

**APPENDIX E**

**ABORIGINAL CULTURAL**

**HERITAGE AND HISTORIC**

**HERITAGE IMPACT ASSESSMENT**



Native vegetation in northeast corner of Modification Disturbance Area

## **ABORIGINAL CULTURAL HERITAGE & HISTORIC HERITAGE ASSESSMENT REPORT**

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### **NORTHERN COAL SERVICES PROJECT MODIFICATION 4**

DORA CREEK, NSW

SEPTEMBER 2024

Report prepared by  
OzArk Environment & Heritage  
on behalf of Centennial Coal



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Heritage NSW



## ABORIGINAL CULTURAL HERITAGE ASSESSMENT REPORT COVER SHEET

|                                              |                                                                                                                                                                                                                                                                                                                                  |
|----------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Report Title                                 | Aboriginal Cultural Heritage & Historic Heritage Assessment Report: Northern Coal Services Modification 4.                                                                                                                                                                                                                       |
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Stephanie Rusden, OzArk Environment & Heritage Senior Archaeologist



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|                                                                                                                                                                                                                                                                                                                                                    |                                                                                                           |                                                                                                                                                                                |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Proponent                                                                                                                                                                                                                                                                                                                                          | Centennial Coal Company Pty Limited                                                                       |                                                                                                                                                                                |
| Client                                                                                                                                                                                                                                                                                                                                             | James Bailey & Associates                                                                                 |                                                                                                                                                                                |
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### **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 NPW Act.                                                                                                                                         |
| DCCEEW (Cth)     | Commonwealth Department of Climate Change, Energy, the Environment and Water. Department responsible for administering the EPBC Act                                                                                                                             |
| DCCEEW (state)   | NSW Department of Climate Change, Energy, the Environment and Water. DCCEEW contains the Environment and Heritage Group which, in turn, contains Heritage NSW and AHIMS                                                                                         |
| DPE              | Former NSW Department of Planning and Environment. The functions of DPE are now undertaken by DCCEEW and DPHI                                                                                                                                                   |
| DPHI             | NSW Department of Planning, Housing, and Infrastructure. DPHI contains the planning group                                                                                                                                                                       |
| 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.                                                                         |
| EP&A Act         | <i>Environmental Planning and Assessment Act 1979</i> . Act that institutes a system of environmental planning and assessment for the State of New South Wales                                                                                                  |
| EPBC Act         | <i>Environment Protection and Biodiversity Conservation Act 1999</i> . Commonwealth legislation that governs matters of national and world heritage significance                                                                                                |

|              |                                                                                                                                                                                    |
|--------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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. |
| RAP          | Registered Aboriginal Party. An individual or group who have indicated through the ACHCR process that they wish to be consulted regarding the project.                             |



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## EXECUTIVE SUMMARY

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OzArk Environment & Heritage (OzArk) has been engaged by James Bailey & Associates on behalf of Centennial Coal Company Pty Limited (the proponent) to complete an *Aboriginal Cultural Heritage and Historic Heritage Assessment Report* (ACHHR) for Modification 4 to State Significant Development (SSD)-5145 held for the Northern Coal Services Project (the Modification).

The Modification is located at Dora Creek, approximately 4.4 kilometres (km) northeast of Cooranbong and 30 km south of Newcastle in the Lake Macquarie City Council Local Government Area (LGA). The Modification Disturbance Area is adjacent to the existing Cooranbong Entry Site (CES) in Lot 7306 DP1164232, located in the southwest of the SSD-5145 Project Boundary and includes three hectares (ha) of land.

The Modification will increase the existing Run-of-Mine (ROM) coal stockpile capacity at the CES from 100,000 tonnes to 400,000 tonnes. The Modification seeks to construct the extended stockpile to the west and south of the existing CES ROM stockpile location.

Desktop database searches completed prior to the survey indicate that there are no previously recorded Aboriginal sites or items of local, state or national heritage significance located within or near the Modification Disturbance Area.

A field survey was completed on 13 July 2023 by OzArk Senior Archaeologist Stephanie Rusden and representatives from Wonn 1 Contracting and Guringai Tribal Link Aboriginal Corporation. No Aboriginal sites were identified and no landforms within the Modification Disturbance Area were assessed as having potential to contain subsurface archaeological deposits. Further, no Aboriginal cultural heritage values have been identified to date through consultation with the Aboriginal community, however the site officers present during the survey requested that some native vegetation, particularly the *Xanthorrhoea* species (grass trees) and Geebung present within the Modification Disturbance Area, be relocated if possible.

Additionally, no historic items or areas of potential historic archaeological deposits were identified during the fieldwork survey. As such the Modification will not impact historic heritage.

Recommendations concerning Aboriginal cultural values within the Modification Disturbance Area are as follows:

1. If the Modification is approved, the *Northern Region - Aboriginal Cultural Heritage Management Plan* (Northern Regional ACHMP) will need to be reviewed within 3 months of the approval date, in accordance with the existing Schedule 5 consent condition5(d) of SSD-5145.

2. The proposed works may proceed inside the Modification Disturbance Area without further archaeological investigation. All land-disturbing activities must be confined to within the Modification Disturbance Area. Should the parameters of the proposed work extend beyond this, then further archaeological assessment may be required.
3. If Aboriginal objects or skeletal material is identified during construction or operation of the Modification, all work must cease and the relevant procedures in the Northern Region ACHMP must be followed.
4. All staff and contractors involved in the proposed work should be aware of the legislative protection requirements for all Aboriginal heritage items and the procedures for unanticipated Aboriginal objects or suspected skeletal material. Inductions for work crews should include a cultural heritage awareness procedure to ensure they recognise Aboriginal artefacts.

Recommendations concerning the historic values within Modification Disturbance Area are as follows.

1. If the Modification is approved, the *Northern Region - Historic Heritage Management Plan* (Northern Region HHMP) will need to be reviewed within 3 months of approval date in accordance with the existing Schedule 5 condition 5(d) of SSD-5145.
2. The proposed works may proceed inside the Modification Disturbance Area without further archaeological investigation. All land-disturbing activities must be confined to within the Modification Disturbance Area. Should the parameters of the proposed work extend beyond this, then further archaeological assessment may be required.
3. If historic heritage items or skeletal material is identified during construction or operation of the Modification, all work must cease and the relevant procedures in the Northern Region HHMP must be followed.
4. All staff and contractors involved in the proposed work should be made aware of the legislative protection requirements for all historic items.

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## **1 INTRODUCTION**

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### **1.1 DESCRIPTION OF THE PROPOSAL**

OzArk has been engaged by James Bailey & Associates on behalf of Centennial Coal (the proponent) to complete an *Aboriginal Cultural Heritage & Historic Heritage Assessment Report* (ACHHR) for Modification 4 to the development consent of State Significant Development (SSD)-5145 for the Northern Coal Services Project (the Modification).

The Modification is located at Dora Creek, approximately 4.4 kilometres (km) northeast of Cooranbong and 30 km south of Newcastle in the Lake Macquarie City Council Local Government Area (LGA).

### **1.2 PROPOSED WORK**

The Modification will increase the existing Run-of-Mine (ROM) coal stockpile capacity at the Cooranbong Entry Site (CES) from 100,000 tonnes to 400,000 tonnes. The Modification seeks to construct the extended stockpile to the west and south of the existing CES ROM stockpile location (**Figure 1-2**). Additional disturbance of up to three hectares (ha) is proposed to facilitate development of the extended coal stockpile and associated infrastructure.

### **1.3 MODIFICATION DISTURBANCE AREA**

The Modification Disturbance Area refers to the approximate 3 ha of land which will be impacted by the Modification (**Figure 1-2**).

The Modification Disturbance Area is in Lot 7306 DP1164232, located in the southwest of the approved SSD-5145 Project Boundary.

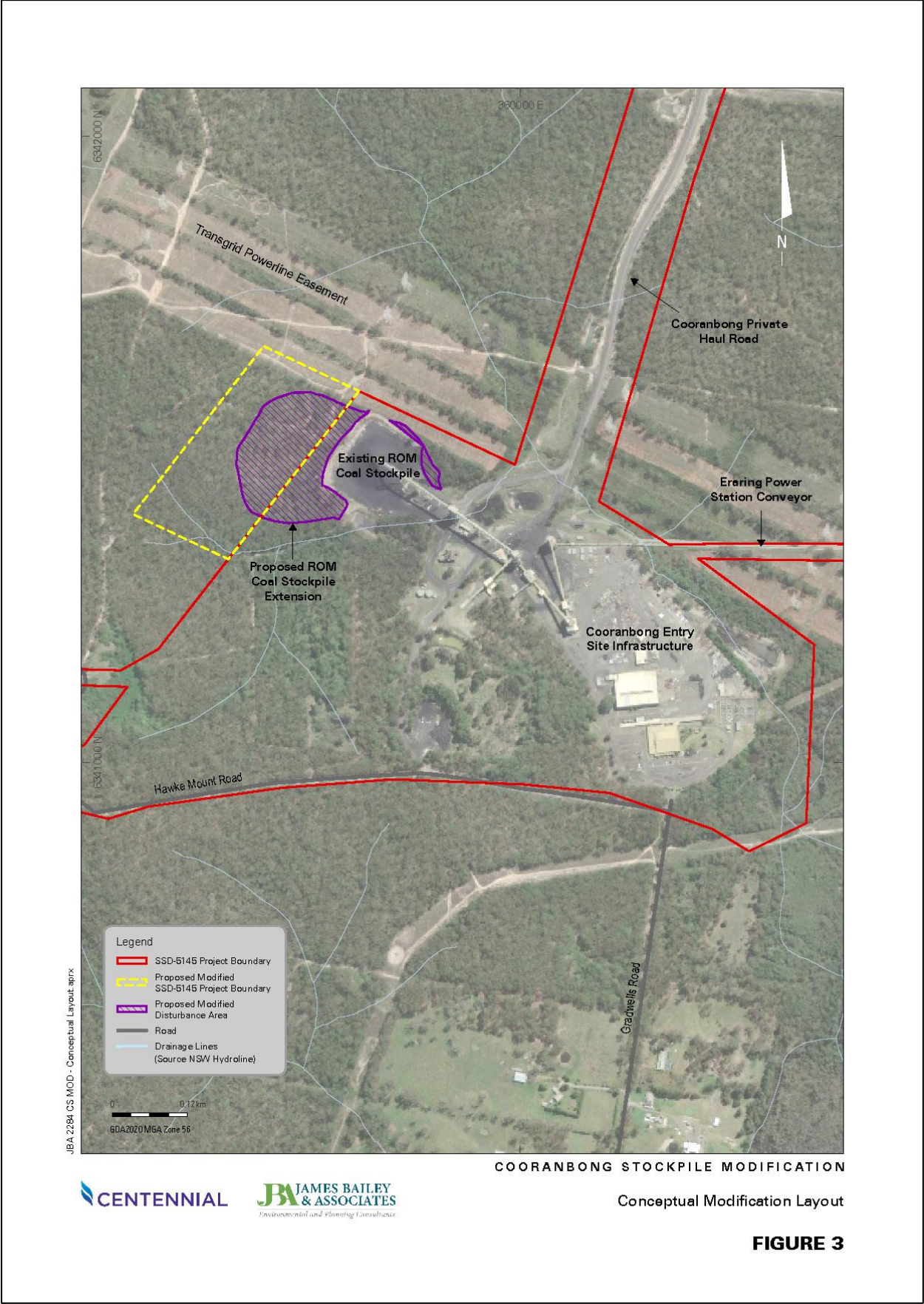


Figure 1-1: Map showing the location of the Modification.





Figure 1-2: Aerial showing the conceptual Modification layout.



## **ABORIGINAL CULTURAL HERITAGE ASSESSMENT**

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## 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 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 Modification

It is noted there are no Commonwealth or National heritage listed places within the Modification Disturbance Area, and as such, the heritage provisions of the EPBC Act and other Commonwealth Acts do not apply (see **Table 5-1**).

## 2.1.2 State legislation

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

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; and
- Ecologically sustainable development.

The objects of the EP&A Act 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 4.7: Approvals process for state significant development

#### Applicability to the Modification

The current Modification will be assessed under Part 4 Division 4.7 of the EP&A Act.

As SSD, if the Modification were approved, Section 4.41 of the EP&A Act would apply and therefore an Aboriginal Heritage Impact Permit (AHIP) under section 90 of the *National Parks and Wildlife Act 1974* (NPW Act) to harm Aboriginal objects would not be required. Instead, all management related to Aboriginal cultural heritage would be governed by the policies within an approved *Aboriginal Cultural Heritage Management Plan* (ACHMP).

### 2.1.2.2 *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 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).

Under Section 89A of the Act, it is a requirement to notify the Secretary of the Department of Climate Change, Energy, the Environment and Water (DCCEEW) 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.

#### Applicability to the Modification

Any Aboriginal objects within the Modification Disturbance Area are afforded legislative protection under the NPW Act.

The Secretary of DDDEEW will be notified of the location of any Aboriginal object/s recorded by sending the relevant details to the AHIMS register.

## **2.2 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).

## **2.3 PURPOSE AND OBJECTIVES**

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

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



- Objective One:** Undertake background research on the Modification Disturbance Area to formulate a predicative model for site location
- Objective Two:** Identify and record Aboriginal cultural heritage values within the Modification Disturbance Area. This includes intangible cultural values, Aboriginal objects, and any landforms likely to contain further archaeological deposits
- Objective Three:** To assess the significance of any recorded Aboriginal cultural values, Aboriginal objects, or sites in consultation with Registered Aboriginal Parties (RAPs)
- Objective Four:** Assess the likely impacts of the proposed work to Aboriginal cultural heritage values and provide management recommendations.

## 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 searches                                                                                 | <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</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 artefact locations were 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 6.3</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 field survey was undertaken by OzArk on 13 July 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: Dr Bernadette Drabsch, OzArk Affiliate, (BA Ancient History, BNHI [Hons], PhD Design/Archaeology, University of Newcastle)
- Reviewer: Stephanie Rusden.

### 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 proposed works are located so that those values can be recognised and incorporated into the management recommendations.

The Aboriginal cultural heritage assessment of the Modification has followed the ACHCRs (DECCW 2010b) and has been completed by the proponent.

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 Modification.

As the Modification is an existing SSD, there is already an established list of RAPs. The groups or individuals registered to be consulted as RAPs are:

- Awabakal Descendants Traditional Owners Aboriginal Corporation;
- Awabakal Traditional Owners Aboriginal Corporation;
- Bahtabah Local Aboriginal Land Council (LALC);
- Biraban LALC;
- Cacatua Culture Consultants;
- Darkinjung LALC;
- Guringai Tribal Link Aboriginal Corporation;
- Wonn 1 Contracting;
- Wonnarua Nation Aboriginal Corporation; and
- Yula – Punaal Education and Healing Aboriginal Corporation.

### 3.2.2 ACHCRs Stage 2

The aim of Stage 2 is to provide information about the Modification to the RAPs.

Detailed information was provided in the assessment methodology that was issued to all RAPs for their consideration on 7 June 2023 (**Appendix 1**).

### 3.2.3 ACHCRs Stage 3

The aim of Stage 3 is to acquire information regarding Aboriginal cultural values associated with the Modification through RAP consultation and field work.

To inform the RAPs of the assessment, an assessment methodology was issued for their consideration on 7 June 2023 (**Appendix 1**). This document provided the archaeological context of the Modification Disturbance 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 7 July 2023.

A response was received from Darkinjung Local Aboriginal Land Council on 8 June 2023 and Arthur Fletcher from Wonn 1 Contracting on 7 June 2023 advising that they had reviewed and supported the methodology.

### 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 copy of the draft ACHAR was sent to all RAPs on 17 August 2023 for their review and feedback (**Appendix 1 Figure 3**). No comments were received on the draft ACHAR.

### 3.2.5 Project update

On 12 June 2024, the proponent sent a project update to the RAPs advising an amendment in the Modification Disturbance Area with a reduction from 5 ha to 3 ha. A copy of the updated ACHAR was provided for their records (**Appendix 1 Figure 4**).

## 3.3 ABORIGINAL COMMUNITY INVOLVEMENT IN THE ASSESSMENT

An invitation was sent to all RAPs on 7 June 2023 inviting them to participate in the survey.

The survey was attended by Arthur Fletcher representing Wonn 1 Contracting and Tracey Howie representing Awabakal Traditional Owners Aboriginal Corporation and Tyler Howie representing Guringai Tribal Link Aboriginal Corporation.

## 3.4 ABORIGINAL COMMUNITY COMMENTS ON THE SURVEY

During the survey, the RAP site officers requested that some native vegetation, particularly the *Xanthorrhoea* species and Geebung, be relocated if possible. These plants have traditionally been used by Aboriginal people for multiple purposes, such as fire making, a food/drink source and the resin has been used in the construction of spears and for waterproofing (**Section 4.3**).

## 3.5 CULTURAL VALUES IDENTIFIED THROUGHOUT THE ACHCR PROCESS

No specific cultural values have been identified by the RAPs to date regarding the Modification Disturbance Area, however, the strong cultural values of Aboriginal communities towards landscapes and cultural heritage sites are recognised.

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## 4 LANDSCAPE CONTEXT

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An understanding of the environmental context of a study area is requisite 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.

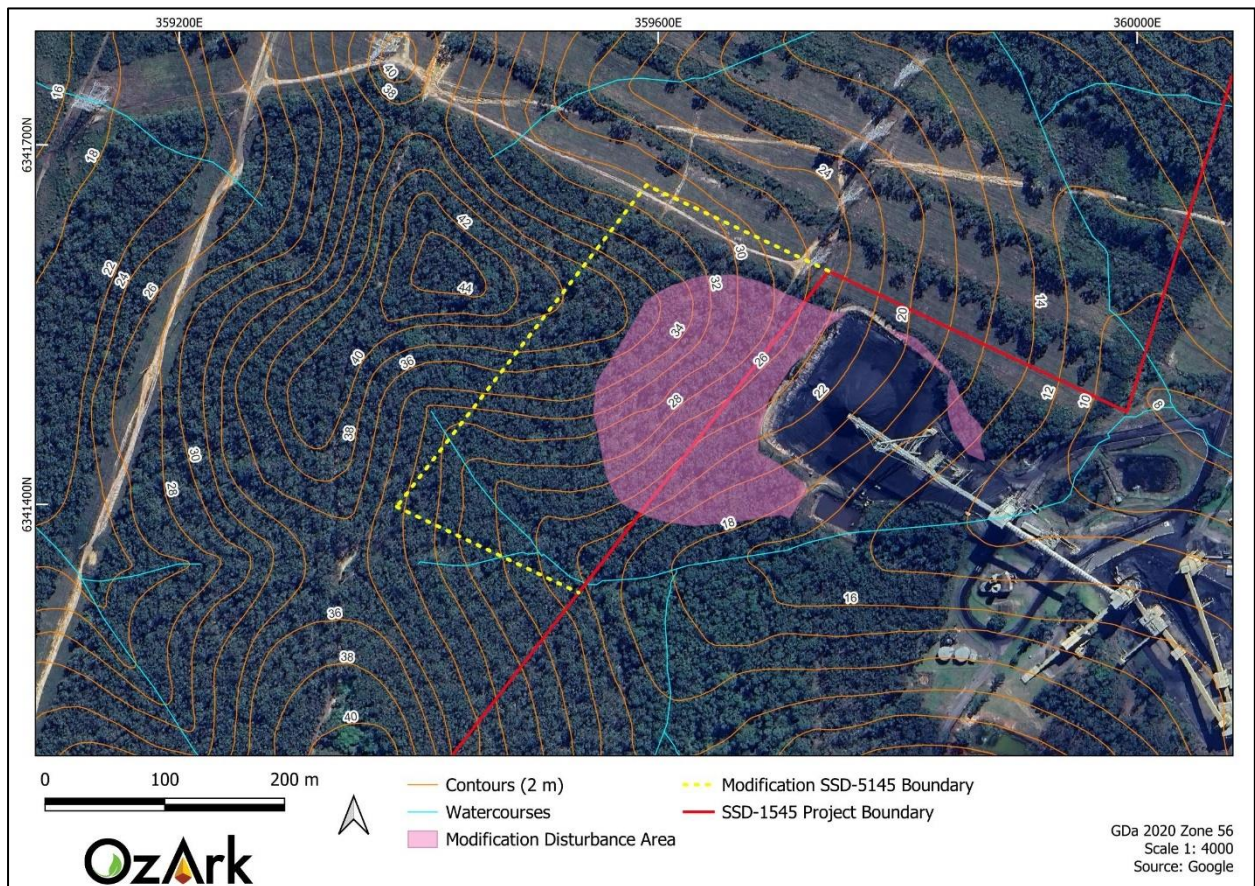
### 4.1 TOPOGRAPHY AND HYDROLOGY

The topography of the Modification Disturbance Area is moderately sloping with elevation starting at 38 m above sea level (ASL) in the northwest, down to 14 m in the east (**Figure 4-1**). Preliminary landform mapping indicates the entire Modification Disturbance Area makes up the mid-slope of a broader sloping landform and contains only one survey unit.

The closest named watercourse to the Modification Disturbance Area is Jigadee Creek, a perennial watercourse, located approximately 1.4 km to the west. An ephemeral drainage line borders the southern boundary of the Modification Disturbance Area however it would not have held water for long periods of time (**Figure 4-1**).



**Figure 4-1: Aerial of the Modification Disturbance Area showing topographical contours and watercourses.**



## 4.2 GEOLOGY AND SOILS

According to Mitchell (2002) the Modification Disturbance Area is in the Gosford – Cooranbong Coastal Slopes, which is generally categorised by extensive rock outcropping, low cliffs, ridges and plateaus of Triassic Narrabeen sandstone.

More specifically, the Modification Disturbance Area and surrounds are comprised of the Narrabeen Group and the Newcastle Coal measures, predominantly the Clifton subgroup and the Moon Island Beach subgroup (Hawley, Glen et al. 1994). These subgroups include conglomerate, sandstone, siltstone, claystone, tuff and coal. Parts of the Modification Disturbance Area are also located on Quaternary Sands, which include sand, silt, gravel and clay. The presence of tuff and sandstone indicates that geological materials utilised by Aboriginal people would have been readily available, for example, silicified tuff was utilised for the manufacture of flaked stone tools and sandstone was used for grinding grooves, shelters, and engravings, amongst other uses.

Soil analysis has important ramifications for archaeological research through the potential impact of different soils on human activity (such as agricultural exploitation) and the impact of the soils on archaeological evidence (such as post-depositional movement).

The soil landscapes identified within the Modification Disturbance Area are the Gateshead soil landscape unit. The representative soil type within the Modification Disturbance Area is a Dystrophic Brown Kurosol. Kurosols are soils that have strong texture contrast between the A (topsoil) and B (main subsoil) horizons and have strongly acidic subsoil. This soil is characterised by a dominant colour class of brown and is strongly acidic (RPS 2014).

### 4.3 FLORA AND FAUNA

Before European occupation, the Modification Disturbance Area and surrounds was likely vegetated by Sydney Coast Dry Sclerophyll Forest. The open eucalypt canopy varies in height from approximately 10 to 25 m, in correlation with the quality of the soil drainage. Typical tree species which populate this vegetation community include Sydney Red Gum, Red Bloodwood, Sydney Peppermint, Brown Stringybark, Broad-leaved and Narrow-leaved Scribbly Gum, Silvertop Ash, Old Man Banksia and Christmas Bush. The sclerophyll shrub understorey is diverse and includes several species of wattle, banksia, heath, flowering shrubs, ti-tree and Xanthorrhoea (grass trees) (Keith 2006: 146-147).

Many of these species would have been used by Aboriginal people for food, fibre and materials for making implements and weapons. Wattle and Xanthorrhoea in particular, were popular multi-purpose plants. According to Gunson (1974: 66), Xanthorrhoea was used as a food and drink source, with nectar from the flowers being extracted by soaking in water filled bark troughs, to produce a thick sweet drink, which was sometimes fermented to produce an alcoholic brew. The light straight flower stalk served as a butt-piece for spears. A tip section of ti-tree would then be attached to the end of the spear and hardened in the fire before used for hunting. Pieces of very dry flower stalks were also used for making fire with a drilling stick and the leaves produce a hard waterproof resin, which could be collected from the base of the trunk. This resin melts when warmed but sets hard when cold and was used for gluing stone heads to wooden handles and spears to shafts and tips, as well as waterproofing bark canoes and water carrying vessels. The gum from wattle was used in a similar way (Gunson 1974: 66).

This vegetation community provides habitat for a variety of animals and would have also provided potential food and raw material sources for Aboriginal people. Typical animals which may have been used by Aboriginal people include kangaroos, wallabies, sugar gliders, possums, lizards and snakes, birds, as well as rats and mice. The bones of such animals have been recovered from Aboriginal sites in the region, suggesting that they were sources of food (Attenbrow 2003: 70-76). The hides, bones and teeth of some of the larger mammals may have been used for Aboriginal clothing, ornamentation, or other implements. It is likely that such natural resources would have been used by Aboriginal people in the Lake Macquarie area.

#### 4.4 LAND USE HISTORY AND EXISTING LEVELS OF DISTURBANCE

The Modification Disturbance Area has experienced moderate levels of disturbance, with disturbances from farming, logging, and the construction of tracks, trails and earth stockpiles.

#### 4.5 CONCLUSION

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

- Topography and hydrology: the moderately sloping landforms which dominates the Modification Disturbance Area would have been hospitable to Aboriginal people, however due to the lack of a permanent or semi-permanent water source, there are few areas within the Modification Disturbance Area which would have encouraged substantial Aboriginal occupation of the landscape. The Modification Disturbance Area is more likely to have been used for short term resource gathering (i.e. materials from the Xanthorrhoea species).
- Geology and soils: the underlying geology of the Modification Disturbance Area features sandstone, which may have been used for sharpening tools, shelters (if rock shelters present) and engravings if outcroppings or overhangs are present. Further, should tuff be present, it is possible that it would have been used by Aboriginal people for the manufacture of flaked stone tools. Soils present on the gentle slopes inside the Modification Disturbance Area are likely to have been affected by water erosion. The erosional qualities of the soils and their highly acidic nature will have influenced the likelihood for *in situ* archaeological deposits being present. Furthermore, the use of the Modification Disturbance Area for farming, logging and access tracks would have further promoted soil erosion and loss.
- Vegetation: the Modification Disturbance Area would have once supported an open woodland which would have provided some resources for Aboriginal subsistence in the past. However, resources likely to have supported a large population of people would have been present closer to the banks of more permanent water sources. The vegetation clearance which has taken place for timber-getting purposes reduces the likelihood that any culturally modified trees remain present.
- Land use: ground surface disturbances such as vegetation clearance, farming, and access tracks exist throughout the Modification Disturbance Area. These activities may have displaced Aboriginal objects and are likely to have reduced the potential for subsurface archaeological material. However, disturbance at a given location does not necessarily mean that there will be no cultural material present, as often a disturbed context will reveal objects which may have previously been subsurface. As noted above, initial vegetation clearing would also have significantly reduced the likelihood of culturally modified trees remaining.

## 5 ARCHAEOLOGICAL CONTEXT

### 5.1 ETHNO-HISTORIC SOURCES OF REGIONAL ABORIGINAL CULTURE

Brayshaw (1987: 40) documents that the coastal areas of the lower Hunter Region were occupied by the Awabakal language group, in general terms bounded by the south bank of the Hunter River, the Sugarloaf Mountains, Lake Macquarie and Newcastle West. To their north were Gaddang speaking tribes, who included the Worimi centred on Port Stephens, possibly the Gringai of the Dungog area, and the Birpai, who were north of the Worimi. To the south of the Awabakal were the Kuringgai (or Guringgai), living both north and south of Broken Bay. Inland of the Kuringgai and bordering both the Awabakal and the Wonaruah were the Darkinung tribes, whose territory extended from the Hawkesbury River northwards towards the southern drainage of the Hunter River (Brayshaw 1987: 40).

The Awabakal appear to have been people of the coast, estuaries, lakes and wetlands, with an attachment to the rugged sandstone country through the Sugarloaf and Watagan Ranges.

Linguistic studies completed by Gunson (1974: 3, 23) indicate that the Awabakal may have had most in common with the Wonnarua of the Hunter Valley and possibly, although not necessarily, were a subgroup of the Wonnarua. Vinnicombe (1980: 1-21) has also indicated that there "was clearly a considerable amount of come and go" between the Awabakal and the Kuringgai to the south, although there was also considerable enmity and ritualised fighting between them.

The documentation of Awabakal language, clan territories, kinship and mythology, by L.E. Threlkeld, a missionary who established a mission initially on the eastern side of Lake Macquarie, has produced some of the best ethno-history in the early 19th Century (Threlkeld 1892).

Threlkeld documented two Awabakal ceremonial areas, one at Wallsend and the other at Stockrington. Two types of ceremonial rings were recorded, each of which were used for men's ceremonies, including the tooth removal ceremony for young men (Threlkeld as cited in Gunson 1974: 61).

Other ethnographic information recorded by Threlkeld about the Awabakal tribe included trade relations, with the exchange of tomahawks, seashells from the coastal areas for possum skins and belts of yam from the interior (Brayshaw 1987: 41). The Awabakal specifically made reed spears and exchanged them inland for possum skin rugs and fur cord (Gunson 1984: 61).

Threlkeld (in Gunson 1974) observed the use of stone hatchets and Dawson (1830) observed grooved heads with a handle fastened by adhesive gum. He stated that gum obtained from wattle and grass trees were used in the manufacture of much equipment. The stone was mainly basalt or diorite which was ground on sandstone to form a bevelled cutting edge.



## 5.2 REGIONAL ARCHAEOLOGICAL CONTEXT

Several development-driven investigations have been conducted in relation to the mining and energy sector near the Modification Disturbance Area. A sample of these assessments have been summarised below.

### Dean-Jones 1989

This survey was conducted approximately 6 km north of the Modification Disturbance Boundary and encompassed one square kilometre (km<sup>2</sup>) area near Stony Creek. It was noted during the survey that the extensive vegetation coverage inhibited visibility, like the dense vegetation in the current Modification Disturbance Area. One isolated find (a mudstone flake) was recorded on a disturbed creek terrace adjacent to Stony Creek.

### Umwelt 1997

Umwelt completed an archaeological assessment for the Cooranbong Colliery Life Extension Project. The Modification Disturbance Area was approximately 45 km<sup>2</sup> in the Lake Macquarie City LGA.

Several landforms, including stream channels and banks, ridge and hill crests and sandstone outcrops on any landform, were identified as being archaeologically sensitive. The desktop study identified a broad range of site types in the study area. No Aboriginal sites were identified during study area which was expected due to the high levels of disturbance.

### Umwelt 1998

This archaeological survey was conducted approximately 9 km to the north of the Modification Disturbance Area. Due to dense vegetation cover, the survey focussed on exposures, mature native vegetation, and areas of increased sandstone outcrops. A total of three isolated finds, one grinding groove and nine potential rock shelters (with potential archaeological deposit [PAD]) were identified during the survey.

### Niche 2011

In 2011, Niche conducted an archaeological assessment for the proposed 3.5 km pipeline that also included a sewerage pump station and connection to the Rathmines Sewerage Pump Station, which is located approximately 5.2 km northeast of the current Modification Disturbance Area. Two Aboriginal sites including one isolated find and one midden were recorded during the field assessment.

### RPS, 2014

In 2014, RPS conducted an archaeological assessment for the Northern Coal Services Environmental Impact Statement.

RPS Australia East Pty Ltd completed a *Cultural Heritage Impact Assessment* (CHIA) for the original SSD-5145 Environmental Assessment. The CHIA covered the Northern Coal Services proposal area including the CES location. During the field survey one scarred tree was recorded (45-7-0324) at the south-eastern extent of the Hawkmount Quarry disturbance assessment area. This is located 2.7 km north of the current Modification Disturbance Area.

## 5.3 LOCAL ARCHAEOLOGICAL CONTEXT

### 5.3.1 Desktop database searches conducted

A desktop search was conducted on the following databases to identify any previously recorded heritage within the Modification Disturbance 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      | 11/05/2023     | Lake Macquarie                                                                                                                   | No places listed on either the National or Commonwealth heritage lists are located within the Modification Disturbance Area                                             |
| National Native Title Claims Search | 11/05/2023     | NSW                                                                                                                              | No Native Title claims cover the Modification Disturbance Area                                                                                                          |
| AHIMS                               | 11/05/2023     | A 5 km radius centred on the Modification Disturbance Area (GDA zone 56 Eastings: 354653 - 364635, Northings: 6336509 - 6346490) | 58 sites were returned within the search area. Search results are presented in <b>Appendix 2</b> .<br>None of these sites are within the Modification Disturbance Area. |
|                                     | 7/06/2024      | A 5 km radius centred on the Modification Disturbance Area (GDA zone 56 Eastings: 354653 - 364635, Northings: 6336509 - 6346490) | 57 sites were returned within the search area. Search results are presented in <b>Appendix 2</b> .<br>None of these sites are within the Modification Disturbance Area. |
| Local Environmental Plan (LEP)      | 11/05/2023     | Lake Macquarie City Council LEP of 2014                                                                                          | None of the Aboriginal places noted occur near the Modification Disturbance Area.                                                                                       |

A search of the AHIMS database completed on 11 May 2023 returned 58 records for Aboriginal heritage sites within the designated 5 km radius search area. **Figure 5-1** shows the location of the AHIMS sites that have been recorded near the Modification Disturbance Area. None of the previously recorded sites are located within the Modification Disturbance Area.

**Table 5-2** shows the site types and frequencies of site located by the AHIMS search. The most frequently recorded site types are artefact sites with an unspecified quantity which contribute 45% of all recorded sites in the vicinity of the Modification Disturbance Area. Other less frequent site types include middens in association with artefacts (n=12, 21%), culturally modified trees (n=9, 16%) and grinding grooves (n=3, 5%).

The AHIMS data indicates that artefact sites have largely been recorded in proximity to waterways throughout the region, although some sites are located over 1 km from a named watercourse.

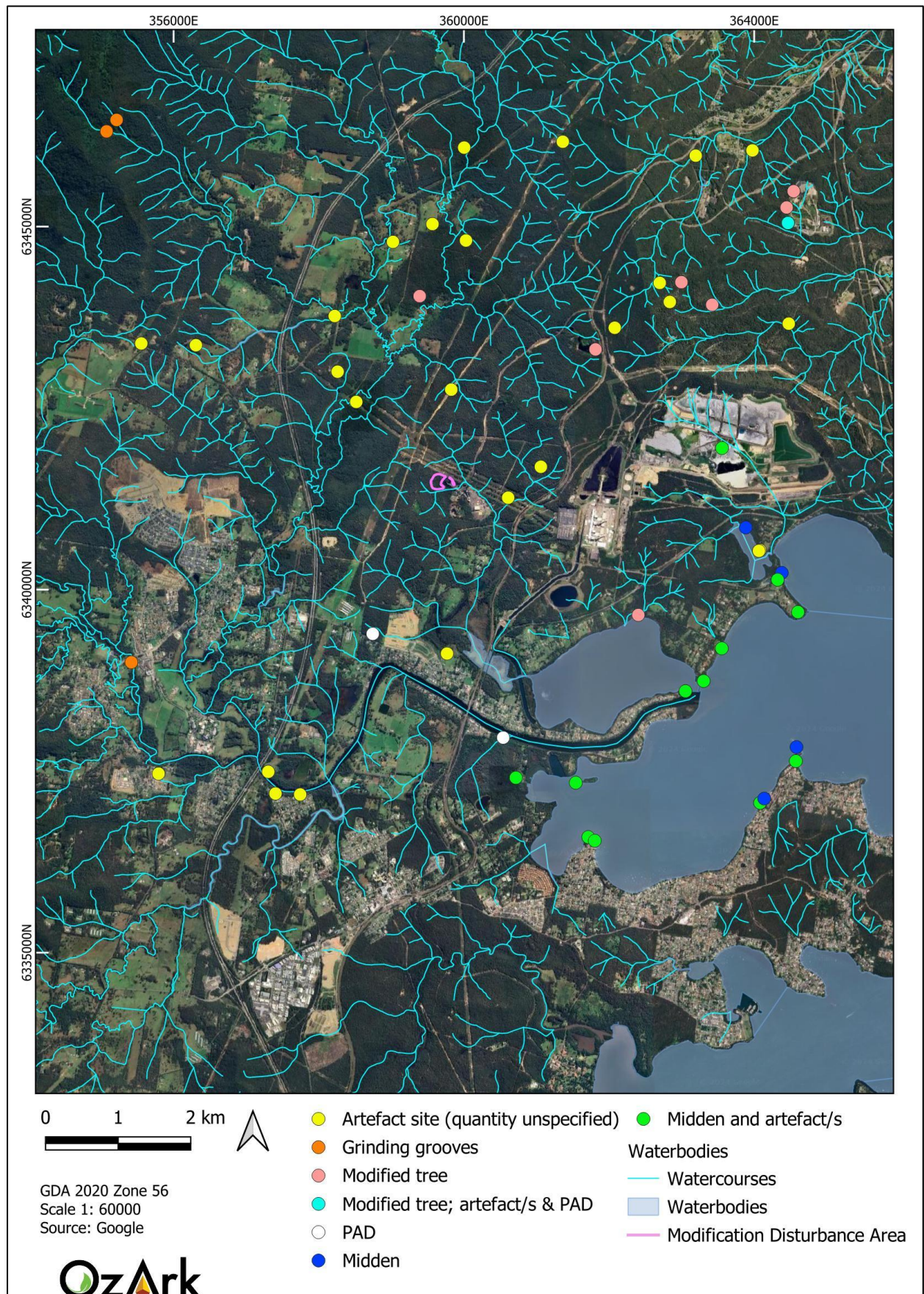
Midden sites are consistently recorded in proximity to large bodies of water including Lake Eraring and Lake Macquarie where reliable aquatic resources such as shellfish are readily available. Modified trees have been recorded where mature vegetation remains, while grinding grooves are present where suitable rock outcropping exists.

**Table 5-2: Site types and frequencies of AHIMS sites near the Modification Disturbance Area.**

| Site Type                              | Number    | % Frequency |
|----------------------------------------|-----------|-------------|
| Artefact site (quantity unspecified)   | 26        | 45          |
| Midden and artefact/s                  | 12        | 21          |
| Modified tree (carved or scarred)      | 9         | 16          |
| Midden                                 | 4         | 7           |
| Grinding groove                        | 3         | 5           |
| Potential archaeological deposit (PAD) | 2         | 3           |
| Modified tree; artefact/s and PAD      | 2         | 3           |
| <b>Total</b>                           | <b>58</b> | <b>100</b>  |



**Figure 5-1: Location of previously recorded AHIMS sites in relation to the Modification Disturbance Area.**



## 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 Modification Disturbance Area

The site types listed in **Table 5-3** are present in the region of the Modification Disturbance Area. The likelihood of these sites being present in the Modification Disturbance Area is discussed in **Section 5.4.3**.

**Table 5-3: Site types recorded in the region of the Modification Disturbance 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 metres 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. |



| Site type                 | Site description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                           | 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.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Culturally modified trees | Aboriginal scarred trees contain evidence of the removal of bark (and sometimes wood) in the past by Aboriginal people, in the form of a scar. Bark was removed from trees for a wide range of reasons. It was a raw material used in the manufacture of various tools, vessels, and commodities such as string, water containers, roofing for shelters, shields and canoes. Bark was also removed because of gathering food, such as collecting wood boring grubs or creating footholds to climb a tree for possum hunting. Due to the multiplicity of uses and the continuous process of occlusion (or healing) following removal, it is difficult to accurately determine the intended purpose for any example of bark removal. Scarred trees may occur anywhere old growth trees survive. The identification of scars as Aboriginal cultural heritage items can be problematical because some forms of natural trauma and European bark extraction create similar scars. Many remaining scarred trees probably date to the historic period when bark was removed by Aboriginal people for both their own purposes and for roofing on early European houses. Consequently, the distinction between European and Aboriginal scarred trees may not be clear. |
| Quarry sites              | Typically consist of exposures of stone material where evidence for human collection, extraction and/or preliminary processing has survived. Typically, these involve the extraction of siliceous or fine grained igneous and meta-sedimentary rock types for the manufacture of artefacts. The presence of quarry/extraction sites is dependent on the availability of suitable rock formations.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 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.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 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.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

#### 5.4.2 Landform modelling of archaeological potential

The archaeological studies undertaken within the vicinity of the Modification Disturbance Area indicate that most of the Aboriginal sites previously recorded were identified and recorded near a water source – such as rivers, creek lines, edges of lakes or the coastal margins. Movement of hunter-gatherers near water sources was not uncommon given that this was where people could obtain drinking water and a place that attracted animals to the same locality.

Shell middens are generally located around lakes and swamp land. Grinding grooves in the region have largely been recorded along permanent or semi-permanent source of water, as the water was required as an agent to enable the sharpening of stone tools on the abrasive sandstone pavements. Isolated finds have been identified throughout the landscape with no association to any specific landform feature. Culturally modified trees occur in the surrounding area, usually where old-growth trees survive, typically in areas of selectively logged forest or remnant vegetation on privately owned lands.

With regards to the Modification Disturbance Area, any exploitation of natural resources, such as possums, wattle and grass trees, was probably sporadic and short term, leaving minimal archaeological trace. Isolated incidences of culturally modified trees and stone artefacts may be present, however land use, such as logging, farming and the construction of access tracks, would have impacted the likelihood of finding these sites *in situ*.

### 5.4.3 Conclusion

Based on knowledge of the environmental contexts of the Modification Disturbance Area and a desktop review of the known local and regional archaeological record, the following predictions are made concerning the probability of landforms within the Modification Disturbance Area to contain Aboriginal objects (**Table 5-4**), and what types of sites may be present (**Table 5-5**).

**Table 5-4: Likelihood of landforms within the Modification Disturbance Area to contain Aboriginal objects.**

| Survey Unit | Landform type | Likelihood to contain Aboriginal objects                                                                                                                                                                                                                                                                                                                                                                                                               |
|-------------|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1           | Mid-slope     | Slopes are a degrading landform, especially in the Modification Disturbance Area where some vegetation removal has accelerated soil loss. These landforms were less commonly utilised for occupation, especially where distant from water, and Aboriginal objects recorded in such landforms are likely to be in a secondary context. The exception is in localised flat benches, if they are present, where occupation may have been more favourable. |

**Table 5-5: Likelihood of certain site types being present in the Modification Disturbance Area.**

| Site type                 | Likelihood of being present in the Modification Disturbance Area                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Isolated finds            | As isolated finds can occur anywhere, particularly within disturbed contexts, it is predicted that this site type could be recorded within the Modification Disturbance Area.                                                                                                                                                                                                                                                                                                                                       |
| Open artefact scatters    | As most of the Modification Disturbance Area is within sloping landforms distant to permanent water, this site type is not predicted to be common. It is likely that any sites associated with such landforms are likely to have a low artefact density and a low complexity of tool types as the sites are either one-off events or only infrequently used.                                                                                                                                                        |
| Culturally modified trees | This site type is not a common site type in the region, however, there are recordings near the Modification Disturbance Area at a regional level. The vegetation clearance which has taken place for timber-getting purposes reduces the likelihood that any culturally modified trees remain present.                                                                                                                                                                                                              |
| Middens                   | Middens 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. As the Modification Disturbance Boundary is located over 1 km from a named waterway and 3 km from the coast or lakes, it is unlikely that this site type will be recorded. |
| Grinding grooves          | Grinding grooves are more likely to be in areas of suitable outcropping rock and are unlikely to be present within the Modification Disturbance Area.                                                                                                                                                                                                                                                                                                                                                               |

## 5.5 RESEARCH QUESTIONS

Several research questions can meaningfully be applied to the investigation of the Modification Disturbance Area. These research questions include:

- What resources were available to the Aboriginal people using the land within the Modification Disturbance Area (food, stone, and water) and what resources were transported to the area?
- What tasks were Aboriginal people undertaking at the sites?
- Are there outcropping rock materials present suitable for stone tool procurement and manufacture?
- Do the findings within the Modification Disturbance Area (if any) accord with the regional archaeological context examined in **Section 5.2**?
- Do the survey results support the predictive model set out in **Section 5.4**?

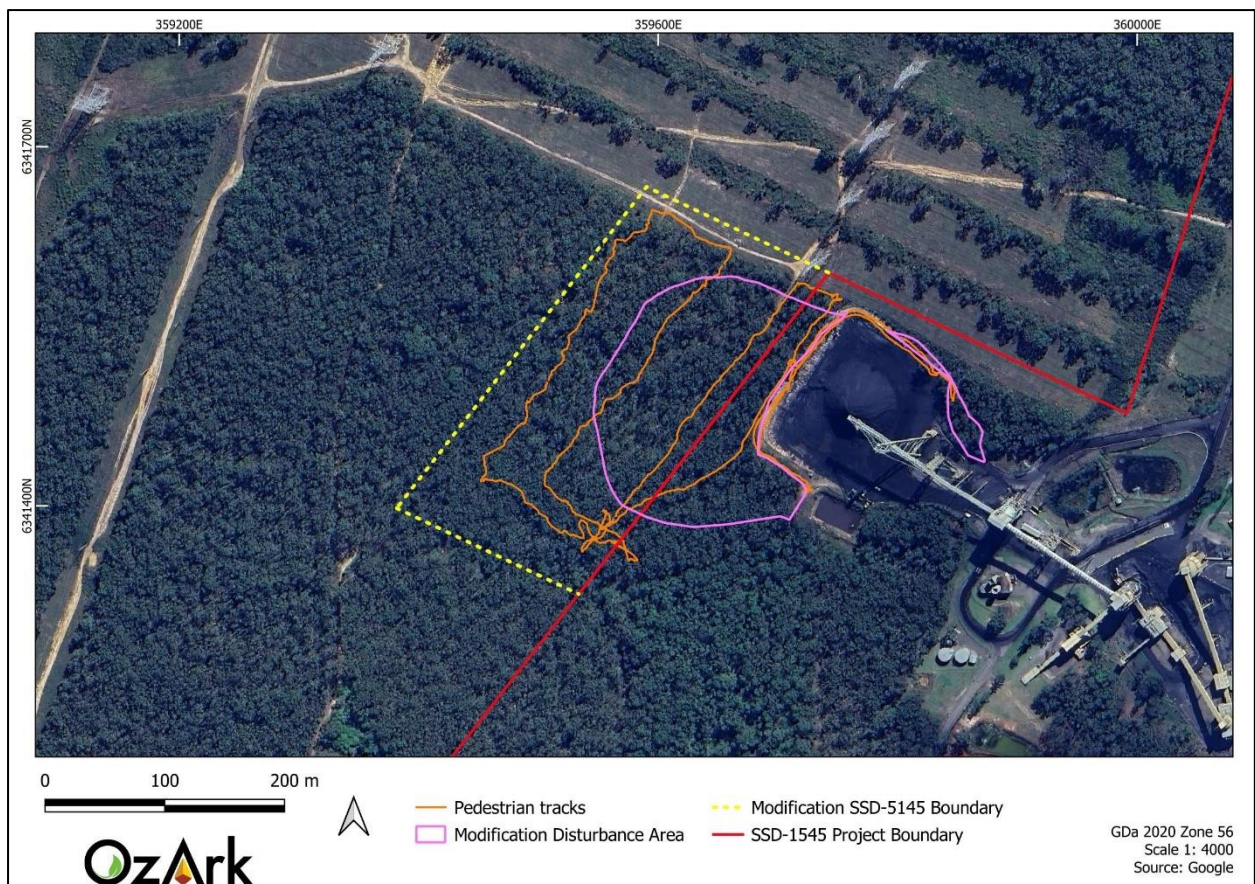
## 6 RESULTS OF ABORIGINAL ARCHAEOLOGICAL ASSESSMENT

### 6.1 SAMPLING STRATEGY AND FIELD METHODS

Standard archaeological field survey and recording methods were employed in this study (Burke & Smith 2004). Due to the small size of the Modification Disturbance Area a 'full pedestrian survey' was conducted, using systemic transects with surveyors spaced approximately 10 m apart throughout the survey unit.

The Modification Disturbance Area was surveyed by an OzArk archaeologist and three representatives from the RAP groups. The pedestrian survey coverage of the archaeologist is shown in **Figure 6-1**.

**Figure 6-1: Aerial showing survey coverage of the Modification Disturbance 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 Modification Disturbance Area. In general, **Table 6-1** presents an approximation of the amount of ground surface able to be seen at any location within specific landform units. The GSE was low at approximately 10%, however within these areas of exposure, GSV was moderate averaging 50%. GSE was greatest along the edges of vehicle tracks and was lowest in the densely vegetated areas due to heavy leaf litter and understorey shrubs (**Figure 6-2**).

**Table 6-1: Effective survey coverage within the Modification Disturbance 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           | Mid-slope | 30,000                  | 50           | 10         | 1,500                                                                           | 5                                                                         |

**Table 6-2** demonstrates that the survey efficacy could contribute to the low number of artefacts recorded. In general, to offset the lack of visibility, the assessment relied on an examination of the archaeological potential of the landforms present. As these have a low archaeological potential but were nevertheless extensively surveyed, the assessment concluded that the low survey efficacy did not prevent the archaeological potential of the landforms being understood.

**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 |
|-----------|----------------------|--------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------|---------------------------------|
| Mid-slope | 30,000               | 1,500                                                        | 5                                                                                 | 0               | 0                               |



**Figure 6-2: Examples of GSE and GSV across the Modification Disturbance Area**

|                                                                                                                     |                                                                                              |
|---------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|
|                                    |            |
| <p>1. View towards the northern boundary fence showing a high level of exposure along the edge of access track.</p> | <p>2. View in the northeast corner showing heavy leaf litter and low exposure.</p>           |
|                                   |           |
| <p>3. View along the pedestrian access track running through the central area.</p>                                  | <p>4. View in the southern corner showing heavy understorey vegetation and low exposure.</p> |

### 6.3 ABORIGINAL SITES RECORDED

No Aboriginal sites were identified within the Modification Disturbance Area. Further, no landforms were assessed to have potential for subsurface archaeological deposits. The lack of potential for subsurface deposits is attributed to the thin A-Horizon soils identified in areas of exposure across the Modification Disturbance Area and the lack of suitable landforms, i.e., benches, along the overall sloping landform.

### 6.4 SUMMARY OF SURVEY RESULTS

#### 6.4.1 Discussion

In **Section 5.5** several research questions were advanced to guide the survey of the Modification Disturbance Area. Following the survey, responses to these research questions are set out below.

- What resources were available to the Aboriginal people using the land within the Modification Disturbance Area (food, stone, and water) and what resources were transported to the area?
  - The area was well vegetated and species such as wattle and Xanthorrhoea (grass trees) were evident. The leaves, flowers and flower spikes of the grass trees may have been used for food/drink and fire starting, and the gum and resin for tool manufacturing. No outcropping sandstone or tuff was identified in the Modification Disturbance Boundary. There are no permanent water sources within the Modification Disturbance Area therefore visits to the area would most likely have been sporadic.
- What tasks were Aboriginal people undertaking at the sites?
  - No Aboriginal sites were identified within the Modification Disturbance Area therefore there is no conclusive evidence to suggest what tasks Aboriginal people may have undertaken in this area.
- Are there outcropping rock materials present suitable for stone tool procurement and manufacture?
  - There was no evidence of outcropping rock materials suitable for Aboriginal use (i.e. tuff or sandstone) within the Modification Disturbance Area.
- Do the findings within the Modification Disturbance Area (if any) accord with the regional archaeological context examined in **Section 5.2**?
  - The results of previous archaeological assessments in the local area suggest that the sloping landform of the Modification Disturbance Area which is distant to water would not have been used for camping but rather likely would have been an area visited infrequently for resource extraction. The results of the survey conform with this prediction as no Aboriginal sites or areas of PAD were identified.

## 7 SIGNIFICANCE ASSESSMENT

### 7.1 INTRODUCTION TO SIGNIFICANCE ASSESSMENT

#### 7.1.1 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.

##### 7.1.1.1 *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 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 accord with interpretations made by the archaeologist: a site may have low archaeological value but high social value, or vice versa.

#### **7.1.1.2     *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.

#### **7.1.1.3     *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).



#### **7.1.1.4     *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.

Places of post-contact Aboriginal history have generally been poorly recognised in investigations of Aboriginal heritage. Consequently, the Aboriginal involvement and contribution to important regional historical themes is often missing from accepted historical narratives. This means it is often necessary to collect oral histories along with archival or documentary research to gain enough understanding of historic values.

## **7.2     ASSESSED SIGNIFICANCE OF THE MODIFICATION DISTURBANCE AREA**

Social or cultural value: No comments were received from the RAPs regarding the cultural values of the Modification Disturbance Area during the ACHCRs process or the survey.

Scientific (archaeological) value: No Aboriginal sites were recorded during the survey therefore there are no known places with archaeological significance within the Modification Disturbance Area.

Aesthetic value: There are no known places with identified aesthetic values identified within the Modification Disturbance Area however the native vegetation present within has aesthetic qualities.

Historic value: There are no known places with identified historic values identified within the Modification Disturbance Area.



## 8 ASSESSING HARM

### 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 sites or specific cultural values have been identified within the Modification Disturbance Area, the Modification will not enhance nor diminish known Aboriginal cultural heritage values.

As noted in **Section 3.4**, the RAP site officers present during the survey requested that efforts be made to relocate some native vegetation, particularly the *Xanthorrhoea* species (grass trees) and Geebung from the Modification Disturbance Area.

### 8.2 LIKELY IMPACTS TO ABORIGINAL HERITAGE FROM THE MODIFICATION DISTURBANCE AREA

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 Modification.

### 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 Modification Disturbance Area.

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 Modification

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 Modification Disturbance Area. The results of the survey indicate that significant Aboriginal cultural heritage values will not be harmed within the Modification Disturbance Area.

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

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

| ESD principle                          | Response                                                                                                                                                                                                                                                                                                                                                    |
|----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Avoiding and minimising harm           | There are no Aboriginal sites within the Modification Disturbance Area and therefore harm to Aboriginal cultural values will be avoided.                                                                                                                                                                                                                    |
| The integration principle              | The Modification has sought to minimise environmental and heritage harm wherever possible. No Aboriginal sites will be impacted by the Modification.                                                                                                                                                                                                        |
| The precautionary principle            | The archaeological assessment has followed the precautionary principle through undertaking a robust impact assessment to ensure that harm to Aboriginal objects is minimised. The survey adopted a precautionary principle when it came to describing and assessing the archaeological potential to the landforms within the Modification Disturbance Area. |
| The intergenerational equity principle | It is assessed that the Modification will not harm significant Aboriginal cultural heritage values and that a diminution of intergenerational equity will not occur as no Aboriginal cultural heritage values or archaeological objects or sites will be impacted.                                                                                          |

## 9 MANAGEMENT OF ABORIGINAL CULTURAL HERITAGE SITES

### 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 Modification. 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 Modification 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 Modification 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 Modification Disturbance Area, alteration to the proposed conceptual 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 ACHMP will be required.

As there are no identified Aboriginal cultural values within the Modification Disturbance 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 are no recorded Aboriginal sites or areas of archaeological sensitivity within the Modification Disturbance Area and this assessment concludes that there is a low likelihood that the proposed work will adversely harm Aboriginal cultural heritage objects or sites.

Following approval of the Modification, the Northern Region ACHMP for SSD-5145 will need to be reviewed.

In the unlikely event that Aboriginal objects, or skeletal material are noted during construction or operation of the Modification, all work must cease and the procedures in the Northern Region ACHMP must be followed.

As noted in **Section 3.4**, the RAP site officers present during the survey requested that efforts be made to relocate some native vegetation, particularly the *Xanthorrhoea* species (grass trees) and Geebung from the Modification Disturbance Area. Specialist advice was obtained on this however relocation is not considered to be a feasible mitigation option due to the difficulty in effectively

transplanting these species and the potential for translocation work to impact on the biodiversity values of recipient sites located outside the Modification Disturbance Area. This is consistent with the general principles of the NSW OEH (2019) *Translocation Operational Policy*.



## **HISTORIC HERITAGE ASSESSMENT**

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## 10 HISTORIC HERITAGE ASSESSMENT: INTRODUCTION

### 10.1 BRIEF DESCRIPTION OF THE MODIFICATION

Please refer to **Sections 1** and **4** for a description of the Modification and the environmental context of the Modification Disturbance Area.

### 10.2 ASSESSMENT APPROACH

The inspection and assessment of heritage significance follows the:

- The International Council on Monuments and Sites' *The Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance* (Burra Charter 2013)
- Heritage Council's *Historical Archaeology Code of Practice* (Heritage Council 2006)
- Heritage Council's *Assessing Significance for Historical Archaeological Sites and 'Relics'* (Heritage Council 2009)
- NSW Heritage Office's *Assessing heritage significance* (NSW Heritage Office 2001).

### 10.3 RELEVANT LEGISLATION

#### 10.3.1 State legislation

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

Please refer to **Section 2.1.2** for a description of the EP&A Act.

##### 10.3.1.2 *Heritage Act 1977 (Heritage Act)*

The *Heritage Act 1977* (Heritage Act) is applicable to the current assessment. This Act established the Heritage Council of NSW. The Heritage Council's role is to advise the government on the protection of heritage assets, make listing recommendations to the Minister in relation to the State Heritage Register (SHR), and assess/approve/decline proposals involving modification to heritage items or places listed on the SHR. Most proposals involving modification are assessed under Section 60 of the Heritage Act.

Automatic protection is afforded to 'relics', defined as 'any deposit or material evidence relating to the settlement of the area that comprised New South Wales, not being Aboriginal settlement, and which holds state or local significance' (note: formerly the Act protected any 'relic' that was more than 50 years old. Now the age determination has been dropped from the Act and relics are protected according to their heritage significance assessment rather than purely on their age). Excavation of land on which it is known or where there is reasonable cause to suspect that 'relics' will be exposed, moved, destroyed, discovered or damaged is prohibited unless ordered under an excavation permit.

### Applicability to the Modification

As the Modification is an SSD, Section 4.41 of the EP&A Act (formerly Section 89J) applies and provides a defence for any investigative or other activities that are required to be carried out for the purpose of complying with any environmental assessment requirements.

Section 4.41 of the EP&A Act also notes that an approval under Part 4, or an excavation permit under Section 139, of the Heritage Act are not required. It is normally a condition of approval for SSD projects that historic heritage be managed under an *Historic Heritage Management Plan* (HHMP).

### **10.3.2 Commonwealth legislation**

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

Please refer to **Section 2.1.1** for a description of the EPBC Act.

### **10.3.3 Applicability to the Modification**

The Modification will be assessed under Part 4 Division 4.7 of the EP&A Act.

Any items of local or state historical heritage significance within the Modification Disturbance Area are afforded legislative protection under the Heritage Act.

It is noted there are no Commonwealth or National heritage listed places within the Modification Disturbance Area, and as such, the heritage provisions of the EPBC Act do not apply (see **Table 11-1**).

## **10.4 HISTORIC HERITAGE ASSESSMENT OBJECTIVES**

The current assessment applied the Heritage Council's *Historical Archaeology Code of Practice* (Heritage Council 2006) in the completion of a historical heritage assessment, including field investigations, to meet the following objectives:

- Objective One:** To identify whether historical heritage items or areas are, or are likely to be, present within the Modification Disturbance Area.
- Objective Two:** To assess the significance of any recorded historical heritage items or areas.
- Objective Three:** Determine whether the proposal is likely to cause harm to recorded historical heritage items or areas.
- Objective Four:** Provide management recommendations and options for mitigating impacts.

## **10.5 DATE OF HISTORIC HERITAGE ASSESSMENT**

The historic heritage assessment took place at the same time as the Aboriginal heritage assessment. Please refer to **Section 2.5** for the dates of the fieldwork.

## **10.6 OZARK INVOLVEMENT**

The fieldwork and reporting of the historic heritage assessment are the same personnel involved with the Aboriginal heritage assessment. Please see **Section 2.6** for details.



## 11 HISTORIC HERITAGE ASSESSMENT: BACKGROUND

### 11.1 BRIEF HISTORY OF THE LAKE MACQUARIE REGION

The first recorded evidence of Europeans visiting the area was in 1800 when Captain William Reid, master of the vessel *Martha*, mistakenly entered the mouth of the lake's channel, assuming it to be the mouth of the Hunter River (Clouten 1967: 10). The waterway was then known as Reid's Mistake, and the name remained in general use until about 1826 when it was renamed in honour of Governor Lachlan Macquarie. Captain Reid's discovery sparked little interest in Sydney. No further exploration took place for 20 years, partly because of the difficulty of getting overland to the area across rugged rocky unexplored terrain, but largely because King's Town (as Newcastle was known in those times) was a penal settlement, which authorities wished to keep isolated. It was only after pressure from free settlers eager to move into the Hunter Valley that the days of settlement began (Lake Macquarie City Council).

The earliest European occupants around Lake Macquarie were most likely timber getters, targeting the cedar of the Watagan Mountains to the west and the stands of timber around the lake foreshore. From the 1830s onward the south-western boundary of Lake Macquarie was known as a haunt of cattle thieves. Nearby Wyee was an important crossroads and a stopping point on Aboriginal and European tracks, at this junction the track diverged either to the east of Lake Macquarie or to the west toward Maitland (Bennett 1969: 16).

From 1880-1887 the main industries were farming, mining and timber. In response to rapid growth, there was increased demand for timber with several timber companies exploiting the hardwood forests of the Dora Creek catchments. In the Lake Macquarie district, the first steam sawmill appeared in 1872 at Cardiff Point, near Belmont. While the timber industry flourished, the dense woodland vegetation made farming and agricultural pursuits difficult in the area.

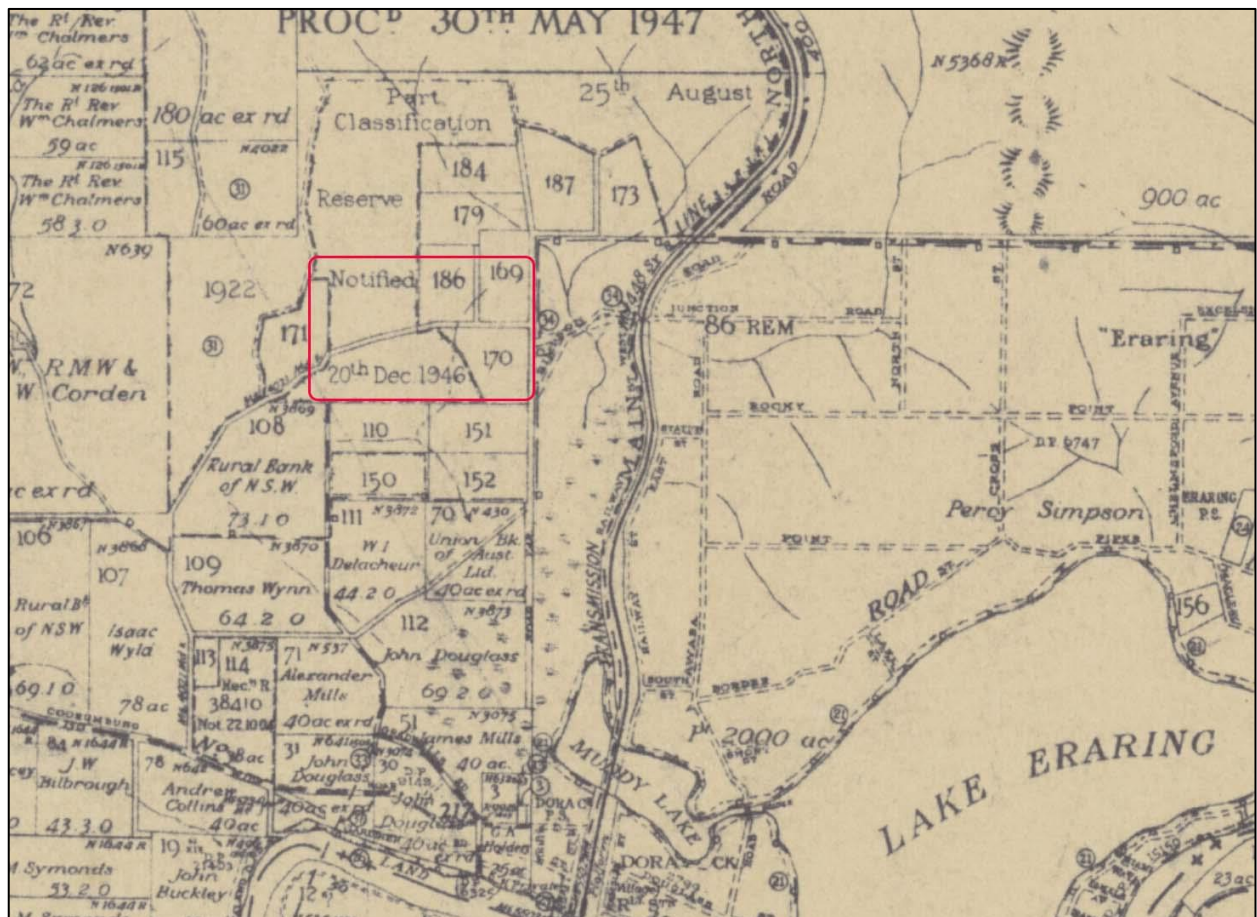
The introduction of railways and trams triggered the onset of coal production and in 1841 Threkheld opened a coal mine on his land. Subsequently, coal mining became the Lake's key industry, bringing further growth and employment to the region (Lake Macquarie City Council).

#### 11.1.1 Local context

The Modification Disturbance Area sits in a landscape close to the towns of Dora Creek and Cooranbong. The name Cooranbong came from the Awabakal word *Kour-an-bong* meaning rocky bottom creek or water over rocks and Dora Creek was known to the Awabakal people as *Doree Doree*, meaning a creek running into the lake. Between 1840 - 1887 Dora Creek was called Newport, then the railway was opened, and the station was named Dora Creek. The small town was on the southern boundary of Percy Simpson's Eraring grant of 2000 acres (Simpson already had 2000 acres at Cooranbong). The Dora Creek section of Simpson's grant shared in the land boom associated with Newport. The first Newport sub-division in 1840 had been to the north of

Lake Eraring but later the north bank of Dora Creek was subdivided, and the new area became more popular. The Modification Disturbance Area sits on small land parcels bordering Percy Simpson's large Eraring grant (Figure 11-1).

**Figure 11-1: 1956 Parish of Coorumbung Map showing the location of the Modification Disturbance Area, bordering Simpson's Eraring Grant.**



Shops and a hotel were built on the banks of the creek but the depression of the 1840s wiped out Newport and only a few fishermen and subsistence farmers remained. There was good alluvial soil along the creek banks and farmers grew vegetables, grapes, fruit and wheat. Chinese market gardeners also prospered; however, floods were a reoccurring issue.

Timber-getting was the most important early industry and the creek provided transport, as it was sheltered and penetrated the forest country. Ketches took the timber to Sydney, being poled up and down the creek. Half a dozen small sawmills operated on the banks of the creek and bullock teams brought the timber to the mills.

Shipbuilding was another important industry in the area, as was fishing. With the arrival of the Newcastle to Sydney railway the catch could be loaded on the train at night and be taken directly to the Sydney markets, fresh for morning trade (Lake Macquarie City Council).

### 11.1.2 Desktop database searches conducted

A desktop search was conducted on the following databases to identify any potential previously recorded heritage within the Modification Disturbance Area. The results of this search are summarised in **Table 11-1**.

**Table 11-1: Historic heritage: desktop-database search results.**

| Name of database searched                   | Date of search | Type of search                          | Comment                                                                                                                     |
|---------------------------------------------|----------------|-----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| National and Commonwealth Heritage Listings | 11/05/2023     | NSW                                     | No places listed on either the National or Commonwealth heritage lists are located within the Modification Disturbance Area |
| State Heritage Listings                     | 11/05/2023     | Lake Macquarie City Council LGA         | No places were listed near the Modification Disturbance Area                                                                |
| Local Environmental Plan (LEP)              | 11/05/2023     | Lake Macquarie City Council LEP of 2014 | No places listed near the Modification Disturbance Area                                                                     |

A search of the Heritage Council of NSW administered heritage databases and the Lake Macquarie City Council LEP returned no records for historical heritage sites within the designated search areas.

## **12 RESULTS OF HISTORIC HERITAGE ASSESSMENT**

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### **12.1 SURVEY METHODOLOGY**

Standard archaeological field survey and recording methods were employed in this study (Burke & Smith 2004). The survey for historic heritage values occurred at the same time as the Aboriginal cultural heritage survey for the Modification (see **Section 6.1**).

### **12.2 HISTORIC HERITAGE SITES**

No historic heritage items were recorded during the survey of the Modification Disturbance Area. As such there will be no impact to historic heritage from the Modification. Additionally, no areas with potential subsurface archaeological deposits were identified.

The absence of historic heritage items within the Modification Disturbance Area is unsurprising given the small size of the Modification Disturbance Area and the former land use.

## **13 MANAGEMENT AND MITIGATION: HISTORIC HERITAGE**

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### **13.1 GENERAL PRINCIPLES FOR THE MANAGEMENT OF HISTORIC SITES**

Appropriate management of heritage items is primarily determined based on their assessed significance as well as the likely impacts of the proposed development.

In terms of best practice and desired outcomes, avoiding impact to any historical item is a preferred outcome, however, where a historical site has been assessed as having no heritage value, impacts to these items does not require any legislated mitigation.

### **13.2 MANAGEMENT AND MITIGATION OF RECORDED HISTORIC SITES**

As no items or sites of historic heritage were recorded, no management or mitigation is required.

Following approval of the Modification, the Northern Region HHMP for SSD-5145 will need to be reviewed.

In the unlikely event that heritage sites or skeletal material are noted during construction or operation of the Modification, all work must cease and the relevant procedures in the Northern Region HHMP must be followed.

## 14 RECOMMENDATIONS

### 14.1 ABORIGINAL CULTURAL HERITAGE

Under Section 89A of the NPW Act it is mandatory that all newly recorded Aboriginal sites be registered with AHIMS. As professionals 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 ACHMP;
- The findings of the current investigations undertaken within the Modification Disturbance Area; and
- The interests of the Aboriginal community.

Recommendations concerning Aboriginal cultural values within the Modification Disturbance Area are as follows:

1. If the Modification is approved, the Northern Region ACHMP will need to be reviewed within 3 months of the approval date, in accordance with the existing Schedule 5 consent condition 5(d) of SSD-5145;
2. The proposed works may proceed inside the Modification Disturbance Area without further archaeological investigation. All land-disturbing activities must be confined to within the Modification Disturbance Area. Should the parameters of the proposed work extend beyond this, then further archaeological assessment may be required;
3. If Aboriginal objects or skeletal material is identified during construction or operation of the Modification, all work must cease and the relevant procedures in the Northern Region ACHMP must be followed;
4. All staff and contractors involved in the proposed work should be aware of the legislative protection requirements for all Aboriginal heritage items and the procedures for unanticipated Aboriginal objects or suspected skeletal material. Inductions for work crews should include a cultural heritage awareness procedure to ensure they recognise Aboriginal artefacts.

### 14.2 HISTORIC HERITAGE

The following recommendations are made based on the impacts associated with the Modification and with regard to:



- Legal requirements under the terms of the Heritage Act;
- Guidelines presented in the *Burra Charter*;
- The findings of the current assessment; and
- The interests of the local community.

Recommendations concerning the historic values within Modification Disturbance Area are as follows.

1. If the Modification is approved, the Northern Region HHMP will need to be reviewed within 3 months of the approval date, in accordance with the existing Schedule 5 consent condition5(d) of SSD-5145.
2. The proposed works may proceed inside the Modification Disturbance Area without further archaeological investigation. All land-disturbing activities must be confined to within the Modification Disturbance Area. Should the parameters of the proposed work extend beyond this, then further archaeological assessment may be required.
3. If historic heritage items or skeletal material is identified during construction or operation of the Modification, all work must cease and the relevant procedures the Northern Region HHMP must be followed.
4. All staff and contractors involved in the proposed work should be made aware of the legislative protection requirements for all historic items.

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## APPENDIX 1: ABORIGINAL COMMUNITY CONSULTATION

**Appendix 1 Table 1: Consultation log**

| Date    | Organisation                                                   | Comment                                                                                                                       | Method |
|---------|----------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|--------|
| 7/6/23  | Biraban Local Aboriginal Land Council                          | Christopher Armit (CA) from Centennial Coal emailed draft methodology and survey invite                                       | Email  |
| 7/6/23  | Cacatua Culture Consultants                                    | CA emailed draft methodology and survey invite                                                                                | Email  |
| 7/6/23  | Wonn 1 Contracting                                             | CA emailed draft methodology and survey invite                                                                                | Email  |
| 7/6/23  | Wonnarua Nation Aboriginal Corporation                         | CA emailed draft methodology and survey invite                                                                                | Email  |
| 7/6/23  | Guringai Tribal Link Aboriginal Corporation                    | CA emailed draft methodology and survey invite                                                                                | Email  |
| 7/6/23  | Darkinjung Local Aboriginal Land Council                       | CA emailed draft methodology and survey invite                                                                                | Email  |
| 7/6/23  | Bahtabah Local Aboriginal Land Council                         | CA emailed draft methodology and survey invite                                                                                | Email  |
| 7/6/23  | Awabakal Traditional Owners Aboriginal Corporation             | CA emailed draft methodology and survey invite                                                                                | Email  |
| 7/6/23  | Awabakal Descendants Traditional Owners Aboriginal Corporation | CA emailed draft methodology and survey invite                                                                                | Email  |
| 7/6/23  | Yula – Punaai Education and Healing Aboriginal Corporation     | CA emailed draft methodology and survey invite                                                                                | Email  |
| 7/6/23  | Wonn 1 Contracting                                             | CA received email confirming the involvement of Arthur Fletcher in survey                                                     | Email  |
| 8/6/23  | Darkinjung Local Aboriginal Land Council                       | CA received email stating that the methodology and invite had been passed onto Jacob Cain – Senior Culture & Heritage Officer | Email  |
| 17/8/23 | Cacatua Culture Consultants                                    | CA emailed draft ACHAR for review and comments                                                                                | Email  |
| 17/8/23 | Wonn 1 Contracting                                             | CA emailed draft ACHAR for review and comments                                                                                | Email  |
| 17/8/23 | Wonnarua Nation Aboriginal Corporation                         | CA emailed draft ACHAR for review and comments                                                                                | Email  |
| 17/8/23 | Guringai Tribal Link Aboriginal Corporation                    | CA emailed draft ACHAR for review and comments                                                                                | Email  |
| 17/8/23 | Darkinjung Local Aboriginal Land Council                       | CA emailed draft ACHAR for review and comments                                                                                | Email  |
| 17/8/23 | Bahtabah Local Aboriginal Land Council                         | CA emailed draft ACHAR for review and comments                                                                                | Email  |
| 17/8/23 | Awabakal Traditional Owners Aboriginal Corporation             | CA emailed draft ACHAR for review and comments                                                                                | Email  |
| 17/8/23 | Awabakal Descendants Traditional Owners Aboriginal Corporation | CA emailed draft ACHAR for review and comments                                                                                | Email  |
| 17/8/23 | Yula – Punaai Education and Healing Aboriginal Corporation     | CA emailed draft ACHAR for review and comments                                                                                | Email  |
| 12/6/24 | Cacatua Culture Consultants                                    | CA sent project update and final ACHAR                                                                                        | Email  |
| 12/6/24 | Wonn 1 Contracting                                             | CA sent project update and final ACHAR                                                                                        | Email  |
| 12/6/24 | Wonnarua Nation Aboriginal Corporation                         | CA sent project update and final ACHAR                                                                                        | Email  |
| 12/6/24 | Guringai Tribal Link Aboriginal Corporation                    | CA sent project update and final ACHAR                                                                                        | Email  |
| 12/6/24 | Darkinjung Local Aboriginal Land Council                       | CA sent project update and final ACHAR                                                                                        | Email  |
| 12/6/24 | Bahtabah Local Aboriginal Land Council                         | CA sent project update and final ACHAR                                                                                        | Email  |
| 12/6/24 | Awabakal Traditional Owners Aboriginal Corporation             | CA sent project update and final ACHAR                                                                                        | Email  |
| 12/6/24 | Awabakal Descendants Traditional Owners Aboriginal Corporation | CA sent project update and final ACHAR                                                                                        | Email  |

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|         |                                                               |                                        |       |
|---------|---------------------------------------------------------------|----------------------------------------|-------|
| 12/6/24 | Yula – Punaai Education and Healing<br>Aboriginal Corporation | CA sent project update and final ACHAR | Email |
|---------|---------------------------------------------------------------|----------------------------------------|-------|



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

**FW: Northern Coal Services Cooranbong Stockpile Extension - Draft Methodology and survey invite**

 Christopher M. Armit <Christopher.M.Armit@ce>  
 To:  ceo  
 Cc:  Jeffrey Dunwoodie;  Stephanie

Wed 7/06/2023 6:11 PM

 Cooranbong Entry Site Modification Draft Assessment Methodology June 23.pdf .pdf File

 Letter to RAPs\_ Survey Invitation Biraban.pdf .pdf File

Good evening Ashley,

Please find attached a draft methodology and invite for a survey inspection to be conducted at Cooranbong Entry Site in relation to the proposed Run-of-Mine (ROM) Coal stockpile extension and subsequent assessment report.

Please read through the methodology and get in touch with Stephanie (cc'ed) or myself on any comments you might have.

Some of you may know Stephanie, who works for OzArk. Stephanie is a Senior Archaeologist with lots of experience and we are happy to have her on the team and working on this project.

At this stage, we are planning survey work to be conducted on the 13 July 2023. Given the area is only 5 ha, on gently sloping terrain it is envisaged that the field work will take a bit under a day.

If you are interested in the field survey please fill out the engagement form and send to myself by the 7 July so I can organise the survey for the following week.

Regards,  
Chris

Regards

**Christopher M. Armit**  
Approvals Coordinator



p: +61 (0) 2 4935 8965



7 June 2022

Biraban Local Aboriginal Land Council  
PO Box 212  
Toronto NSW, 2283  
Via email: [ceo@birabanlalc.com.au](mailto:ceo@birabanlalc.com.au)

Dear Ashley,

**Northern Coal Services – Aboriginal Cultural Heritage Site survey invitation for the proposed Cooranbong Entry Site Run-of-Mine Coal Stockpile extension area**

Centennial will be undertaking a survey of Aboriginal cultural heritage in accordance with the Centennial Coal Northern Region Aboriginal Cultural Heritage Management Plan and the Northern Coal Services project specific Aboriginal Cultural Heritage Assessment Methodology once it has been finalised.

**Inspection Program**

The survey will be facilitated by OzArk. The following site will be inspected:

- Proposed Cooranbong Entry Site ROM Stockpile extension modification disturbance area

**Inspection Logistics**

Date: Thursday 13 July 2023  
Time: 9.00 am – 4.00 pm

**Meeting Location:** Front office, Cooranbong Entry Site, End of Gradwells Rd, Dora Creek

**Attendance**

Confirmation of attendance is to be provided no later than Friday 7 July 2023 to:

Chris Armit

Approvals Coordinator

4935 8965

[Christopher.M.Armit@centennialcoal.com.au](mailto:Christopher.M.Armit@centennialcoal.com.au)

**Minimum Contractor Requirements**

The following will be required to attend the work:

- Minimum PPE requirements are long pants and long sleeve high visibility shirt, Australian Standards approved Protective Footwear and hard hat in construction areas.
- Each individual will bring adequate food and water.
- Adhere to a minimum expectation of behaviour where all parties behave in an appropriate, culturally sensitive and respectful manner,
- Arrive on time and by own travel methods

**Centennial Mandalong Pty Limited**

ABN 74 101 508 892

PO Box 1000

Toronto NSW 2283

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E: [info@centennialcoal.com.au](mailto:info@centennialcoal.com.au)

[www.centennialcoal.com.au](http://www.centennialcoal.com.au)



**Standard Payment Terms and Conditions**

Standard payment terms for field work are:

- 
- 
- 
- 
- 
- 



Yours sincerely

A handwritten signature in blue ink, appearing to read 'CA', representing Chris Armit.

**Chris Armit**

Approvals Coordinator

## Appendix 1 Figure 2: Stage 2/3 Assessment Methodology



**ABORIGINAL CULTURAL HERITAGE ASSESSMENT  
METHODOLOGY**

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**COORANBONG ENTRY SITE MODIFICATION**  
COORANBONG, NSW  
JULY 2023

Report prepared by  
OzArk Environment & Heritage  
on behalf of Centennial Coal



**OzArk  
Environment & Heritage**

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**DOCUMENT CONTROLS**

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                       |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Proponent                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Centennial Coal                                                                                                                                                       |
| Client                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | James Bailey & Associates                                                                                                                                             |
| Document Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Aboriginal Cultural Heritage Assessment Methodology:<br>Cooranbong Entry Site Modification.                                                                           |
| File Location                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | OzArk Job No.                                                                                                                                                         |
| Clients\James Bailey and Associates\Centennial Coal<br>Cooranbong Entry Site Modification Dec<br>2022\Assessment Methodology                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 3728                                                                                                                                                                  |
| Document Status: V3.0 FINAL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Date: 12 July 2023                                                                                                                                                    |
| Draft V1: OzArk internal edits                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | V1.0 JH author 10/5/23<br>V1.1 SR review 12/5/23<br>V1.2 JH amend 12/5/23                                                                                             |
| Draft V2: OzArk and client edits                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | V2.0 OzArk to client 15/5/23<br>V2.1 OzArk updates 2/6/23                                                                                                             |
| Final V3: Final document                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | V3.0 OzArk to client 12/7/23                                                                                                                                          |
| Prepared for                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Prepared by                                                                                                                                                           |
| Dorian Walsh<br>Principal<br>James Bailey & Associates<br>6/127-129 John St<br>Singleton NSW 2330<br>dwalsh@baileyassociates.com.au                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Jordan Henshaw<br>Archaeologist<br>OzArk Environment & Heritage<br>145 Wingewarra Street (PO Box 2069)<br>Dubbo NSW 2830<br>P: 02 6882 0118<br>jordan@ozarkehm.com.au |
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### **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 James Bailey & Associates (the client) on behalf of Centennial Coal (the proponent) to prepare an assessment methodology for Modification 4 to the development consent of State Significant Development (SSD)-5145 for the Northern Coal Services Project (the Modification) (**Figure 1-1**).

The Modification will increase the existing Run-of-Mine (ROM) coal stockpile capacity at the Cooranbong Entry Site (CES) from 100,000 tonnes to 400,000 tonnes. The Modification seeks to construct the extended stockpile to the west and south of the existing CES ROM location (**Figure 1-2**). Additional disturbance of up to 5 hectares (ha) is proposed to facilitate development of the extended coal stockpile and associated infrastructure.

The Modification is located 30 kilometres (km) south of Newcastle and 4.4 km northeast of Cooranbong, in the Lake Macquarie City Council Local Government Area (LGA) (**Figure 1-1**).

This methodology is written in accordance with Stage 3 of the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (ACHCRs; DECCW 2010b). The Modification 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 Modification Disturbance Area. The results of this investigation will be presented in an *Aboriginal Cultural Heritage Assessment Report* (ACHAR).

Figure 1-1: Map showing the location of the Modification.





**Figure 1-2: Aerial showing the conceptual Modification layout.**





## 1.2 MODIFICATION DISTURBANCE AREA

The Modification Disturbance Area refers to the approximate 5 ha of land which will be impacted by the Modification (Figure 1-2). The Modification Disturbance Area is partially located in the southwest of the SSD-5145 Project Boundary.

## 1.3 MODIFICATION DISTURBANCE AREA LANDSCAPE CHARACTERISTICS

The Modification Disturbance Area is in the Sydney Basin bioregion, specifically the Wyong subregion. According to Mitchell (2002) the Modification Disturbance Area is in the Gosford – Cooranbong Coastal Slopes, which is generally categorised by extensive rock outcropping, low cliffs, ridges and plateaus of Triassic Narrabeen sandstone.

The Modification Disturbance Area is moderately sloping with elevation starting at 38 m above sea level (ASL) in the northwest, down to 14 m in the east (Figure 1-4). Soils present can include texture-contrast soils near areas of shale or sandstone outcrop.

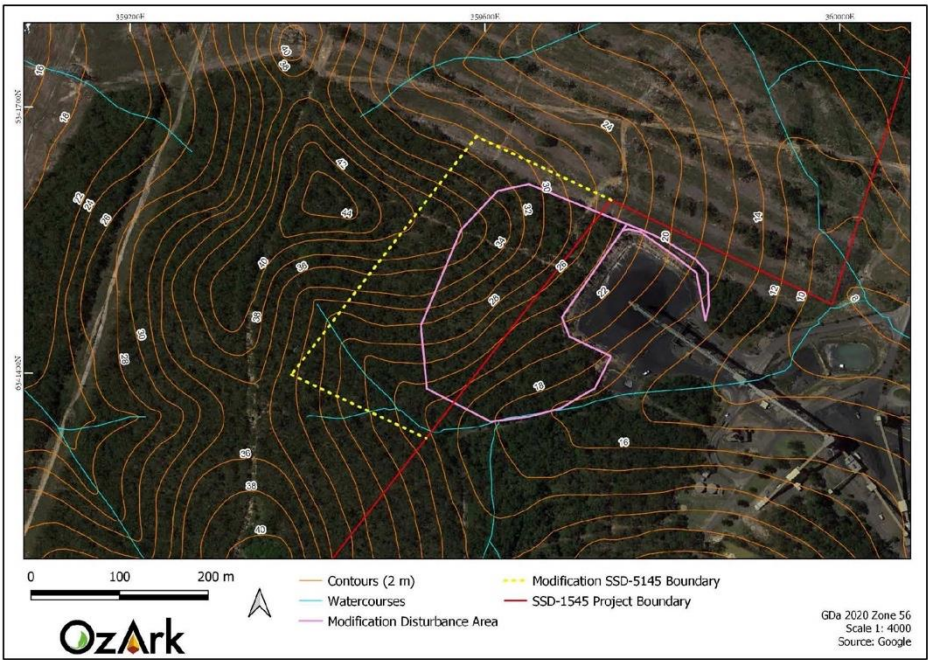
The closest named watercourse to the Modification Disturbance area is Jigadee Creek, a perennial watercourse, located approximately 1.4 km to the west. An ephemeral drainage line borders the southern boundary of the Modification Disturbance Area however it would not have held water for long periods of time.

The proposed Modification Disturbance Area is generally well vegetated (Figure 1-3) with some existing disturbed areas containing access tracks/trails and earth stockpiles.

**Figure 1-3: Overview of the Modification Disturbance Area.**



Figure 1-4: Topography and hydrology of the Modification Disturbance Area.



## 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 Modification 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 Modification 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 MODIFICATION DISTURBANCE AREA

Brayshaw (1987: 40) documents that the coastal areas of the lower Hunter Region were occupied by the Awabakal language group, in general terms bounded by the south bank of the Hunter River, the Sugarloaf Mountains, Lake Macquarie and Newcastle West. To their north were Gaddang speaking tribes, who included the Worimi centred on Port Stephens, possibly the Gringai of the Dungog area, and the Birpai, who were north of the Worimi. To the south of the Awabakal were the Kuringgai (or Guringgai), living both north and south of Broken Bay. Inland of the Kuringgai and bordering both the Awabakal and the Wonaruah were the Darkinung tribes, whose territory extended from the Hawkesbury River northwards towards the southern drainage of the Hunter River (Brayshaw 1987: 40).

Linguistic studies completed by Gunson (1974: 3, 23) indicate that the Awabakal may have had most in common with the Wonnarua of the Hunter Valley and possibly although not necessarily were a subgroup of the Wonnarua. Vinnicombe (1980: 1-21) has also indicated that there "was clearly a considerable amount of come and go" between the Awabakal and the Kuringgai to the south, although there was also considerable enmity and ritualised fighting between them.

The documentation of Awabakal language, clan territories, kinship and mythology, by L.E. Threlkeld, a missionary who established a mission initially on the eastern side of Lake Macquarie, has produced some of the best ethno-history in the early 19th Century (Threlkeld 1892).

Threlkeld documented two Awabakal ceremonial areas, one at Wallsend and the other at Stockrington. Two types of ceremonial rings were recorded, each of which were used for men's ceremonies, including the tooth removal ceremony for young men (Threlkeld as cited in Gunson 1974: 61).

Other ethnographic information recorded by Threlkeld about the Awabakal tribe included trade relations, with the exchange of tomahawks, seashells from the coastal areas for opossum skins and belts of yam from the interior (Brayshaw 1987: 41). The Awabakal specifically made reed spears and exchanged them inland for possum skin rugs and fur cord (Gunson 1984: 61).

#### 3.2 LOCAL ARCHAEOLOGICAL CONTEXT

A search of the Heritage NSW administered Aboriginal Heritage Information Management System (AHIMS) database on 11 May 2023 returned 58 results for Aboriginal sites within a 5 km radius of the Modification Disturbance Area (GDA Zone 56 Eastings: 354653-364635; Northings: 6336509-6346490). Figure 3-1 shows the location of previously recorded sites in relation to the Modification Disturbance Area. None of the previously recorded sites are located within the Modification Disturbance Area.

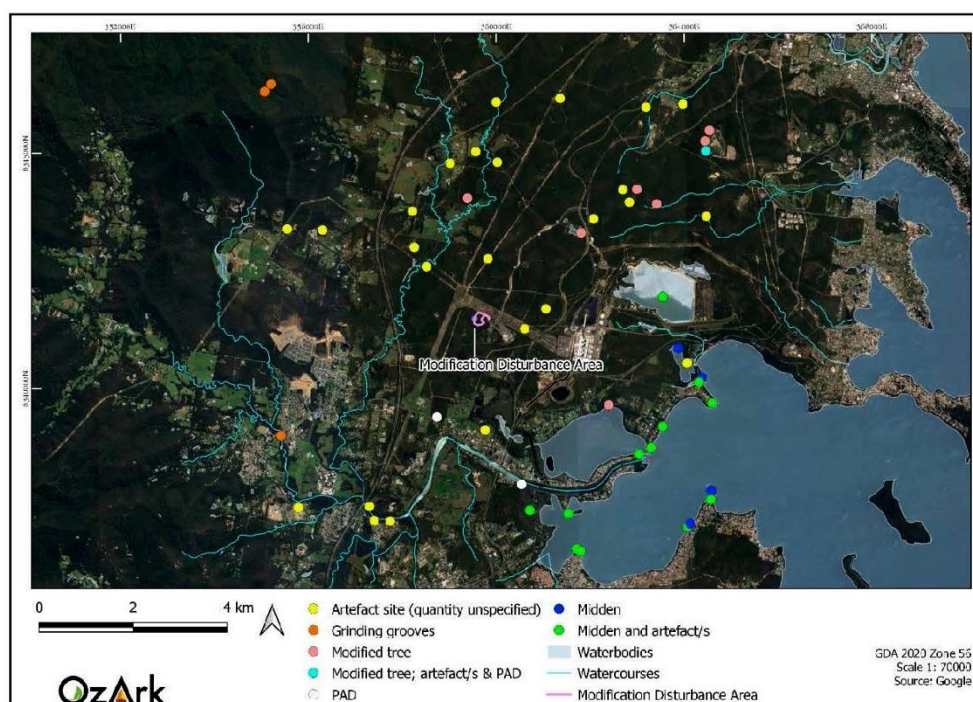


AHIMS data indicates that artefact sites have largely been recorded in proximity to waterways throughout the region, although some sites are located over 1 km from a named watercourse. Midden sites are consistently recorded in proximity to large bodies of water including Lake Eraring and Lake Macquarie where reliable aquatic resources such as shellfish are readily available. Modified trees have been recorded mature vegetation remains, whilst grinding grooves are present where suitable rock outcropping exists.

**Table 3-1** shows the site types and frequencies of site located by the search. The most frequently recorded site types are artefact sites with an unspecified quantity which contribute 45% of all recorded sites in the vicinity of the Modification Disturbance Area. Other less frequent site types include shells in association with artefacts, often referred to as midden sites (n=12, 21%), culturally modified trees (n=9, 16%) and grinding grooves (n=3, 5%).

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

| Site Type                              | Number    | % Frequency |
|----------------------------------------|-----------|-------------|
| Artefact site (quantity unspecified)   | 26        | 45          |
| Midden and artefact/s                  | 12        | 21          |
| Modified tree (carved or scarred)      | 9         | 16          |
| Midden                                 | 4         | 7           |
| Grinding groove                        | 3         | 5           |
| Potential archaeological deposit (PAD) | 2         | 3           |
| Modified tree; artefact/s and PAD      | 2         | 3           |
| <b>Total</b>                           | <b>58</b> | <b>100</b>  |

**Figure 3-1. AHIMS sites in relation to the Modification Disturbance Area.**

### 3.2.1 Archaeological investigations near the Modification Disturbance Area

Several development driven investigations have been conducted in relation to the mining and energy sector near the Proposed Modification Area. A sample of these assessments have been summarised below.

#### Dean-Jones 1989

This survey was conducted approximately 6 km north of the Modification Disturbance Boundary and encompassed one square kilometre (km<sup>2</sup>) area near Stony Creek. It was noted during the survey that the extensive vegetation coverage inhibited visibility, similar to the dense vegetation in the current Modification Disturbance Area. One isolated find (a mudstone flake) was recorded on a disturbed creek terrace adjacent to Stony Creek.

#### Umwelt 1997

Umwelt completed an archaeological assessment for the Cooranbong Colliery Life Extension Project. The Modification Disturbance Area was approximately 45 km<sup>2</sup> in the Lake Macquarie City LGA.

Several landforms, including stream channels and banks, ridge and hill crests and sandstone outcrops on any landform, were identified as being archaeologically sensitive. The desktop study

identified a broad range of site types in the study area. No Aboriginal sites were identified during study area which was expected due to the high levels of disturbance.

#### Umwelt 1998

This archaeological survey was conducted approximately 9 km to the north of the Modification Disturbance Area. Due to dense vegetation cover, the survey focussed on exposures, mature native vegetation, and areas of increased sandstone outcrops. A total of three isolated finds, one grinding groove and nine potential rock shelters (with PAD) were identified during the survey.

#### Niche 2011

In 2011, Niche conducted an archaeological assessment for the proposed 3.5 km pipeline that also included a sewerage pump station and connection to the Rathmines Sewerage Pump Station, which is located approximately 5.2 km northeast of the current Modification Disturbance Area. Two Aboriginal sites including one isolated find and one midden were recorded during the field assessment.

#### RPS 2014

RPS Australia East Pty Ltd completed a *Cultural Heritage Impact Assessment* (CHIA) for the original SSD-5145 Environmental Assessment. The CHIA covered the Northern Coal Services proposal area including the CES location. During the field survey a scarred tree was recorded (45-7-0324) at the south-eastern extent of the Hawkmount Quarry disturbance assessment area and is located 2.7 km north of the current Modification Disturbance Area.

### **3.3 ARCHAEOLOGICAL CONTEXT: CONCLUSION**

The archaeological investigations surrounding the Modification Disturbance Area as summarised in **Section 3.2** indicate that:

- Stone artefact sites (isolated finds and artefact scatters) and middens are the most frequent sites recorded in the area, especially in association with watercourses
- Grinding grooves are present in the general region where suitable rock outcroppings exist and tend to be located near water sources and in the surrounding escarpment
- Archaeological sites, even where surface evidence is not present, occur on most landforms
- Scarred trees have been recorded in areas where mature native vegetation is present.



## 4 PREDICTIVE MODEL

### 4.1 LANDFORM MODELLING

The topography of the Modification Disturbance Area is primarily gentle slopes, with the highest point being the western-most boundary, with an elevation of 40 m which descends in a general easterly direction (Figure 1-4). Preliminary landform mapping indicates the entire Modification Disturbance Area makes up the mid-slope of a broader sloping landform.

### 4.2 PREDICTIVE MODEL FOR THE MODIFICATION DISTURBANCE 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 Modification Disturbance Area

The site types listed in Table 4-1 are present in the region of the Modification Disturbance Area. The likelihood of these sites being present in the Modification Disturbance Area is discussed in Section 4.2.2.

**Table 4-1: Site types recorded in the region of the Modification Disturbance 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 metres away from any other constituent artefact. This site type may occur almost                                                                                                                                      |

| Site type                 | Site description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                           | <p>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> |
| Culturally modified trees | <p>Aboriginal scarred trees contain evidence of the removal of bark (and sometimes wood) in the past by Aboriginal people, in the form of a scar. Bark was removed from trees for a wide range of reasons. It was a raw material used in the manufacture of various tools, vessels, and commodities such as string, water containers, roofing for shelters, shields and canoes. Bark was also removed because of gathering food, such as collecting wood boring grubs or creating footholds to climb a tree for possum hunting. Due to the multiplicity of uses and the continuous process of occlusion (or healing) following removal, it is difficult to accurately determine the intended purpose for any example of bark removal. Scarred trees may occur anywhere old growth trees survive. The identification of scars as Aboriginal cultural heritage items can be problematical because some forms of natural trauma and European bark extraction create similar scars. Many remaining scarred trees probably date to the historic period when bark was removed by Aboriginal people for both their own purposes and for roofing on early European houses. Consequently, the distinction between European and Aboriginal scarred trees may not be clear.</p>                                                                                                                                                                                                                                                                                            |
| Grinding grooves          | <p>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.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Middens                   | <p>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.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

#### 4.2.2 Conclusion

Based on knowledge of the environmental contexts of the Modification Disturbance Area and a desktop review of the known local and regional archaeological record, the following predictions are made concerning the probability of the sloping landform of the Modification Disturbance Area to contain Aboriginal objects, and what types of sites may be present within the Modification Disturbance Area (Table 4-2).

Slopes are a degrading landform and are unsuitable for occupation. Aboriginal objects recorded in such landforms are likely to be in a secondary context. The exception is in localised flat benches, if present, where occupation may have been possible.



**Table 4-2: Likelihood of certain site types being present in the Modification Disturbance Area.**

| Site type                 | Likelihood of being present in the Modification Disturbance Boundary                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Isolated finds            | As isolated finds can occur anywhere, particularly within disturbed contexts, it is predicted that this site type could be recorded within the Modification Disturbance Boundary.                                                                                                                                                                                                                                                                                                                         |
| Open artefact scatters    | As most of the Modification Disturbance Boundary is within sloping landforms distant to permanent water, this site type is not predicted to be common. It is likely that any sites associated with such landforms are likely to have a low artefact density and a low complexity of tool types as the sites are either one-off events or only infrequently used.                                                                                                                                          |
| Culturally modified trees | Due to the large number of mature trees within the Modification Disturbance Boundary, this site type is predicted to be more likely. It is also noted that this site type has been recorded at a regional level.                                                                                                                                                                                                                                                                                          |
| Middens                   | Middens 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. As the Modification Disturbance Boundary is located over 1 km from a named waterway and 3km from the coast, it is unlikely that this site type will be recorded. |
| Grinding grooves          | Grinding grooves are more likely to be in areas of suitable outcropping rock and are unlikely to be present within the Modification Disturbance Boundary.                                                                                                                                                                                                                                                                                                                                                 |

### 4.3 RESEARCH QUESTIONS

A number of research questions can meaningfully be applied to the investigation of the Modification Disturbance Area. These research questions include:

- What resources were available to the Aboriginal people using the land within the Modification Disturbance Area (food, stone and water) and what resources were transported to the area?
- What tasks were Aboriginal people undertaking at the sites?
- Are there outcropping rock materials present suitable for stone tool procurement and manufacture?
- Do the findings within the Modification Disturbance Area (if any) accord with the regional archaeological context examined in **Section 3.2**?
- Do the survey results support the predictive model set out in **Section 4.2.2**?

The survey methodology set out in **Section 5** will be framed to help answer these questions; should sites of sufficient significance be encountered. However, based on the results of previous assessments and past disturbances, it not expected that the land within the Modification Disturbance Area will contain sites of sufficient significance to help answer those research questions that require a robust data set

## 5 SURVEY METHODOLOGY

### 5.1 ASSESSMENT APPROACH

The Aboriginal cultural heritage assessment of the Modification Disturbance 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 MODIFICATION DISTURBANCE AREA SURVEY AIMS

The aim of any archaeological survey is not to locate each artefact in a landscape but to undertake investigations so that the archaeological potential and archaeological characteristics of all landforms within the Modification Disturbance Area are known. Therefore, the aims of the survey will be to:

- Inspect all landform types in the Modification Disturbance Area so that their archaeological potential can be determined
- Evaluate whether the predictive model set out in **Section 4.2** is valid
- Determine if the research questions set out in **Section 4.3** can be answered
- Determine if any landforms of the Modification Disturbance Area require test excavation to understand the archaeological potential at a particular location
- Undertake sufficient assessment to satisfy Sections 2.2, 2.4, 2.5, 2.6, and 2.7 in The Guide
- Collect sufficient data so that the results can be presented in an ACHAR as set out in Section 3 in The Guide
- Undertake survey and record keeping satisfying Requirements 1–13 of the Code of Practice.

### 5.3 SURVEY METHODOLOGY

Standard archaeological field survey and recording methods will be employed in this assessment (Burke & Smith 2004) and will follow the Code of Practice.

Due to the small size of the Modification Area a 'full pedestrian survey' will be conducted. 'Full pedestrian survey' refers to systematic transects walked by surveyors spaced approximately 10 m apart throughout the landform or area being surveyed.

In the field, OzArk staff will identify, record and evaluate physical (i.e., archaeological) evidence. Site recording will capture all the information required to complete current AHIMS site recording forms (e.g., site location, site boundary, site plan, representative photographs, artefact recording and feature recording). 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 Modification Disturbance Boundary. 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.

#### **5.4 TEST EXCAVATION**

It is possible that the survey may identify landforms where test excavation under the Code of Practice (Requirements 14–17) is required. Should such landforms be identified during the survey, the test excavation methodology will be prepared as a separate document that will be circulated to all RAPs for review and comment.

## REFERENCES

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- Niche 2011                         Niche. 2011. *Aboriginal Cultural Heritage Assessment: Awaba Waste Management Facility Proposed Pipeline*. Report to Lake Macquarie City Council.
- OEH 2011                         Office of Environment and Heritage. 2011. *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in New South Wales*. Department of Environment, Climate Change and Water, Sydney.
- RPS 2014                         RPS Australia East Pty Ltd. 2014. *Cultural Heritage Impact Statement North Coal Logistics Project*. Report to: Centennial Coal.
- Threlkeld 1892                      Threlkeld, L. E. 1892. *An Australian Language*. Sydney.
- Umwelt 1997                        Umwelt. 1997. *Cooranbong Colliery Life Extension Project*. Report to Powercoal Pty Ltd.
- Umwelt 1998                        Umwelt. 1998. *Newstan Colliery Life Extension Project Environmental Impact Statement*. Report to Powercoal Pty Ltd.
- Vinnicombe 1980                  Vinnicombe, P. 1980. *Predilection and Prediction: A Study of Aboriginal Sites in the Gosford–Wyong Region*. Unpublished report to NSW National Parks & Wildlife Service.

Appendix 1 Figure 3: Stage 4 draft ACHAR review (sample)

RE: Northern Coal Services Cooranbong Stockpile Extension - Draft ACHHAR for comment

CM

Christopher M. Armit <Christopher.M.Armit@centenn

To

ceo

Cc

Jeffrey Dunwoodie; Stephanie

230816 V2.1 FINAL DRAFT\_Centennial CES Modification ACHHAR\_August2023.pdf

11 MB

☺

↩ Reply

↩ Reply All

➡ Forward

📧

⋮

Thu 17/08/2023 4:09 PM

Dear Ashley,

Please find attached the draft ACHHAR Report for your comment.

Note: a minor adjustment may be made to slightly reduce the final footprint in the design.

For comments - don't hesitate to drop Steph, Jeff or myself a line or email.

regards,  
Chris

(02) 4935 8965

Regards

Christopher M. Armit

Approvals Coordinator



CENTENNIAL

p: +61 (0) 2 4935 8965

Centennial | Fassifern

100 Miller Road | Fassifern | NSW | 2283 | Australia

[centennialcoal.com.au](http://centennialcoal.com.au)



## Appendix 1 Figure 4: Project update (sample)

RE: Northern Coal Services Cooranbong Stockpile Extension - Draft ACHHAR for comment

 Christopher M. Armit <Christopher.M.Armit@c>  
 To:  kerrie  
 Cc:  Jeffrey Dunwoodie;  Stephanie;  Dorian Walsh

  Reply  Reply All  Forward  ...

Wed 12/06/2024 10:31 AM

 2406011 V3.0\_Centennial CES Modification ACHHAR\_June 2024.pdf  
 13 MB

Dear Kerrie,

Thank you for your continued interest and participation as a Registered Aboriginal Party (RAP) regarding the Aboriginal cultural heritage assessment for a modification to the Northern Coal Services Project (SSD-5145) consent.

The purpose of this email is to provide you with an update of the Northern Coal Services Modification 4 (MOD 4) – Stockpile extension project.

As you are aware, a copy of the draft *Aboriginal Cultural Heritage Assessment* (ACHAR) for SSD-5145 MOD 4 was distributed for review on 17 August 2023 in accordance with Stage 4 of the *Aboriginal cultural heritage consultation requirements for proponents 2010* (DECCW 2010).

Since this time, the proposed Modification Disturbance Area has been refined. The initially assessed Modification Disturbance Area contained up to 5 hectares (ha) of land whereas the revised Modification Disturbance Area now only contains 3 ha of land mainly to avoid disturbance to the nearby 3<sup>rd</sup> order stream. The ACHAR has been amended to ensure it accurately reflects the areas requiring assessment. The final footprint in the design has been finalised and the updated figures are presented in the attached report.

We are planning to submit the NCS MOD 4 Modification report and final ACHAR onto the planning portal in August 2024 and it will be made publicly available.

Comments on the NCS MOD 4 ACHAR are more than welcome. Don't hesitate to drop Jeff, Steph or myself a phone call or email.

regards,  
Chris

Regards

**Christopher M. Armit**  
 Approvals Coordinator



p: +61 (0) 2 4935 8905

APPENDIX 2: AHIMS SEARCH RESULTS

10 May 2023 search result



AHIMS Web Services (AWS)

Search Result

Your Ref/PO Number : 3728

Client Service ID : 780671

OzArk Environmental and Heritage Management - Dubbo

Date: 10 May 2023

PO Box 2069

Dubbo New South Wales 2830

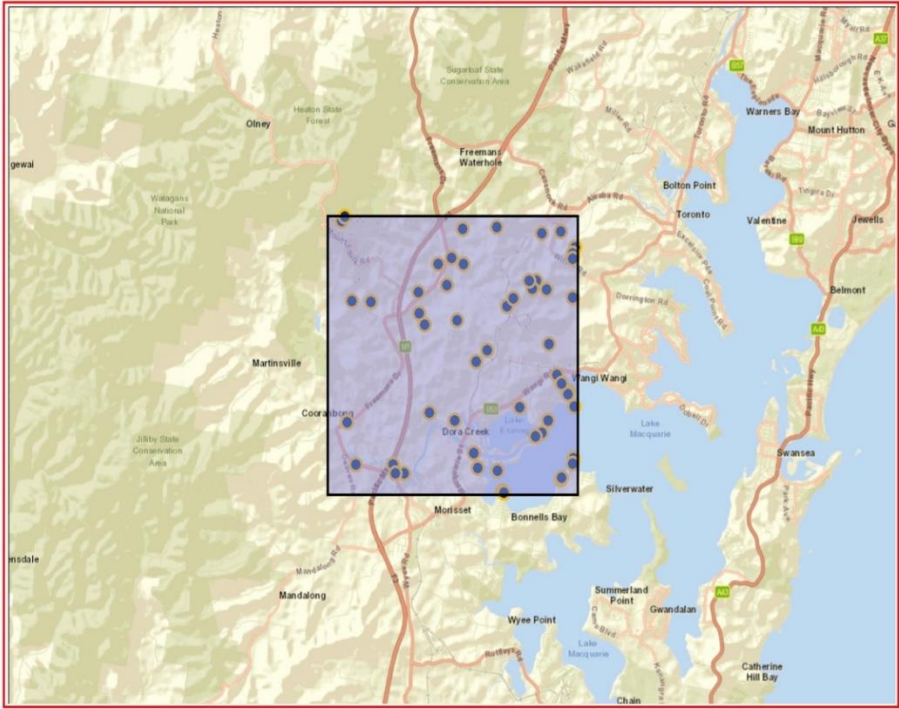
Attention: Jordan Henshaw

Email: jordan@ozarkehm.com.au

Dear Sir or Madam:

AHIMS Web Service search for the following area at Datum :GDA, Zone : 56, Eastings : 354653.0 - 364635.0, Northings : 6336509.0 - 6346490.0 with a Buffer of 0 meters, conducted by Jordan Henshaw on 10 May 2023.

The context area of your search is shown in the map below. Please note that the map does not accurately display the exact boundaries of the search as defined in the paragraph above. The map is to be used for general reference purposes only.



A search of Heritage NSW AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

|    |                                                                       |
|----|-----------------------------------------------------------------------|
| 58 | Aboriginal sites are recorded in or near the above location.          |
| 0  | Aboriginal places have been declared in or near the above location. * |

Aboriginal Cultural Heritage & Historic Heritage Assessment Report: SSD-5145 Modification 4

95



## AHIMS Web Services (AWS)

### Extensive search - Site list report

Your Ref/PO Number : 3728  
Client Service ID : 780672

| SiteID    | SiteName                                      | Datum            | Zone | Easting | Northing | Context   | Site Status ** | SiteFeatures                                                                                                   | SiteTypes      | Reports |
|-----------|-----------------------------------------------|------------------|------|---------|----------|-----------|----------------|----------------------------------------------------------------------------------------------------------------|----------------|---------|
| 45-7-0315 | RPS NEWST 22                                  | GDA              | 56   | 361364  | 6346170  | Open site | Valid          | Artefact :-                                                                                                    |                |         |
|           | <b>Contact</b>                                | <b>Recorders</b> |      |         |          |           |                | <b>Permits</b>                                                                                                 |                |         |
| 45-7-0147 | Eraring;                                      | AGD              | 56   | 362300  | 6339460  | Open site | Valid          | Modified Tree<br>(Carved or Scarred) :-                                                                        | Scarred Tree   | 2630    |
|           | <b>Contact</b>                                | <b>Recorders</b> |      |         |          |           |                | <b>Permits</b>                                                                                                 |                |         |
| 45-7-0318 | RPS ST01                                      | GDA              | 56   | 362999  | 6344235  | Open site | Valid          | Modified Tree<br>(Carved or Scarred) :-                                                                        |                |         |
|           | <b>Contact</b>                                | <b>Recorders</b> |      |         |          |           |                | <b>Permits</b>                                                                                                 |                |         |
| 45-3-4624 | Dora Creek Grinding Grooves                   | GDA              | 56   | 355419  | 6338999  | Open site | Valid          | Grinding Groove :-                                                                                             |                |         |
|           | <b>Contact</b>                                | <b>Recorders</b> |      |         |          |           |                | <b>Permits</b>                                                                                                 |                |         |
| 45-7-0163 | M3;Crusader Camp, Yarrowonga Point;           | GDA              | 56   | 364084  | 6337063  | Open site | Valid          | Shell :- , Artefact :-                                                                                         | Midden         | 2685    |
|           | <b>Contact</b>                                | <b>Recorders</b> |      |         |          |           |                | <b>Permits</b>                                                                                                 |                |         |
| 45-3-1132 | Dora Creek;Dora Creek North Bank;Beauty Point | AGD              | 56   | 357200  | 6337300  | Open site | Valid          | Artefact :-                                                                                                    | Open Camp Site | 305     |
|           | <b>Contact</b>                                | <b>Recorders</b> |      |         |          |           |                | <b>Permits</b>                                                                                                 |                |         |
| 45-3-4344 | BP1 AFT                                       | GDA              | 56   | 357745  | 6337178  | Open site | Valid          | Artefact :-                                                                                                    |                |         |
|           | <b>Contact</b>                                | <b>Recorders</b> |      |         |          |           |                | <b>Permits</b>                                                                                                 |                |         |
| 45-3-0908 | Old Maitland Road;Jigadee Creek;              | AGD              | 56   | 358919  | 6344599  | Open site | Valid          | Artefact :-                                                                                                    | Open Camp Site | 4835    |
|           | <b>Contact</b>                                | <b>Recorders</b> |      |         |          |           |                | <b>Permits</b>                                                                                                 |                |         |
| 45-3-4533 | DC1 ART                                       | GDA              | 56   | 359769  | 6339119  | Open site | Valid          | Artefact :-                                                                                                    |                |         |
|           | <b>Contact</b>                                | <b>Recorders</b> |      |         |          |           |                | <b>Permits</b>                                                                                                 |                |         |
| 45-3-3373 | AA2                                           | AGD              | 56   | 359722  | 6342564  | Open site | Valid          | Artefact : 2                                                                                                   |                |         |
|           | <b>Contact</b>                                | <b>Recorders</b> |      |         |          |           |                | <b>Permits</b>                                                                                                 |                |         |
| 45-7-0161 | M1;Hungary Point public reserve;              | AGD              | 56   | 361610  | 6336400  | Open site | Valid          | Shell :- , Artefact :-                                                                                         | Midden         | 2685    |
|           | <b>Contact</b>                                | <b>Recorders</b> |      |         |          |           |                | <b>Permits</b>                                                                                                 |                |         |
| 45-3-4380 | Olney SF_C244_Mt Faulk_AGG 1                  | GDA              | 56   | 355077  | 6346312  | Open site | Valid          | Grinding Groove :-                                                                                             |                |         |
|           | <b>Contact</b>                                | <b>Recorders</b> |      |         |          |           |                | <b>Permits</b>                                                                                                 |                |         |
| 45-7-0313 | RPS NEWST 20                                  | GDA              | 56   | 363978  | 6346050  | Open site | Valid          | Artefact :-                                                                                                    |                |         |
|           | <b>Contact</b>                                | <b>Recorders</b> |      |         |          |           |                | <b>Permits</b>                                                                                                 |                |         |
| 45-7-0383 | Myuna bay                                     | GDA              | 56   | 364382  | 6340232  | Open site | Valid          | Shell :-                                                                                                       |                |         |
|           | <b>Contact</b>                                | <b>Recorders</b> |      |         |          |           |                | <b>Permits</b>                                                                                                 |                |         |
| 45-7-0327 | AWTF_ST1, TP7                                 | GDA              | 56   | 364468  | 6345051  | Open site | Deleted        | Modified Tree<br>(Carved or Scarred) :-<br>-, Potential<br>Archaeological<br>Deposit (PAD) :- ,<br>Artefact :- |                |         |

Report generated by AHIMS Web Service on 10/05/2023 for Jordan Henshaw for the following area at Datum :GDA, Zone : 56, Eastings : 354653.0 - 364635.0, Northings : 6336509.0 - 6346490.0 with a Buffer of 0 meters. Number of Aboriginal sites and Aboriginal objects found is 58

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## AHIMS Web Services (AWS)

### Extensive search - Site list report

Your Ref/PO Number : 3728  
Client Service ID : 780672

| SiteID    | SiteName                                                | Datum            | Zone | Easting | Northing | Context   | Site Status ** | SiteFeatures                              | SiteTypes      | Reports |
|-----------|---------------------------------------------------------|------------------|------|---------|----------|-----------|----------------|-------------------------------------------|----------------|---------|
|           | <b>Contact</b> Mr.Shane Frost                           | <b>Recorders</b> |      |         |          |           |                | <b>Permits</b>                            |                |         |
| 45-3-3232 | Dora Ck Pad                                             | AGD              | 56   | 358640  | 6339200  | Open site | Valid          | Potential Archaeological Deposit (PAD) :- |                | 100145  |
|           | <b>Contact</b> Searle                                   | <b>Recorders</b> |      |         |          |           |                | <b>Permits</b>                            |                |         |
| 45-3-0906 | Dora Creek;Cooranbong;                                  | AGD              | 56   | 356203  | 6343176  | Open site | Valid          | Artefact :-                               | Open Camp Site |         |
|           | <b>Contact</b>                                          | <b>Recorders</b> |      |         |          |           |                | <b>Permits</b>                            |                |         |
| 45-7-0427 | Myuna Bay Sport & Recreation Centre Artefact Scatter 02 | GDA              | 56   | 364081  | 6340543  | Open site | Valid          | Artefact :-                               |                |         |
|           | <b>Contact</b>                                          | <b>Recorders</b> |      |         |          |           |                | <b>Permits</b>                            |                |         |
| 45-7-0004 | Eraring Power Stn;Lake View;                            | AGD              | 56   | 364220  | 6339945  | Open site | Valid          | Shell :- , Artefact :-                    | Midden         |         |
|           | <b>Contact</b>                                          | <b>Recorders</b> |      |         |          |           |                | <b>Permits</b>                            |                |         |
| 45-7-0306 | RPS NEWST 13                                            | GDA              | 56   | 364478  | 6343664  | Open site | Valid          | Artefact :-                               |                |         |
|           | <b>Contact</b>                                          | <b>Recorders</b> |      |         |          |           |                | <b>Permits</b>                            |                |         |
| 45-7-0326 | AWTF_ST3                                                | GDA              | 56   | 364546  | 6345488  | Open site | Valid          | Modified Tree (Carved or Scarred) :-      |                |         |
|           | <b>Contact</b>                                          | <b>Recorders</b> |      |         |          |           |                | <b>Permits</b>                            |                |         |
| 45-3-3307 | AA7                                                     | AGD              | 56   | 358156  | 6342811  | Open site | Valid          | Artefact : 4                              |                |         |
|           | <b>Contact</b> Searle                                   | <b>Recorders</b> |      |         |          |           |                | <b>Permits</b>                            |                |         |
| 45-3-0905 | Sandy Creek;Sunday Creek;                               | AGD              | 56   | 358413  | 6342395  | Open site | Valid          | Artefact :-                               | Open Camp Site |         |
|           | <b>Contact</b>                                          | <b>Recorders</b> |      |         |          |           |                | <b>Permits</b>                            |                |         |
| 45-7-0241 | Awaba 1                                                 | AGD              | 56   | 363091  | 6345787  | Open site | Valid          | Artefact : 3                              |                |         |
|           | <b>Contact</b> S Scanlon                                | <b>Recorders</b> |      |         |          |           |                | <b>Permits</b>                            |                |         |
| 45-7-0077 | Sandy Creek;                                            | AGD              | 56   | 359925  | 6344618  | Open site | Valid          | Artefact :-                               | Open Camp Site |         |
|           | <b>Contact</b>                                          | <b>Recorders</b> |      |         |          |           |                | <b>Permits</b>                            |                |         |
| 45-7-0002 | Goat Island;Dora Creek;                                 | AGD              | 56   | 361438  | 6337149  | Open site | Valid          | Shell :- , Artefact :-                    | Midden         |         |
|           | <b>Contact</b>                                          | <b>Recorders</b> |      |         |          |           |                | <b>Permits</b>                            |                |         |
| 45-7-0361 | LMRC SM2                                                | GDA              | 56   | 364140  | 6337122  | Open site | Valid          | Shell :-                                  |                |         |
|           | <b>Contact</b>                                          | <b>Recorders</b> |      |         |          |           |                | <b>Permits</b>                            |                |         |
| 45-7-0390 | Shingle Splitters Pt 2                                  | GDA              | 56   | 364585  | 6337831  | Open site | Valid          | Shell :-                                  |                |         |
|           | <b>Contact</b>                                          | <b>Recorders</b> |      |         |          |           |                | <b>Permits</b>                            |                |         |
| 45-7-0205 | Rocky point;                                            | AGD              | 56   | 364500  | 6339500  | Open site | Valid          | Shell :- , Artefact :-                    | Midden         |         |
|           | <b>Contact</b>                                          | <b>Recorders</b> |      |         |          |           |                | <b>Permits</b>                            |                |         |
| 45-7-0319 | RPS ST02                                                | GDA              | 56   | 363423  | 6343924  | Open site | Valid          | Modified Tree (Carved or Scarred) :-      |                |         |
|           | <b>Contact</b>                                          | <b>Recorders</b> |      |         |          |           |                | <b>Permits</b>                            |                |         |
| 45-7-0240 | Dora Creek (Stingaree Road)                             | AGD              | 56   | 360613  | 6337218  | Open site | Valid          | Artefact : 3, Shell :-                    |                |         |

Report generated by AHIMS Web Service on 10/05/2023 for Jordan Henshaw for the following area at Datum :GDA, Zone : 56, Eastings : 354653.0 - 364635.0, Northings : 6336509.0 - 6346490.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 58

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## AHIMS Web Services (AWS)

### Extensive search - Site list report

Your Ref/PO Number : 3728  
Client Service ID : 780672

| SiteID    | SiteName                              | Datum            | Zone | Easting | Northing | Context   | Site Status **      | SiteFeatures                              | SiteTypes      | Reports |
|-----------|---------------------------------------|------------------|------|---------|----------|-----------|---------------------|-------------------------------------------|----------------|---------|
|           | <b>Contact</b>                        | <b>Recorders</b> |      |         |          |           |                     | <b>Permits</b>                            |                |         |
| 45-7-0243 | WWSS3-2                               | AGD              | 56   | 360438  | 6337770  | Open site | Valid               | Potential Archaeological Deposit (PAD) :- | 2215           | 100134  |
|           | <b>Contact</b>                        | <b>Recorders</b> |      |         |          |           |                     | <b>Permits</b>                            |                |         |
| 45-7-0332 | AWTF ST2                              | GDA              | 56   | 364449  | 6345264  | Open site | Valid               | Modified Tree (Carved or Scarred) : 1     | 2273           |         |
|           | <b>Contact</b>                        | <b>Recorders</b> |      |         |          |           |                     | <b>Permits</b>                            |                |         |
| 45-3-3374 | AA3                                   | AGD              | 56   | 359463  | 6344845  | Open site | Valid               | Artefact : 2                              |                |         |
|           | <b>Contact</b>                        | <b>Recorders</b> |      |         |          |           |                     | <b>Permits</b>                            |                |         |
| 45-7-0311 | RPS NEWST 18                          | GDA              | 56   | 360611  | 6341266  | Open site | Valid               | Artefact :-                               |                |         |
|           | <b>Contact</b>                        | <b>Recorders</b> |      |         |          |           |                     | <b>Permits</b>                            |                |         |
| 45-7-0162 | M2,Hungary Point Public Reserve;      | AGD              | 56   | 361700  | 6336350  | Open site | Valid               | Shell :-, Artefact :-                     | Midden         | 2685    |
|           | <b>Contact</b>                        | <b>Recorders</b> |      |         |          |           |                     | <b>Permits</b>                            |                |         |
| 45-7-0324 | RPS COALLOG1                          | GDA              | 56   | 361815  | 6343309  | Open site | Valid               | Modified Tree (Carved or Scarred) : 1     |                |         |
|           | <b>Contact</b>                        | <b>Recorders</b> |      |         |          |           |                     | <b>Permits</b>                            |                |         |
| 45-3-4086 | Coorabong artefacts potential scatter | GDA              | 56   | 355793  | 6337465  | Open site | Partially Destroyed | Artefact :-                               |                |         |
|           | <b>Contact</b>                        | <b>Recorders</b> |      |         |          |           |                     | <b>Permits</b>                            |                |         |
| 45-7-0391 | Shingle Splitters Pt 1                | GDA              | 56   | 364576  | 6337638  | Open site | Valid               | Artefact :-, Shell :-                     | 4534           |         |
|           | <b>Contact</b>                        | <b>Recorders</b> |      |         |          |           |                     | <b>Permits</b>                            |                |         |
| 45-7-0333 | AWTF ST3                              | GDA              | 56   | 364546  | 6345488  | Open site | Valid               | Modified Tree (Carved or Scarred) : 1     | 4678           |         |
|           | <b>Contact</b>                        | <b>Recorders</b> |      |         |          |           |                     | <b>Permits</b>                            |                |         |
| 45-7-0302 | RPS NEWST 9                           | GDA              | 56   | 362839  | 6343963  | Open site | Valid               | Artefact :-                               |                |         |
|           | <b>Contact</b>                        | <b>Recorders</b> |      |         |          |           |                     | <b>Permits</b>                            |                |         |
| 45-7-0208 | Pipers Point;                         | AGD              | 56   | 363200  | 6338550  | Open site | Valid               | Shell :-, Artefact :-                     | Midden         |         |
|           | <b>Contact</b>                        | <b>Recorders</b> |      |         |          |           |                     | <b>Permits</b>                            |                |         |
| 45-6-2516 | Pipers Point Rocky Point;             | AGD              | 56   | 363450  | 6339000  | Open site | Valid               | Shell :-, Artefact :-                     | Midden         |         |
|           | <b>Contact</b>                        | <b>Recorders</b> |      |         |          |           |                     | <b>Permits</b>                            |                |         |
| 45-3-3443 | RPS NEWST23                           | GDA              | 56   | 359392  | 6344043  | Open site | Valid               | Modified Tree (Carved or Scarred) : -     |                |         |
|           | <b>Contact</b>                        | <b>Recorders</b> |      |         |          |           |                     | <b>Permits</b>                            |                |         |
| 45-7-0078 | Sandy Creek;                          | AGD              | 56   | 359900  | 6345898  | Open site | Valid               | Artefact :-                               | Open Camp Site |         |
|           | <b>Contact</b>                        | <b>Recorders</b> |      |         |          |           |                     | <b>Permits</b>                            |                |         |

Report generated by AHIMS Web Service on 10/05/2023 for Jordan Henshaw for the following area at Datum :GDA, Zone : 56, Eastings : 354653.0 - 364635.0, Northings : 6336509.0 - 6346490.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 58

This information is not guaranteed to be free from error omission. Heritage NSW and its employees disclaim liability for any act done or omission made on the information and consequences of such acts or omission.

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## AHIMS Web Services (AWS)

### Extensive search - Site list report

Your Ref/PO Number : 3728  
Client Service ID : 780672

| SiteID    | SiteName                                                             | Datum            | Zone                                                                               | Easting | Northing | Context   | Site Status **      | SiteFeatures                                                                                    | SiteTypes      | Reports |
|-----------|----------------------------------------------------------------------|------------------|------------------------------------------------------------------------------------|---------|----------|-----------|---------------------|-------------------------------------------------------------------------------------------------|----------------|---------|
| 45-7-0300 | RPS NEWST 7                                                          | GDA              | 56                                                                                 | 362080  | 6343607  | Open site | Valid               | Artefact :-                                                                                     |                |         |
|           | <b>Contact</b>                                                       | <b>Recorders</b> | RPS AAP Consulting Pty Ltd - Hamilton,Ms.Laraine Nelson                            |         |          |           |                     | <b>Permits</b>                                                                                  |                |         |
| 45-7-0090 | Dora Creek;                                                          | AGD              | 56                                                                                 | 362950  | 6338410  | Open site | Valid               | Shell :-, Artefact :-                                                                           | Midden         |         |
|           | <b>Contact</b>                                                       | <b>Recorders</b> | ASRSYS                                                                             |         |          |           |                     | <b>Permits</b>                                                                                  |                |         |
| 45-3-4379 | Olney SF_C244_Mt Faulk_AGG 2                                         | GDA              | 56                                                                                 | 355215  | 6346470  | Open site | Valid               | Grinding Groove :-                                                                              |                |         |
|           | <b>Contact</b>                                                       | <b>Recorders</b> | Darkinjung LALC - Wyong,Ms.Sharon Hodgetts                                         |         |          |           |                     | <b>Permits</b>                                                                                  |                |         |
| 45-3-1148 | Mount Nellinda Morisset                                              | AGD              | 56                                                                                 | 355450  | 6343200  | Open site | Valid               | Artefact :-                                                                                     | Open Camp Site | 494     |
|           | <b>Contact</b>                                                       | <b>Recorders</b> | Margrit Koettig                                                                    |         |          |           |                     | <b>Permits</b>                                                                                  |                |         |
| 45-7-0325 | AWTF_ST2                                                             | GDA              | 56                                                                                 | 364449  | 6345264  | Open site | Valid               | Modified Tree (Carved or Scarred) :-                                                            |                |         |
|           | <b>Contact</b>                                                       | <b>Recorders</b> | Ms.Elizabeth Wyatt                                                                 |         |          |           |                     | <b>Permits</b>                                                                                  |                |         |
| 45-7-0331 | AWTF ST1 TP7                                                         | GDA              | 56                                                                                 | 364468  | 6345051  | Open site | Partially Destroyed | Artefact : 1, Potential Archaeological Deposit (PAD) : 1, Modified Tree (Carved or Scarred) : 1 |                |         |
|           | <b>Contact</b>                                                       | <b>Recorders</b> | Umwelt (Australia) Pty Limited - Individual users,Insite Heritage Pty Ltd,Mr.Kirwa |         |          |           |                     | <b>Permits</b>                                                                                  |                |         |
| 45-3-1133 | Dora Creek,Dora Creek South Bank,Beauty Point;                       | AGD              | 56                                                                                 | 357300  | 6337000  | Open site | Valid               | Artefact :-                                                                                     | Open Camp Site | 305     |
|           | <b>Contact</b>                                                       | <b>Recorders</b> | Len Dyall                                                                          |         |          |           |                     | <b>Permits</b>                                                                                  |                |         |
| 45-7-0301 | RPS NEWST 8                                                          | GDA              | 56                                                                                 | 362700  | 6344225  | Open site | Valid               | Artefact :-                                                                                     |                |         |
|           | <b>Contact</b>                                                       | <b>Recorders</b> | RPS AAP Consulting Pty Ltd - Hamilton,Ms.Laraine Nelson                            |         |          |           |                     | <b>Permits</b>                                                                                  |                |         |
| 45-7-0312 | RPS NEWST 19                                                         | GDA              | 56                                                                                 | 361062  | 6341692  | Open site | Valid               | Artefact :-                                                                                     |                |         |
|           | <b>Contact</b>                                                       | <b>Recorders</b> | Mr.Roger Mehr,RPS AAP Consulting Pty Ltd - Hamilton                                |         |          |           |                     | <b>Permits</b>                                                                                  |                |         |
| 45-7-0426 | Myuna Bay Sport & Recreation Centre Midden 01                        | GDA              | 56                                                                                 | 363886  | 6340855  | Open site | Valid               | Shell :-                                                                                        |                |         |
|           | <b>Contact</b>                                                       | <b>Recorders</b> |                                                                                    |         |          |           |                     | <b>Permits</b>                                                                                  |                |         |
| 45-7-0358 | Myuna Bay Sport and Recreation Centre Artefact Scatter 1 (MBSRC AS1) | GDA              | 56                                                                                 | 364067  | 6340534  | Open site | Destroyed           | Artefact :-                                                                                     |                |         |
|           | <b>Contact</b>                                                       | <b>Recorders</b> | Artefact - Cultural Heritage Management - Pyrmont,Mr.Alex Timms                    |         |          |           |                     | <b>Permits</b>                                                                                  | 4111           |         |
| 45-3-0907 | Old Maitland Road Sandy Creek Sunday Creek                           | AGD              | 56                                                                                 | 358116  | 6343578  | Open site | Valid               | Artefact :-                                                                                     | Open Camp Site |         |
|           | <b>Contact</b>                                                       | <b>Recorders</b> | ASRSYS                                                                             |         |          |           |                     | <b>Permits</b>                                                                                  |                |         |
| 45-7-0070 | Eraring,Crooked Creek;                                               | AGD              | 56                                                                                 | 363454  | 6341759  | Open site | Valid               | Shell :-, Artefact :-                                                                           | Midden         |         |
|           | <b>Contact</b>                                                       | <b>Recorders</b> | Len Dyall                                                                          |         |          |           |                     | <b>Permits</b>                                                                                  |                |         |

Report generated by AHIMS Web Service on 10/05/2023 for Jordan Henshaw for the following area at Datum :GDA, Zone : 56, Eastings : 354653.0 - 364635.0, Northings : 6336509.0 - 6346490.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 58

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## 7 June 2024 search result

| <div>  <div> <b>AHIMS Web Services (AWS)</b><br/>           Extensive search - Site list report         </div> <div>           Your Ref/PO Number : Cooranbong<br/>           Client Service ID : 899329         </div> </div> |                                               |       |      |          |           |           |                |                                            |                |         |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|-------|------|----------|-----------|-----------|----------------|--------------------------------------------|----------------|---------|
| SiteID                                                                                                                                                                                                                                                                                                          | SiteName                                      | Datum | Zone | Eastings | Northings | Context   | Site Status ** | SiteFeatures                               | SiteTypes      | Reports |
| 45-7-0318                                                                                                                                                                                                                                                                                                       | RPS ST01                                      | GDA   | 56   | 362999   | 6344235   | Open site | Valid          | Modified Tree (Carved or Scarred) : -      |                |         |
|                                                                                                                                                                                                                                                                                                                 | <b>Contact</b>                                |       |      |          |           |           |                | <b>Permits</b>                             |                |         |
| 45-7-0163                                                                                                                                                                                                                                                                                                       | M3;Crusader Camp, Yarrowonga Point;           | GDA   | 56   | 364084   | 6337063   | Open site | Valid          | Shell : -, Artefact : -                    | Midden         | 2685    |
|                                                                                                                                                                                                                                                                                                                 | <b>Contact</b>                                |       |      |          |           |           |                | <b>Permits</b>                             |                |         |
| 45-7-0315                                                                                                                                                                                                                                                                                                       | RPS NEWST 22                                  | GDA   | 56   | 361364   | 6346170   | Open site | Valid          | Artefact : -                               | 4038,4224      |         |
|                                                                                                                                                                                                                                                                                                                 | <b>Contact</b>                                |       |      |          |           |           |                | <b>Permits</b>                             |                |         |
| 45-3-4344                                                                                                                                                                                                                                                                                                       | BP1 ART                                       | GDA   | 56   | 357745   | 6337178   | Open site | Valid          | Artefact : -                               |                |         |
|                                                                                                                                                                                                                                                                                                                 | <b>Contact</b>                                |       |      |          |           |           |                | <b>Permits</b>                             |                |         |
| 45-3-4624                                                                                                                                                                                                                                                                                                       | Dora Creek Grinding Grooves                   | GDA   | 56   | 355419   | 6338999   | Open site | Valid          | Grinding Groove : -                        | 4835           |         |
|                                                                                                                                                                                                                                                                                                                 | <b>Contact</b>                                |       |      |          |           |           |                | <b>Permits</b>                             |                |         |
| 45-7-0147                                                                                                                                                                                                                                                                                                       | Braring;                                      | AGD   | 56   | 362300   | 6339460   | Open site | Valid          | Modified Tree (Carved or Scarred) : -      | Scarred Tree   | 2630    |
|                                                                                                                                                                                                                                                                                                                 | <b>Contact</b>                                |       |      |          |           |           |                | <b>Permits</b>                             |                |         |
| 45-3-0908                                                                                                                                                                                                                                                                                                       | Old Maitland Road;Jigadee Creek;              | AGD   | 56   | 358919   | 6344599   | Open site | Valid          | Artefact : -                               | Open Camp Site |         |
|                                                                                                                                                                                                                                                                                                                 | <b>Contact</b>                                |       |      |          |           |           |                | <b>Permits</b>                             |                |         |
| 45-3-1132                                                                                                                                                                                                                                                                                                       | Dora Creek;Dora Creek North Bank;Beauty Point | AGD   | 56   | 357200   | 6337300   | Open site | Valid          | Artefact : -                               | Open Camp Site | 305     |
|                                                                                                                                                                                                                                                                                                                 | <b>Contact</b>                                |       |      |          |           |           |                | <b>Permits</b>                             |                |         |
| 45-7-0383                                                                                                                                                                                                                                                                                                       | Myuna bay                                     | GDA   | 56   | 364382   | 6340232   | Open site | Valid          | Shell : -                                  |                |         |
|                                                                                                                                                                                                                                                                                                                 | <b>Contact</b>                                |       |      |          |           |           |                | <b>Permits</b>                             |                |         |
| 45-3-4533                                                                                                                                                                                                                                                                                                       | DC1 ART                                       | GDA   | 56   | 359769   | 6339119   | Open site | Valid          | Artefact : -                               |                |         |
|                                                                                                                                                                                                                                                                                                                 | <b>Contact</b>                                |       |      |          |           |           |                | <b>Permits</b>                             |                |         |
| 45-7-0161                                                                                                                                                                                                                                                                                                       | M1;Hungary Point public reserve;              | AGD   | 56   | 361610   | 6336400   | Open site | Valid          | Shell : -, Artefact : -                    | Midden         | 2685    |
|                                                                                                                                                                                                                                                                                                                 | <b>Contact</b>                                |       |      |          |           |           |                | <b>Permits</b>                             |                |         |
| 45-3-3232                                                                                                                                                                                                                                                                                                       | Dora Ck Pad                                   | AGD   | 56   | 358640   | 6339200   | Open site | Valid          | Potential Archaeological Deposit (PAD) : - |                | 100145  |
|                                                                                                                                                                                                                                                                                                                 | <b>Contact</b>                                |       |      |          |           |           |                | <b>Permits</b>                             |                |         |
| 45-3-3373                                                                                                                                                                                                                                                                                                       | AA2 Searle                                    | AGD   | 56   | 359722   | 6342564   | Open site | Valid          | Artefact : 2                               | 2346           |         |
|                                                                                                                                                                                                                                                                                                                 | <b>Contact</b>                                |       |      |          |           |           |                | <b>Permits</b>                             |                |         |
| 45-7-0313                                                                                                                                                                                                                                                                                                       | RPS NEWST 20                                  | GDA   | 56   | 363978   | 6346050   | Open site | Valid          | Artefact : -                               |                |         |
|                                                                                                                                                                                                                                                                                                                 | <b>Contact</b>                                |       |      |          |           |           |                | <b>Permits</b>                             |                |         |
| 45-3-4380                                                                                                                                                                                                                                                                                                       | Olney SF_C244_Mt Faulk;AGG 1                  | GDA   | 56   | 355077   | 6346312   | Open site | Valid          | Grinding Groove : -                        |                |         |
|                                                                                                                                                                                                                                                                                                                 | <b>Contact</b>                                |       |      |          |           |           |                | <b>Permits</b>                             |                |         |
| 45-7-0241                                                                                                                                                                                                                                                                                                       | Awaba 1                                       | AGD   | 56   | 363091   | 6345787   | Open site | Valid          | Artefact : 3                               |                |         |
|                                                                                                                                                                                                                                                                                                                 | <b>Contact</b>                                |       |      |          |           |           |                | <b>Permits</b>                             |                |         |
|                                                                                                                                                                                                                                                                                                                 |                                               |       |      |          |           |           |                |                                            |                |         |
|                                                                                                                                                                                                                                                                                                                 | <b>Contact</b>                                |       |      |          |           |           |                | <b>Permits</b>                             |                |         |

Report generated by AHIMS Web Service on 07/06/2024 for Stephanie Rudden for the following area at Datum :GDA, Zone : 56, Eastings : 354653.0 - 364635.0, Northings : 6336509.0 - 6346490.0 with a Buffer of 0 meters. Number of Aboriginal sites and Aboriginal objects found is 57

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| <div>  <div> <b>AHIMS Web Services (AWS)</b><br/>           Extensive search - Site list report         </div> <div>           Your Ref/PO Number : Cooranbong<br/>           Client Service ID : 899329         </div> </div> |                                                         |       |      |          |           |           |                |                                       |                |         |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|-------|------|----------|-----------|-----------|----------------|---------------------------------------|----------------|---------|
| SiteID                                                                                                                                                                                                                                                                                                            | SiteName                                                | Datum | Zone | Eastings | Northings | Context   | Site Status ** | SiteFeatures                          | SiteTypes      | Reports |
| 45-3-3307                                                                                                                                                                                                                                                                                                         | AA7                                                     | AGD   | 56   | 358156   | 6342811   | Open site | Valid          | Artefact : 4                          |                |         |
|                                                                                                                                                                                                                                                                                                                   | <b>Contact</b>                                          |       |      |          |           |           |                | <b>Permits</b>                        |                |         |
| 45-7-0306                                                                                                                                                                                                                                                                                                         | RPS NEWST 13                                            | GDA   | 56   | 364478   | 6343664   | Open site | Valid          | Artefact : -                          |                |         |
|                                                                                                                                                                                                                                                                                                                   | <b>Contact</b>                                          |       |      |          |           |           |                | <b>Permits</b>                        |                |         |
| 45-7-0004                                                                                                                                                                                                                                                                                                         | Braring Power Stn;Lake View;                            | AGD   | 56   | 364220   | 6339945   | Open site | Valid          | Shell : -, Artefact : -               | Midden         |         |
|                                                                                                                                                                                                                                                                                                                   | <b>Contact</b>                                          |       |      |          |           |           |                | <b>Permits</b>                        |                |         |
| 45-7-0326                                                                                                                                                                                                                                                                                                         | AWTF_ST3                                                | GDA   | 56   | 364546   | 6345488   | Open site | Valid          | Modified Tree (Carved or Scarred) : - |                |         |
|                                                                                                                                                                                                                                                                                                                   | <b>Contact</b>                                          |       |      |          |           |           |                | <b>Permits</b>                        |                |         |
| 45-3-0905                                                                                                                                                                                                                                                                                                         | Sandy Creek;Sunday Creek;                               | AGD   | 56   | 358413   | 6342395   | Open site | Valid          | Artefact : -                          | Open Camp Site |         |
|                                                                                                                                                                                                                                                                                                                   | <b>Contact</b>                                          |       |      |          |           |           |                | <b>Permits</b>                        |                |         |
| 45-3-0906                                                                                                                                                                                                                                                                                                         | Dora Creek;Cooranbong;                                  | AGD   | 56   | 356203   | 6343176   | Open site | Valid          | Artefact : -                          | Open Camp Site |         |
|                                                                                                                                                                                                                                                                                                                   | <b>Contact</b>                                          |       |      |          |           |           |                | <b>Permits</b>                        |                |         |
| 45-7-0427                                                                                                                                                                                                                                                                                                         | Myuna Bay Sport & Recreation Centre Artefact Scatter 02 | GDA   | 56   | 364081   | 6340543   | Open site | Valid          | Artefact : -                          |                | 105399  |
|                                                                                                                                                                                                                                                                                                                   | <b>Contact</b>                                          |       |      |          |           |           |                | <b>Permits</b>                        |                |         |
| 45-7-0319                                                                                                                                                                                                                                                                                                         | RPS ST02                                                | GDA   | 56   | 363423   | 6343924   | Open site | Valid          | Modified Tree (Carved or Scarred) : - |                |         |
|                                                                                                                                                                                                                                                                                                                   | <b>Contact</b>                                          |       |      |          |           |           |                | <b>Permits</b>                        |                |         |
| 45-7-0205                                                                                                                                                                                                                                                                                                         | Rocky point;                                            | AGD   | 56   | 364500   | 6339500   | Open site | Valid          | Shell : -, Artefact : -               | Midden         |         |
|                                                                                                                                                                                                                                                                                                                   | <b>Contact</b>                                          |       |      |          |           |           |                | <b>Permits</b>                        |                |         |
| 45-7-0077                                                                                                                                                                                                                                                                                                         | Sandy Creek;                                            | AGD   | 56   | 359925   | 6344618   | Open site | Valid          | Artefact : -                          | Open Camp Site |         |
|                                                                                                                                                                                                                                                                                                                   | <b>Contact</b>                                          |       |      |          |           |           |                | <b>Permits</b>                        |                |         |
| 45-7-0002                                                                                                                                                                                                                                                                                                         | Goat Island;Dora Creek;                                 | AGD   | 56   | 361438   | 6337149   | Open site | Valid          | Shell : -, Artefact : -               | Midden         |         |
|                                                                                                                                                                                                                                                                                                                   | <b>Contact</b>                                          |       |      |          |           |           |                | <b>Permits</b>                        |                |         |
| 45-7-0240                                                                                                                                                                                                                                                                                                         | Dora Creek (Stingaree Road)                             | AGD   | 56   | 360613   | 6337218   | Open site | Valid          | Artefact : 3, Shell : -               |                |         |
|                                                                                                                                                                                                                                                                                                                   | <b>Contact</b>                                          |       |      |          |           |           |                | <b>Permits</b>                        |                |         |
| 45-7-0361                                                                                                                                                                                                                                                                                                         | LMRC SM2                                                | GDA   | 56   | 364140   | 6337122   | Open site | Valid          | Shell : -                             |                |         |
|                                                                                                                                                                                                                                                                                                                   | <b>Contact</b>                                          |       |      |          |           |           |                | <b>Permits</b>                        |                |         |
| 45-7-0390                                                                                                                                                                                                                                                                                                         | Shingle Splitters Pt 2                                  | GDA   | 56   | 364585   | 6337831   | Open site | Valid          | Shell : -                             | 4038,4224      |         |
|                                                                                                                                                                                                                                                                                                                   | <b>Contact</b>                                          |       |      |          |           |           |                | <b>Permits</b>                        |                |         |
| 45-7-0332                                                                                                                                                                                                                                                                                                         | AWTF ST2                                                | GDA   | 56   | 364449   | 6345264   | Open site | Valid          | Modified Tree (Carved or Scarred) : 1 |                |         |
|                                                                                                                                                                                                                                                                                                                   | <b>Contact</b>                                          |       |      |          |           |           |                | <b>Permits</b>                        |                |         |
|                                                                                                                                                                                                                                                                                                                   |                                                         |       |      |          |           |           |                |                                       |                |         |
|                                                                                                                                                                                                                                                                                                                   | <b>Contact</b>                                          |       |      |          |           |           |                | <b>Permits</b>                        |                |         |

Report generated by AHIMS Web Service on 07/06/2024 for Stephanie Rudden for the following area at Datum :GDA, Zone : 56, Eastings : 354653.0 - 364635.0, Northings : 6336509.0 - 6346490.0 with a Buffer of 0 meters. Number of Aboriginal sites and Aboriginal objects found is 57

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## AHIMS Web Services (AWS)

### Extensive search - Site list report

Your Ref/PO Number : Cooranbong  
Client Service ID : 899329

| SiteID    | SiteName                               | Datum            | Zone                                                        | Eastings | Northings | Context   | Site Status **      | SiteFeatures                              | SiteTypes      | Reports |
|-----------|----------------------------------------|------------------|-------------------------------------------------------------|----------|-----------|-----------|---------------------|-------------------------------------------|----------------|---------|
| 45-7-0243 | WWSS3-2                                | AGD              | 56                                                          | 360438   | 6337770   | Open site | Valid               | Potential Archaeological Deposit (PAD) :- |                | 100134  |
|           | <b>Contact</b> S Scanlon               | <b>Recorders</b> | ABCOM Australia Pty Ltd - Sydney                            |          |           |           |                     | <b>Permits</b>                            | 2273           |         |
| 45-7-0311 | RPS NEWST 18                           | GDA              | 56                                                          | 360611   | 6341266   | Open site | Valid               | Artefact :-                               |                |         |
|           | <b>Contact</b>                         | <b>Recorders</b> | Mr.Roger Mehr,RPS AAP Consulting Pty Ltd - Hamilton         |          |           |           |                     | <b>Permits</b>                            |                |         |
| 45-7-0302 | RPS NEWST 9                            | GDA              | 56                                                          | 362839   | 6343963   | Open site | Valid               | Artefact :-                               |                |         |
|           | <b>Contact</b>                         | <b>Recorders</b> | RPS AAP Consulting Pty Ltd - Hamilton,Ms Laraine Nelson     |          |           |           |                     | <b>Permits</b>                            |                |         |
| 45-3-4086 | Cooranbong artefacts potential scatter | GDA              | 56                                                          | 355793   | 6337465   | Open site | Partially Destroyed | Artefact :-                               |                |         |
|           | <b>Contact</b>                         | <b>Recorders</b> | Guringal Tribal Link Aboriginal Corporation,Mrs.Tracy Howle |          |           |           |                     | <b>Permits</b>                            | 4534           |         |
| 45-7-0162 | M2,Hungary Point Public Reserve;       | AGD              | 56                                                          | 361700   | 6336350   | Open site | Valid               | Shell :-,Artefact :-                      | Midden         | 2685    |
|           | <b>Contact</b>                         | <b>Recorders</b> | Mary Dallas Consulting Archaeologists (MDCA),Kerry Navin    |          |           |           |                     | <b>Permits</b>                            |                |         |
| 45-7-0208 | Pipers Point;                          | AGD              | 56                                                          | 363200   | 6338550   | Open site | Valid               | Shell :-,Artefact :-                      | Midden         |         |
|           | <b>Contact</b>                         | <b>Recorders</b> | L.M Nelson                                                  |          |           |           |                     | <b>Permits</b>                            |                |         |
| 45-6-2516 | Pipers Point Rocky Point;              | AGD              | 56                                                          | 363450   | 6339000   | Open site | Valid               | Shell :-,Artefact :-                      | Midden         |         |
|           | <b>Contact</b>                         | <b>Recorders</b> | Bonhomme Craib & Associates                                 |          |           |           |                     | <b>Permits</b>                            |                |         |
| 45-3-3374 | AA3                                    | AGD              | 56                                                          | 359463   | 6344845   | Open site | Valid               | Artefact : 2                              |                |         |
|           | <b>Contact</b>                         | <b>Recorders</b> | Indigenous Outcomes - Cheryl Kitchener                      |          |           |           |                     | <b>Permits</b>                            |                |         |
| 45-7-0333 | AWTF ST3                               | GDA              | 56                                                          | 364546   | 6345498   | Open site | Valid               | Modified Tree (Carved or Scarred) : 1     |                |         |
|           | <b>Contact</b>                         | <b>Recorders</b> | Insite Heritage Pty Ltd.                                    |          |           |           |                     | <b>Permits</b>                            |                |         |
| 45-7-0324 | RPS COALLOG1                           | GDA              | 56                                                          | 361815   | 6343309   | Open site | Valid               | Modified Tree (Carved or Scarred) : 1     |                |         |
|           | <b>Contact</b>                         | <b>Recorders</b> | RPS AAP Consulting Pty Ltd - Echuca Victoria                |          |           |           |                     | <b>Permits</b>                            |                |         |
| 45-7-0391 | Shingle Splitters Pt 1                 | GDA              | 56                                                          | 364576   | 6337638   | Open site | Valid               | Artefact :-,Shell :-                      |                |         |
|           | <b>Contact</b>                         | <b>Recorders</b> | Insite Heritage Pty Ltd,Ms.Elizabeth Wyatt                  |          |           |           |                     | <b>Permits</b>                            | 4678           |         |
| 45-3-1148 | Mount Nellinda Morisset                | AGD              | 56                                                          | 355450   | 6343200   | Open site | Valid               | Artefact :-                               | Open Camp Site | 494     |
|           | <b>Contact</b>                         | <b>Recorders</b> | Margrit Koettig                                             |          |           |           |                     | <b>Permits</b>                            |                |         |
| 45-7-0300 | RPS NEWST 7                            | GDA              | 56                                                          | 362080   | 6343607   | Open site | Valid               | Artefact :-                               |                |         |
|           | <b>Contact</b>                         | <b>Recorders</b> | RPS AAP Consulting Pty Ltd - Hamilton,Ms Laraine Nelson     |          |           |           |                     | <b>Permits</b>                            |                |         |
| 45-7-0301 | RPS NEWST 8                            | GDA              | 56                                                          | 362700   | 6344225   | Open site | Valid               | Artefact :-                               |                |         |
|           | <b>Contact</b>                         | <b>Recorders</b> | RPS AAP Consulting Pty Ltd - Hamilton,Ms Laraine Nelson     |          |           |           |                     | <b>Permits</b>                            |                |         |
| 45-7-0078 | Sandy Creek;                           | AGD              | 56                                                          | 359900   | 6345898   | Open site | Valid               | Artefact :-                               | Open Camp Site |         |
|           | <b>Contact</b>                         | <b>Recorders</b> | Len Dyall                                                   |          |           |           |                     | <b>Permits</b>                            |                |         |
| 45-7-0090 | Dora Creek;                            | AGD              | 56                                                          | 362950   | 6338410   | Open site | Valid               | Shell :-,Artefact :-                      | Midden         |         |

Report generated by AHIMS Web Service on 07/06/2024 for Stephanie Rusden for the following area at Datum :GDA, Zone: 56, Eastings: 354653.0 - 364635.0, Northings: 6336509.0 - 6346490.0 with a Buffer of 0 meters. Number of Aboriginal sites and Aboriginal objects found is 57

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## AHIMS Web Services (AWS)

### Extensive search - Site list report

Your Ref/PO Number : Cooranbong  
Client Service ID : 899329

| SiteID    | SiteName                                                             | Datum            | Zone                                                                               | Eastings | Northings | Context   | Site Status **      | SiteFeatures                                                                                    | SiteTypes      | Reports |
|-----------|----------------------------------------------------------------------|------------------|------------------------------------------------------------------------------------|----------|-----------|-----------|---------------------|-------------------------------------------------------------------------------------------------|----------------|---------|
| 45-7-0312 | RPS NEWST 19                                                         | GDA              | 56                                                                                 | 361062   | 6341692   | Open site | Valid               | Artefact :-                                                                                     |                |         |
|           | <b>Contact</b>                                                       | <b>Recorders</b> | ASRSYS                                                                             |          |           |           |                     | <b>Permits</b>                                                                                  |                |         |
| 45-3-3443 | RPS NEWST23                                                          | GDA              | 56                                                                                 | 359392   | 6344043   | Open site | Valid               | Modified Tree (Carved or Scarred) :-                                                            |                |         |
|           | <b>Contact</b>                                                       | <b>Recorders</b> | RPS AAP Consulting Pty Ltd - Hamilton,Mrs.Tessa Boer-Mah                           |          |           |           |                     | <b>Permits</b>                                                                                  |                |         |
| 45-7-0331 | AWTF ST1 TP7                                                         | GDA              | 56                                                                                 | 364468   | 6345051   | Open site | Partially Destroyed | Artefact : 1, Potential Archaeological Deposit (PAD) : 1, Modified Tree (Carved or Scarred) : 1 |                |         |
|           | <b>Contact</b>                                                       | <b>Recorders</b> | Unwelt (Australia) Pty Limited - Individual users,Insite Heritage Pty Ltd,Mr.Kirwa |          |           |           |                     | <b>Permits</b>                                                                                  |                |         |
| 45-7-0325 | AWTF ST2                                                             | GDA              | 56                                                                                 | 364449   | 6345264   | Open site | Valid               | Modified Tree (Carved or Scarred) :-                                                            |                |         |
|           | <b>Contact</b>                                                       | <b>Recorders</b> | Ms.Elizabeth Wyatt                                                                 |          |           |           |                     | <b>Permits</b>                                                                                  |                |         |
| 45-3-1133 | Dora Creek;Dora Creek South Bank;Beauty Point;                       | AGD              | 56                                                                                 | 357300   | 6337000   | Open site | Valid               | Artefact :-                                                                                     | Open Camp Site | 305     |
|           | <b>Contact</b>                                                       | <b>Recorders</b> | Len Dyall                                                                          |          |           |           |                     | <b>Permits</b>                                                                                  |                |         |
| 45-3-4379 | Olney SF_C244,Mt Faulk AGG 2                                         | GDA              | 56                                                                                 | 355215   | 6346470   | Open site | Valid               | Grinding Groove :-                                                                              |                |         |
|           | <b>Contact</b>                                                       | <b>Recorders</b> | Darwinjung LALC - Wyong,Ms Sharon Hodggets                                         |          |           |           |                     | <b>Permits</b>                                                                                  |                |         |
| 45-7-0070 | Eraring;Crooked Creek;                                               | AGD              | 56                                                                                 | 363454   | 6341759   | Open site | Valid               | Shell :-,Artefact :-                                                                            | Midden         |         |
|           | <b>Contact</b>                                                       | <b>Recorders</b> | Len Dyall                                                                          |          |           |           |                     | <b>Permits</b>                                                                                  |                |         |
| 45-7-0358 | Myuna Bay Sport and Recreation Centre Artefact Scatter 1 (MBSRC AS1) | GDA              | 56                                                                                 | 364067   | 6340534   | Open site | Destroyed           | Artefact :-                                                                                     |                |         |
|           | <b>Contact</b>                                                       | <b>Recorders</b> | Artefact Heritage and Environment - Pyrmont,Mr.Alex Timms                          |          |           |           |                     | <b>Permits</b>                                                                                  | 4111           |         |
| 45-3-0907 | Old Maitland Road Sandy Creek Sunday Creek                           | AGD              | 56                                                                                 | 358116   | 6343578   | Open site | Valid               | Artefact :-                                                                                     | Open Camp Site |         |
|           | <b>Contact</b>                                                       | <b>Recorders</b> | ASRSYS                                                                             |          |           |           |                     | <b>Permits</b>                                                                                  |                |         |
| 45-7-0426 | Myuna Bay Sport & Recreation Centre Midden 01                        | GDA              | 56                                                                                 | 363886   | 6340855   | Open site | Valid               | Shell :-                                                                                        |                | 105399  |
|           | <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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