) (see **Table 5-2** for site types and frequencies).

The most frequently recorded site types are grinding grooves which contribute 30.5% of the site types in the vicinity of the study area. Other frequent site types are art (pigment or engraved) (16.9%), rock engravings (13.6%) and grinding groove with rock engraving (10.2%). Shelters with art (8.5%), shelter with midden (5.1%), stone arrangements (6.8%), stone arrangements with rock engraving (3.4%) are also present, as well as less common site types which only have single recording within the search area (**Table 5-2**).

Site types which include shelters and art (largely engravings) are in the mountainous ranges to the south and west of the study area where outcropping sandstone is prevalent. Recorded grinding grooves tend to be located near a watercourse (Patonga Creek) and on the edges of mountainous areas.

**Figure 5-1** shows the location of previously recorded sites in the vicinity of the study area. No previously recorded sites are located within the study area. The closest recorded Aboriginal site (ID 45-6-0204) plots 60 m within the Brisbane Water National Park. The site includes grinding grooves and rock engravings (**Figure 5-2**).

**Table 5-2: Site types and frequencies of AHIMS sites near the study area.**

Site Type	Number	% Frequency
Grinding groove	18	30.5
Art (pigment or engraved)	10	16.9
Rock engraving	8	13.6
Grinding groove and rock engraving	6	10.2
Shelter with art	5	8.5
Shelter with midden	3	5.1
Stone arrangement	4	6.8
Stone arrangement and rock engraving	2	3.4
Artefact and midden	2	3.4

Site Type	Number	% Frequency
Grinding groove and stone arrangement	1	1.7
<b>Total</b>	<b>86</b>	<b>100</b>

**Figure 5-1: Location of previously recorded AHIMS sites in relation to the study area.**

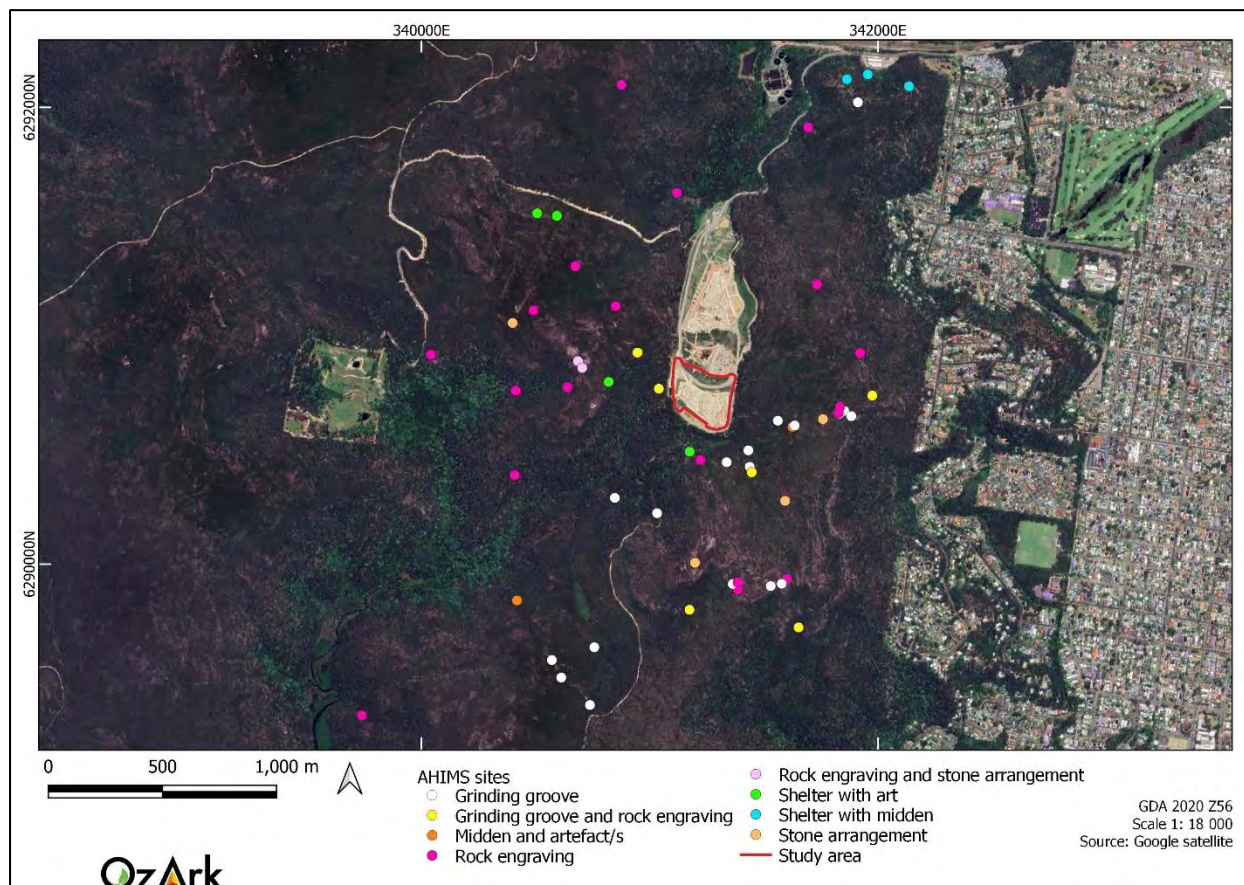




Figure 5-2: Aerial showing 45-6-0204 in relation to the study area.



### 5.3.1 Archaeological investigations within the study area

#### 5.3.1.1 Woy Woy Waste Management Facility (Biosis 2006)

In 2006, Biosis Research (Biosis) undertook an archaeological assessment of proposed upgrade works at Woy Woy WMF which included the current study area. Biosis noted high levels of disturbance and low ground surface visibility during the survey. Several areas of small sandstone overhangs were identified within their assessment area, however, none of these contained Aboriginal cultural material, features, or visible art. As a result of the survey, no Aboriginal archaeological sites were recorded.

## 5.4 PREDICTIVE MODEL FOR SITE LOCATION

Across Australia, numerous archaeological studies in widely varying environmental zones and contexts have demonstrated a high correlation between the permanence of a water source and the permanence and/or complexity of Aboriginal occupation. Site location is also affected by the availability of and/or accessibility to a range of other natural resources including plant and animal foods, stone and ochre resources and rock shelters, as well as by their general proximity to other sites/places of cultural/mythological significance. Consequently, sites tend to be found along permanent and ephemeral water sources, along access or trade routes, or in areas that have good flora/fauna resources and appropriate shelter.

In formulating a predictive model for Aboriginal archaeological site location within any landscape it is also necessary to consider post-depositional influences on Aboriginal material culture. In all but the best preservation conditions very little of the organic material culture remains of ancestral Aboriginal communities survives to the present. Generally, it is the more durable materials such as stone artefacts, stone hearths, shells, and some bones that remain preserved in the current landscape. Even these, however, may not be found in their original depositional context since these may be subject to either (a) the effects of wind and water erosion/transport, both over short- and long-time scales, or (b) the historical impacts associated with the introduction of European farming practices including grazing and cropping, land degradation, and farm related infrastructure. Scarred trees, due to their nature, may survive for up to several hundred years but rarely beyond.

### 5.4.1 Site types in the region of the study area

The site types listed in **Table 5-3** are present in the region of the study area.

**Table 5-3: Site types recorded in the region of the study area.**

Site type	Site description
Isolated finds	May be indicative of random loss or deliberate discard of a single artefact, the remnant of a now dispersed and disturbed artefact scatter, or an otherwise obscured or subsurface artefact scatter. They may occur anywhere within the landscape but are more likely to occur in topographies where open artefact scatters typically occur.

Site type	Site description
Open artefact scatters	<p>Artefact scatters are defined as two or more artefacts, not located within a rock shelter, and located no more than 50 m away from any other constituent artefact. This site type may occur almost anywhere that Aboriginal people have travelled and may be associated with hunting and gathering activities, short- or long-term camps, and the manufacture and maintenance of stone tools. Artefact scatters typically consist of surface scatters or sub-surface distributions of flaked stone discarded during the manufacture of tools but may also include other artefactual rock types such as hearth and anvil stones. Less commonly, artefact scatters may include archaeological stratigraphic features such as hearths and artefact concentrations which relate to activity areas. Artefact density can vary considerably between and across individual sites. Small ground exposures revealing low density scatters may be indicative of a background scatter rather than a spatially or temporally distinct artefact assemblage. These sites are classed as 'open', that is, occurring on the land surface unprotected by rock overhangs, and are sometimes referred to as 'open camp sites'.</p> <p>Artefact scatters are most likely to occur on level or low gradient contexts, along the crests of ridgelines and spurs, and elevated areas fringing watercourses or wetlands. Larger sites may be expected in association with permanent water sources.</p> <p>Topographies which afford effective through-access across, and relative to, the surrounding landscape, such as the open basal valley slopes and the valleys of creeks, will tend to contain more and larger sites, mostly camp sites evidenced by open artefact scatters.</p>
Grinding grooves	Grinding grooves are the remnants of ground edge hatchet manufacture and sometimes from food preparation. The site is most likely to occur on flat outcrops of coarse-grained sandstone in the vicinity of water sources, however, grinding grooves have also been recorded on fine-grained granite and quartzite outcrops.
Rock shelters and art sites	Utilised in the past for both habitation and ceremonial purposes. The term 'rock shelter site' refers to rock shelters/rock overhangs that contain evidence such as stone artefacts and/or bones and/or plant remains (from meals eaten at the site) and/or hearths (fireplaces). Most rock shelter sites are secular in nature, however, those that also contain rock art or engravings are often believed to be non-secular in nature. The term 'rock art site' generally refers to Aboriginal ochre paintings or ochre or charcoal drawings located on a rock slab (generally in a sheltered place like the floor of a cave or rock shelter), boulder, cliff-face, cave or rock shelter wall or roof, or wall of a rock overhang. Most rock art sites are found in locations that are sheltered from the elements. This observation, however, is probably biased to some extent, as rock art would not preserve well in open positions. Rock art sites are generally believed to be non-secular in nature.
Rock engravings or petroglyphs	A type of Aboriginal art that are often located on high vantage points along ridge lines at the headwaters of creeks but can be located on any suitable fine-grained stone surface. Examination into the rock engraving process notes that it presumably first included sketching the outline of the motif; then a series of holes was drilled along the line, using a pointed stone or shell. Finally, the holes were joined by rubbing a sharp stone along the line.
Burials	Generally found in soft sediments such as aeolian sand, alluvial silts, and rock shelter deposits. In valley floor and plains contexts, burials may occur in locally elevated topographies rather than poorly drained sedimentary contexts. Burials are also known to have occurred on rocky hilltops in some limited areas. Burials are generally only visible where there has been some disturbance of sub-surface sediments or where some erosional process has exposed them.
Bora/Ceremonial sites	Places which have ceremonial or spiritual connections. Ceremonial sites may comprise of natural landscapes or have archaeological material. Bora sites are ceremonial sites which consist of a cleared area and earthen rings.

## 5.4.2 Conclusion

Based on knowledge of the environmental contexts of the study area, it is considered that the study area has little to no potential to contain Aboriginal sites. The landforms of the study area have been heavily modified which removes the potential for common site types in the local area (i.e. rock shelters, art engravings and grinding grooves) to remain. The only site type with potential to be identified in the study area is isolated finds or low-density artefact scatters however the study area has been previously assessed by Biosis (2006) and no sites were identified. Should these site types be identified, they will be in a secondary context with no associated subsurface deposits.



## 6 RESULTS OF ABORIGINAL ARCHAEOLOGICAL ASSESSMENT

### 6.1 SAMPLING STRATEGY AND FIELD METHODS

The archaeological methods utilised in the Aboriginal archaeological assessment followed the Code of Practice. Standard archaeological field survey and recording methods were employed (Burke and Smith 2004).

The study area was inspected on foot by an OzArk archaeologist. The survey coverage is shown in **Figure 6-1**.

**Figure 6-1: Aerial showing survey coverage of the study area.**



### 6.2 EFFECTIVE SURVEY COVERAGE

Two of the key factors influencing the effectiveness of archaeological survey are ground surface visibility (GSV) and ground surface exposure (GSE). These factors are quantified to ensure that the survey data provides adequate evidence for the evaluation of the archaeological materials across the landscape. For the purposes of the current assessment, these terms are used in accordance with the definitions provided in the Code of Practice.

GSV is defined as:

*... the amount of bare ground (or visibility) on the exposures which might reveal artefacts or other archaeological materials. It is important to note that visibility, on its own, is not a*

*reliable indicator of the detectability of buried archaeological material. Things like vegetation, plant or leaf litter, loose sand, stone ground or introduced materials will affect the visibility. Put another way, visibility refers to 'what conceals' (DECCW 2010: 39).*

GSE is defined as:

*... different to visibility because it estimates the area with a likelihood of revealing buried artefacts or deposits rather than just being an observation of the amount of bare ground. It is the percentage of land for which erosion and exposure was sufficient to reveal archaeological evidence on the surface of the ground. Put another way, exposure refers to 'what reveals' (DECCW 2010: 37).*

**Table 6-1** calculates the effective survey coverage within the study area. In general, **Table 6-1** presents an approximation of the amount of ground surface able to be seen at any one location within the study area. The GSE was moderate at approximately 60%, however some areas of ground cover remain towards the northern extent of the study area (**Plate 5**). Within these areas of exposure, GSV was high (80%) largely due to previous vegetation clearing and earthworks which has displaced large volumes of soil throughout the study area (**Plate 6**).

**Table 6-1: Effective survey coverage within the study area.**

Survey unit	Landform	Survey Unit Area (sq m)	Visibility %	Exposure %	Effective Coverage Area (sq m) (= Survey Unit Area x Visibility % x Exposure %)	Effective Coverage % (= Effective Coverage Area / Survey Unit Area x 100)
1	Modified	55,155	80	60	26,474	48%

**Table 6-2** demonstrates that although the survey efficacy within the study area was 48%, the level of disturbance at the study area is a more direct contributor as to why no sites were recorded.

**Table 6-2: Effective survey coverage and incidences of site recording.**

Landform	Landform area (sq m)	Area Effectively Surveyed (sq m) (= Effective Coverage Area)	% of Landform Effectively Surveyed (= Area Effectively Surveyed / Landform x 100)	Number of Sites	Number of Artefacts or Features
Modified	55,155	26,474	48%	0	0

### 6.3 ABORIGINAL SITES RECORDED

No Aboriginal sites were identified within the study area. Further, due to the extent of past landform modification, no landforms within the study area were assessed to have potential for subsurface archaeological deposits.

### 6.4 DISCUSSION

The predictive model in **Section 5.4** concluded that only isolated finds and/or low-density artefact scatters had potential to be located within the study area due to the high levels of disturbance.



These site types were not identified within the study area which is not surprising. Additionally, no landforms were identified as having the potential to contain Aboriginal objects in subsurface archaeological deposits as the landforms have been heavily modified.

## 7 SIGNIFICANCE ASSESSMENT

### 7.1 IDENTIFYING CULTURAL SIGNIFICANCE

The concept of cultural significance is used in Australian heritage practice and legislation to encompass all the cultural values and meanings that might be recognised in a place. The *Burra Charter*'s definition of cultural significance is broad and encompasses places that are significant to Indigenous cultures (Burra Charter 2013).

The *Burra Charter* definition of 'place' is also broad and encompasses Indigenous places of cultural significance. 'Place' includes locations that embody spiritual value (such as Dreaming places, sacred landscapes, and stone arrangements), social and historical value (such as massacre sites), as well as scientific value (such as archaeological sites). In fact, one place may be all these things or may embody all these values at the same time.

In some cases, the find-spot of a single artefact may constitute a 'place'. Equally, a suite of related locations may together comprise a single 'place', such as the many individual elements that make up a Songline. These more complex places are sometimes called a cultural landscape or cultural route.

The Guide (OEH 2011: 8–9) notes that cultural significance is comprised of an assessment of social values, scientific values, aesthetic values, and historic values. These values are described below.

#### *Social or cultural value*

Social or cultural value refers to the spiritual, traditional, historical, or contemporary associations and attachments the place or area has for Aboriginal people. Social or cultural value is how people express their connection with a place and the meaning that place has for them.

Places of social or cultural value have associations with contemporary community identity. These places can have associations with tragic or warmly remembered experiences, periods, or events. Communities can experience a sense of loss should a place of social or cultural value be damaged or destroyed.

There is not always consensus about a place's social or cultural value. Because people experience places and events differently, expressions of social or cultural value do vary and, in some instances, will be in direct conflict. When identifying values, it is not necessary to agree with or acknowledge the validity of each other's values, but it is necessary to document the range of values identified.

Social or cultural value can only be identified through consultation with Aboriginal people. This could involve a range of methodologies, such as cultural mapping, oral histories, archival

documentation, and specific information provided by Aboriginal people specifically for the investigation.

Cultural value involves both traditional links with specific areas, as well as an overall concern by Aboriginal people for their sites generally and the continued protection of these. This type of value may not be in accordance with interpretations made by the archaeologist: a site may have low archaeological value but high social value, or vice versa.

### ***Scientific (archaeological) value***

This refers to the importance of a landscape, area, place or object because of its rarity, representativeness, and the extent to which it may contribute to further understanding and information (Burra Charter 2013).

Assessing a site in this context involves placing it into a broader regional framework, as well as assessing the site's individual merits in view of current archaeological discourse. This type of value relates to the ability of a site to answer current research questions and is also based on a site's condition (integrity), content and representativeness.

The overriding aim of cultural heritage management is to preserve a representative sample of the archaeological resource. This will ensure that future research within the discipline can be based on a valid sample of the past. Establishing whether a site can contribute to current research also involves defining 'research potential'. Questions regularly asked when determining significance are: can this site contribute information that no other site can? Is this site representative of other sites in the region?

Information about scientific values will be gathered through any archaeological investigation undertaken. Archaeological investigations must be carried out according to Heritage NSW's Code of Practice (DECCW 2010).

Often scientific values are informed by social values that allow a contemporary understanding of the archaeological data to be understood.

### ***Aesthetic value***

This refers to the sensory, scenic, architectural, and creative aspects of the place. It is often closely linked with the social values. It may consider form, scale, colour, texture and material of the fabric or landscape, and the smell and sounds associated with the place and its use (Burra Charter 2013).

### ***Historic value***

Historic value refers to the associations of a place with a historically important person, event, phase, or activity in an Aboriginal community. Historic places do not always have physical

evidence of their historical importance (such as structures, planted vegetation or landscape modifications). They may have 'shared' historic values with other (non-Aboriginal) communities.

## **7.2 ASSESSED SIGNIFICANCE OF THE RECORDED SITES**

Social or cultural value: There may be places with intangible cultural significance within the study area although no specific locations have so far been identified by the Aboriginal community.

Scientific (archaeological) value: During the survey, no Aboriginal sites were recorded and therefore there are no known places with archaeological significance within the study area.

Aesthetic value: There are no known places with identified aesthetic values identified within the study area and the landform has been heavily modified.

Historic value: There are no known places with identified historic values identified within the study area.

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## 8 ASSESSING HARM

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### 8.1 AVOIDING AND MINIMISING HARM

#### 8.1.1 Conserving significant Aboriginal cultural heritage

An object of the NPW Act is the '*conservation of objects places and features... of cultural value within the landscape, including... places, objects and features of significance to Aboriginal people*' (s.2A(1(b)(i)).

As heritage professionals, OzArk, strives for good conservation outcomes. In particular, OzArk is primarily concerned with the conservation and protection of Aboriginal cultural heritage that is of significance to Aboriginal people.

Two primary objectives when managing harm to an Aboriginal object are:

- Impacts to significant Aboriginal objects and places should always be avoided wherever possible
- Where impacts to Aboriginal objects and places cannot be avoided, proposals should be amended to reduce the extent and severity of impacts to significant Aboriginal objects and places using reasonable and feasible measures.

#### 8.1.2 Opportunities to conserve Aboriginal cultural heritage values

As no Aboriginal cultural values have been identified within the study area, the project will not enhance nor diminish known Aboriginal cultural heritage values.

### 8.2 LIKELY IMPACTS TO ABORIGINAL HERITAGE FROM THE PROJECT

As no Aboriginal sites or specific cultural values were recorded during the current assessment, there are no known impacts to Aboriginal cultural heritage from the project.

### 8.3 ECOLOGICALLY SUSTAINABLE DEVELOPMENT PRINCIPLES

Ecologically sustainable development principles (ESD) (defined in s.6 of the *Protection of the Environment Administration Act 1991*) requires the integration of economic and environmental considerations (including cultural heritage) in the decision-making process. Regarding Aboriginal cultural heritage, ESD can be achieved by applying the principle of intergenerational equity and the precautionary principle.

#### 8.3.1 Intergenerational equity

Intergenerational equity is the principle whereby the present generation should ensure the health, diversity, and productivity of the environment for the benefit of future generations.

In terms of Aboriginal heritage, intergenerational equity can be considered in terms of the cumulative impacts to Aboriginal objects and places in a region. If few Aboriginal objects and

places remain in a region (for example, because of impacts under previous permits), fewer opportunities remain for future generations of Aboriginal people to enjoy the cultural benefits of those Aboriginal objects and places.

Information about the integrity, rarity or representativeness of the Aboriginal objects and places proposed to be impacted, and how they illustrate the occupation and use of land by Aboriginal people across the region, will be relevant to the consideration of intergenerational equity and the understanding of the cumulative impacts of the proposal.

Where there is uncertainty, the precautionary principle should also be followed.

### 8.3.2 The precautionary principle

The precautionary principle states that if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing cost-effective measures to prevent environmental degradation.

In relation to Aboriginal cultural heritage values, the precautionary principle should be applied if:

- The proposal involves a risk of serious or irreversible damage to Aboriginal objects or places or to the value of those objects or places
- There is uncertainty about the Aboriginal cultural heritage values or scientific or archaeological values, including in relation to the integrity, rarity or representativeness of the Aboriginal objects or places proposed to be impacted.

### 8.3.3 Principle of Integration

The Plan of Implementation of the World Summit on Sustainable Development held in Johannesburg, 2002, noted the need to *“promote the integration of the three components of sustainable development- economic development, social development and environmental protection- as interdependent and mutually reinforcing pillars”*.

The principle of integration ensures mutual respect and reciprocity between economic and environmental considerations:

- Environmental considerations are to be integrated into economic and other development plans, programs, and projects
- Development needs are to be considered in applying environmental objectives.

### 8.3.4 Applicability to the proposal

There are no impacts to Aboriginal cultural heritage values as no Aboriginal sites were recorded, and no intangible heritage values have been identified within the study area. The results of the survey indicate that significant Aboriginal cultural heritage values will not be harmed within the study area.

**Table 8-1** examines the application of ESD principles to the project.



**Table 8-1: Application of ESD principles to the project.**

ESD principle	Response
Avoiding and minimising harm	<b>Section 8.1</b> sets out mechanisms by which to avoid and minimise harm. As no Aboriginal sites are present, these mechanisms will not be employed.
The integration principle	The project presents a strong case for the broader environmental benefits arising from environmentally responsible development. The environmental consequences of the proposal have been carefully assessed.
The precautionary principle	The Aboriginal cultural heritage investigation has followed the precautionary principle though undertaking a robust Aboriginal cultural heritage assessment. The survey adopted a precautionary principle when it came to describing and assessing landforms within the study area.
The intergenerational equity principle	It is assessed that the project will not harm significant Aboriginal cultural heritage values and that there will be a manageable diminution of intergenerational equity.

## 9 MANAGEMENT OF ABORIGINAL CULTURAL HERITAGE

### 9.1 GENERAL MANAGEMENT PRINCIPLES

Appropriate management of cultural heritage items is primarily determined based on their assessed significance as well as the likely impacts of the project. **Section 8.2** describes the likely impacts of the project. The following management options are general principles, in terms of best practice and desired outcomes, rather than mitigation measures against individual site disturbance.

- Avoid impact by altering the project to avoid impact to a recorded Aboriginal cultural heritage value. If this can be done, then a suitable curtilage around a site must be provided to ensure its protection both during the short-term construction phase of development and in the long-term use of the area. If intangible values are identified, consultation with the Aboriginal community will determine how this value may be impacted by the proposal and what appropriate mitigation can be enacted. If plans are altered, care must be taken to ensure that impacts do not occur to areas not previously assessed.

As no Aboriginal cultural heritage values have been identified within the study area, alteration to the proposed project design is unnecessary in terms of Aboriginal cultural heritage.

- If impact is unavoidable then approval to disturb sites/cultural values under the authority of an AHIP will be required.

As there are no identified Aboriginal cultural values within the study area, management recommendations relate only to appropriate management protocols for unanticipated finds and skeletal remains.

### 9.2 MANAGEMENT AND MITIGATION OF RECORDED ABORIGINAL SITES

There is no specific management to be applied to the project as no Aboriginal sites or values have been identified.

In the unlikely event that Aboriginal objects are noted during construction or operation of the project, the *Unanticipated Finds Protocol* in **Appendix 4** will be an appropriate management protocol. If suspected human remains were to be encountered, the procedure in **Appendix 5** must be followed.

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## 10 RECOMMENDATIONS

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Under Section 89A of the NPW Act it is mandatory that all newly recorded Aboriginal sites be registered with AHIMS. As a professional in the field of cultural heritage management it is the responsibility of OzArk to ensure this process is undertaken.

To this end it is noted that no Aboriginal sites were recorded during the assessment.

The following recommendations are made based on these impacts and with regard to:

- Legal requirements under the terms of the NPW Act whereby it is illegal to damage, deface or destroy an Aboriginal place or object without an approved AHIP
- The findings of the current investigations undertaken within the study area
- The interests of the Aboriginal community.

Recommendations concerning Aboriginal cultural values within the study area are as follows:

1. Following development consent of the project, the proposed work may proceed with caution. In the unlikely event that unexpected Aboriginal heritage items are encountered during works, the *Unanticipated Finds Protocol* (**Appendix 4**) must be implemented. **Appendix 5** provides the appropriate procedure to be undertaken in the unlikely event that suspected human remains are encountered.
2. All land-disturbing activities must be confined to within the study area. Should the parameters of the proposed work extend beyond this, then further archaeological assessment will be required.
3. All staff and contractors involved in the proposed work should be made aware of the legislative protection requirements for all Aboriginal heritage items and the procedures for unanticipated Aboriginal objects or suspected skeletal material.

## REFERENCES

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Vinnicombe 1980

Vinnicombe, P. *Predilection and Prediction: A Study of Aboriginal Sites in the Gosford–Wyong Region*. Unpublished report to NSW National Parks & Wildlife Service.



## PLATES



Plate 1: View north of sandstone outcrop west of the study area.



Plate 2: View north across the western boundary of the study area.



Plate 3: View west of fence, overhead power lines and sealed road along the south of the study area.



Plate 4: View southeast of rubble mounds in the central portion of the study area.



Plate 5: View east across the north of the study area showing bitumen road and modified landform.

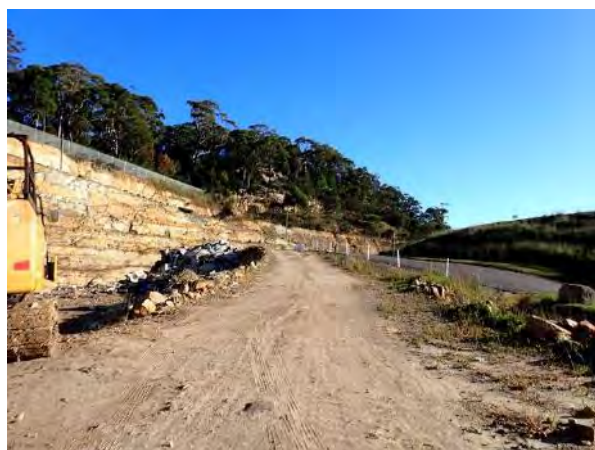


Plate 6: View northwest showing the cut landform.



## APPENDIX 1: ABORIGINAL COMMUNITY CONSULTATION

Appendix 1 Table 1: Aboriginal Community Consultation Log

Aboriginal Consultation Log			
2.3.23	Advertising	Classifieds Northern - Advert Thursday 2.3.22 closing date 16.3.22	Email
2.3.23	Heritage NSW	Catherine Burrowes (CB) sent stage 1 agency letter requesting potential stakeholders. Closing date 16.3.22	Email
2.3.23	Darkinjung LALC	CB sent stage 1 agency letter requesting potential stakeholders. Closing date 16.3.22	Email
2.3.23	Office of The Registrar, ALRA	CB sent stage 1 agency letter requesting potential stakeholders. Closing date 16.3.22	Email
2.3.23	National Native Title Tribunal	CB sent stage 1 agency letter requesting potential stakeholders. Closing date 16.3.22	Email
2.3.23	NTSCORP	CB sent stage 1 agency letter requesting potential stakeholders. Closing date 16.3.22	Email
2.3.23	Central Coast Council	CB sent stage 1 agency letter requesting potential stakeholders. Closing date 16.3.22	Email
2.3.23	Greater Sydney Local Land Services	CB sent stage 1 agency letter requesting potential stakeholders. Closing date 16.3.22	Email
10.3.23	Awabakal & Guringai Pty.Ltd	CB received email registering for the project	Email
10.3.23	Awabakal & Guringai Pty.Ltd	CB replied with thanks	Email
17.3.23	A1 Indigenous Services	CB sent stage 1 community letter requesting potential stakeholders. Closing date 31.3.22	Email
17.3.23	Amanda Hickey Cultural Services	CB sent stage 1 community letter requesting potential stakeholders. Closing date 31.3.22	Email
17.3.23	Awabakal & Guringai Pty Ltd	CB sent stage 1 community letter requesting potential stakeholders. Closing date 31.3.22	Email
17.3.23	Awabakal Descendants Traditional Owners	CB sent stage 1 community letter requesting potential stakeholders. Closing date 31.3.22	Email
17.3.23	Awabakal Traditional Owners Aboriginal Corporation	CB sent stage 1 community letter requesting potential stakeholders. Closing date 31.3.22	Email
17.3.23	Corroboree Aboriginal Corporation	CB sent stage 1 community letter requesting potential stakeholders. Closing date 31.3.22	Email
17.3.23	Darkinjung Local Aboriginal Land Council	CB sent stage 1 community letter requesting potential stakeholders. Closing date 31.3.22	Email
17.3.23	Didge Ngunawal Clan	CB sent stage 1 community letter requesting potential stakeholders. Closing date 31.3.22	Email
17.3.23	Glen Morris	CB sent stage 1 community letter requesting potential stakeholders. Closing date 31.3.22	Email
17.3.23	Gomery Cultural Consultants	CB sent stage 1 community letter requesting potential stakeholders. Closing date 31.3.22	Email
17.3.23	Gunjeewong Cultural Heritage Aboriginal Corporation	CB sent stage 1 community letter requesting potential stakeholders. Closing date 31.3.22	Email
17.3.23	Guringai Tribal Link Aboriginal Corporation	CB sent stage 1 community letter requesting potential stakeholders. Closing date 31.3.22	Email
17.3.23	Kamilaroi Yankuntjatjara Working Group	CB sent stage 1 community letter requesting potential stakeholders. Closing date 31.3.22	Email
17.3.23	Kawul Pty Ltd trading as Wonn1 Sites	CB sent stage 1 community letter requesting potential stakeholders. Closing date 31.3.22	Email
17.3.23	Kevin Duncan	CB sent stage 1 community letter requesting potential stakeholders. Closing date 31.3.22	Email

17.3.23	Kyle Howie	CB sent stage 1 community letter requesting potential stakeholders. Closing date 31.3.22	Email
17.3.23	Lower Hunter Aboriginal Incorporated	CB sent stage 1 community letter requesting potential stakeholders. Closing date 31.3.22	Email
17.3.23	Metropolitan Local Aboriginal Land Council	CB sent stage 1 community letter requesting potential stakeholders. Closing date 31.3.22	Email
17.3.23	Michael Green Cultural Heritage Consultant	CB sent stage 1 community letter requesting potential stakeholders. Closing date 31.3.22	Email
17.3.23	Phillip Pullbrook	CB sent stage 1 community letter requesting potential stakeholders. Closing date 31.3.22	Email
17.3.23	Renee Sales	CB sent stage 1 community letter requesting potential stakeholders. Closing date 31.3.22	Email
17.3.23	Sharon Hodgetts	CB sent stage 1 community letter requesting potential stakeholders. Closing date 31.3.22	Email
17.3.23	Tim Selwyn	CB sent stage 1 community letter requesting potential stakeholders. Closing date 31.3.22	Email
17.3.23	Trent Hodgetts	CB sent stage 1 community letter requesting potential stakeholders. Closing date 31.3.22	Email
17.3.23	Trudy Smith	CB sent stage 1 community letter requesting potential stakeholders. Closing date 31.3.22	Email
17.3.23	WATTAKA Pty Ltd	CB sent stage 1 community letter requesting potential stakeholders. Closing date 31.3.22	Email
17.3.23	Widescope Indigenous Group	CB sent stage 1 community letter requesting potential stakeholders. Closing date 31.3.22	Email
17.3.23	Woka Aboriginal Corporation	CB sent stage 1 community letter requesting potential stakeholders. Closing date 31.3.22	Email
17.3.23	Yinarr Cultural Services	CB sent stage 1 community letter requesting potential stakeholders. Closing date 31.3.22	Email
17.3.23	Yurwang Gundana Consultancy Cultural Heritage Services.	CB sent stage 1 community letter requesting potential stakeholders. Closing date 31.3.22	Email
17.3.23	Yvette and Jackson Walker	CB sent stage 1 community letter requesting potential stakeholders. Closing date 31.3.22	Email
17.3.23	Trudy Smith	CB received email registering for the project	Email
17.3.23	Trudy Smith	CB replied with thanks	Email
20.3.23	Didge Ngunawal Clan	CB received email registering for the project	Email
20.3.23	Didge Ngunawal Clan	CB replied with thanks	Email
21.3.23	Kevin Duncan	CB received email registering for the project	Email
21.3.23	Kevin Duncan	CB replied with thanks	Email
23.3.23	Widescope Indigenous Group	CB received email registering for the project	Email
23.3.23	Widescope Indigenous Group	CB replied with thanks	Email
24.3.23	Stakeholder 1	CB received email registering for the project	Email
24.3.23	Stakeholder 1	CB replied with thanks	Email
23.3.23	Stakeholder 2	CB received email registering for the project	Email
23.3.23	Stakeholder 2	CB replied with thanks	Email
6.4.23	Heritage NSW	CB sent email advising of those who have registered for the project	Email
6.4.23	Darkinjung LALC	CB sent email advising of those who have registered for the project	Email
13.4.23	Awabakal & GuriNgai Pty.Ltd	Eleanore Martin (EM) sent email with cover letter and stage 2-3 assessment methodology	Email
13.4.23	Trudy Smith	EM sent email with cover letter and stage 2-3 assessment methodology	Email

13.4.23	Didge Ngunawal Clan	EM sent email with cover letter and stage 2-3 assessment methodology	Email
13.4.23	Kevin Duncan	EM sent email with cover letter and stage 2-3 assessment methodology	Email
13.4.23	Widescope Indigenous Group	EM sent email with cover letter and stage 2-3 assessment methodology	Email
13.4.23	Stakeholder 1	EM sent email with cover letter and stage 2-3 assessment methodology	Email
13.4.23	Stakeholder 2	EM sent email with cover letter and stage 2-3 assessment methodology	Email
13.4.23	Darkinjung LALC	EM sent email with cover letter and stage 2-3 assessment methodology	Email
21.4.23	Stakeholder 2	CB received email <i>We agree with methodology</i>	Email
21.4.23	Stakeholder 2	CB replied with thanks	Email
23.4.23	Stakeholder 1	CB received email <i>We agree with methodology</i>	Email
23.4.23	Stakeholder 1	CB replied with thanks	Email
4.5.23	Darkinjung LALC	CB sent FW invitation for 18.5.23 closing date 15.5.23	Email
8.5.23	Amanda Hickey Cultural Services	CB received late registration email	Email
8.5.23	Amanda Hickey Cultural Services	CB replied with thanks	Email
15.5.23	Darkinjung LALC	EM received email reply feedback methodology	Email
15.5.23	Darkinjung LALC	EM replied with thanks for feedback	Email
21.7.23	Awabakal & GuriNgai Pty.Ltd	EM sent email with cover letter and stage 4 methodology Closing dale 18.7.23	Email
21.7.23	Trudy Smith	EM sent email with cover letter and stage 4 methodology Closing dale 18.7.23	Email
21.7.23	Didge Ngunawal Clan	EM sent email with cover letter and stage 4 methodology Closing dale 18.7.23	Email
21.7.23	Kevin Duncan	EM sent email with cover letter and stage 4 methodology Closing dale 18.7.23	Email
21.7.23	Widescope Indigenous Group	EM sent email with cover letter and stage 4 methodology Closing dale 18.7.23	Email
21.7.23	Stakeholder 1	EM sent email with cover letter and stage 4 methodology Closing dale 18.7.23	Email
21.7.23	Stakeholder 2	EM sent email with cover letter and stage 4 methodology Closing dale 18.7.23	Email
21.7.23	Darkinjung LALC	EM sent email with cover letter and stage 4 methodology Closing dale 18.7.23	Email
21.7.23	Amanda Hickey Cultural Services	EM sent email with cover letter and stage 4 methodology Closing dale 18.7.23	Email
26.7.23	Amanda Hickey Cultural Services	CB received email AHCS is happy with the Stage 4 Final DRAFT Aboriginal Cultural Heritage Assessment Report Woy Woy Waste Management Facility and supports it	Email
26.7.23	Amanda Hickey Cultural Services	CB replied with thanks	Email



Appendix 1 Figure 1: Stage 1 advertisement, *Newcastle Herald*

46 NEWCASTLE HERALD Thursday, March 2, 2023

# Connect with Class

Phone: 131 696

Email: [classifieds@newcastleherald.com.au](mailto:classifieds@newcastleherald.com.au)

Public Notices	Public Notices	Public Notices
<div style="background-color: black; color: white; padding: 5px; text-align: center; font-weight: bold; font-size: 1.2em;"> WATERSIDE RESTRICTED ZONE </div> <p style="text-align: center; font-weight: bold;">PUBLIC NOTICE</p> <p>Port of Newcastle advises that a Waterside Restricted Zone will be in force during the following cruise ship visit to the Channel Berth in the Port of Newcastle:</p> <p style="text-align: center; font-weight: bold;"> <b>VIKING ORION</b>  <b>FRIDAY 3 MARCH 2023</b>  <b>08:00AM - 6:00PM</b> </p> <p>Further information can be found online at <a href="http://www.portofnewcastle.com.au">www.portofnewcastle.com.au</a>.</p> <p><b>CRUISE SHIP VIEWING</b></p> <p>The best vantage point to watch cruise ships enter or depart the Port is the Newcastle or Stockton foreshore.</p> <p><i>Viking Orion</i> is due to enter the Port at approximately 7:15am. On departure, <i>Viking Orion</i> will leave the berth and make its way to Nobbys Headland. It is expected to pass Queens Wharf at 6:10pm.</p> <p>Port of Newcastle's cruise ship schedule is available at <a href="http://www.portofnewcastle.com.au">www.portofnewcastle.com.au</a>.</p> <div style="text-align: center; margin-top: 20px;"> <p><b>PORT of NEWCASTLE</b></p> <p><a href="http://www.portofnewcastle.com.au">www.portofnewcastle.com.au</a></p> </div> <div style="background-color: green; color: white; padding: 10px; text-align: center;"> <p><b>SAVE TIME, SUBMIT ONLINE</b></p> <p>Place your classified ad anytime 24/7</p> <p><a href="http://addirect.com.au">addirect.com.au</a></p> </div>	<p style="text-align: center; font-weight: bold;"> <b>Invitation to Register an Interest – Glendale Precinct Concept Development Application</b> </p> <p>Environmental Resources Management Australia Pty Ltd (ERM) have been engaged by the Transport for NSW (The Proponent) to undertake an Aboriginal Cultural Heritage Assessment to support preparation of the Glendale Precinct Concept Development Application. The Project Area is in the Lake Macquarie LGA.</p> <p>Aboriginal community consultation is being undertaken to assist the Proponent in the preparation of the Cultural Heritage Assessment to inform the Concept Development Application. It is intended that the consultation process would be continued into subsequent stages of the Project which may require approvals under the <i>National Parks and Wildlife Act 1974</i> or <i>Environmental Planning and Assessment Act 1979</i>. Future approvals may include an application for an Aboriginal Heritage Impact Permit (AHIP). If required, this consultation process would be utilised to support the application for an AHIP and to assist the Secretary of Heritage NSW in their assessment of the AHIP application. The proponents contact details are:</p> <p>Transport for NSW Pat Patel ✉ <a href="mailto:Pat.Patel@Transport.nsw.gov.au">Pat.Patel@Transport.nsw.gov.au</a></p> <p>ERM is seeking expressions of interest from any Aboriginal people who may have cultural knowledge relating to the Glendale area who may be able to assist. Interested Aboriginal parties wishing to be consulted for this assessment are invited to register a written expression of their interest by Thursday 16th March 2023.</p> <p>Please respond in writing to: Victoria Cottle PO Box 603, Newcastle, NSW 2300 Australia ✉ <a href="mailto:Victoria.Cottle@ERM.com">Victoria.Cottle@ERM.com</a> ☎ (02) 4903 5510</p> <p>Please note that the consultation guidelines require the proponent to provide details of registered Aboriginal parties to Heritage NSW and the Biraban LALC. In your response could you please advise if you would like your details to not be provided.</p>	<p style="text-align: center; font-weight: bold;"> <b>Expression of Interest Cultural Heritage Management</b> </p> <p>OzArk Environment &amp; Heritage has been engaged by Central Coast Council (the proponent) to complete an Aboriginal cultural heritage assessment for the Woy Woy waste management facility within the Central coast local government area. The project will involve undertaking investigation, planning, and design for a new 'South Cell' and associated infrastructure at the Woy Woy Waste Management Facility. These activities may result in harm to Aboriginal cultural heritage.</p> <p>OzArk is seeking persons or groups who wish to be consulted about the project and this consultation group will assist OzArk and the proponent in the preparation of an Aboriginal Cultural Heritage Assessment Report and to assist Heritage NSW and the Department of Planning and Environment in their consideration and determination of the project.</p> <p>If you hold cultural knowledge relevant to determining the cultural significance of Aboriginal objects or places in the project area, please register your interest to be consulted.</p> <p>Registrations can be made by post: OzArk PO Box 2069 Dubbo NSW 2830; email: <a href="mailto:catherine@ozarkem.com.au">catherine@ozarkem.com.au</a> or by phoning OzArk on 02 6882 0118. All submissions should be received no later than <b>16 March 2023</b></p>
<div style="background-color: #0070C0; color: white; padding: 5px; text-align: center; font-weight: bold;"> <b>Positions Vacant</b> </div> <div style="background-color: #0070C0; color: white; padding: 10px; text-align: center;"> <p><b>Join the award winning team</b></p> <p><b>We are looking for more staff to join the Gentlemen's Outfitters Family.</b></p> <p><b>Call ☎ 02 4943 3621 for enquiries</b></p> </div>		
<div style="background-color: #0070C0; color: white; padding: 5px; text-align: center; font-weight: bold;"> <b>Trade Services</b> </div> <div style="background-color: #0070C0; color: white; padding: 10px;"> <p><b>GYPROCK/PASTERER</b></p> <p>Small job specialist. Fix ceiling &amp; wall cracks, water damaged ceilings. Small renos, update old rooms to new. All aspects of gyprocking. 35yrs exp, tidy &amp; reliable. Call <b>Dean</b> ☎ 0401 542 289</p> </div>	<div style="background-color: #0070C0; color: white; padding: 5px; text-align: center; font-weight: bold;"> <b>Adult Services</b> </div> <div style="background-color: #0070C0; color: white; padding: 10px;"> <p><b>A1 ANGEL</b></p> <p>Angela Eva Linda \$120 2 ladies 1/2 hr Bodyrub full service. \$75 1/2 hr, \$150 hr 4961 2272 7 Denney St, Broadmeadow</p> </div>	

## Appendix 1 Figure 2: Stage 1 agency letter (sample)

	<p><b>OzArk Environment &amp; Heritage</b></p> <p>Head office: Dubbo          Satellite offices: Queanbeyan   Wollongong          Newcastle   Brisbane</p> <p>T: 02 6882 0118          enquiry@ozarkehm.com.au          www.ozarkehm.com.au</p>	<p><b>ABN 59 104 582 354</b></p> <p>145 Wingewarra St          PO Box 2069          DUBBO NSW 2830</p>
<p>20 February 2023</p> <p>Heritage NSW          Department of Premier and Cabinet          heritagemailbox@environment.nsw.gov.au          Locked Bag 5020          Parramatta NSW 2124</p>		
<p><b>ABORIGINAL CULTURAL HERITAGE ASSESSMENT</b></p> <p><b>WOY WOY WASTE MANAGEMENT FACILITY</b></p>		
<p>Dear Sir/Madam,</p> <p>OzArk Environment &amp; Heritage (OzArk) has been engaged by GHD on behalf of Central Coast Council (the proponent) to undertake Aboriginal community consultation as per the <i>Aboriginal cultural heritage consultation requirements for proponents 2010</i> (DECCW 2010).</p> <p>The proponent is proposing to construct and operate a new 'South Cell' and associated infrastructure in existing excavation and stockpile area on the southern end of the Woy Woy Waste Management Facility, Nagari Road, Woy Woy NSW. The project would provide ongoing putrescible waste disposal capacity for the Central Coast Council Local Government Area. The project may result in harm to Aboriginal cultural heritage.</p> <p>We are therefore seeking Expressions of Interest from relevant Aboriginal stakeholder groups and individuals in the area who hold cultural knowledge relevant to determining the significance of Aboriginal objects or places within the Central Coast local government area.</p> <p>This consultation group will assist OzArk in preparing the Aboriginal Cultural Heritage Assessment Report (ACHAR) and to assist Heritage NSW and the Department of Planning and Environment in their consideration and determination of the project.</p> <p>If your organisation can recommend and provide contact details for any known Aboriginal groups or individuals with cultural knowledge relevant to determining the impacts to the cultural significance of the above-mentioned project, please advise our office.</p> <p>We would appreciate it if you could provide any feedback, by responding to this email catherine@ozarkehm.com.au, regarding these Aboriginal stakeholder groups by 16<sup>th</sup> March 2023, or sooner if possible.</p> <p>Kind regards,</p> <div style="text-align: center; margin-top: 20px;">  </div> <p>Catherine Burrowes  <b>Office Manager/ Community Liaison</b></p>		



Figure 1: Location map.





## Appendix 1 Figure 3: Stage 1 community letter (sample)

	<p><b>OzArk Environment &amp; Heritage</b></p> <p>Head office: Dubbo          Satellite offices: Queanbeyan   Wollongong          Newcastle   Brisbane</p> <p>T: 02 6882 0118          enquiry@ozarkehm.com.au          www.ozarkehm.com.au</p>	<p><b>ABN 59 104 582 354</b></p> <p>145 Wingewarra St          PO Box 2069          DUBBO NSW 2830</p>
<p>20 February 2023</p> <p>Members          Darkinjung LALC          300 Woy Woy Road          Kariong NSW 2250</p>		
<p><b>ABORIGINAL CULTURAL HERITAGE ASSESSMENT</b></p> <p><b>WOY WOY WASTE MANAGEMENT FACILITY</b></p>		
<p>Dear Sir/Madam,</p> <p>OzArk Environment &amp; Heritage (OzArk) has been engaged by GHD on behalf of Central Coast Council (the proponent) to undertake Aboriginal community consultation as per the <i>Aboriginal cultural heritage consultation requirements for proponents 2010</i> (DECCW 2010).</p> <p>The proponent is proposing to construct and operate a new 'South Cell' and associated infrastructure in existing excavation and stockpile area on the southern end of the Woy Woy Waste Management Facility, Nagari Road, Woy Woy NSW. The project would provide ongoing putrescible waste disposal capacity for the Central Coast Council Local Government Area. The project may result in harm to Aboriginal cultural heritage.</p> <p>We are therefore seeking Expressions of Interest from relevant Aboriginal stakeholder groups and individuals in the area who hold cultural knowledge relevant to determining the significance of Aboriginal objects or places within the Central Coast local government area.</p> <p>This consultation group will assist OzArk in preparing the Aboriginal Cultural Heritage Assessment Report (ACHAR) and to assist Heritage NSW and the Department of Planning and Environment in their consideration and determination of the project.</p> <p>If your organisation can recommend and provide contact details for any known Aboriginal groups or individuals with cultural knowledge relevant to determining the impacts to the cultural significance of the above-mentioned project, please advise our office.</p> <p>We would appreciate it if you could provide any feedback, by responding to this email catherine@ozarkehm.com.au, regarding these Aboriginal stakeholder groups by 16<sup>th</sup> March 2023, or sooner if possible.</p> <p>Kind regards,</p> <div style="text-align: center; margin-top: 20px;">  </div> <p>Catherine Burrowes  <b>Office Manager/ Community Liaison</b></p>		

Figure 1: Location map.



## Appendix 1 Figure 4: Stage 2/3 assessment methodology cover letter (sample)

	<p style="text-align: center;"><b>OzArk Environment &amp; Heritage</b></p> <table border="0" style="width: 100%;"> <tr> <td style="width: 33%;">Dubbo</td> <td style="width: 33%;">T: 02 6882 0118</td> <td style="width: 33%;">ABN 59 104 582 354</td> </tr> <tr> <td>Queanbeyan</td> <td>enquiry@ozarkehm.com.au</td> <td>145 Wingewarra St</td> </tr> <tr> <td>Newcastle</td> <td>www.ozarkehm.com.au</td> <td>PO Box 2069</td> </tr> <tr> <td></td> <td></td> <td>DUBBO NSW 2830</td> </tr> </table>	Dubbo	T: 02 6882 0118	ABN 59 104 582 354	Queanbeyan	enquiry@ozarkehm.com.au	145 Wingewarra St	Newcastle	www.ozarkehm.com.au	PO Box 2069			DUBBO NSW 2830	
Dubbo	T: 02 6882 0118	ABN 59 104 582 354												
Queanbeyan	enquiry@ozarkehm.com.au	145 Wingewarra St												
Newcastle	www.ozarkehm.com.au	PO Box 2069												
		DUBBO NSW 2830												

13 April 2023

Darkinjung Local Aboriginal Land Council  
darkinjung@dlalc.org.au

***Aboriginal Cultural Heritage Assessment Methodology:  
Woy Woy Waste Management Facility***

---

Dear Members,

Thank-you for your registration of interest to become a Registered Aboriginal Party (RAP) to be consulted regarding the proposed Woy Woy Waste Management Facility 'South Cell' (the project) within the Central Coast Council Local Government Area. The project will be assessed as a State Significant Development (SSD) under Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

The purpose of this letter is to invite you to comment on the enclosed draft methodology for the Aboriginal cultural heritage assessment.

In addition to comments on the draft methodology, if you can share any Aboriginal cultural heritage knowledge relevant to the assessment areas, we welcome this input to improve our assessment outcomes and to ensure Aboriginal cultural values are considered.

OzArk Environment & Heritage is required to give you 28 days to supply feedback on the attached documents. This period closes 5pm on **Thursday 11 May 2023**

If you need any help supplying feedback or have any queries in relation to the enclosed information, please do not hesitate to contact our office.



Kind regards,





Catherine Burrowes  
**Customer Liaison**


Appendix 1 Figure 5: Stage 2 and 3 RAP responses.

Re: Woy Woy Waste Management Facility Assessment Methodology Report

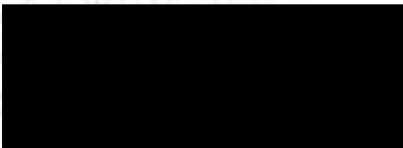
 

To  Eleanore Martin  
Cc  Catherine Burrowes

21/04/2023

 You forwarded this message on 24/04/2023 10:04 AM.

Hi All  
We agree with methodology

Kind regards  


*We respectfully acknowledge the Traditional Owners of the lands upon which we work and pay our deep respect to Elders past, present and emerging.*

On Thursday, April 13, 2023, 1:08 pm, Eleanore Martin <[Eleanore@ozarkehm.com.au](mailto:Eleanore@ozarkehm.com.au)> wrote:

Hello Members,

Please find attached stage 2-3 Draft assessment methodology package: Woy Woy Waste Management Facility.


Please contact Catherine or I with any feedback you may have. Closing date is 5pm Thursday 11 May 2023 (in 28 days-time).

Kind Regards,




---


**Eleanore Martin**

Archaeologist



OzArk Environment & Heritage  
PO Box 2069 DUBBO 2830  
02 6882 0118





## Re: Woy Woy Waste Management Facility Assessment Methodology Report



To Eleanore Martin  
Cc Catherine Burrowes



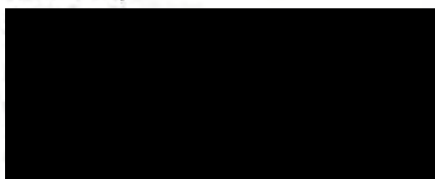
23/04/2023

You replied to this message on 24/04/2023 10:02 AM.  
Click here to download pictures. To help protect your privacy, Outlook prevented automatic download of some pictures in this message.

Hi Eleanore

We agree with methodology.

Sincerely



*We respectfully acknowledge the Traditional Owners of the lands upon which we work and pay our deep respect to Elders past, present and emerging.*

On Thursday, April 13, 2023, 1:07 pm, Eleanore Martin <[Eleanore@ozarkehm.com.au](mailto:Eleanore@ozarkehm.com.au)> wrote:

Hello Members,

Please find attached stage 2-3 Draft assessment methodology package: Woy Woy Waste Management Facility.

Please contact Catherine or I with any feedback you may have. Closing date is 5pm Thursday 11 May 2023 (in 28 days-time).

Kind Regards,

**Eleanore Martin**

Archaeologist





**From:** Jacob Cain <[Jacob.Cain@dlalc.org.au](mailto:Jacob.Cain@dlalc.org.au)>

**Sent:** Monday, May 15, 2023 3:48 PM

**To:** Eleanore Martin <[Eleanore@ozarkehm.com.au](mailto:Eleanore@ozarkehm.com.au)>

**Subject:** Woy Woy Waste Management Facility Assessment Methodology Report

You don't often get email from [jacob.cain@dlalc.org.au](mailto:jacob.cain@dlalc.org.au). [Learn why this is important](#)

Yaama Eleanore,

I am so sorry for the late response to make a comment on the Methodology Report!

I am happy with the report and don't have much comments to make, I really like how in depth you have gone about our Cultural Values, especially about our Connection and Management of Country which I think is very special to us all.

Sorry again that I am late to this.

**Jacob Cain | Culture, Heritage & Education Officer**



**Phone:** 02 4351 2930 **Fax:** 02 4351 2946

**Postal:** [PO%20Box%20401%20Wyong%20NSW%202259]PO Box 401 Wyong NSW 2259


**Website:** [darkinjung.com.au](http://darkinjung.com.au)






## Appendix 1 Figure 6: Stage 4 cover letter




## Appendix 1 Figure 7: Stage 4 response

Re: Stage 4 DRAFT Aboriginal Cultural Heritage Assessment Report – Woy Woy Waste...

 Amanda De Zwart [REDACTED]  
To Catherine Burrowes

  Reply  Reply All  Forward 

Wed 26/07/2023 9:14 AM

 You replied to this message on 26/07/2023 1:14 PM.

Received, thank you. AHCS is happy with the **Stage 4 Final DRAFT Aboriginal Cultural Heritage Assessment Report Woy Woy Waste Management Facility and supports it**

**If you have any questions or need anything else please let me know**

**Thanks**  
**Amanda Dezwart/ Hickey AHCS**

## APPENDIX 2: ASSESSMENT METHODOLOGY



### ABORIGINAL CULTURAL HERITAGE ASSESSMENT METHODOLOGY

**WOY WOY WASTE MANAGEMENT FACILITY, SOUTH CELL**  
CENTRAL COAST COUNCIL LOCAL GOVERNMENT AREA, NSW  
MAY 2023

Report prepared by  
OzArk Environment & Heritage  
for GHD (Sydney) Pty Ltd

**OzArk**

#### **OzArk Environment & Heritage**

145 Wingewarra St  
(PO Box 2069)  
Dubbo NSW 2830  
Phone: (02) 6882 0118  
Fax: (02) 6882 0630  
[enquiry@ozarkehm.com.au](mailto:enquiry@ozarkehm.com.au)  
[www.ozarkehm.com.au](http://www.ozarkehm.com.au)

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**DOCUMENT CONTROLS**

Proponent	Central Coast Council	
Client	GHD (Sydney) Pty Ltd	
Document Description	Aboriginal Cultural Heritage Assessment Methodology: Woy Woy Waste Management Facility, South Cell.	
File Location	OzArk Job No.	
S:\OzArk EHM Data\Clients\GHD (Sydney)	3667	
Document Status: V3.0 FINAL		Date: 13 May 2023
Draft V1: OzArk internal edits		V1.0 JK author 8/4/2023 V1.1 SR review 10/4/2023
Draft V2: OzArk and client edits		V2.0 OzArk to client 11/4/2023 V2.1 OzArk to RAPs 13/4/2023
Final V3: Final document		V3.0 OzArk finalises 13/5/2023
Prepared for		Prepared by
Anna Montgomery Technical Director – Waste Management GHD L15, 133 Castereagh Street Sydney NSW 2000 P: 02 9239 7379 anna.montgomery@ghd.com		Jennifer Knight Archaeologist OzArk Environment & Heritage 145 Wingewarra Street (PO Box 2069) Dubbo NSW 2830 P: 02 6882 0118 stephanie@ozarkehm.com.au
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Enquiries should be addressed to OzArk Environment & Heritage.		

### **Acknowledgement**

OzArk acknowledge the traditional custodians of the area on which this assessment will take place and pay respect to their beliefs, cultural heritage, and continuing connection with the land. We also acknowledge and pay respect to the post-contact experiences of Aboriginal people with attachment to the area and to the Elders, past and present, as the next generation of role models and vessels for memories, traditions, culture and hopes of local Aboriginal people.

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## 1 INTRODUCTION

### 1.1 PREAMBLE

OzArk Environment & Heritage (OzArk) has been engaged by GHD (Sydney) on behalf of Central Coast Council (the proponent) to prepare an assessment methodology for the proposed 'South Cell' and associated infrastructure at the Woy Woy Waste Management Facility (WMF) (the proposal).

This methodology has been prepared in accordance with Stage 3 of the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (ACHCRs; DECCW 2010). The proposal information provided here also complies with Stage 2 of the ACHCRs. The investigation set out in this methodology aims to identify Aboriginal cultural values, both tangible and intangible, that exist in the study area. The results of this investigation will be presented in an *Aboriginal Cultural Heritage Assessment Report* (ACHAR).

### 1.2 STUDY AREA

The study area for the proposal is located at Woy Woy, located approximately 10 kilometres (km) south of Gosford in the Central Coast Council Local Government Area (LGA) (**Figure 1-1**).

The study area encompasses approximately 5.5 hectares (ha) of land within Lot 110 DP755251. The study area is highly disturbed as it forms part of the Woy Woy WMF and a former quarry (**Figure 1-2**).

### 1.3 PROPOSAL OVERVIEW

The proposal will be assessed as a State Significant Development (SSD), under Division 4.7 of the *Environmental Planning & Assessment Act 1979* (EP&A Act).

The proponent proposes to develop the 'South Cell' from the present time through the remaining life of the facility through to post closure remediation.

The conceptual proposal includes:

- Excavation and stockpiling of approximately 159,000 cubic metres (m<sup>3</sup>) to form the cell floor. Cover material will be sourced from the excavations. If hydrogeological investigations allow, lower the floor of the cell if groundwater levels are investigated and determined to be lower (increasing excavation quantities)
- Cell batters are as follows:
  - East and west batter slopes: 1(H) to 1(V) as per current excavations
  - South bund batter slope: 1(H) to 1(V). The southern bund is formed by excavating into the existing fill platform in the southern area



- North batter slope: Ranging from 1(H) to 1(V) and 3(H) to 1(V). The batter slopes on the north side of the cell follow the existing waste slopes to avoid excavating into the waste. The batter slopes then grade to 1(H) to 1(V) until the cell floor.
- Within the cell area, demolish existing bitumen road and excavate the top layer of clay cap for reuse of the material
- Installation of electrical power and a new pump for leachate transfer to the existing leachate pond. If required, increase the depth of the existing pump station to facilitate leachate transfer
- Additional measures to manage leachate generation, if required, may involve:
  - Staged filling of the cell with intermediate bund(s)
  - Upgrade the pump station to increase pumping capacity
  - Seek approval for temporary rise in leachate levels in conjunction with the new cell approval
- Installation of a temporary stormwater catchment pond (0.4ML), if required

The conceptual proposal layout is presented on **Figure 1-3**.

**Figure 1-1: Location of the study area.**

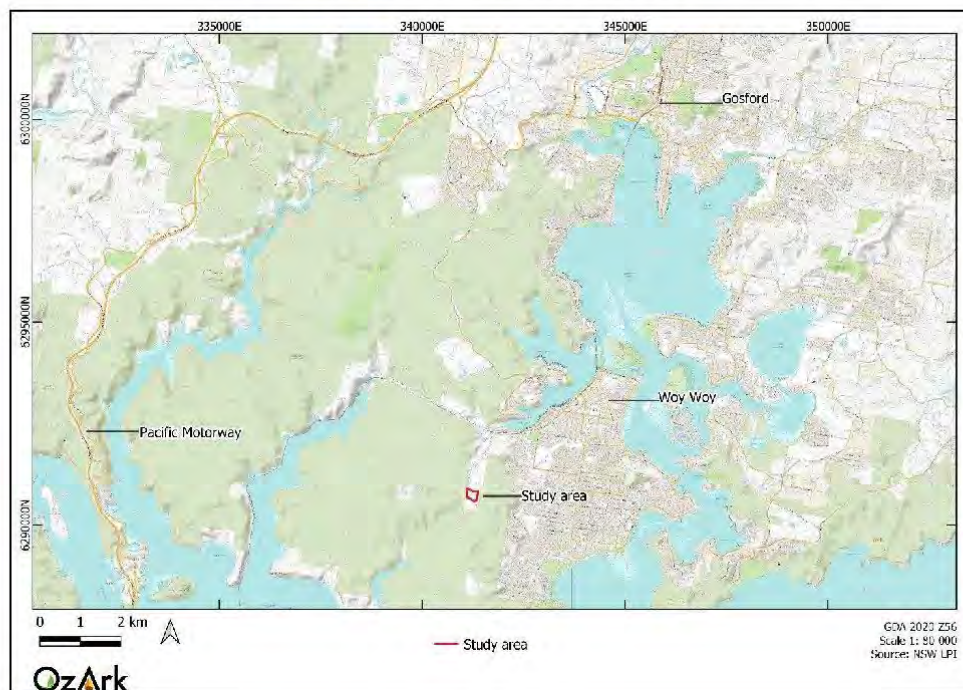
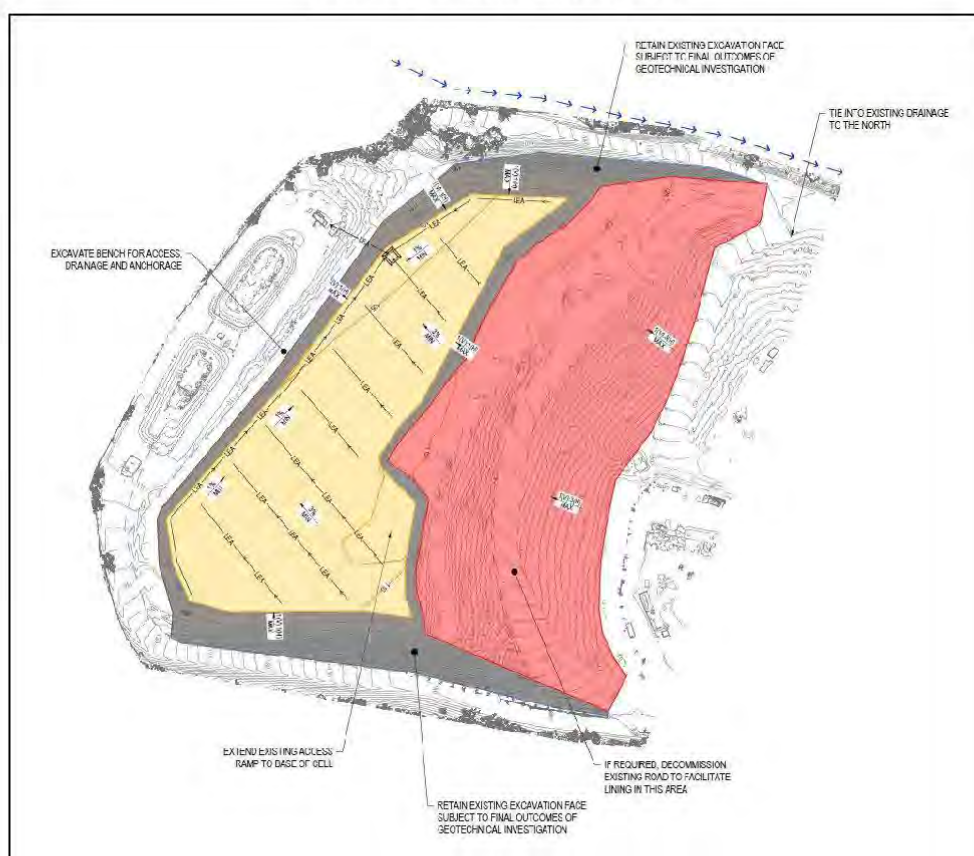


Figure 1-2. Aerial of the study area.





**Figure 1-3. Conceptual project layout.**

#### 1.4 CONSULTATION ON THIS METHODOLOGY

Consultation for this proposal has followed the guidelines established in the ACHCRs (DECCW 2010) whereby an advertisement was placed in the local press and relevant agencies were contacted to ascertain if they were aware of groups or individuals who may have cultural knowledge of the region containing the proposal.

On 2 March 2023 an advertisement was placed in the *Newcastle Herald* requesting expressions of interest in being consulted about the proposal. In addition, the following agencies were contacted to identify potential stakeholders for the area: Heritage NSW; the Darkinjung Local Aboriginal Land Council (LALC); the Office of The Registrar, *Aboriginal Land Rights Act 1983*; the National Native Title Tribunal; Native Title Services Corporation Limited (NTSCORP); the Central Coast Council; and the Greater Sydney Local Land Services.

As a result, the following individuals/groups registered to be consulted about the proposal:

- Amanda Hickey Cultural Services

- Awabakal & GuriNgai Pty Ltd
- Darkinjung LALC.
- Didge Ngunawal Clan
- Kevin Duncan
- Stakeholder 1
- Stakeholder 2
- Trudy Smith
- Widescope Indigenous Group

Those individuals or groups who did not wish to be identified in the public documents are referred to as 'Stakeholder 1', etc.

### 1.5 LANDSCAPE CHARACTERISTICS OF THE STUDY AREA

The study area is located at the eastern edge of the Sydney Basin bioregion, specifically, the Pittwater sub-bioregion. The Pittwater sub-bioregion landforms are characterised by small beach, dune and lagoon barrier systems; steep coastal cliffs and rock platforms (NPWS 2003: 193).

Most of the study area is within the Gosford-Cooranbong Coastal Slopes landscape unit described by Mitchell (2002) (**Figure 1-4**). This landscape unit generally consists of rolling hills, sandstone plateaus, extensive rock outcrop and low cliffs along ridge margins with a general elevation between 0 to 75 m (Mitchell 2002: 123). The topography of the study area formerly included spurs and slopes however the landforms have now been heavily modified.

The soils inside the study area consist primarily of Hawkesbury Sandstone overlain with alluvial and colluvial soils deposited by water (SMEC 2020). Hawkesbury Sandstone is known to comprise medium to coarse-grained quartz sandstone, very minor shale and laminate lenses. Alluvial soils are comprised of sandstone clays, silts, sands and gravel. Colluvial soils are comprised of a mixture of coarse granular material with fines (SMEC 2020).

The study area has experienced widespread disturbance, with the original vegetation essentially removed historically. The original vegetation of the local area consisted of open forest woodland of smooth-barked apple, red bloodwood, brown stringybark, Sydney peppermint, spotted gum, bastard mahogany, northern grey ironbark and grey gum (Mitchell 2002: 123).

Patonga Creek flows generally north to south adjacent the southern boundary of the study area into Brisk Bay approximately 5.2 km south of the study area. A couple of recharge tributaries of Woy Woy Creek are located approximately 600 m north of the study area and flow north into Horsfield Bay, approximately 1.7 km north of the study area.

The study area is within the existing approved impact footprint of the Woy Woy WMF and as such has been impacted by approved WMF activities. An aerial from 1960 which covers the study area shows native open woodland surrounding a basalt quarry (Figure 1-5).

**Figure 1-4: Soil landscapes throughout the study area.**

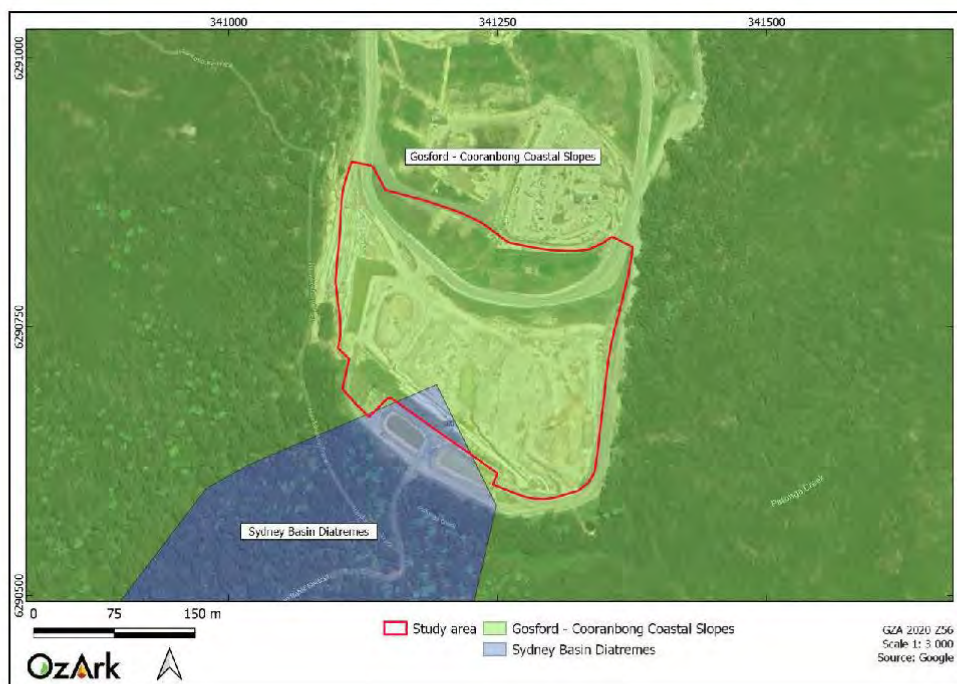
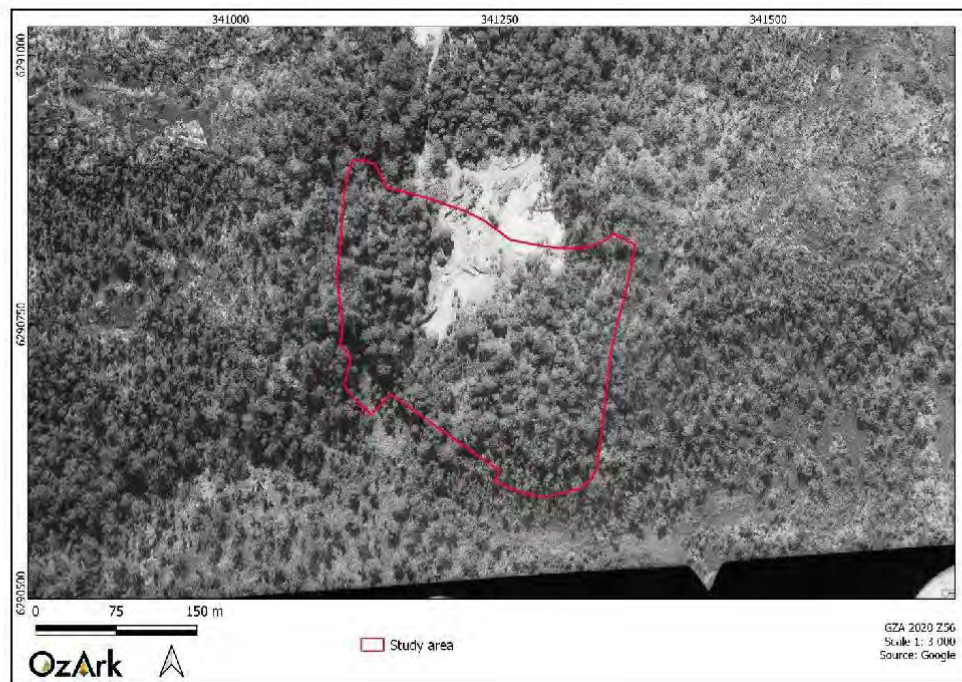




Figure 1-5: 1960 aerial with overlay of study area (source: SS 2023).



## 2 CULTURAL VALUES

### 2.1 INTRODUCTION TO CULTURAL VALUES

*No matter who you are, we all have culture. Each person's culture is important; it's part of what makes us who we are.*

Many Aboriginal people in Australia have a unique view of the world that's distinct from the mainstream. Land, family, law, ceremony and language are five key interconnected elements of Aboriginal culture. For example, families are connected to the land through the kinship system, and this connection to land comes with specific roles and responsibilities which are enshrined in the law and observed through ceremony. In this way, the five elements combine to create a way of seeing and being in the world that is distinctly Aboriginal.

Fundamentally, culture is living and is not static:

- Culture is acquired - we learn about culture from others in our community, including our parents
- Culture is shared - culture does not exist in a vacuum, it is shared amongst a group of people
- Culture defines core values - because we have been taught our culture and share it with our cultural group, we tend to form the same core values
- Cultures resist change but are not static - culture does and can change, but change is usually slow and gradual.

#### 2.1.1 Connection to Country

Aboriginal and Torres Strait Islander peoples are connected to Country through lines of descent (paternal and maternal), as well as clan and language groups.

Although in the past (and sometimes into the present) there have been conflicts between different tribal groups, these were rarely over land. Aboriginal and Torres Strait Islander people have such a strong sense of belonging to country; they have no desire to own the land of others.

Territory is defined by spiritual as well as physical links. Landforms have deep meaning, recorded in art, stories, songs, and dance. Songlines or Dreaming Tracks as well as kinship structures link Aboriginal peoples to the territories of other groups. In the past, these links were also used for trade.

*"When we say Country we might mean homeland, or tribal or clan area and in saying so we may mean something more than just a place; somewhere on the map. We are not necessarily referring to place in a geographical sense. But we are talking about the whole of the landscape, not just the places on it."*

Professor Mick Dodson AM, August 2007



### 2.1.2 Managing Country

Living on this land for around 50,000 years, Aboriginal and Torres Strait Islanders established effective ways to use and sustain resources. One important aspect is the right of certain people to control the use of resources in a particular area. Aboriginal and Torres Strait Islander people don't see themselves as 'owning' land, animals, plants, or nature, but rather belonging with these things as equal parts of creation.

The rights of different groups to live in and manage certain areas of land are clear and recorded through art, stories, songs, and dance.

Deep cultural and spiritual values like totemism have also played an important part in Aboriginal and Torres Strait Islander resource management. Totemism is a belief and value system that connects human beings to other animals, plants, and aspects of nature. Groups and individuals are assigned a particular animal that they are related to and must care for. This gives them a profound sense of connection to and responsibility for the natural world.

Aboriginal and Torres Strait Islanders people have a wide range of traditional methods for gathering food including fish traps, subsistence agriculture, hunting and harvesting a wide range of natural fruits and vegetables. Some groups of people would stay in one place, while others moved around the land according to the seasons, to ensure sustainable and rich food supplies, and to fulfil their spiritual and cultural obligations.

Even before 1788 there were complex relationships for long distance trade between Aboriginal and Torres Strait Islander communities especially for coastal shells and stone hatchets. When people from different groups met socially to share resources, for ceremonies or to settle disputes, they brought items to exchange. Items included stones for hatchets, kangaroo skins, timber for spears, ochre or clay for paint and marine shells for decoration. The exchange of objects was not motivated by a desire for wealth accumulation but a social system to build connection between people and groups.

### 2.1.3 Recognising lore

In much of eastern Australia, Aboriginal communities live their lives like most Australians. However, in certain crucial areas, particularly associated with family, leadership roles and caring for Country, Aboriginal lore continues, even in the most urbanised communities.

## 2.2 IDENTIFYING CULTURAL VALUES

A major aim of this assessment is to identify any cultural values within the landscape in which the proposal is located so that those values can be recognised and incorporated into the ACHAR's management recommendations.

Any cultural values relating to the proposal area will be captured by the OzArk archaeologists (if such information is provided by RAPs during the survey) and included in the ACHAR.

Understanding cultural landscapes can only come from the views of a particular community, in this case, the Aboriginal community. Unless informed, OzArk will not know of the community's feelings towards the cultural landscape in which the project will be located. Should any RAPs have knowledge of cultural values regarding the proposal area that they wish to share or that may affect the survey methodology set out in **Section 5**, OzArk invites them to contact us so that these values can be recorded and/or responded to in the methodology.

#### **2.2.1 Use of information collected**

An ACHAR will be prepared for the project which articulates Aboriginal cultural values and associated conservation methods across the proposal area, as identified during the consultations. The ACHAR will be circulated to all RAPs for comment as is set out in the ACHCRs. The ACHAR will be available to Heritage NSW for their consideration of the proposal and the report will be publicly available.

#### **2.2.2 Public / confidential information**

Information will be treated in accordance with instructions received by Aboriginal informants. Information described as confidential (culturally sensitive) will not be detailed in the publicly available report. Confidential information should be made available to the proponent, its heritage consultants, and Heritage NSW so that significant cultural values can be conserved. On advice from the provider of the information, a redacted ACHAR would be made available to the wider public where any sensitive cultural information is removed.

#### **2.2.3 Copyright**

Information collected for this assessment remains the property of the Aboriginal informants and the author. Without written permission from individual informants and the author information may not be used for purposes other than those outlined above.



### 3 ARCHAEOLOGICAL CONTEXT

#### 3.1 ABORIGINAL PEOPLE OF THE STUDY AREA

Although the exact position of traditional (pre-European) tribal boundaries is not clear, Tindale's 1974 map, with its obvious limitations, places the study area at the intersection of Daruk and Eora Country.

These neighbours lived by fishing, gathering bush foods and hunting. The region was part of an extensive trade network and large ceremonies were held at times of the year when fish were plentiful. Ourimbah, in the middle of the Central Coast region, was a ceremonial ground in which boys were initiated (Vinnicombe 1980). Only now gaining acceptance are the wide-ranging land management practices undertaken by Aboriginal people. This ranged from landscape management through the use of fire (Gammage 2011) to various forms of subsistence (better termed agriculture) resulting in stored agricultural surpluses and semi-sedentary lifestyles (Pascoe 2014). Particularly in resource-rich environments such as the Central Coast, the common visualisation of Aboriginal people being purely hunters and gatherers is probably not an accurate representation of the more complex lifestyles practiced in the region of the study area over the past millennia.

#### 3.2 REGIONAL ARCHAEOLOGICAL CONTEXT

The Aboriginal occupation of Australia begins prior to 40,000 BP (years before present) and possibly earlier than 50,000 BP. Dates exceeding 20,000 years occur in almost all parts of Australia resulting in the expectation that most areas should have a Pleistocene (>12,000 BP) occupational signature. However, such dates remain relatively rare due to a range of factors, both behavioural and post-depositional. These factors include a possible low density of occupation in the Pleistocene period and poor preservation of archaeological materials (particularly dateable organic materials).

Many hundreds of Aboriginal sites have been recorded within the Central Coast Council LGA and are listed on the Aboriginal Heritage Information Management System (AHIMS). The oldest date for the region (11,050 BP) is based on evidence from Logger's Shelter at Mangrove Creek, recorded by Attenbrow (as cited in Vinnicombe 1980).

##### 3.2.1 Vinnicombe (1980) Predilection and Prediction: A Study of Aboriginal Sites in the Gosford-Wyong Region

Vinnicombe (1980) undertook a major survey that sought to categorise and define Aboriginal heritage resources in the Gosford/Wyong area to integrate cultural heritage into the early stages of development planning. The project comprised thorough background research, detailed survey and analysis of results to produce a predictive model for the region that was relevant to her 1,560 square kilometre study area. Vinnicombe's study area included the current study area.



As a result of this study, Vinnicombe identified various ecological zones within her study area and sought to determine the differences within and between these areas that might make Aboriginal site prediction more accurate. Three different environments were investigated, including open coastline and coastal estuary, riverine estuary and inland sclerophyll forest (with riverine estuary being most relevant to the current study area).

Vinnicombe conducted intensive 10 square kilometre surveys within each of these three zones, identifying an average of 11 sites/square kilometre in coastal estuary areas, eight sites/square kilometre in riverine estuary areas and six sites/square kilometre in inland sclerophyll zones. Given the (then) current levels of development and the ecological make-up of the Gosford/Wyong area, Vinnicombe predicted that there could be an overall total of 13,000 sites within the locality. Vinnicombe was also able to postulate that decreasing site densities are directly related to the distance from marine resources.

A total of 243 sites were recorded during intensive survey, as well as additional sites recorded in spot surveys and ad hoc inspections.

A total of 127 rock shelters with occupation evidence were located, along with another 469 shelters considered to be potentially habitable, thereby being the most common site type recorded during the survey.

Forty-nine middens were recorded in sandy alluvium and Narrabeen Group landscapes, and these were most often observed near freshwater creeks/aquifers at the bottom of slopes towards the valley floor.

Artefact scatters were not commonly observed during survey. Five were located (only one is recorded as a separate site, the others as middens or shelter with deposit), all of which were either associated with middens or found on creek banks or a high plateau. It was noted, however, that there was a reasonable likelihood that vegetation and/or accumulated deposits may have covered archaeological sites causing them to be invisible in terms of survey.

A total of 54 grinding grooves were found, mostly in and along creek beds at the heads of valleys on Hawkesbury Sandstone. These were also found on Narrabeen Group sandstone(s) although not as often as in Hawkesbury Sandstone. They were usually located near the tops of waterfalls, near rock pools or close to aquifers on rock platforms. The numbers of grooves varied from 1–81 and the average groove size was 29 x 7.5 x 1 centimetres (cm), making them likely to have been for spear/tool point sharpening rather than any sort of food preparation.

Engravings usually consisted of pecking, abrasion or both. Most motifs were human, fish or macropods, with birds and other animals, weapons and animal/human tracks also being observed. Of the 12 engravings recorded, they were usually found in Hawkesbury Sandstone on ridge tops and plateaus. Others were found on Narrabeen Group sandstone(s) at sea level.

As the Gosford-Wyong area has been heavily logged in the past, scarred trees were considered rare in the region and none were recorded during Vinnicombe's assessment.

### 3.3 LOCAL ARCHAEOLOGICAL CONTEXT

A search of the AHIMS on 29 March 2023 returned 59 results for Aboriginal sites within a 3 km radius of the study area (GDA Zone 56 Eastings: 339687–342687; Northings: 6289234–6292234 with no buffer) (see **Table 3-1** for site types and frequencies).

The most frequently recorded site types are grinding grooves which contribute 30.5% of the site types in the vicinity of the study area. Other frequent site types are art (pigment or engraved) (16.9%), rock engravings (13.6%) and grinding groove with rock engraving (10.2%). Shelters with art (8.5%), shelter with midden (5.1%), stone arrangements (6.8%), stone arrangements with rock engraving (3.4%) are also present, as well as less represented site types which only have single recording in the vicinity of the study area (see **Table 3-1**).

Site types which include shelters and art are in the mountainous ranges to the south and west of the study area. Recorded grinding grooves tend to be located near a watercourse (Patonga Creek) and on the edges of mountainous areas.

**Figure 3-1** shows the location of previously recorded sites in the vicinity of the study area. No previously recorded sites are located within the study area. The closest recorded site (45-6-0204) is located 60 m to the west and includes grinding grooves and rock engravings.

**Table 3-1: AHIMS site types and frequencies**

Site Type	Number	% Frequency
Grinding groove	18	30.5
Art (pigment or engraved)	10	16.9
Rock engraving	8	13.6
Grinding groove and rock engraving	6	10.2
Shelter with art	5	8.5
Shelter with midden	3	5.1
Stone arrangement	4	6.8
Stone arrangement and rock engraving	2	3.4
Artefact and midden	2	3.4
Grinding groove and stone arrangement	1	1.7
<b>Total</b>	<b>86</b>	<b>100</b>



Figure 3-1. AHIMS sites in relation to the study area.



### 3.3.1 Archaeological investigations within the study area

#### 3.3.1.1 Woy Woy Waste Management Facility (Biosis 2006)

In 2006, Biosis Research (Biosis) undertook an archaeological assessment of proposed upgrade works at Woy Woy WMF which included the current study area. Biosis noted high levels of disturbance and low ground surface visibility during the survey. Several areas of small sandstone overhangs were identified within their assessment area, however, none of these contained Aboriginal cultural material, features or visible art. As a result of the survey, no Aboriginal archaeological sites were recorded.

## 4 PREDICTIVE MODEL

### 4.1 LANDFORM MODELLING

Previous studies in the district (Vinnicombe 1980, Biosis 2006) indicate that grinding grooves and rock shelters in association with art or deposit are the most likely site type to be recorded in the study area, however, the recent activities associated with the operation of the Woy Woy WMMF and the former quarry are likely removed any evidence of past Aboriginal occupation.

### 4.2 PREDICTIVE MODEL FOR THE STUDY AREA

Across Australia, numerous archaeological studies in widely varying environmental zones and contexts have demonstrated a high correlation between the permanence of a water source and the permanence and/or complexity of Aboriginal occupation. Site location is also affected by the availability of and/or accessibility to a range of other natural resources including: plant and animal foods; stone and ochre resources and rock shelters; as well as by their general proximity to other sites/places of cultural/mythological significance. Consequently, sites tend to be found along permanent and ephemeral water sources, along access or trade routes or in areas that have good flora/fauna resources and appropriate shelter.

In formulating a predictive model for Aboriginal archaeological site location within any landscape it is also necessary to consider post-depositional influences on Aboriginal material culture. In all but the best preservation conditions very little of the organic material culture remains of ancestral Aboriginal communities survives to the present. Generally, it is the more durable materials such as stone artefacts, stone hearths, shell, and some bones that remain preserved in the current landscape. Even these however may not be found in their original depositional context since these may be subject to either (a) the effects of wind and water erosion/transport—both over short- and long-time scales—or (b) the historical impacts associated with the introduction of colonial farming practices. Scarred trees, by their nature, may survive for up to several hundred years but rarely beyond.

#### 4.2.1 Site types in the region of the study area

The site types listed in **Table 4-1** are present in the region of the study area. The likelihood of these sites being present in the study area is discussed in **Section Error! Reference source not found.**



**Table 4-1: Site types recorded in the region of the study area.**

Site type	Site description
Isolated finds	May be indicative of random loss or deliberate discard of a single artefact, the remnant of a now dispersed and disturbed artefact scatter, or an otherwise obscured or subsurface artefact scatter. They may occur anywhere within the landscape but are more likely to occur in topographies where open artefact scatters typically occur.
Open artefact scatters	Artefact scatters are defined as two or more artefacts, not located within a rock shelter, and located no more than 50 m away from any other constituent artefact. This site type may occur almost anywhere that Aboriginal people have travelled and may be associated with hunting and gathering activities, short- or long-term camps, and the manufacture and maintenance of stone tools. Artefact scatters typically consist of surface scatters or sub-surface distributions of flaked stone discarded during the manufacture of tools but may also include other artefactual rock types such as hearth and anvil stones. Less commonly, artefact scatters may include archaeological stratigraphic features such as hearths and artefact concentrations which relate to activity areas. Artefact density can vary considerably between and across individual sites. Small ground exposures revealing low density scatters may be indicative of a background scatter rather than a spatially or temporally distinct artefact assemblage. These sites are classed as 'open', that is, occurring on the land surface unprotected by rock overhangs, and are sometimes referred to as 'open camp sites'.  Artefact scatters are most likely to occur on level or low gradient contexts, along the crests of ridgelines and spurs, and elevated areas fringing watercourses or wetlands. Larger sites may be expected in association with permanent water sources.  Topographies which afford effective through-access across, and relative to, the surrounding landscape, such as the open basal valley slopes and the valleys of creeks, will tend to contain more and larger sites, mostly camp sites evidenced by open artefact scatters.
Grinding grooves	Grinding grooves are the remnants of ground edge hatchet manufacture and sometimes from food preparation. The site is most likely to occur on flat outcrops of coarse-grained sandstone in the vicinity of water sources, however, grinding grooves have also been recorded on fine-grained granite and quartzite outcrops.
Rock shelters and art sites	Utilised in the past for both habitation and ceremonial purposes. The term 'rock shelter site' refers to rock shelters/rock overhangs that contain evidence such as stone artefacts and/or bones and/or plant remains (from meals eaten at the site) and/or hearths (fireplaces). Most rock shelter sites are secular in nature, however, those that also contain rock art or engravings are often believed to be non-secular in nature. The term 'rock art site' generally refers to Aboriginal ochre paintings or ochre or charcoal drawings located on a rock slab (generally in a sheltered place like the floor of a cave or rock shelter), boulder, cliff-face, cave or rock shelter wall or roof, or wall of a rock overhang. Most rock art sites are found in locations that are sheltered from the elements. This observation, however, is probably biased to some extent, as rock art would not preserve well in open positions. Rock art sites are generally believed to be non-secular in nature.
Rock engravings or petroglyphs	A type of Aboriginal art that are often located on high vantage points along ridge lines at the headwaters of creeks but can be located on any suitable fine-grained stone surface. Examination into the rock engraving process notes that it presumably first included sketching the outline of the motif, then a series of holes was drilled along the line, using a pointed stone or shell. Finally, the holes were joined by rubbing a sharp stone along the line.
Middens	Formed from Aboriginal exploitation and consumption of shellfish, in marine, estuarine, or freshwater contexts. Middens may also include faunal remains such as fish or mammal bone, stone artefacts, hearths, charcoal, and occasionally, burials. They are usually located on elevated dry ground close to the aquatic environment from which the shellfish has been exploited and where freshwater resources are available. Deeper, more compacted, midden sites are often found in areas containing the greatest diversity of resources, such as river estuaries and coastal lagoons.
Burials	Generally found in soft sediments such as aeolian sand, alluvial silts, and rock shelter deposits. In valley floor and plains contexts, burials may occur in locally elevated topographies rather than poorly drained sedimentary contexts. Burials are also known to have occurred on rocky hilltops in some limited areas. Burials are generally only visible where there has been some disturbance of sub-surface sediments or where some erosional process has exposed them.
Bora/Ceremonial sites	Places which have ceremonial or spiritual connections. Ceremonial sites may comprise of natural landscapes or have archaeological material. Bora sites are ceremonial sites which consist of a cleared area and earthen rings.

#### 4.2.2 Landform modelling of archaeological potential

Although there is some conjecture about the relationship between stream order, site numbers and densities, the general pattern is that most sites are present close to watercourses. An ephemeral watercourse, Patonga Creek is located 40 m south of the study area. This suggests



the landform of the study area may have been suitable to Aboriginal occupation, but more likely utilised by smaller groups for short periods of time.

Crucial for the preservation of archaeological deposits is the history of past land use in an area. The study area has been cleared of native vegetation and landforms modified for operation of the Woy Woy WMF and previous quarry activities. Prior to current disturbances, there may have been potential for grinding grooves, rock engravings, and open campsites to be identified in the study area. This potential however has been largely removed by the high levels of modification present in the study area.

## 5 SURVEY METHODOLOGY

### 5.1 ASSESSMENT APPROACH

The Aboriginal cultural heritage assessment of the study area will follow the *Code of Practice for the Investigation of Aboriginal Objects in New South Wales* (Code of Practice; DECCW 2010). The field inspection will follow the *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in New South Wales* (The Guide, OEH 2011).

### 5.2 SURVEY METHODOLOGY

The study area will be subject to sample survey due to the high levels of disturbance. Surveyors will be spaced approximately 20 m apart and will target areas subject to lower levels of disturbance so the archaeological potential of the landforms can be assessed.

In the field, OzArk staff will identify, record and evaluate physical (i.e., archaeological) evidence. A RAP will participate in the survey, identifying Aboriginal objects, determining the cultural significance of Aboriginal objects and identifying cultural places or non-physical site types within the study area. OzArk staff understand that cultural knowledge may not be provided in some instances due to cultural sensitivities (e.g., men's and/or women's places). Under these circumstances, to assess the potential impacts, OzArk staff will need to be told, only in general terms, why a particular place is important, and what the significance of the impact will be. OzArk staff will liaise with RAPs on a case-by-case basis to determine how to record the location in a culturally sensitive manner.

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## APPENDIX 3: AHIMS SEARCH RESULTS

# AHIMS Web Services (AWS)

## Extensive search - Site list report

Your Ref/PO Number : Way Woy

Client Service ID : 768252

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
45-6-3567	PATONGA CK WY SMALLART SWA	GDA	56	340041	6290917	Closed site	Valid	Art (Pigment or Engraved) :-		
	<b>Contact</b>	<b>Recorders</b>						<b>Permits</b>		
45-6-2363	BWNP DILLONS TRACK SWA	GDA	56	340507	6291536	Closed site	Valid	Art (Pigment or Engraved) :-	Shelter with Art	1333
	<b>Contact</b>	<b>Recorders</b>						<b>Permits</b>		
45-6-2534	B.W.N.P PATONGA CK AGGS	GDA	56	340757	6289636	Open site	Valid	Grinding Groove :-	Axe Grinding Groove	1333
	<b>Contact</b>	<b>Recorders</b>						<b>Permits</b>		
45-6-2379	BWNP HAND STENCIL SWA	GDA	56	340820	6290798	Closed site	Valid	Art (Pigment or Engraved) :-	Shelter with Art	1333
	<b>Contact</b>	<b>Recorders</b>						<b>Permits</b>		
45-6-0783	Blackwall	AGD	56	340745	6290938	Open site	Valid	Art (Pigment or Engraved) :-	Rock Engraving	
	<b>Contact</b>	<b>Recorders</b>						<b>Permits</b>		
45-3-0189	WONDABINE ENGRAVING	GDA	56	340876	6292099	Open site	Valid	Art (Pigment or Engraved) :-	Rock Engraving	
	<b>Contact</b>	<b>Recorders</b>						<b>Permits</b>		
45-6-2530	BWNP VAN DAHLS TRACK AGGS	GDA	56	341032	6290223	Open site	Valid	Grinding Groove :-	Axe Grinding Groove	1333
	<b>Contact</b>	<b>Recorders</b>						<b>Permits</b>		
45-6-2527	B.W.N.P. UPPER PATONGA CK SWA	GDA	56	341175	6290492	Closed site	Valid	Art (Pigment or Engraved) :-	Shelter with Art	1333
	<b>Contact</b>	<b>Recorders</b>						<b>Permits</b>		
45-6-3563	PATONGA CK LOWER CYS	GDA	56	341432	6290498	Open site	Valid	Grinding Groove :-		
	<b>Contact</b>	<b>Recorders</b>						<b>Permits</b>		
45-6-2434	BWNP WEST SIDE STA	GDA	56	341593	6290277	Open site	Valid	Stone Arrangement :-	Stone Arrangement	1333
	<b>Contact</b>	<b>Recorders</b>						<b>Permits</b>		
45-3-0996	BWNP CHANNEL AND GROOVES	GDA	56	341652	6289723	Open site	Valid	Art (Pigment or Engraved) :- Grinding Groove :-	Axe Grinding Groove/Rock Engraving	1333
	<b>Contact</b>	<b>Recorders</b>						<b>Permits</b>		
45-6-0798	BLACKWALL RIDGE WEST ENG AGGS	GDA	56	341733	6291224	Open site	Valid	Grinding Groove :- Art (Pigment or Engraved) :-	Rock Engraving	
	<b>Contact</b>	<b>Recorders</b>						<b>Permits</b>		
45-6-2639	BWM	GDA	56	341759	6290635	Open site	Valid	Stone Arrangement :-		
	<b>Contact</b>	<b>Recorders</b>						<b>Permits</b>		

Report generated by AHIMS Web Service on 29/03/2023 for Stephanie Rudden for the following area at Datum :GDA, Zone : 56, Eastings : 339687.0 - 342687.0, Northings : 6289234.0 - 6292234.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 59

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# AHIMS Web Services (AWS)

## Extensive search - Site list report

Your Ref/PO Number : Way Woy  
Client Service ID : 768252

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
45-6-0151	Dillons Heights/Ettalong	GDA	56	340685	6290889	Open site	Valid	Art (Pigment or Engraved) :- Stone Arrangement :-	Rock Engraving/Stone Arrangement	1333
	<b>Contact</b>	<b>Recorders</b>						<b>Permits</b>		
45-6-0787	BLACKWALL ENGS SWAS	GDA	56	340704	6290839	Open site	Valid	Art (Pigment or Engraved) :- Stone Arrangement :-	Rock Engraving/Stone Arrangement	
	<b>Contact</b>	<b>Recorders</b>						<b>Permits</b>		
45-6-3576	PATONGA CK AGG AREA	GDA	56	341438	6290426	Open site	Valid	Grinding Groove :-		
	<b>Contact</b>	<b>Recorders</b>						<b>Permits</b>		
45-6-2436	BWNP THE BASTION ENGS	GDA	56	341386	6289889	Open site	Valid	Art (Pigment or Engraved) :-	Rock Engraving	1333
	<b>Contact</b>	<b>Recorders</b>						<b>Permits</b>		
45-6-2512	B.W.N.P.1	GDA	56	340612	6289503	Open site	Valid	Art (Pigment or Engraved) :- Grinding Groove :-	Axe Grinding Groove	1333
	<b>Contact</b>	<b>Recorders</b>						<b>Permits</b>		
45-6-3569	WOY WOY CK PEK ENG	GDA	56	340674	6291304	Open site	Valid	Art (Pigment or Engraved) :-		
	<b>Contact</b>	<b>Recorders</b>						<b>Permits</b>		
45-6-3566	WOY WOY CK THREESTEN SWA	GDA	56	341119	6291626	Closed site	Valid	Art (Pigment or Engraved) :-		
	<b>Contact</b>	<b>Recorders</b>						<b>Permits</b>		
45-6-3561	WOY WOY TIP SOUTH AGGS	GDA	56	341337	6290446	Open site	Valid	Grinding Groove :-		
	<b>Contact</b>	<b>Recorders</b>						<b>Permits</b>		
45-6-2619	BWNP BOULDER ENGS	GDA	56	341852	6290671	Open site	Valid	Art (Pigment or Engraved) :- Grinding Groove :-	Axe Grinding Groove	1333
	<b>Contact</b>	<b>Recorders</b>						<b>Permits</b>		
45-6-0797	ETTALONG BEACH	GDA	56	341975	6290738	Open site	Valid	Grinding Groove :- Art (Pigment or Engraved) :-	Axe Grinding Groove/Rock Engraving	
	<b>Contact</b>	<b>Recorders</b>						<b>Permits</b>		
45-6-3565	WOY WOY CK WY TOPART SWA	GDA	56	341695	6291913	Closed site	Valid	Art (Pigment or Engraved) :-		
	<b>Contact</b>	<b>Recorders</b>						<b>Permits</b>		
45-6-3570	PATONGA CK PATONGA ART SWA	GDA	56	339739	6289337	Closed site	Valid	Art (Pigment or Engraved) :-		
	<b>Contact</b>	<b>Recorders</b>						<b>Permits</b>		
45-6-2388	BWNP STONE ARR	GDA	56	340399	6291056	Open site	Valid	Stone Arrangement :-	Stone Arrangement	1333
	<b>Contact</b>	<b>Recorders</b>						<b>Permits</b>		

Report generated by AHIMS Web Service on 29/03/2023 for Stephanie Rudden for the following area at Datum :GDA, Zone : 56, Eastings : 339687.0 - 342687.0, Northings : 6289234.0 - 6292234.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 59

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## AHIMS Web Services (AWS)

### Extensive search - Site list report

Your Ref/PO Number : Way Way  
Client/Service ID : 768252

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
45-6-3568	PATONGA CK PRETTYROO SWA	GDA	56	340413	6290760	Closed site	Valid	Art (Pigment or Engraved) :-		
	<b>Contact</b>	<b>Recorders</b>	Ms.Collette Douchkov							
45-6-3564	PATONGA CK BOY AGGS	GDA	56	340847	6290290	Open site	Valid	Grinding Groove :-		
	<b>Contact</b>	<b>Recorders</b>	Ms.Collette Douchkov							
45-6-2439	BWNP THE CITADEL WEST AGG	GDA	56	341561	6290628	Open site	Valid	Grinding Groove :-	Axe Grinding Groove	1333
	<b>Contact</b>	<b>Recorders</b>	Warren Bluff/Ms.Collette Douchkov							
45-6-3572	PATONGA CK ODMAN ENG	GDA	56	341601	6289935	Open site	Valid	Art (Pigment or Engraved) :-		
	<b>Contact</b>	<b>Recorders</b>	Ms.Collette Douchkov							
45-6-2433	BWNP CITADEL AGGS	GDA	56	341883	6290648	Open site	Valid	Grinding Groove :-	Axe Grinding Groove	1333
	<b>Contact</b>	<b>Recorders</b>	Warren Bluff/Ms.Collette Douchkov							
45-6-0182	BLACKWALL	GDA	56	340490	6291111	Open site	Valid	Art (Pigment or Engraved) :-	Rock Engraving	
	<b>Contact</b>	<b>Recorders</b>	Ms.Lisa Campbell, Mr.Jeff Betteridge, DPIE - Armidale							
45-6-2364	BWNP DILLONS TRACK SOUTH SWA	GDA	56	340593	6291525	Closed site	Valid	Art (Pigment or Engraved) :-	Shelter with Art	1333
	<b>Contact</b>	<b>Recorders</b>	Warren Bluff/Ms.Collette Douchkov							
45-6-3573	PATONGA CK ODD STENCIL SWA	GDA	56	340639	6290775	Closed site	Valid	Art (Pigment or Engraved) :-		
	<b>Contact</b>	<b>Recorders</b>	Ms.Collette Douchkov							
45-6-2515	BWNP UPPER PATONGA AGGS	GDA	56	340738	6289383	Open site	Valid	Grinding Groove :-	Axe Grinding Groove	1333
	<b>Contact</b>	<b>Recorders</b>	Warren Bluff/Ms.Collette Douchkov							
45-6-3562	WOY WOY TIP SOUTH ENGRAVING	GDA	56	341222	6290456	Open site	Valid	Art (Pigment or Engraved) :-		
	<b>Contact</b>	<b>Recorders</b>	Mr.Jeff Betteridge, DPIE - Armidale							
45-6-2618	BWNP CITADEL RIDGE GROOVES	GDA	56	341830	6290658	Open site	Valid	Grinding Groove :-	Axe Grinding Groove	1333
	<b>Contact</b>	<b>Recorders</b>	Warren Bluff/Ms.Collette Douchkov							
45-6-2617	BWNP THREE ENGS	GDA	56	341833	6290689	Open site	Valid	Art (Pigment or Engraved) :-	Rock Engraving	1333
	<b>Contact</b>	<b>Recorders</b>	Warren Bluff/Ms.Collette Douchkov							
45-6-0888	BLACKWALL GSSZ	GDA	56	341864	6292123	Closed site	Valid	Shell :- , Artefact :-	Shelter with Midden	
	<b>Contact</b>	<b>Recorders</b>	ASRSYS, Ms.Collette Douchkov							
45-6-0889	BLACKWALL GSS3	GDA	56	341955	6292144	Closed site	Valid	Shell :- , Artefact :-	Shelter with Midden	
	<b>Contact</b>	<b>Recorders</b>	ASRSYS, Ms.Collette Douchkov							

Report generated by AHIMS Web Service on 29/03/2023 for Stephanie Rusden for the following area at Datum : GDA, Zone : 56, Eastings : 339687.0 - 342687.0, Northings : 6289234.0 - 6292234.0 with a Buffer of 0 meters. Number of Aboriginal sites and Aboriginal objects found is 59

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## AHIMS Web Services (AWS)

### Extensive search - Site list report

Your Ref/PO Number : Way Way  
Client/Service ID : 768252

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
45-6-2440	BWNP, CASTLE CT RIDGE AGGS	GDA	56	341364	6289913	Open site	Valid	Grinding Groove :-	Axe Grinding Groove	1333
	<b>Contact</b>	<b>Recorders</b>	Warren Bluff/Ms.Collette Douchkov							
45-6-0782	PATONGA CREEK	GDA	56	341198	6290006	Open site	Valid	Stone Arrangement :-	Stone Arrangement	
	<b>Contact</b>	<b>Recorders</b>	ASRSYS, Ms.Collette Douchkov							
45-6-0791	PATONGA CK, BWNP	GDA	56	341447	6290402	Open site	Valid	Art (Pigment or Engraved) :- Grinding Groove :-	Axe Grinding Groove, Rock Engraving	1333
	<b>Contact</b>	<b>Recorders</b>	Warren Bluff/Ms.Collette Douchkov							
45-6-3874	WOY WOY CITADEL SWA	GDA	56	341922	6290924	Closed site	Valid	Art (Pigment or Engraved) :-		
	<b>Contact</b>	<b>Recorders</b>	Mr.Jeff Betteridge, DPIE - Armidale							
45-6-0183	Patonga Creek/Etalong	AGD	56	340302	6290198	Open site	Valid	Art (Pigment or Engraved) :-	Rock Engraving	
	<b>Contact</b>	<b>Recorders</b>	ASRSYS							
45-6-1304	Patonga	AGD	56	340312	6289649	Open site	Valid	Shell :- , Artefact :-	Midden	
	<b>Contact</b>	<b>Recorders</b>	ASRSYS							
45-6-0788	BLACKWALL RIDGE SOUTH ENGS	GDA	56	340946	6290926	Open site	Valid	Art (Pigment or Engraved) :- Grinding Groove :-	Axe Grinding Groove, Rock Engraving	1333
	<b>Contact</b>	<b>Recorders</b>	I.M.Smi, Ms.Collette Douchkov							
45-6-0204	Blackwall/Brisbane Waters N.P.	AGD	56	340934	6290576	Open site	Valid	Grinding Groove :- , Art (Pigment or Engraved) :-	Axe Grinding Groove, Rock Engraving	
	<b>Contact</b>	<b>Recorders</b>	ASRSYS							
45-5-0995	BWNP, CREEK FISH ENGS	GDA	56	341174	6289800	Open site	Valid	Art (Pigment or Engraved) :- Grinding Groove :-	Axe Grinding Groove, Rock Engraving	1333
	<b>Contact</b>	<b>Recorders</b>	Warren Bluff/Ms.Collette Douchkov							
45-6-2437	BWNP CASTLE CT AGGS	GDA	56	341530	6289994	Open site	Valid	Grinding Groove :-	Axe Grinding Groove	1333
	<b>Contact</b>	<b>Recorders</b>	Warren Bluff/Ms.Collette Douchkov							
45-6-2948	Turtle and Red Hands	GDA	56	341625	6290601	Open site	Valid	Artefact : 1, Shell :-		
	<b>Contact</b>	<b>Recorders</b>	Mr.Anthony Dunk							
45-6-3575	PATONGA CK AGG RUNOFF	GDA	56	341635	6290607	Open site	Valid	Grinding Groove :-		
	<b>Contact</b>	<b>Recorders</b>	Ms.Collette Douchkov							
45-6-2616	BWNP CITADEL SADDLE ENGS	GDA	56	341826	6290661	Open site	Valid	Art (Pigment or Engraved) :-	Rock Engraving	133
	<b>Contact</b>	<b>Recorders</b>	Warren Bluff/Ms.Collette Douchkov							

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## AHIMS Web Services (AWS)

### Extensive search - Site list report

Your Ref/PO Number : Woy Woy  
Client/Service ID : 768252

SiteID	SiteName	Datum	Zone	Eastings	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
45-6-2510	BWNP NAGARI AGGS	GDA	56	341912	6292022	Open site	Valid	Grinding Groove :-	Axe Grinding Groove	1333
	<b>Contact</b>	<b>Recorders</b>						<b>Permits</b>		
45-6-2533	B.W.N.P.:	AGD	56	342030	6291900	Closed site	Valid	Shell :- , Artefact :-	Shelter with Midden	1333
	<b>Contact</b>	<b>Recorders</b>						<b>Permits</b>		
45-6-2529	B.W.N.P.:	GDA	56	340571	6289580	Open site	Valid	Grinding Groove :-	Axe Grinding Groove	1333
	<b>Contact</b>	<b>Recorders</b>						<b>Permits</b>		
45-6-0778	ETTALONG:	GDA	56	341175	6290492	Closed site	Valid	Art (Pigment or Engraved) :-	Shelter with Art	
	<b>Contact</b>	<b>Recorders</b>						<b>Permits</b>		
45-6-2438	BWNP THE BASTION AGG	GDA	56	341578	6289914	Open site	Valid	Grinding Groove :-	Axe Grinding Groove	1333
	<b>Contact</b>	<b>Recorders</b>						<b>Permits</b>		
45-6-2435	BWNP CASTLE CT ENGS	GDA	56	341386	6289920	Open site	Valid	Art (Pigment or Engraved) :-	Rock Engraving	1333
	<b>Contact</b>	<b>Recorders</b>						<b>Permits</b>		

#### \*\* Site Status

**Valid** - The site has been recorded and accepted onto the system as valid.

**Destroyed** - The site has been completely impacted or harmed usually as consequence of permit activity but sometimes also after natural events. There is nothing left of the site on the ground but proponents should proceed with caution.

**Partially Destroyed** - The site has been only partially impacted or harmed usually as consequence of permit activity but sometimes also after natural events. There might be parts or sections of the original site still present on the ground.

**Not a site** - The site has been originally entered and accepted onto AHIMS as a valid site but after further investigations it was decided it is NOT an aboriginal site. Impact of this type of site does not require permit but Heritage NSW should be notified.

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## APPENDIX 4: ABORIGINAL HERITAGE: UNANTICIPATED FINDS PROTOCOL

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An Aboriginal artefact is anything which is the result of past Aboriginal activity. This includes stone (artefacts, rock engravings etc.), plant (culturally scarred trees) and animal (if showing signs of modification; i.e. smoothing, use). Human bone (skeletal) remains may also be uncovered while onsite.

Cultural heritage significance is assessed by the Aboriginal community and is typically based on traditional and contemporary lore, spiritual values, and oral history, and may also consider scientific and educational value.

Protocol to be followed if previously unrecorded or unanticipated Aboriginal object(s) are encountered:

1. If any Aboriginal object is discovered and/or harmed in, or under the land, while undertaking the proposed development activities, the proponent must:
  - a. Not further harm the object
  - b. Immediately cease all work at the particular location
  - c. Secure the area to avoid further harm to the Aboriginal object
  - d. Notify Heritage NSW as soon as practical on (02) 9873 8500 (heritagemailbox@environment.nsw.gov.au), providing any details of the Aboriginal object and its location; and
  - e. Not recommence any work at the particular location unless authorised in writing by Heritage NSW.
2. If Aboriginal burials are unexpectedly encountered during the activity, work must stop immediately, the area secured to prevent unauthorised access and NSW Police and Heritage NSW contacted.
3. Cooperate with the appropriate authorities and relevant Aboriginal community representatives to facilitate:
  - a. The recording and assessment of the find(s)
  - b. The fulfilment of any legal constraints arising from the find(s), including complying with Heritage NSW directions
  - c. The development and implementation of appropriate management strategies, including consultation with stakeholders and the assessment of the significance of the find(s).
4. Where the find(s) are determined to be Aboriginal object(s), recommencement of work in the area of the find(s) can only occur in accordance with any consequential legal requirements and after gaining written approval from Heritage NSW (normally an Aboriginal Heritage Impact Permit).



## APPENDIX 5: UNANTICIPATED SKELETAL REMAINS PROTOCOL

