



Northparkes Mine

## **ABORIGINAL CULTURAL HERITAGE ASSESSMENT REPORT**

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### **MODIFICATION 6 – E22 PORTAL, TSF2 BUTTRESSING AND E31 PRECINCT**

NORTHPARKES MINE, PARKES LGA, NSW

NOVEMBER 2021

Report prepared by  
OzArk Environment & Heritage for Umwelt Australia  
on behalf of CMOC



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## ABORIGINAL CULTURAL HERITAGE ASSESSMENT REPORT COVER SHEET

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### **Acknowledgement**

OzArk acknowledge 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 Department of Premier and Cabinet, 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.  |
| Assemblage:      | All artefacts recorded at a location. In this report, assemblage refers to stone artefacts as this was the only artefact class recorded.  |
| Bondaian:        | A chronological period where bondi points become more frequent in artefact assemblages. Post-3000 BP, although earlier at some sites.   |
| BP               | Years before present  |
| Capertian:       | Chronological phase preceding the Bondaian Phase. Pre-3000 BP, although earlier at some sites.  |
| Code of Practice | <i>Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales</i> under Part 6 NPW Act.   |
| Debitage:        | The term debitage refers to all the waste material produced during lithic reduction and the production of stone tools. Therefore, technically, all artefacts other than reworked tools are debitage. However, in this report debitage is used in its other common meaning being the small flakes and chips produced purely as a by-product of knapping. This distinguishes these small flakes from the larger flakes that were removed (while technically 'debitage', a non-retouched flake can be used as a tool and therefore could have been the intended end point for a knapping event). |
| DPIE             | NSW Department of Planning, Industry and Environment  |
| EARs             | Environmental Assessment Requirements issued by the NSW Department of Planning, Industry and Environment.   |

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|              |  |
|--------------|--|
| EIS          | Environmental Impact Statement. A required document for major projects documenting all potential impacts to the environment, including heritage, that may arise due to the development.  |
| GSE          | Ground surface exposure. A measure of factors that may reveal surface artefacts such as erosion scalds.  |
| GSV          | Ground surface visibility. A measure of factors that may obscure the detection of surface artefacts such as leaf litter.   |
| Heritage NSW | Government department tasked with ensuring compliance with the NPW Act. Heritage NSW is advised by the Aboriginal Cultural Heritage Advisory Committee (ACHAC) and is part of the Environment, Energy and Science cluster within DPIE. |
| 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 are visible.  |
| Pleistocene: | Geological epoch which lasted from about 2.5 million years ago to 10,000 BCE. This period spans the world's recent period of repeated glaciations. Aboriginal occupation of Australia occurs during the upper Pleistocene.             |
| RAP          | Registered Aboriginal Party. An individual or group who have indicated through the ACHCR process that they wish to be consulted regarding the project.   |
| SEARs        | Secretary's Environmental Assessment Requirements issued by DPIE.  |
| Taphonomy:   | The study of how artefacts can be moved in archaeological deposits due to natural occurrences such as animals burrowing or treadage into the ground.   |

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## EXECUTIVE SUMMARY

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OzArk Environment & Heritage (OzArk) has been engaged by Umwelt Australia (the client), on behalf of CMOC (the proponent) to complete an *Aboriginal Cultural Heritage Assessment Report* (ACHAR) for the proposed Modification 6 (MOD 6; the proposal) to the State Significant Development (SSD) approval for Northparkes Mines (PA 11\_0060). MOD 6 involves the establishment of a new E22 underground Portal access, an extension to the approved disturbance area for Tailings Storage Facility (TSF) 2 to facilitate embankment buttressing and amendments to approved activities and associated disturbance areas in the vicinity of the E31 Precinct. The E22 Portal, TSF2 and E31 Precinct areas were the study area for the assessment.

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).

The field survey of the study area was undertaken by OzArk and four members of the Wiradjuri Executive Committee (WEC) on the 21 June 2021 and 9 November 2021. No Aboriginal objects were recorded during the assessment. In accordance with the methodology developed for the assessment, a tree that had previously been recorded as a possible modified tree site (P1 – Alectown, AHIMS ID:35-6-0156) was revisited by the survey team. The survey team reached a consensus that the scar on the tree was not of cultural origin. The site will be updated to ‘not a site’ on the AHIMS database.

As it has been assessed that there are no likely impacts to Aboriginal objects as a result of the MOD 6, it is recommended that:

1. The previously recorded scarred tree (P1-Alectown, 35-6-0156) will be updated to ‘not a site’ on the AHIMS register. No impact to the tree (if proposed) should be undertaken until the approved Aboriginal Site Impact Recording Form (ASIRF) has been received.
2. The ACHMP should be consulted for the appropriate procedures if unanticipated Aboriginal objects or human skeletal remains are encountered during works

There are no further requirements for additional assessment of the study area.

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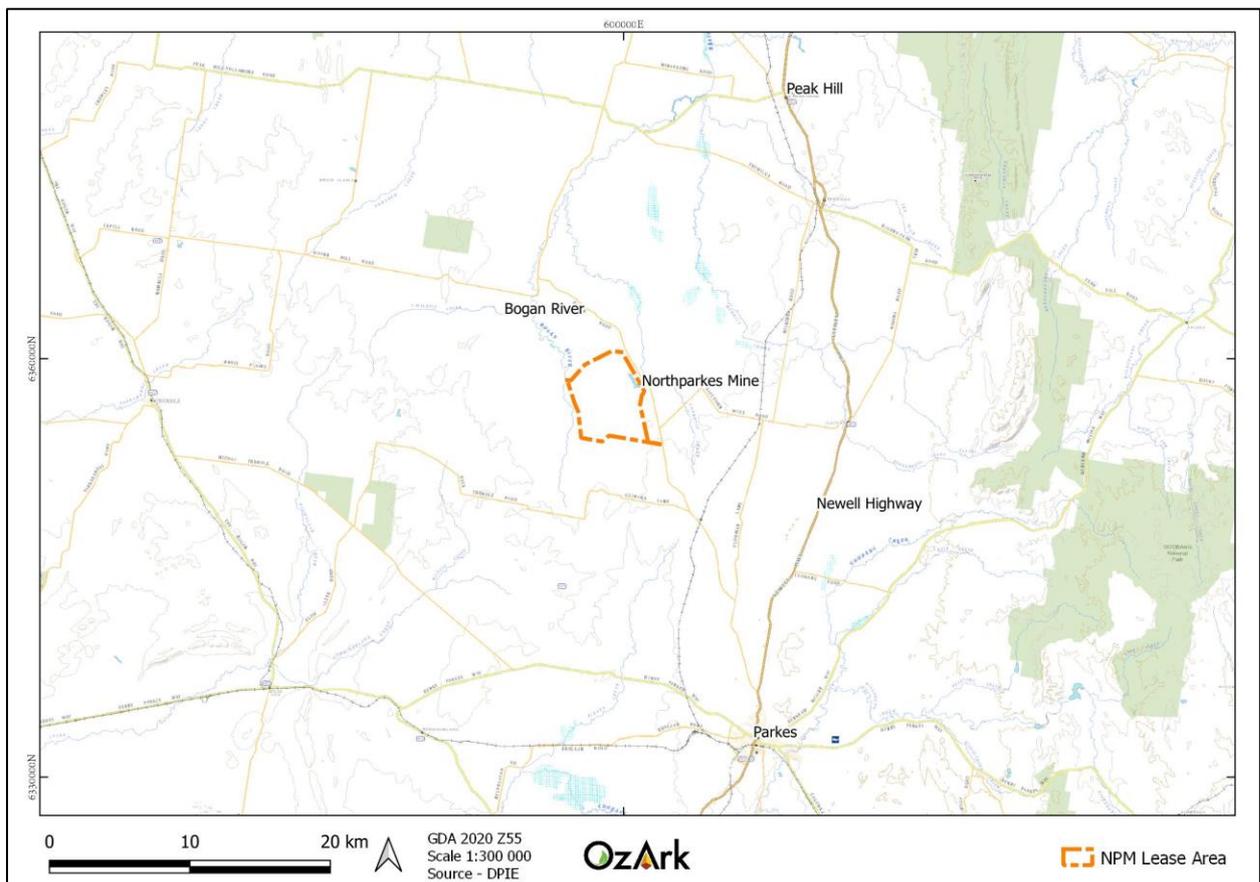
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# 1 INTRODUCTION

## 1.1 DESCRIPTION OF THE PROPOSAL

OzArk Environment & Heritage (OzArk) has been engaged by Umwelt Australia (the client), on behalf of CMOC (the proponent) to complete an *Aboriginal Cultural Heritage Assessment Report* (ACHAR) for the proposed Modification 6 (MOD 6; the proposal) to the State Significant Development (SSD) approval for Northparkes Mines (PA 11\_0060). MOD 6 involves the establishment of a new E22 underground portal access, an extension to the approved disturbance area for Tailings Storage Facility (TSF) 2 to facilitate embankment buttressing and amendments to approved activities and associated disturbance areas in the vicinity of the E31 Precinct. The proposal is located at Northparkes Mines (Northparkes), which is in the Parkes Local Government Area (LGA) (**Figure 1-1**).

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



## 1.2 BACKGROUND

The proposal will require a modification to PA 11\_0060 under section 4.55(2) of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

Much of the MOD 6 study area has been previously assessed during field surveys for PA 11\_0060 (see **Section 5.3.2** for full details). Other sections of the study area have been subsequently

covered by Due Diligence assessments associated with exploration or during the survey for the concurrent E44 Rocklands Project. As a result, the archaeological characteristics of the study area have been well recorded and the current assessment only includes a supplementary survey effort to ensure all sections of the study area have been covered to the standard of the *Code of Practice for the Investigation of Aboriginal Objects in New South Wales* (Code of Practice; DECCW 2010).

Consultation with the Aboriginal Community for MOD 6 has been undertaken concurrently with the E44 Rocklands Project (see **Section 3.2**).

### 1.3 PROPOSED WORK

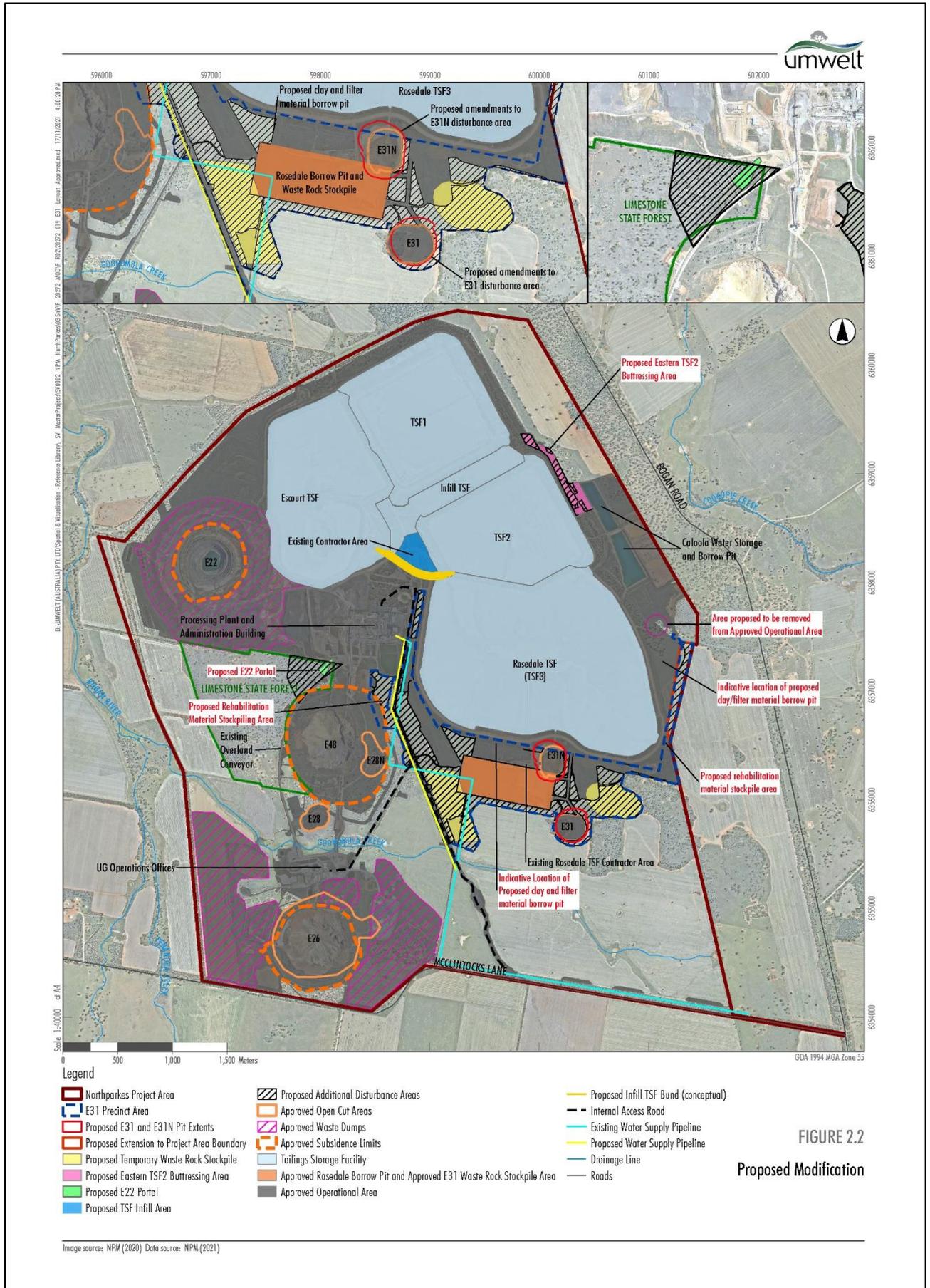
MOD 6 is proposed to include:

- construction and use of a new underground portal access (including associated drive, conveyor and other ancillary infrastructure) for E22 underground mining operations
- TSF2 embankment buttressing (including associated amendments to the approved disturbance area)
- changes to TSF construction within the approved disturbance footprint associated with increased safety requirements for TSFs since first approved
- minor changes to the E31 and E31N open cut pits to reflect updated geological data and improved resource recovery, including:
  - minor adjustments to disturbance areas for the approved pits and associated infrastructure (roads, safety bunds, water management etc)
  - minor increases to maximum approved mining depths
- establishment of temporary waste rock stockpile areas for the E31 and E31N pits to avoid unnecessary material re-handling in the future due to the proposed Rocklands TSF
- additional definition regarding the approved methods and locations rehabilitation material (soils and vegetation) to improve integration with existing and proposed operations (including the proposed Rocklands TSF)
- establishment of additional clay and filter material borrow pits for TSF construction and lifts
- relocation of the Contractor area facilities (eg site offices, crib huts and a workshop) which would also service the E31 and E31 mining operations
- relocation of the main water supply pipeline and Rosedale (TSF3) tailings pipeline
- clarification regarding approved disturbance boundaries and the location of ancillary infrastructure within the E31 Precinct.

MOD 6 will also include a minor adjustment to the PA 11\_0060 disturbance area to align this boundary with the existing lease boundary and provide additional space for soil stockpiling in areas.

The Approved Operational Area to the east of the Rosedale TSF will also be extended to the existing Mining Lease boundary to accommodate additional stockpiling in this area which is likely to include topsoil and subsoil associated with the clay and filter material borrow pits, the eastern E31 Temporary Waste Rock Stockpile and E31 open cut pits. This change does not involve any additional clearing.

Figure 1-2: Proposed MOD 6 Layout



## 1.4 STUDY AREA

The study area includes three discrete areas within the Northparkes Mining Lease boundary:

- E22 Portal
- TSF2 embankment area
- E31 Precinct area

These three areas are shown on **Figure 1-3** and referred to collectively as the 'study area' for the assessment or individually as required.

Figure 1-3: Aerial showing the study area.



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## 2 THE ABORIGINAL CULTURAL HERITAGE ASSESSMENT

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### 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 Agriculture, Water and the Environment, 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.

##### Applicability to the proposal

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

##### 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 proposal

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

## 2.1.2 State legislation

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

This Act established requirements relating to land use and planning. The main part of the EP&A Act relevant to MOD 6 is Part 4 (development assessment and consent).

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:

- Promoting the social and economic welfare of the community and a better environment by the proper management, development, and conservation of the State's natural and other resources
- Promoting the orderly and economic use and development of land
- Promoting the sustainable management of built and cultural heritage (including Aboriginal cultural heritage)
- Facilitating ecologically sustainable development by integrating relevant economic, environmental and social considerations in decision making about environmental planning and assessment.

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

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

#### Applicability to the proposal

The current MOD 6 proposal will be assessed under section 4.55(2) of the EP&A Act.

As PA 11\_0060 was granted under Part 3A of the EP&A Act, and was subsequently transitioned to SSD, section 4.41 of the EP&A Act applies. Therefore, an AHIP under section 90 of the NPW Act is not required (see **Section 2.1.2.2**). Instead, all management related to Aboriginal cultural heritage within the study area 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 Part 1 of the NPW Act, 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 New South Wales, being habitation before or concurrent with (or both) the occupation of that area by persons of non-Aboriginal extraction and includes Aboriginal remains'.

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

- The harm was authorised by and conducted in accordance with the requirements of an *Aboriginal Heritage Impact Permit (AHIP)* under Section 90 of the Act
- The defendant exercised 'due diligence' to determine whether the action would harm an Aboriginal object and reasonably determined that no Aboriginal object would be harmed
- The harm to the Aboriginal object occurred during the undertaking of a 'low impact act or omission' (as defined in the regulations).

Under Section 89A of the Act, it is a requirement to notify the Secretary of the Department of Premier and Cabinet (DPC) 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 proposal

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

Under Section 89A of the NPW Act, it is a requirement to notify the Secretary of DPC of the location of an Aboriginal object. Identified Aboriginal items and sites are registered on AHIMS that is administered by Heritage NSW.

As mentioned in **Section 2.1.2.1**, should any Aboriginal sites be impacted as a result of this project, it would be managed under an ACHMP rather than an AHIP under Section 90 of the NPW Act.

## **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 heritage constraints relevant to the proposed works.

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

**Objective One:** Undertake background research and summarise previous assessment of the study area to formulate a predictive model for site location within the study area

**Objective Two:** Identify and record Aboriginal cultural heritage values within the study areas. 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</b>  |
| Requirement 1b               | Review AHIMS searches   | <b>Section 5.3.1</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 5.3</b>  |
| Requirement 4a               | Develop predictive model  | <b>Section 5.4</b>  |
| Requirement 4b               | Present predictive model results  | <b>Section 6.6</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 4.1.1</b>  |
| Requirement 6                | Site definition   | <b>Section 5.4.1</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  | Not applicable to this report as no new sites were recorded.        |

| Code of Practice Requirement | Context of the Requirement  | Concordance in this report   |
|------------------------------|---|--|
| Requirement 8a               | Geospatial information  | Not applicable to this report as no new sites were recorded.                                 |
| Requirement 8b               | Datum and grid coordinates  | Not applicable to this report as no new sites were recorded.                                 |
| Requirement 9                | Record survey coverage data   | <b>Section 6.3</b>   |
| Requirement 10               | Analyse survey coverage   | <b>Section 6.3</b>   |
| Requirement 11               | Archaeological Report content and format  | This report adheres to this Requirement.   |
| 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               | Test excavation which is not excluded from the definition of harm               | The test excavation did not take place in any of the landforms identified in Requirement 14. |
| Requirement 15a              | Consultation regarding test excavation  | Consultation has included the ACHCRs, see <b>Section 3</b>                                   |
| Requirement 15b              | Developing a test excavation sampling strategy                                  | Not applicable   |
| Requirement 15c              | Providing Heritage NSW with notification of the test excavation                 | Not applicable   |
| Requirement 16a              | Test excavation that can be carried out in accordance with the Code of Practice | Not applicable   |
| Requirement 16b              | Objects recovered during test excavations                                       | Not applicable   |
| Requirement 17               | When to stop test excavations   | Not applicable   |

## 2.5 DATE OF ARCHAEOLOGICAL ASSESSMENT

The field survey was undertaken by OzArk and RAPs on the 21 June 2021 and 9 November 2021.

## 2.6 OZARK INVOLVEMENT

### 2.6.1 Field survey

The fieldwork survey was undertaken by:

- Fieldwork Director: Dr Jodie Benton (OzArk Director, BA [Hons] and PhD [Archaeology] University of Sydney)
- Archaeologist: Harrison Rochford (B. Liberal Studies [Hons], M. Phil. [Arts and Social Science]).

### 2.6.2 Reporting

The reporting component of the heritage assessment was undertaken by:

- Report author: Harrison Rochford
- Contributor and Reviewer: Dr Jodie Benton

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## 3 ABORIGINAL COMMUNITY CONSULTATION

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### 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.*

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 without resorting to tribal lore. 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 proposal is located so that those values can be recognised and incorporated into the proposal's management recommendations.

The Aboriginal cultural heritage assessment of the proposal has followed the ACHCRs (DECCW 2010b). A summary of correspondence with Aboriginal community stakeholders is presented at **Appendix 1 Figure 1**.

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

### 3.2.1 ACHCRs Stage 1

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

As the proposed MOD 6 study area overlaps with, or is adjacent to, the assessment area for the E44 Rocklands Project, the consultation that has been undertaken to date for the E44 Rocklands Project is relevant to MOD 6.

Consultation has followed the guidelines established in the ACHCRs (DECCW 2010) whereby an advertisement was placed in the local press and relevant agencies were contacted to ascertain if they were aware of groups or individuals who may have cultural knowledge of the region in which Northparkes Mines is located. A letter seeking information from various agencies was sent on 14 August 2020. These agencies were: Office of the Registrar, *Aboriginal Land Rights Act 1983*; Heritage NSW; National Native Title Tribunal; National Native Title Services Corporation Ltd (NTSCORP); Peak Hill Local Aboriginal Land Council (LALC), Parkes Shire Council, and Central West Local Land Services. !

In August 2020, advertisements were placed in the Parkes Champion Post, The Koori Mail and The Forbes Advocate requesting expressions of interest in being consulted about the project. An example of the Stage 1 advertisement is provided at **Appendix 1 Figure 2**.

The response from Heritage NSW identifying potential RAPs is shown in **Appendix 1 Figure 3**. A letter was sent to the potential stakeholders including Binjang Wellington Wiradjuri Heritage Survey, Bogan River Peak Hill Wiradjuri Aboriginal Corporation, Bulgandramine Youth Development Aboriginal Corporation, Condobolin LALC and Corroboree Aboriginal Corporation on 2 September 2020.

In response to the Stage 1 consultation process, the following four groups registered interest in the Project:

- Peak Hill LALC
- Wiradjuri Council of Elders
- Corroboree Aboriginal Corporation
- Gunjeewong Aboriginal Corporation.

### 3.2.2 ACHCRs Stages 2 & 3

The aim of Stages 2 and 3 is to provide information about the proposal to the RAPs and to acquire information regarding Aboriginal cultural values associated with the proposal either through consultation and/or field work. Often these two stages are run together, and the detailed project

information is provided in the assessment methodology that is issued to all RAPs for their consideration.

The Stage 2/3 methodology was sent to RAPs on Tuesday 19 October 2021. Consistent with the ACHCRs, RAPs were given a minimum period of 28 days to provide feedback on the methodology, unless RAPs advised that they had no concerns or comments prior to the conclusion of the 28-day consultation period.

At its meeting held 29 October 2021, the Wiradjuri Executive Committee (WEC) advised they had no concerns regarding the proposed methodology (**Appendix 1 Figure 4**). Corroboree Aboriginal Corporation advised via email that they had no concerns regarding the methodology on 1 November 2021 (**Appendix 1 Figure 5**). Consultation closed on 16 November 2021 and no further comments were received from Gunjeewong Aboriginal Corporation, Peak Hill LALC or the Wiradjuri Council of Elders.

### **3.2.3 ACHCRs Stage 4**

Stage 4 involves the production of a draft ACHAR that is issued to all RAPs for their consideration if impacts to Aboriginal sites are identified by the assessment. The ACHAR documents the results of the assessment, outlines opportunities for the conservation of Aboriginal cultural values, and suggests recommendations for the management of Aboriginal objects should impacts to these objects be unavoidable. If there are no unavoidable impacts, then RAPs will have an opportunity to comment as part of the public exhibition process, and there will be a further 28-day consultation period for the updated ACHAR following public exhibition.

A copy of the ACHAR will be provided to RAPs following completion and RAPs will be advised of the upcoming public exhibition period, once confirmed by the Department of Planning, Industry and Environment (DPIE).

## **3.3 ABORIGINAL COMMUNITY INVOLVEMENT IN THE ASSESSMENT**

Members of the WEC, who also represent the RAPs Peak Hill LALC and the Wiradjuri Council of Elders, were present at both relevant field assessments on 21 June 2021 and 9 November 2021.

## **3.4 CULTURAL VALUES IDENTIFIED THROUGHOUT THE ACHCR PROCESS**

No cultural values directly concerning the study area were identified during the ACHCR process. Comments made by the RAPs in person during the assessment are included in **Section 6.5**.

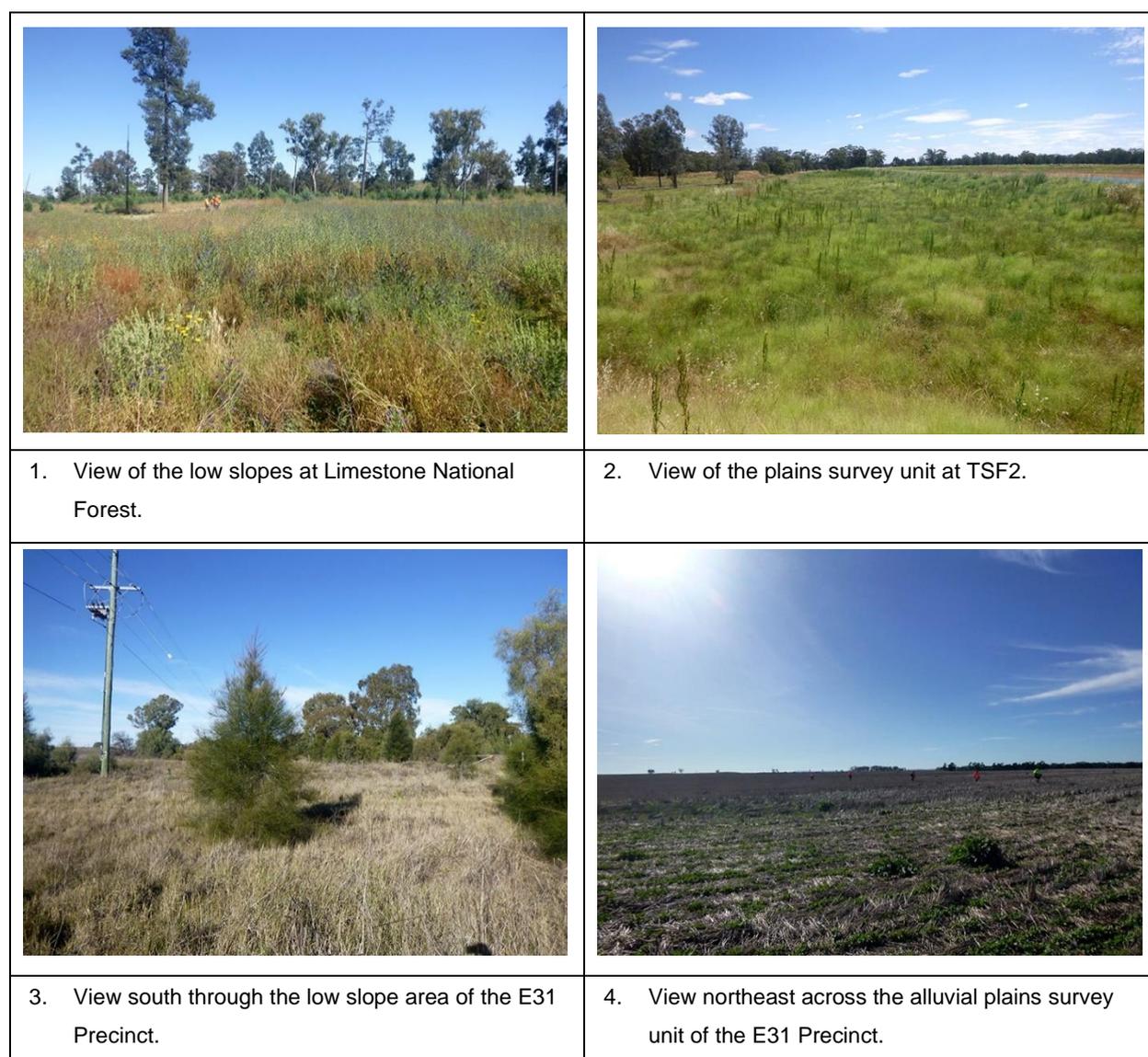
## 4 LANDSCAPE CONTEXT

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

The study area has relatively consistent topographic characteristics across its three elements, being situated on flat plains associated with, but distant to, the Bogan River and Goonumbla Creek. The plains rise to low hills to the southeast of the study area.

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



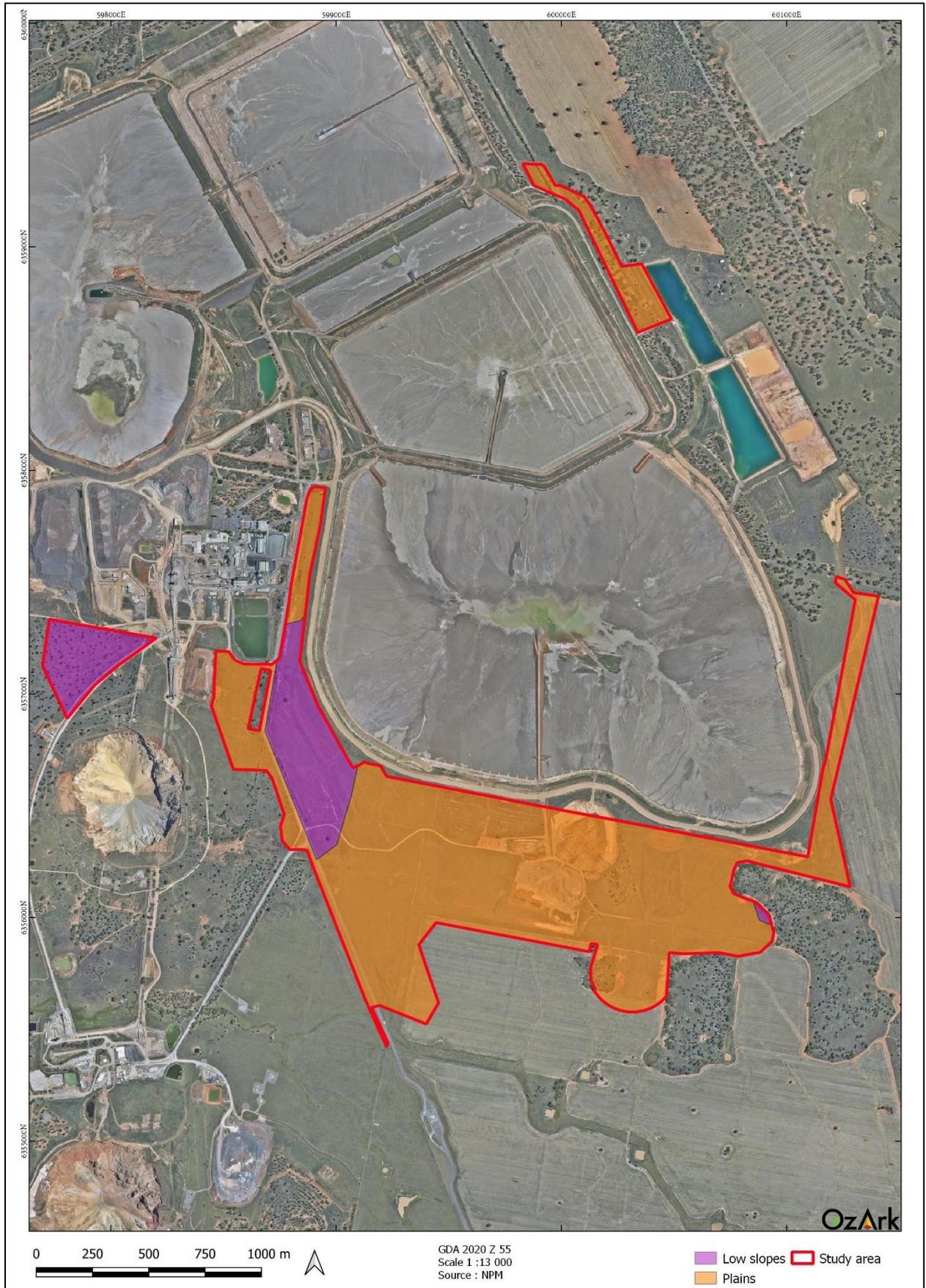
#### **4.1.1 Survey units**

Due to the small survey areas and the consistent topography of the study area, two survey units were assigned. This allows the identified archaeological characteristics of Survey Unit 1, at the E22 Portal location and the northeastern area of the E31 Precinct, to be meaningfully compared to Survey Unit 2, at TSF2 and the remainder of the E31 study area.

Survey Unit 1: Low gradient slope above Goonumbla Creek in the Limestone National Forest and E31 Precinct.

Survey Unit 2: Alluvial plains at the location of TSF2 and the majority of the E31 Precinct.

Figure 4-2: Aerial of the study area showing the location of survey units.



## 4.2 GEOLOGY AND SOILS

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).

Geologically, the Northparkes ore bodies are pipe like intrusions of quartz monzonite within mid-Ordovician andesitic lavas and associated volcanic sandstones, shale and a small amount of limestone. Very little rock outcrop occurs on the lease and none of the local rock types except probably pebbles of vein quartz are known to have been used for the manufacture of artefacts by Aboriginal people (Groundtruth 2008).

The landscape is subdued with a few low hills rising above the general plain and the river and its tributaries meander across the plain. The plain is underlain by deep fine-grained alluvium that in turn lies on a deeply weathered regolith. As the transition from the plains to the low slope is very gradual, the soil profile remains consistent across the study area.

The gradual slopes and poorly defined drainage network have led to less erosion across the study area than might be expected in similarly cultivated and modified agricultural landscapes in the Central West of NSW. Nevertheless, the landscape is one of erosional, rather than aggradation or stable, soil processes that are more likely to reveal artefact deposits than conceal them.

## 4.3 HYDROLOGY

The headwaters of Goonumbla Creek are 190 metres (m) south of the study area at the E31 Precinct. The route of the creek has been modified by damming and levelling of paddocks. Goonumbla Creek joins the Bogan River 2 km west of the study area.

Average annual rainfall near Northparkes Mines site is 531 millimetres (mm) and average monthly rainfall is between 38 and 55 mm. Monthly pan evaporation greatly exceeds rainfall throughout the year and consequently the streams normally contain no surface water and stream flow is a rare event driven by exceptional sustained rainfall (Raymond 2002). However, as the stream beds are lined by grey and brown clay, pools of water can survive for weeks to months after a stream flow event and although the hydrology of this system has undoubtedly changed as a result of colonial land use, it is reasonable to predict that pools with greater longevity would have been a focus for human occupation in the past.

## 4.4 VEGETATION

The study area is situated across two landscape classifications: the Bogan Alluvial Plains and Goonumbla Hills (Mitchell 2002).

The Bogan Alluvial plains are comprised of red brown loams and some fine orange sands near channels. Vegetation in the landscape classification would have been grasses and saltbushes

with occasional eucalypt species (coolabah, black box, bimple box and wilga). The study area, however, has been subject to widespread clearing resulting in the currently sparse vegetation cover. The bulk of the assessment area outside of the Limestone National Forest includes cleared or disturbed grazing and cropping land. A small area around the E31 and E31N open cut footprints and the TSF2 eastern buttress areas retain patches of woodland vegetation.

Soils in the Goonumbla Hills classification tend to be thin brown structured loams on the hills merging with red-brown and red texture-contrast soils on the flats. Vegetation would have been open eucalypt forest with white cypress pine also prevalent, however, the study area has been extensively modified by agricultural activity and approved mining operations. The study area at the E22 Portal within the Limestone National Forest, while vegetated, has been modified by forestry and agricultural activities during the 20<sup>th</sup> century.

Figure 4-3: Landscape classifications of the study area.

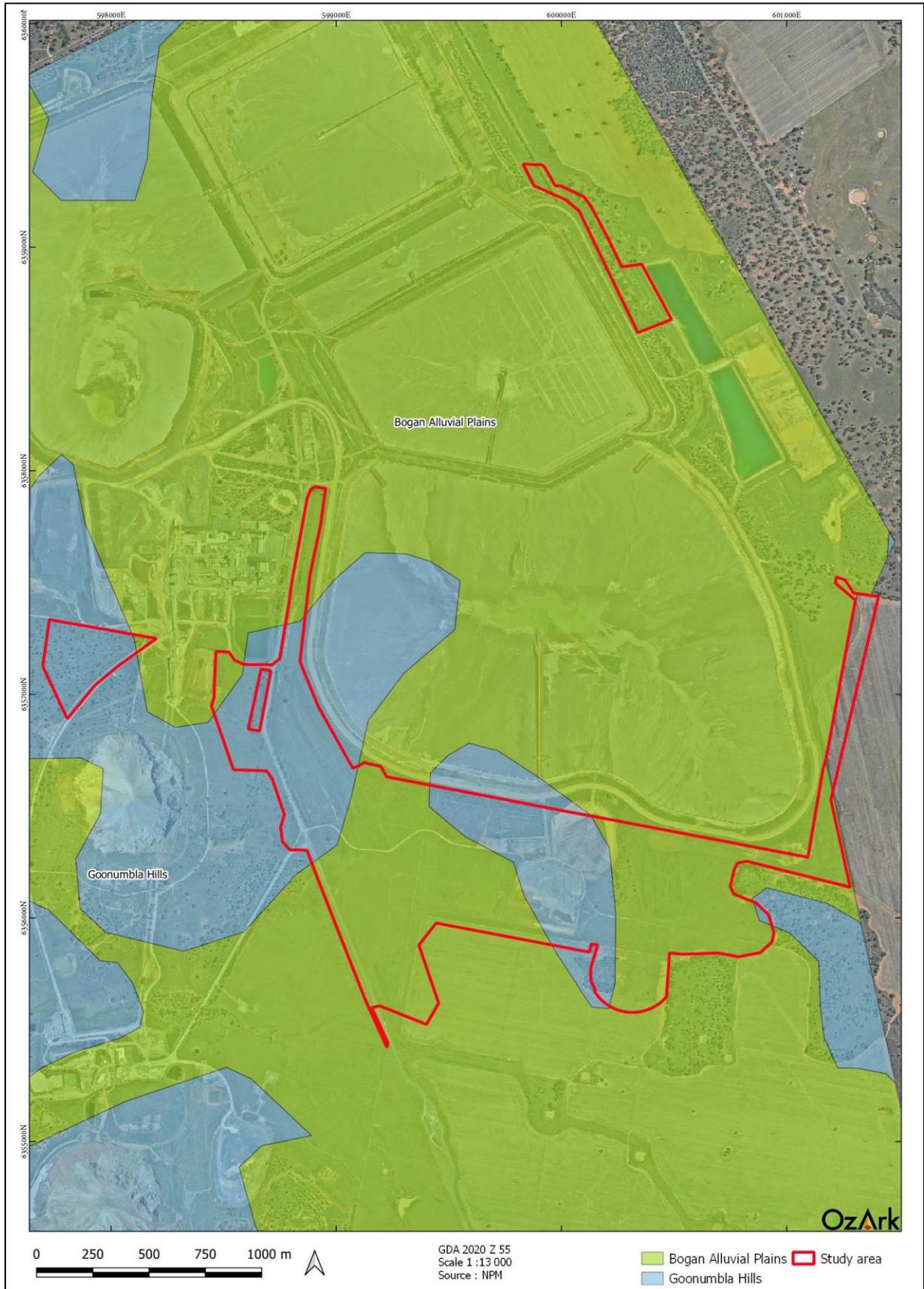




Figure 4-5: Aerial view of the study area in 1966



## 4.6 CONCLUSION

The most significant environmental resource relating to previous occupation of the landscape in the vicinity of the study area is Goonumbla Creek. There is no evidence left suggesting particular vegetation or geological characteristics that were particularly sought after. The level or slightly sloping topography of the study area is conducive to the retention of archaeological evidence, however, colonial clearing may have impacted tree-related evidence of Aboriginal occupation. Colonial activities have substantially modified the landscape, which may have displaced Aboriginal objects and reduced the potential for intact archaeological deposits. 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.

## 5 ARCHAEOLOGICAL CONTEXT

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

The proposal is situated within the traditional lands of the Wiradjuri people (Kabaila 1997). The Wiradjuri tribal area is situated within the Murray Darling Basin and covers three primary physiographic divisions:

- The riverine plains in the west
- The transitional western slopes in between
- The highlands or central tablelands in the east.

The study area falls within the central division, being the transitional western slopes into the central tablelands, the heart of Wiradjuri territory. Episodes of early contact between Wiradjuri and European cultures from the lower Lachlan Valley (approximately 30 km southwest of the study area) were documented by the explorers Oxley and Cunningham in 1817. The explorers tracked north of Lake Cargelligo and Condobolin to the west of Parkes before bearing more northeast towards Peak Hill and Tomingley (Whitehead 2003: 290–296). On the 10 and 11 August 1817, the group set up camp west of the Bogan River near Gobondery Mountains along Genaren Creek and had almost reached the Bogan River by 12 August 1817.

Relating to the travels on 10 August, Oxley writes:

*“We have hitherto seen no other signs of this being inhabited country than the marks usually made by the natives in ascending the trees, and none of these were very recent. It is probable that they may see us without discovering themselves...”*

(Whitehead 2003: 298)

While Cunningham (1817) reported that:

*“...we halted and pitched our tent on the site of an old native encampment. Here we saw quantities of horse-mussel shells with which the creek had furnished them and some stones on which they had been sharpening some weapons or instruments, perhaps their mogos or stone hatchets.”*

(Whitehead 2003: 299)

Mitchell’s expedition passed an area closer to Parkes in 1835. Upon reaching the headwaters of the Bogan (southwest of Peak Hill, possibly within 5 or 10 km of the study area), Mitchell records encountering the tribe of ‘Bultje’, said to be composed of up to 120 people of considerable intelligence who could speak some English. He describes that this tribe removed one of the two front teeth of males aged over 14 (Unger nd: 5). Mitchell’s accounts of the ‘Bogan blacks’ provide excellent detail on subsistence, describing this tribe to be reliant more on possums, kangaroo,

and emus than the lower Darling Aboriginal groups, but with a significant input from freshwater mussels. The root of the 'tao' plant are said to have comprised much of the children's diet.

Ethnographic information gleaned from these colonial sources indicated that the major food sources of the Bogan Wiradjuri were possum, kangaroo, emu, starchy plant roots, and honey. Women fished using a moveable dam of twisted dry grass to corral fish so they could be picked out of the water and they also collected freshwater mussels (Kass 2003: 6).

## 5.2 REGIONAL ARCHAEOLOGICAL CONTEXT

The majority of the Northparkes site, including the study area, has been subject to comprehensive archaeological assessment since mining began. The results of these assessments are summarised below in **Section 5.3.2**, but a brief outline of relevant regional archaeological studies is provided here to contextualise the local information.

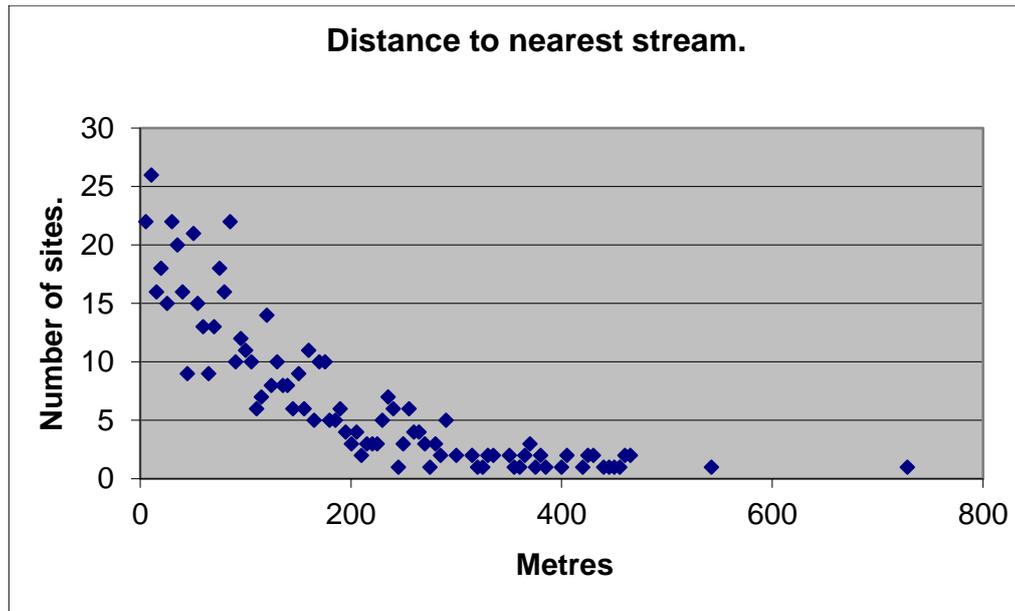
### OzArk 2014

Although there have been no specific studies aimed at site prediction and modelling across the Parkes LGA, distance to water modelling in the Central West is relevant to the current study. The OzArk study of the former Dubbo City Council LGA (now Dubbo Regional Council) was able to establish a stream order correlation to site location. Although distance to the nearest water source is a concept widely used in the analysis and description of Aboriginal sites, it proved to be particularly difficult to achieve/demonstrate this in a GIS model (OzArk 2014). Nonetheless, the analysis used in OzArk 2014, demonstrates a close relationship between the presence of water and site location.

OzArk 2014 employed the Strahler Stream Order to describe stream rankings. According to the Strahler Stream Order, to qualify as a stream it must be either recurring or perennial. Recurring streams have water in the channel for at least part of the year.

When the data was plotted (**Figure 5-1**) there was a clear distance decay curve consistent with normal expectations about Aboriginal site distribution. The two outliers were near the edge of the Dubbo LGA and may be closer to streams that were not mapped in the OzArk 2014 exercise. If they are ignored, the evidence is that all sites are found within 500 m of a stream of some sort. Further analysis was undertaken to try and improve the distance modelling based on different stream orders. The overall conclusions from the stream order analysis were:

- All sites occur within 500 m of streams (of any kind)
- Most sites cluster within 100 m of a stream and become very infrequent further than 200 m from a stream
- Landforms within 100 m of streams that would be expected to provide more reliable water supplies, that is those with an order number of three or greater, are likely to contain most sites in that area.

**Figure 5-1: Distance to the nearest stream for all sites from OzArk 2014 (n=583).**

### OzArk 2016

Following on from the observations of OzArk (2014), OzArk (2016) undertook an assessment of Travelling Stock Reserves (TSRs) in the Central West Local Land Services (CWLLS) area.

The CWLLS was divided into two stream orders: major waterways (normally named rivers) and minor waterways (normally named creeks and their larger tributaries). Based on the evidence of site location obtained by OzArk (2014), two buffers were established for each waterway type, namely:

- 200 m either side of a major waterway (Drainage 1)
- 100 m either side of a minor waterway (Drainage 2).

According to the results of the 2014 study the 200 m buffer on either side of named rivers would capture most sites, while the 100 m buffer on either side of named creeks would capture most sites associated with smaller waterways.

This study divided various landscape types into:

- Channels and floodplains
- Alluvial Plains
- Slopes
- Uplands
- Downs.

In this way, although the landscape type was Lachlan - Bland Channels and Floodplains in one part of the CWLLS study area, and Bogan Channels and Floodplains in another, 'Channels and Floodplains' was a defining landscape type irrespective of localised names.

When previously recorded sites were plotted against these gross landscape types, the following observations were made:

- A high number of sites (n=876) have been recorded in Slope landscapes. This is perhaps biased by the fact that Dubbo is located within this landscape type and the highest number of sites in the CWLLS area have been recorded in and around Dubbo
- The highest concentration of sites is within Channel and Floodplain landscapes (n=927)
- Alluvial plains landscapes have the third highest concentration of sites (n=770)
- Relatively small numbers of sites are recorded in Uplands (n=5) or Plateau landscapes (n=34)
- A reasonable number of sites have been recorded in Downs landscapes (n=255). These recordings are largely due to three or four clusters of sites that may have skewed the data slightly. If the veracity of all site recordings in this category was able to be verified, it is suspected that the actual number of sites in downs landscapes would be lower.

### OzArk 2021

OzArk applied the modelling principles of the 2014 and 2016 studies across the Lachlan LGA, immediately to the west of the Parkes LGA. A data set of 487 Aboriginal heritage sites was compiled and analysed for the study. There are several broad conclusions which could be drawn from the predictive model:

- Nearly half (43.87%; n=211) of the AHIMS sites in the Lachlan LGA are within 200 m of a natural water source, but a large proportion of sites are distant from water (118 sites over 1 km from any discernible watercourse, 24% of all sites). This result contrasts with the previous findings of OzArk 2014 and 2016.
- Aboriginal sites are most likely to be recorded in river channels, floodplains, and wetlands landscapes (47.81% of all sites). No discernible pattern of site type occurrence within these landforms was noted
- Most sites have been recorded where accumulated impacts are categorised as low–moderate or moderate. However, areas with low–moderate impact comprise the majority of the LGA

### Implications for the study area

The key features analysed across the three studies are distance to water and landform type. The evidence suggests that most sites occur within 500 m of reliable watercourses. However, in the adjacent Lachlan LGA, proximity to reliable water has a weaker correlation with site location. Aboriginal sites are also most frequently recorded in alluvial plain landforms similar to the study area.

The results suggest that while proximity to water is a good indicator of site likelihood across the central west of NSW as whole, the definition of 'reliable' water in the studies (perennial or recurring) may exclude waterways surrounding the Bogan and Lachlan Rivers that are classified as ephemeral. As such, the archaeological record of the study area and its surrounds may not be as strongly associated with proximity to reliable water as elsewhere in the Central West region.

## 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 study area, **Table 5-1**.

Specifically in relation to the AHIMS database, a search covering the study area was conducted on 26 April 2021. The search returned 81 results for Aboriginal heritage items. This search was refreshed on 29 October 2021 to ensure no new listings had been made since April. The results of the search are summarised in **Table 5-1** and presented in full detail in **Appendix 2**.

It is noteworthy that OzArk has assisted Northparkes with a recent Aboriginal site audit, ensuring the AHIMS results are up-to-date in terms of co-ordinates and validity (OzArk 2021).

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

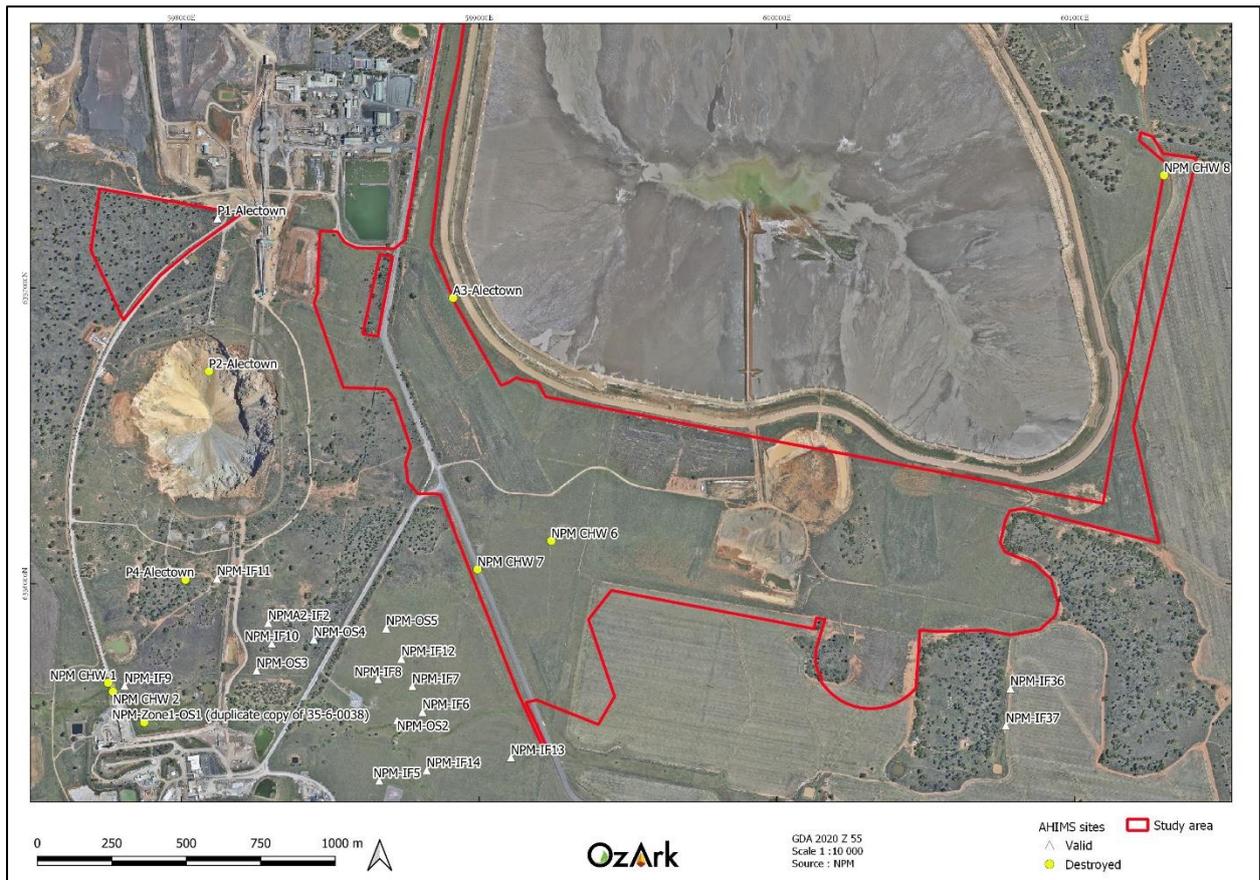
| Name of Database Searched           | Date of Search | Type of Search                     | Comment  |
|-------------------------------------|----------------|------------------------------------|--|
| Commonwealth Heritage Listings      | 11/10/2021     | Parkes LGA                         | No places listed on either the National or Commonwealth heritage lists are located within the study area |
| National Native Title Claims Search | 11/10/2021     | Parkes LGA                         | No active Native Title Claims include the study area.  |
| AHIMS                               | 29/11/2021     | 5 x 5 km centred on the study area | 81 sites within the search area. One valid site within the study area, see <b>Section 5.3.3</b> .        |
| Local Environmental Plan (LEP)      | 11/10/2021     | Parkes LEP of 2012                 | No places of Aboriginal heritage significance occur near the study area.                                 |

**Figure 5-2** shows the location of the AHIMS sites that have been recorded near and within the study area. Details of the sites most relevant to the study area are discussed in **Section 5.3.3**.

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

| Site Type                                    | Number    | % Frequency |
|--|-----------|-------------|
| Artefact site                                | 78        | 96          |
| Modified tree (one with additional features) | 3         | 4           |
| <b>TOTAL</b>                                 | <b>81</b> | <b>100</b>  |

**Figure 5-2: Location of previously recorded AHIMS sites in relation to the study area.**



### 5.3.2 Previous studies in or near the study area

Ozark (2020b) has compiled all known surveys and studies covering the Northparkes mining lease, which are briefly summarised below.

Stone, T. 1986 *An archaeological survey of Goonumbla Mining Lease*. Report to PekoWallsend.

A total of 16 sites were recorded as a result of this assessment, 13 being open artefact scatters, of which one was associated with a culturally modified tree, with a further isolated find also recorded. Overall sites were small and in poor condition, either disturbed by ploughing or erosion. Fifteen of these sites were located along the Bogan River or one of the two tributaries assessed during the study. Seven of the sites were within 1 km of the confluence of Goonumbla Creek and the Bogan River.

Nicholson, A. 1990 *Archaeological survey of additional area to be included in the Northparkes Project located near Parkes, NSW*. Report to Natural Systems Research P/L

Survey covered an area in the northeast of the Northparkes mining lease. No archaeological sites were recorded as a result of this assessment. The lack of sites was not considered surprising due to the distance from permanent water and the type of landscape assessed.

Appleton, J. 1996 *The archaeological investigation of the site of proposed extensions to existing mining operations, E48 development – Northparkes Mine, north of Parkes, Central West, NSW.* Report to R.W. Corkery & Co P/L on behalf of Northparkes Mine.

Survey focused on Limestone National Forest and adjacent agricultural lands for the E48 mine headworks, ventilation shaft and construction roads. Four archaeological sites were recorded as a result of this assessment, three being isolated finds (P2, 3 and 4) and one being a possible scarred tree (P1, see **Figure 5-3**). The overall paucity of archaeological material was interpreted as relating to the fact that the study area was dry sclerophyll woodland with no specific water source or other resources that would concentrate Wiradjuri occupation and was more likely used for activities such as resource gathering.

Possible scarred tree P1 is within the study area proposed for the proposed E22 Portal.

Paton, R. (Australian Archaeological Survey Consultants) 2006 *Northparkes E48 Project – Aboriginal Heritage Assessment.* Report to R.W. Corkery & Co P/L on behalf of Northparkes.

The aims of this assessment included the re-survey of previously recorded sites and survey of areas to be impacted by the expansion of the E48 project. Three sites were recorded as a result of this assessment, one small open camp site and two isolated finds (A1, A2 and A3 respectively). Two of three sites were relatively distant from the Bogan River and Goonumbla Creek, indicating that isolated finds remain possible anywhere in the study area.

Site A3, a single chert flake, was salvaged prior to the construction of the current Rosedale TSF. The location at which the artefact was identified is on the north edge of the E31 Precinct area. It is listed as destroyed on the Aboriginal Heritage Information Management System (AHIMS) database. See **Section 5.3.3**.

OzArk 2008b (OzArk EHM P/L) *Test/Salvage Excavation Program. Northparkes Mines, Parkes NSW.* Report to Northparkes.

Test excavation program accompanying conveyer installation for the E48 project, near Goonumbla Creek. One site recorded and salvaged during the program (NPM-Zone 1 OS1), 1.6 km south of the proposed E22 Portal location. The potential for subsurface deposits was assessed as low.

OzArk 2008c (OzArk EHM P/L) *Aboriginal Cultural Heritage Assessment, Section 75W Modification: Northparkes Mines, Parkes, NSW.* Report to GHD Sydney on behalf of Northparkes.

Assessment covered proposed location of Estcourt TSF and surface crusher works at the E48 headframe. One Aboriginal cultural site was recorded as part of the survey: NPM ST1. The scarred tree was archivally recorded by Kayandel Archaeological Services (KAS 2010) and relocated during construction of the Estcourt TSF.

Godwin, L. 2013. *Aboriginal Cultural Heritage Assessment: Northparkes Mine Step Change Project*. Report to Northparkes Mine.

Survey design for the Step Change Project (PA 11\_0060) included impacts associated with proposed pipeline routes along the Bogan River to the southwest of the Northparkes mining lease area. Assessment also covered an area near Rosedale TSF. Twenty-one archaeological sites were recorded, however, an additional 67 locations associated with Aboriginal heritage values are also provided in an appendix to the report.

Sections of the E31 Precinct area were covered during this assessment (see **Figure 5-4**). Three sites recorded during the survey, known as CHW6, CHW7 and CHW8, have since been salvaged in accordance with the approved ACHMP for PA 11\_0060. Their recorded locations are within the MOD 6 area, but the status of the sites is 'destroyed' (see **Section 5.3.3**).

OzArk 2018a *Aboriginal Due Diligence Archaeological Assessment: Northparkes Mines – Assessment of Four Areas, Parkes LGA*.

Four areas at Northparkes were assessed resulting in two sites recorded: NPM-IF1 and NPM-IF2. The four areas are adjacent to Goonumbla Creek, 700 m southwest of the proposed MOD 6 area.

OzArk 2018b *Aboriginal Due Diligence Assessment: Rosedale area*

25 ha of the E31 Precinct area was assessed during the development of the adjacent Rosedale TSF in 2018. No sites were recorded, which was attributed to the greater distance from Goonumbla Creek than more sensitive landforms to the south. Coverage from this assessment is shown on **Figure 5-4**.

OzArk 2019a *Aboriginal Due Diligence Report: Five impact areas at Northparkes Mine*

Assessment covered further locations surrounding the E48 location at Northparkes. Nine sites were recorded: two artefact scatters and seven isolated finds. Highest artefact densities were recorded along landforms associated with Goonumbla Creek.

OzArk 2019b *Aboriginal Due Diligence Assessment: E48 East Northparkes Mine, Parkes, NSW*

One area southeast of the E48 location was assessed plus a small area of the former Limestone National Forest, 200 m southwest of the proposed E22 Portal location. Four sites were recorded: two artefact scatters and two isolated finds, all to the east of E48.

OzArk 2019c *Aboriginal Due Diligence Assessment: Goonumbla Creek*

Eleven sites were recorded along the northern and southern banks of Goonumbla Creek, 400 m west of the E31 Precinct area. Two artefact scatters and nine isolated finds were recorded.

OzArk 2019d *Aboriginal Due Diligence Assessment: Areas 5, 6 and 8*

Ten previously unrecorded Aboriginal sites were identified during the visual inspection of Areas 5, 6 and 8 study area. The study areas were at the south of the Northparkes site, along Goonumbla Creek. There were three artefact scatters and seven isolated finds. The artefact scatter at Area 8, NPM-OS9, is the largest site at Northparkes, extending for 700 m along the northern bank of Goonumbla Creek and containing over 250 stone artefacts.

OzArk 2020b *Aboriginal Due Diligence Assessment: Area 7*

Assessment of a study area known as Area 7 was conducted over three days in December 2019 and January 2020. Twelve previously unrecorded sites were identified across the 225-ha study area that includes the headwaters of Goonumbla Creek. The study area was surveyed by OzArk, Northparkes staff and representatives of the Northparkes Mines Wiradjuri Executive Committee (WEC).

Area 7 is adjacent to the E31 Precinct area. Coverage from this assessment is shown on **Figure 5-4**.

**Figure 5-3: Previous survey coverage at the study area – E22 Portal Area.**

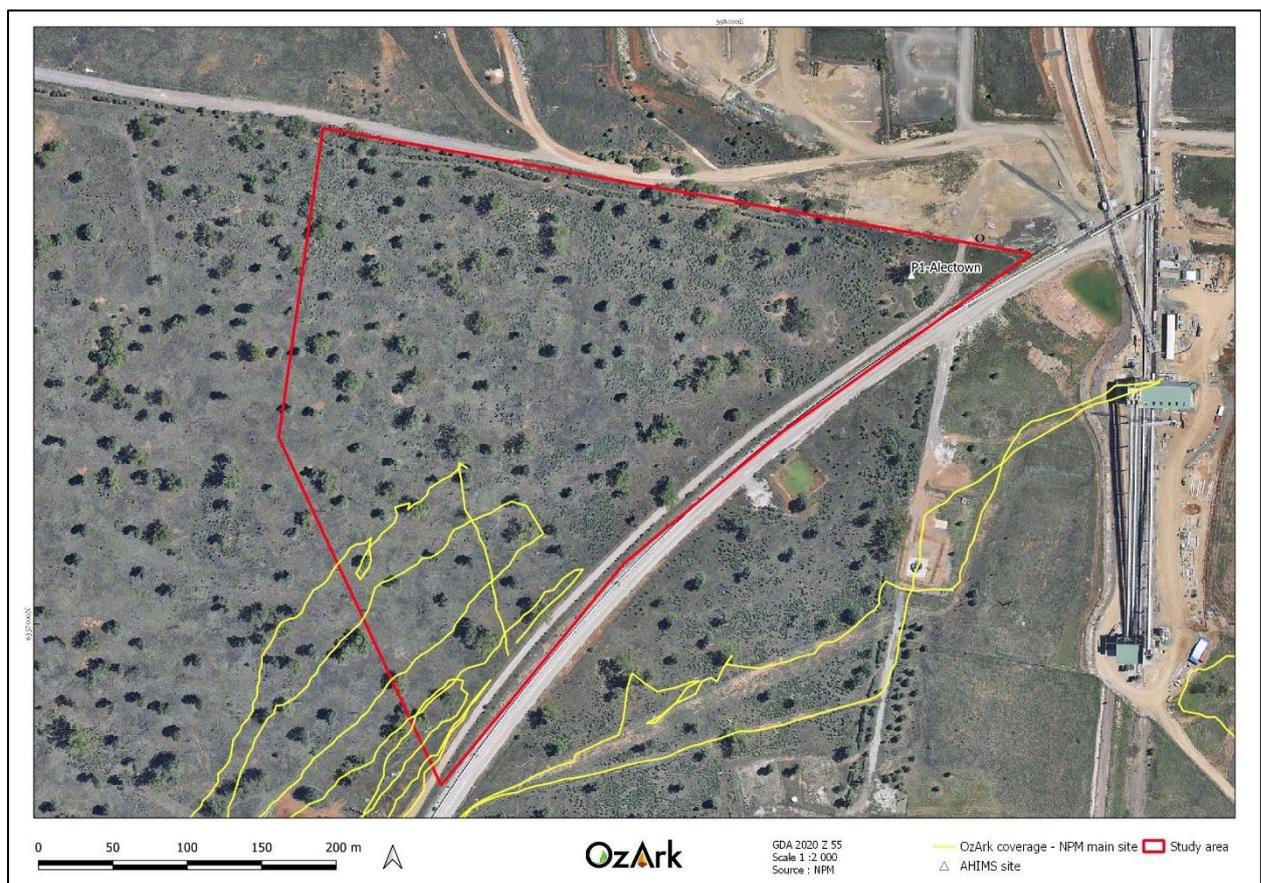
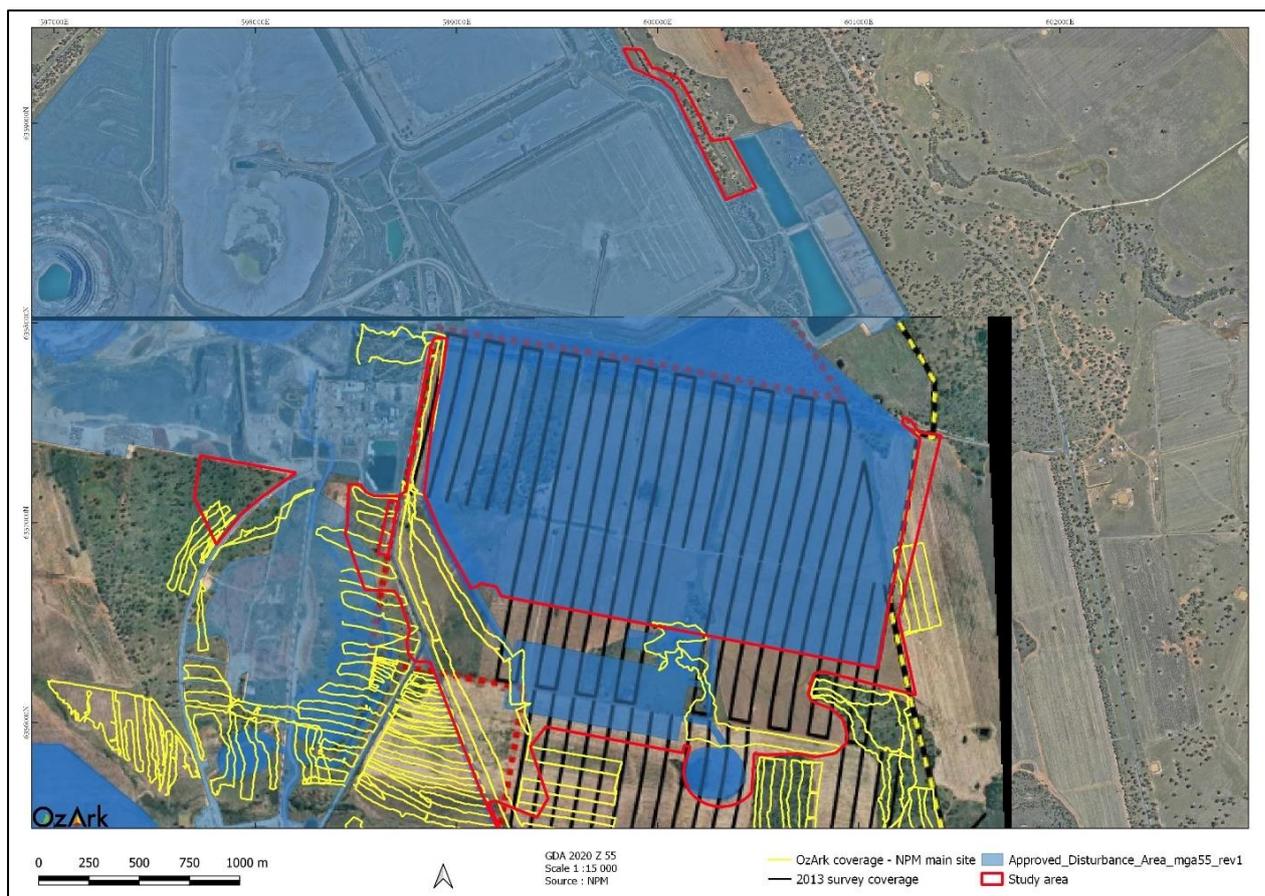


Figure 5-4: Survey coverage at the study area– TSF2 and E31 Precinct.



### 5.3.3 Previously recorded sites at the study area

**Table 5-3** summarises the previously recorded Aboriginal cultural heritage sites within the study areas. Only one valid site remains extant, while four isolated artefact sites have been salvaged from the study area under PA 11\_0060.

**Table 5-3: Aboriginal cultural heritage sites recorded during the survey.**

| AHIMS ID  | Site name     | Site type     | Coordinates (GDA Zone 55) East | Coordinates (GDA Zone 55) North | Site status |
|-----------|---------------|---------------|--------------------------------|---------------------------------|-------------|
| 35-6-0156 | P1 – Alectown | Modified tree | 598122                         | 6357236                         | Valid       |
| 35-6-0155 | A3 – Alectown | Isolated find | 598913                         | 6356966                         | Destroyed   |
| 35-6-0253 | NPM CHW 6     | Isolated find | 599243                         | 6356145                         | Destroyed   |
| 35-6-0254 | NPM CHW 7     | Isolated find | 598995                         | 6356049                         | Destroyed   |
| 35-6-0255 | NPM CHW 8     | Isolated find | 601300                         | 6357381                         | Destroyed   |

#### P1-Alectown

**Site type:** Modified tree

**GPS coordinates:** GDA Z 55 598913E 6356966N

**Location of site:** The tree is located in the northeast corner of the Limestone National Forest area, approximately 2.3 km southeast from the intersection of Adavale Ln and Braeside Ln, 26 km northwest of Parkes, NSW.

**Description of site:** The tree was recorded in 1996. The site card is quoted below.

*Scarred Box Tree, the lozenge-shaped scar is at least 350 cm above ground level. It is approximately 150 cm long by 40 cm wide. It may have been made naturally, be a forester's blaze, or made by an Aboriginal.*

A site card update was made by OzArk in 2020 to correct the coordinates of the tree on the AHIMS database, without reassessment of the scar's likely origin.

**Figure 5-5: View of the P1 tree.**



## 5.4 PREDICTIVE MODEL FOR SITE LOCATION

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

permanent and ephemeral water sources, along access or trade routes, or in areas that have good flora/fauna resources and appropriate shelter.

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

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

The site types listed in **Table 5-4** are present in the region of the study area. The likelihood of these sites being present in the study area is discussed in **Section 5.4.3**.

**Table 5-4: Site types recorded in the region of the study area.**

| Site type                 | Site description  |
|---------------------------|---|
| Isolated finds            | May be indicative of random loss or deliberate discard of a single artefact, the remnant of a now dispersed and disturbed artefact scatter, or an otherwise obscured or subsurface artefact scatter. They may occur anywhere within the landscape but are more likely to occur in topographies where open artefact scatters typically occur.  |
| Open artefact scatters    | Artefact scatters are defined as two or more artefacts, not located within a rock shelter, and located no more than 50 m away from any other constituent artefact. This site type may occur almost anywhere that Aboriginal people have travelled and may be associated with hunting and gathering activities, short- or long-term camps, and the manufacture and maintenance of stone tools. Artefact scatters typically consist of surface scatters or sub-surface distributions of flaked stone discarded during the manufacture of tools but may also include other artefactual rock types such as hearth and anvil stones. Less commonly, artefact scatters may include archaeological stratigraphic features such as hearths and artefact concentrations which relate to activity areas. Artefact density can vary considerably between and across individual sites. Small ground exposures revealing low density scatters may be indicative of a background scatter rather than a spatially or temporally distinct artefact assemblage. These sites are classed as 'open', that is, occurring on the land surface unprotected by rock overhangs, and are sometimes referred to as 'open camp sites'.<br>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.<br>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.   |

| Site type             | Site description   |
|-----------------------|--|
| Hearths/ovens         | Features used by Aboriginal people for the preparation of food and would generally be in the vicinity of available resources, such as water sources to procure fish and shellfish, and on elevated ground to avoid impact from environmental threats.  |
| Burials               | Generally found in soft sediments such as aeolian sand, alluvial silts, and rock shelter deposits. In valley floor and plains contexts, burials may occur in locally elevated topographies rather than poorly drained sedimentary contexts. Burials are also known to have occurred on rocky hilltops in some limited areas. Burials are generally only visible where there has been some disturbance of sub-surface sediments or where some erosional process has exposed them. |
| Bora/Ceremonial sites | Places which have ceremonial or spiritual connections. Ceremonial sites may comprise of natural landscapes or have archaeological material. Bora sites are ceremonial sites which consist of a cleared area and earthen rings.   |

#### 5.4.2 Landform modelling of archaeological potential

The large number of archaeological studies undertaken within the immediate vicinity of the study area provides information to obtain a sound understanding of the nature and distribution of archaeological sites within the area. Across the Northparkes Mines site, proximity to Goonumbla Creek appears to be a strong predictor of site likelihood and density. This relationship is expected to be repeated within the study areas for Modification 6.

Crucial for the preservation of archaeological deposits is the history of past land use in an area. While colonial disturbances are present across the study areas, it may be that the history of logging in the Limestone National Forest area has had different impacts on the archaeological characteristics of that section of the study area than the pastoral and crop cultivation activities at the E31 and TSF2 areas.

#### 5.4.3 Conclusion

Based on knowledge of the environmental contexts of the study 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 study area to contain Aboriginal objects (**Table 5-5**), and what types of sites may be present within the study area (**Table 5-6**).

**Table 5-5: Likelihood of landforms within the study area to contain Aboriginal objects.**

| Survey Unit | Landform type                                   | Likelihood to contain Aboriginal objects  |
|-------------|---|---|
| 1           | Low gradient slope at Limestone National Forest | Very gentle slopes are a slightly degrading landform. These landforms are suitable for occupation but distance from water means sites may be rarer and may be in a secondary context.   |
| 2           | Alluvial plains at the location of TSF2         | Plains are a typically stable environment that can accumulate material from flooding and lose material through runoff. Landforms are suitable for habitation but may not have featured specific desirable resources and are distant from water. |

**Table 5-6: Likelihood of certain site types being present in the study area.**

| Site type                 | Likelihood of being present in the study 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 study area.   |
| Open artefact scatters    | As most of the study area is distant to Goonumbla Creek, this site type is not predicted to be common. However, in flat landforms within 500 m of the creek this site type is possible although the moderate degree of disturbance in the study area will probably mean that the scatter has become displaced. 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. A large, complex scatter such as NPM-OS 9 (800 m southeast of the study area at the closest point) is not expected to be present. |
| Culturally modified trees | Due to the clearance of mature trees or history of logging at the study area, this site type is predicted to be very rare. The site type is also poorly represented in the local area.   |
| Hearths/ovens             | This site type is considered possible in areas where A-Horizon soils are relatively undisturbed. However, given the high levels of disturbance across the study area the likelihood of identifying this site type <i>in situ</i> is significantly reduced.   |
| Burials                   | Sandy deposits suitable for this site type are very unlikely to occur across the plains and low slopes of the study area, so it is considered very unlikely that burials will be identified.   |
| Bora/Ceremonial sites     | This site type does not necessarily follow landform predictability and are, overall, a rare site type with a low likelihood of being present and remaining physically identifiable. These sites are generally identified through consultation with the RAPs.   |

The archaeological characteristics of the study area have been very well documented since assessment of the area began in the 1980s. The key archaeological variable across the Northparkes site is proximity to Goonumbla Creek, as there is little topographical or landform variation across the plains and low-gradient slopes.

The ethnographic and archaeological record demonstrates that the study area and its surrounds were inhabited by Aboriginal people in the past and some areas along Goonumbla Creek may have been occupied by large groups or repeatedly over time, especially closer to its confluence with the Bogan River. Evidence of this occupation remains in the landscape, often in secondary contexts, despite a range of post-deposition disturbances. Within the study areas, the most likely sites to be identified are isolated finds and low-density artefact scatters due to distance from water and land use disturbances, although scarred trees may be present if mature endemic vegetation is present.

## 5.5 RESEARCH QUESTIONS

Several research questions can meaningfully be applied to the investigation of the study area. These research questions include:

- What resources might have been available to the Aboriginal people using the land within the study area (food, stone and water) and what resources were transported to the area?
- Can the archaeological and cultural expertise of the survey team ascertain the most likely origin of the scar on the tree that has been recorded as P1?
- Establish how the findings within the study area (if any) accord with the regional archaeological context examined in **Section 5.2**.

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## 6 RESULTS OF ABORIGINAL ARCHAEOLOGICAL ASSESSMENT

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### 6.1 SAMPLING STRATEGY AND FIELD METHODS

Full pedestrian survey of the E22 Portal and TSF2 study area was undertaken on 9 November 2021 by OzArk Director Dr Jodie Benton with four representatives of the WEC. AHIMS registered site P1 was located by the survey team (see **Section 6.4**).

The E31 Precinct area has been extensively surveyed in the past, and the landscape has been modified by approved ground disturbances since the initial archaeological assessments. Areas within the E31 Precinct that have been subject to less intensive ground disturbance were surveyed for the concurrent Rocklands TSF proposal (part of the E44 Rocklands Project) on 21 June 2021. Coverage from the survey effort is shown on **Figure 6-1** and **Figure 6-2** in relation to previous assessments. Dr. Jodie Benton and Harrison Rochford undertook the survey of the Rocklands TSF area with four members of the WEC on 21 June 2021.

All mature trees were inspected for signs of cultural modification. The entire survey area as defined in the survey methodologies discussed with RAPs was assessed (**Section 3.2.2**).

### 6.2 PROJECT CONSTRAINTS

There were no significant constraints to the field assessment, although it is noted that ground surface visibility was low after two years of good rainfall.

### 6.3 EFFECTIVE SURVEY COVERAGE

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

GSV is defined as:

*... the amount of bare ground (or visibility) on the exposures which might reveal artefacts or other archaeological materials. It is important to note that visibility, on its own, is not a reliable indicator of the detectability of buried archaeological material. Things like vegetation, plant or leaf litter, loose sand, stone ground or introduced materials will affect the visibility. Put another way, visibility refers to 'what conceals' (DECCW 2010: 39).*

GSE is defined as:

*... different to visibility because it estimates the area with a likelihood of revealing buried artefacts or deposits rather than just being an observation of the amount of bare ground. It is the percentage of land for which erosion and exposure was sufficient to reveal*

archaeological evidence on the surface of the ground. Put another way, exposure refers to 'what reveals' (DECCW 2010: 37).

**Table 6-1** calculates the effective survey coverage within the study area. In general, **Table 6-1** presents an approximation of the amount of ground surface able to be seen at any location within specific landform units. For example, at any one location within the low slope landforms of the study area approximately 5% of the ground surface could be seen. Exposures in these landforms were generally confined to the clear areas around the base of trees. Visibility within the plain landforms was hampered by higher vegetation in disturbed areas, with very few small erosion exposures.

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

| Survey Unit | Landform  | Survey Unit Area (sq m)  | Visibility % | Exposure % | Effective Coverage Area (sq m) (= Survey Unit Area x Visibility % x Exposure %) | Effective Coverage % (= Effective Coverage Area / Survey Unit Area x 100) |
|-------------|-----------|--------------------------|--------------|------------|---|---|
| 1           | Low slope | 212 463 m <sup>2</sup>   | 80           | 5          | 8498.5  | 4   |
| 2           | Plain     | 1 646 294 m <sup>2</sup> | 60           | 10         | 98777.6   | 6   |

**Table 6-2** assesses the potential impact of survey efficacy between the two survey units on site recording. However, it should be noted that these differences cannot be meaningfully analysed as no sites were identified.

**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 |
|-----------|--------------------------|--|---|-----------------|---------------------------------|
| Low slope | 212 463 m <sup>2</sup>   | 8498.5   | 4   | 0               | 0                               |
| Plain     | 1 646 294 m <sup>2</sup> | 98777.6  | 6   | 0               | 0                               |

No previously unrecorded Aboriginal sites were recorded during the survey of the study area. Coverage from the survey is shown on **Figure 6-1** and **Figure 6-2**. Pedestrian transects mapped are shown for one of six surveyors, so each line represents six people walking 10-20 metres apart.

Figure 6-1: Survey coverage at E22 and E31 Precinct

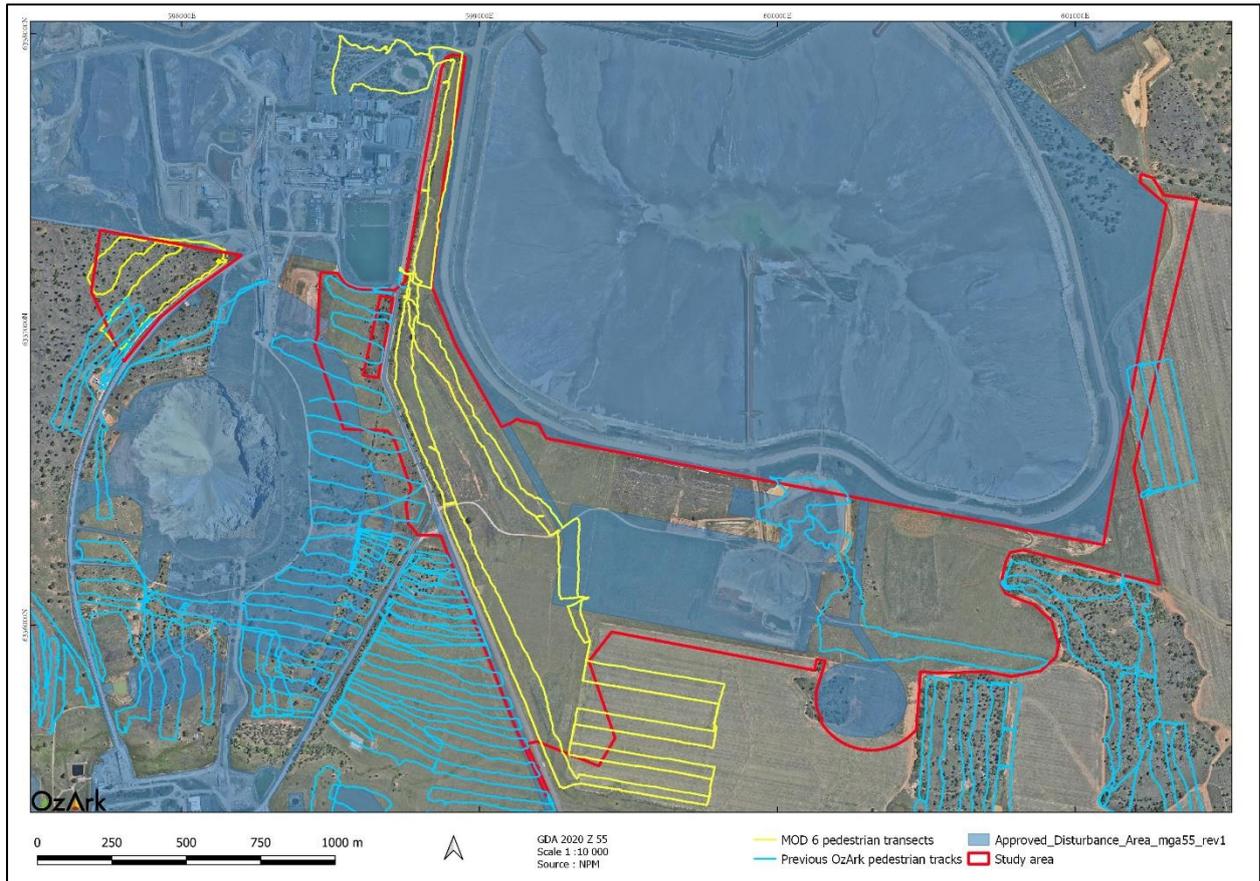
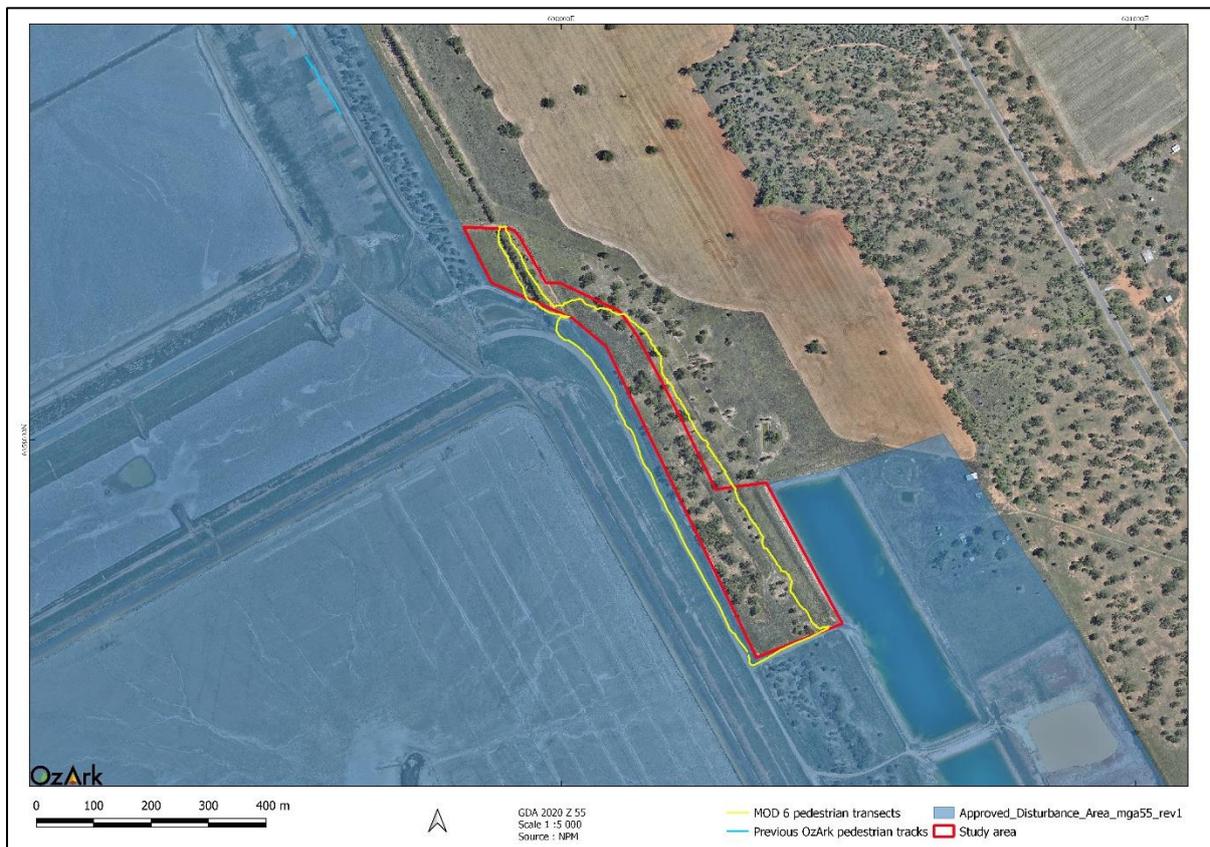


Figure 6-2: Survey coverage at TSF2



## 6.4 PREVIOUSLY RECORDED ABORIGINAL SITES LOCATED

### P1-Alectown

**Site type:** Modified tree

**GPS coordinates:** GDA Z 55 598913E 6356966N

**Location of site:** The tree is located in the northeast corner of the Limestone National Forest area, approximately 2.3 km southeast from the intersection of Adavale Ln and Braeside Ln, 26 km northwest of Parkes, NSW.

#### **Summary of discussion:**

The tree was recorded in 1996 as a possible Aboriginal cultural scar. As part of the current assessment, it was proposed to return to the tree with representatives of the WEC to reach a consensus on the origin of the scar.

After inspection of the tree by the survey team, it was agreed that the scar is not the result of Aboriginal cultural activity. OzArk and the WEC representatives agreed that the height of the scar suggests that a natural trauma is most likely origin and that definitive features of Aboriginal cultural scars (such as axe marks and symmetry) were not identifiable.

A site card update will be provided to the AHIMS database by OzArk with the conclusion of the assessment, with the aim for having the tree revised in status to 'not a site'.

Figure 6-3: Rob Clegg inspecting the scar.



## 6.5 ABORIGINAL COMMUNITY COMMENTS ON THE SURVEY

At the commencement of survey at the TSF2 area, the survey team discussed the visible disturbance to the ground surface. It was the opinion of the Aboriginal community representatives that the ground surface had been substantially modified in the past resulting in topsoil stockpiles, drainage embankments and channels and areas of revegetation.

## 6.6 SUMMARY OF SURVEY RESULTS

### 6.6.1 Discussion

No Aboriginal sites were recorded during the survey. The predictive model outlined in **Section 5.4** identified that artefact sites were the most likely site type to occur at the study area and that the likelihood of sites being present was higher in areas near Goonumbla Creek.

Isolated finds had been identified in previous surveys in the E31 study area (now salvaged), albeit at low density. The majority of the study area is, however, distant from reliable water in an archaeological context and consequently the absence of Aboriginal sites was not surprising.

Overall, the available archaeological information and the results of the current survey effort indicate that the landforms of the study area may not have provided resources that were particularly sought after by the Aboriginal people of the area, and their interaction with the landscape at the study area may have been more intermittent than land further south or west

closer to Goonumbla Creek or the Bogan River, which offered greater resources or desirable habitation locations.

In addition to the generally low archaeological sensitivity of the landforms of the study area, substantial modification to the ground surface at TSF2 and the E31 Precinct were observed during the survey. These disturbances reduced the potential for the landforms of the study areas to retain Aboriginal objects.

### 6.6.2 Responses to the research questions

Three research questions have guided the assessment of the Aboriginal cultural heritage values of the study area. They are relisted below with responses guided by the available information outlined in this report.

- What resources might have been available to the Aboriginal people using the land within the study area (food, stone, and water) and what resources were transported to the area?
  - Despite the occasional high-density artefact sites at Northparkes Mines, no outcropping stone suitable for tool making has been identified in the local area.
  - Ethnographic information suggests that kangaroos, emus and possums were important food resources for the Aboriginal people of the Bogan River area, all of which could be reasonably assumed to have been present over the low slopes and alluvial plains of the study area. These resources were likely more abundant closer to Goonumbla Creek and the Bogan River.
- Can the archaeological and cultural expertise of the survey team ascertain the most likely origin of the scar on the tree that has been recorded as P1?
  - The survey team reached a consensus that the scar on the tree in question was most likely natural in origin, rather than anthropogenic. This was always understood as a possible explanation of the scar in the original recording and the site will be updated to 'not a site' on the AHIMS register.
- Establish how the findings within the study area (if any) accord with the regional archaeological context examined in **Section 5.4**.
  - The predictive model suggested that that while proximity to water is a good indicator of site likelihood across the Central West of NSW as whole, sites in some areas near the Bogan River were not always strongly associated with proximity to waterways.
  - The absence of newly recorded sites does not allow for detailed re-examination of regional modelling. However, the archaeology of Northparkes Mines site suggests that the likelihood and expected density of sites decreases as distance from Goonumbla Creek increases.

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## 7 SIGNIFICANCE ASSESSMENT

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As there are no Aboriginal sites present within the study areas for MOD 6, the significance assessment has been omitted.

## 8 ASSESSING HARM

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### 8.1 LIKELY IMPACTS TO ABORIGINAL HERITAGE FROM THE PROPOSAL

Assessment undertaken for MOD 6 has not identified any previously unrecorded Aboriginal sites and has concluded that the only valid AHIMS listed Aboriginal site within the study area, modified tree P1, has been reassessed as not bearing a scar of Aboriginal cultural origin.

As such, there are no likely impacts to Aboriginal objects as a result of the proposal. No Aboriginal cultural values that directly pertain to the study area have been recorded, but may be expressed during the final stage of consultation with RAPs.

### 8.2 ECOLOGICALLY SUSTAINABLE DEVELOPMENT PRINCIPLES

#### 8.2.1 Intergenerational equity

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

In terms of Aboriginal heritage, intergenerational equity can be considered in terms of the cumulative impacts to Aboriginal objects and places in a region. If few Aboriginal objects and places remain in a region (for example, because of impacts under previous permits), fewer opportunities remain for future generations of Aboriginal people to enjoy the cultural benefits of those Aboriginal objects and places.

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

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

#### 8.2.2 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 values, the precautionary principle should be guided by:

- 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.

### 8.2.3 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.

### 8.2.4 Applicability to the proposal

The proposal does not add to the cumulative impact on the region’s Aboriginal cultural heritage values as no sites will be harmed. While the landscape as a whole should be considered in this cumulative impact, the study area is situated within an operating mining lease and the proposal will not harm undisturbed archaeological landforms.

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

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

| ESD principle                          | Response  |
|--|---|
| Avoiding and minimising harm           | The proposal area is small and avoids harm to Aboriginal objects.   |
| The integration principle              | An environmental objective of avoiding and minimising harm to Aboriginal cultural heritage has been adopted during the current assessment. As no impacts to Aboriginal objects are proposed, this objective has been met. |
| The precautionary principle            | As a consensus was reached regarding the only object of uncertain cultural value, the naturally scarred tree, the precautionary principle does not apply.   |
| The intergenerational equity principle | As no sites are proposed to be impacted by MOD 6, the cumulative impact on the Aboriginal cultural heritage values of the area has not been increased.  |

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## 9 MANAGEMENT OF ABORIGINAL CULTURAL HERITAGE SITES

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### 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 proposed development. 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 site. If this can be done, then a suitable curtilage around the 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 plans are altered, care must be taken to ensure that impacts do not occur to areas not previously assessed.
- If impact is unavoidable then the sites should be managed under the conditions of an approved ACHMP. This will normally involve the salvage of surface artefacts to remove them from the impact area to a place of safe-keeping. The conditions of the ACHMP would normally follow the recommendations of this report. Any changes to an ACHMP, as well as participation in the salvage activity itself, would be done in consultation with the Aboriginal community.

### 9.2 MANAGEMENT AND MITIGATION OF IMPACT TO ABORIGINAL SITES

#### 9.2.1 Unanticipated Finds

As no impacts to Aboriginal sites are proposed, the potential for unanticipated finds is the only specific management measure required.

Should Aboriginal objects not recorded during this assessment be encountered during the construction of the Modification, the approved ACHMP should be referred to for the correct procedures.

In the unlikely event that human skeletal material is observed during the works, all work in the vicinity of the find should stop and the ACHMP should be referred to for the correct procedures.

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## 10 RECOMMENDATIONS

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The following recommendations are made based on proposed 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 the prior written consent of HNSW
- The findings of the current investigations undertaken within the study area
- The interests of the Aboriginal community as they have been relayed through consultation

As it has been assessed that there are no likely impacts to Aboriginal objects as a result of the MOD 6, it is recommended that:

1. The previously recorded scarred tree (P1-Alectown, 35-6-0156) will be updated to 'not a site' on the AHIMS register. No impact to the tree (if proposed) should be undertaken until the approved Aboriginal Site Impact Recording Form (ASIRF) has been received.
2. The ACHMP should be consulted for the appropriate procedures if unanticipated Aboriginal objects or human skeletal remains are encountered during works.

There are no further requirements for additional assessment of the study area.

## REFERENCES

- Appleton 1996                      Appleton, J. 1996. *The archaeological investigation of the site of proposed extensions to existing mining operations, E48 development – Northparkes, north of Parkes, Central West, NSW*. Report to R.W. Corkery & Co P/L on behalf of Northparkes.
- Burke & Smith 2004                Burke, H. and Smith, C. 2004. *The Archaeologist's Field Handbook*, Blackwell, Oxford.
- Burra Charter 2013                 International Council on Monuments and Sites 2013. *The Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance*.
- Clegg 1990                            Clegg, F. *Simple statistics: a course book for the social sciences*. Cambridge University Press, Cambridge.
- DECCW 2010                         Department of Environment, Climate Change and Water, Sydney (now OEH). *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales*.
- DECCW 2010b                        Department of Environment, Climate Change and Water, Sydney (now OEH). *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010*.
- Hiscock and Mitchell 1993        Hiscock, P. and Mitchell, S. Stone artefact quarries and reduction sites in Australia: towards a type profile. *Australian Heritage Commission Technical Publications Series No.4*, Australian Government Publishing Service, Canberra.
- KAS 2010                              Kayandel Archaeological Services 2010. *Moulding, Casting and Recording of Northparkes-ST1*. Report to Northparkes.
- Kass 2003                             Kass, T. 2003. *Parkes Shire Thematic History*. Report to Parkes Shire Council.
- Leonard and Jones 1989         Leonard, R. D. and Jones, G. T. (eds) *Quantifying diversity in archaeology*. Cambridge University Press, Cambridge.
- Lye, Crook and Kolff van Oosterwijk    Lye, A. Crook, G. and Kolff van Oosterwijk, L. *The Discovery History of the Northparkes Deposits*. Northparkes Publication.
- Nicholson 1990                     *Archaeological survey of additional area to be included in the Northparkes Project located near Parkes, NSW*. Report to Natural Systems Research P/L.
- OEH 2011                             Office of Environment and Heritage 2011. *Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW*.

|             |   |
|-------------|---|
| OzArk 2008a | OzArk EHM P/L. 2008. <i>Indigenous Heritage Review: Northparkes Mine, near Parkes, NSW</i> . Report to Northparkes.   |
| OzArk 2008b | OzArk EHM P/L. 2008 <i>Test/Salvage Excavation Program. Northparkes Mines, Parkes NSW</i> . Report to Northparkes.  |
| OzArk 2008c | OzArk EHM P/L. 2008. <i>Aboriginal Cultural Heritage Assessment, Section 75W Modification: Northparkes Mines, Parkes, NSW</i> . Report to GHD Sydney on behalf of Northparkes.                  |
| OzArk 2018a | OzArk EHM P/L. 2018. <i>Aboriginal Due Diligence Archaeological Assessment: Northparkes Mines – Assessment of Four Areas, Parkes LGA</i> . Report to Northparkes.                               |
| OzArk 2018b | OzArk EHM P/L. 2018. <i>Aboriginal Due Diligence Archaeological Assessment: Northparkes Mines - Rosedale Area</i> . Report to Northparkes.  |
| OzArk 2019a | OzArk EHM P/L. 2019. <i>Aboriginal Due Diligence Assessment Report: Limestone Forest Area Northparkes Mine</i> . Report to Northparkes.   |
| OzArk 2019a | OzArk EHM P/L. 2019. <i>Aboriginal Due Diligence Report: Five impact areas at Northparkes Mine</i> . Report to Northparkes.   |
| OzArk 2019b | OzArk EHM P/L. 2019. <i>Aboriginal Due Diligence Assessment: E48 East Northparkes Mine, Parkes, NSW</i> . Report to Northparkes.  |
| OzArk 2019c | OzArk EHM P/L. 2019. <i>Aboriginal Due Diligence Assessment: Goonumbla Creek</i> . Report to Northparkes.   |
| OzArk 2019d | OzArk EHM P/L. 2019. <i>Aboriginal Due Diligence Assessment: Areas 5,6 and 8</i> . Report to Northparkes.   |
| OzArk 2020a | OzArk EHM P/L. 2020. <i>AHIMS Rectification and Gap Analysis</i> . Report to Northparkes.   |
| OzArk 2020b | OzArk EHM P/L. 2020. <i>Aboriginal Due Diligence Assessment: Area 7</i> . Report to Northparkes.  |
| OzArk 2021a | OzArk EHM P/L. In preparation. <i>Aboriginal Cultural Heritage Assessment Report: Proposed E44 Open Cut Project</i> . Report to Northparkes Mines.  |
| OzArk 2021b | OzArk EHM P/L. 2021. <i>Aboriginal Due Diligence Assessment: Overflow Protection Bund</i> . Report to Northparkes Mines.  |
| Paton 2006  | Paton, R. (Australian Archaeological Survey Consultants) 2006 <i>Northparkes E48 Project – Aboriginal Heritage Assessment</i> . Report to R.W. Corkery & Co P/L on behalf of Northparkes Mines. |

- Stone 1986                      Stone, T. 1986 *An archaeological survey of Goonumbla Mining Lease*.  
Report to PekoWallsend.
- Unger (ND)                      Unger, L.A. No Date. *Aboriginal activity in the Parkes district*. Parkes &  
District Historical Society.
- Whitehead 2003                Whitehead, J. 2003, *Tracking and Mapping The Explorers Volume 1 The  
Lachlan River Oxley, Evans, and Cunningham*, Southern Cross University  
Printery: Lismore.

## APPENDIX 1: COMMUNITY CONSULTATION

Appendix 1 Figure 1: Consultation log

| Consultation Log – Stage 1                       |   |  |
|--|---|--|
| Organisation                                     | Correspondence & Date   | Response   |
| Peak Hill Local Aboriginal Land Council (PHLALC) | Call for expressions of interest August 2020                    | PHLALC registered interest in the Project                            |
|  | Initial consultation regarding MOD 6 via email 2 September 2021 | No specific concerns or comments in relation to MOD 6                |
| Wiradjuri Council of Elders                      | Call for expressions of interest August 2020                    | Wiradjuri Council of Elders registered interest in the Project       |
|  | Initial consultation regarding MOD 6 via email 2 September 2021 | No specific concerns or comments in relation to MOD 6                |
| Corroboree Aboriginal Corporation                | Call for expressions of interest August 2020                    | Corroboree Aboriginal Corporation registered interest in the Project |
|  | Initial consultation regarding MOD 6 via email 2 September 2021 | No specific concerns or comments in relation to MOD 6                |
| Gunjeewong Aboriginal Corporation                | Call for expressions of interest August 2020                    | Gunjeewong Aboriginal Corporation registered interest in the Project |
|  | Initial consultation regarding MOD 6 via email 2 September 2021 | No specific concerns or comments in relation to MOD 6                |

| Consultation Log – Stage 2/3                     |  |  |
|--|--|--|
| Organisation                                     | Correspondence & Date  | Response   |
| Peak Hill Local Aboriginal Land Council (PHLALC) | Draft Stage 2/3 Methodology provided via email 19 October 2021 | At the October 2021 Executive Meeting, PHLALC advised they agreed with the MOD 6 methodology. Parties also agreed MOD 6 survey work to be carried out 9 November 2021. Members of the Wiradjuri Executive Committee (WEC), which includes the PHLALC, were present at both relevant field assessments on 21 June 2021 (E44 Rocklands Project) and 9 November 2021 (MOD 6). |
|  | Wiradjuri Executive Meeting held 29 October 2021               |  |
| Wiradjuri Council of Elders                      | Draft Stage 2/3 Methodology provided via email 19 October 2021 | At the October 2021 Executive Meeting, the WEC advised they agreed with the MOD 6 methodology. Parties also agreed MOD 6 survey work to be carried out 9 November 2021. Members of the WEC, which includes the Wiradjuri Council of Elders, were present at both relevant field assessments on 21 June 2021 (E44 Rocklands Project) and 9 November 2021 (MOD 6).           |
|  | Wiradjuri Executive Meeting held 29 October 2021               |  |
| Corroboree Aboriginal Corporation                | Draft Stage 2/3 Methodology provided via email 19 October 2021 | Corroboree Aboriginal Corporation advised via email 1 November 2021 that they agree with the MOD 6 methodology   |
| Gunjeewong Aboriginal Corporation                | Draft Stage 2/3 Methodology provided via email 19 October 2021 | No comments or concerns raised in relation to MOD 6 methodology  |

Appendix 1 Figure 2: Stage 1 advertisement

Friday August 14, 2020 PARKES CHAMPION POST 27

AROUND THE GROUNDS SPORT

www.parkeschampionpost.com.au

# Charlton's the top shooter

**LATEST RESULTS**  
**Shooting**

**Parkes SSAA Smallbore**  
Last weekend saw 6 hearty souls braving the wet & cold weather conditions and shot at ordinary targets at both 25 & 50m for a maximum of 500 points.

Ranges Rifles - Jeff Charlton 259 - 248 496, Brian Drabsch 250 - 246 496, David Wilson 250 - 246 496, Steve Mitchell 243 - 243 486, Paul Hocking 244 for 25m only and one shot for practice only.

Our next event is at 10am Sunday 16/8/20.

Jeff managed to finish on top at last but just fell short of earning 2 stars finishing with one and a half, something to aim at.

**Parkes SSAA Sporting Clays**

At last month's shoot 7 shooters attended and shot in a 50 target day with 2 events.

Event 1 - 60 target known rise using 6 auto clay throwers - Lesarie Redfern 59, Dennis Picker 55, Ben Smith 51, David Abernethy 49, David Tanks 48, Brian Drabsch 47 and John Tomlinson 35.

Our next shot is at 1pm Saturday.

Event 2 - 20 target twin



**RAILWAY BOWLS:** Graham Thomson having a bowl at the Parkes Railway Bowling Club last month. **Photo: Jeany Kingham**

rise - David Tanks 20, Laurie Redfern & Dennis Picker 19, John Tomlinson, David Abernethy & Brian Drabsch 16 & Ben Smith 15.

Our next shot is at 1pm Saturday.

**Men's bowls**

A bit of a quiet week with the wet weather. On Saturday only four brews socials played. Allan Curteis & Gene Rapp v George Gresshalgh & Allan Affleck did battle. Allan and

George winning 16-9.

The Zone AGM was held at Mooling Club with Ricky Boehm being made a life member and standing down from the secretary's job due to ill health.

This was filled by Leo Stinson in a temporary measure. This position will be held by two people in the future when a suitable person is found to assist Leo.

On Wednesday we had 14 bowlers attend on a day that looked terrible but turned out very nice. Winners were Pat Cooney & Allan Curteis W 17-16.

Runners up Mick Furney, Marty Fitzpatrick & Allan Affleck W 16-3. Margins were 2,3 & 16. Marble 19 come out so next week's jackpot will be \$32. Stupans haircut went to Col Boehm.

The draw is out for the zone pairs and can be found on the board.

**Women's Bowls**

As our burys/guys trimmed the new 'sails' for their optimum performance, Skipper Marilyn led an eager crew of 24 bowlers out onto a perfect surface.

Three match-ups of Club Pairs and two social triples games began as the fickle cross wind blew. Our eyes turned to the wind socks for guidance.

Cherie Frame/Gleenda Carty enjoyed a neck and neck race against Betsy Johnstone/Brenda Davies. Betsy n Brenda made a sneaky lacking move with 3 ends to go to sail away with the win. 15-10.

Lea Orr/Lyn Ryan persisted in the conditions, making a jibing move at the 15th end, leaving Maureen Miller/Joan Simpson in their wake. 14-10.

Seasoned sailors, Kim Evans/Jan McPhee, took a strong hold of the helm at the 7th end, and as a result Elaine Miller/Lorraine Baker watched them cross the line from a distance. 21-13.

Semi-finals match-ups for next Tuesday:

Heather Harvey/Maree Grant vs Betsy Johnstone/Brenda Davies

Kim Evans/Jan McPhee vs Lea Orr/Lyn Ryan.

In the social triples, the crews displayed constant communication among themselves, tossing their bows leeward and windward as the breezy conditions prevailed. A few ripples and waves were cursed.

Carol Reed/Laurie Keane/Rhona West didn't allow Helen Heraghty/Chris Curtis/Merilyn Rodgers even one turn at the helm, racing away to a 27-10 victory.

Similarly, Kay Craft/Frances Charlton/Di Howell kept a tight hold on the lines, taking the win over Chris Cox/Valemai Westcott/Eileen Bradley. 18-7.

The winners draw saw Brenda & Betsy tossing their caps high. Carol, Laurie & Audrey were pleased to win their turn raffle in the 100's club.

Nominations for Club Triples are open. Close August 25.

We shall celebrate birthdays, great and small, on August 25.

Next week, August 10, trading table and raffle. Contributions to the value of \$10 please. To play social bowls, please call 6862 1446, between 9 and 9.30am, play at 10am. Social roster: Chris Cox, Lea Orr.

Northparkes Mines  
A century of mining together



## CMOC-Northparkes Mines

### Notification of project proposal and registration of interest

CMOC-Northparkes Mines ('The Proponent') proposes a resources extraction pit and associated works at the following locations:  
29/DP750168 37/DP750168 A/DP395425 45/DP753998 46/DP753998

This project adheres with requirements under section 7 of the Wiradjuri Relationship Agreement with Wiradjuri Council of Elders and Peak Hill Local Aboriginal Land Council. The project will be assessed under the *Environmental Planning and Assessment Act 1979* as a State Significant Development and will not require an Aboriginal Heritage Impact Permit under the *National Parks and Wildlife Act 1974*. It may be possible that archaeological investigations under the provision of the *National Parks and Wildlife Act 1974* may be required during the preparation of an Environmental Impact Statement.

This is an invitation for Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal object (s) and/or place (s) in the area of the proposed project, to register an interest in a process of community consultation with the proposed applicant regarding the proposed activity.

Please register your interest by contacting:  
Ali Standen, Community and External Relations Advisor  
ali.standen@au.cmoc.com • (02) 6861 3621  
PO Box 995, Parkes NSW 2870

Registrations close 5pm 11 September 2020

Consultation guidelines require the proponent to provide details of registered Aboriginal parties to the Department of Planning, Industry and Environment and the Peak Hill Local Aboriginal Land Council. Please inform the proponent at registration if you do not wish for your details to be released.

## Appendix 1 Figure 3: Stage 1 Heritage NSW response identifying stakeholders



Reference: DOC20/682414

Ms Ali Standen  
Northparkes Mines  
[Ali.standen@au.cmoc.com](mailto:Ali.standen@au.cmoc.com)

**RE: Request for information on Aboriginal stakeholders for proposed resource extraction pit and associated works northwest of Parkes**

Dear Ms Standen

Thank you for your letter of 14 Aug 2020 about Aboriginal cultural heritage consultation for the above matter within the Parkes local government area. I appreciate the opportunity to provide input and apologise for the delay in responding.

Please find enclosed a list of known Aboriginal parties for Parkes local government area (Attachment 1) that we consider likely to have an interest in the proposal. Note this is not an exhaustive list of all interested Aboriginal parties. Receipt of this list does not remove the requirement for a proponent/consultant to advertise the proposal in the local print media and contact other bodies and community groups seeking interested Aboriginal parties, in accordance with the 'Aboriginal cultural heritage consultation requirements for proponents 2010' (the CRs).

We would also like to take this opportunity to remind the proponent and consultant to ensure that consultation is fair, equitable and transparent. If the Aboriginal parties express concern or are opposed to parts of or the entire project, we expect that evidence will be provided to demonstrate the efforts made to find common ground between the opponents and the proponent.

If you have any questions about this advice, please do not hesitate to contact me via [rosalie.neve@environment.nsw.gov.au](mailto:rosalie.neve@environment.nsw.gov.au) or 02 6659 8221.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Rosalie Neve', with a small arrow pointing to the name below.

**Rosalie Neve**  
**Aboriginal Heritage Planning Officer**  
**Aboriginal Cultural Heritage Regulation - Northern**  
**Heritage NSW**  
**Department of Premier and Cabinet**

28 August 2020

Level 4, 10 Valentine Ave Parramatta NSW 2150 ■ Locked Bag 5020 Parramatta NSW 2124  
P: 02 9873 8500 ■ E: [heritagemailbox@environment.nsw.gov.au](mailto:heritagemailbox@environment.nsw.gov.au)

Attachment 1: Aboriginal Cultural Heritage Regulation North- Aboriginal Stakeholder List for Parke LGA

| Name   | Title                                       | Address | Email | Phone |
|--|---|---------|-------|-------|
| Binjang<br>Wellington<br>Wiradjuri<br>heritage Survey                  | Jamie Grey                                  |         |       |       |
| Bogan River<br>Peak Hill<br>Wiradjuri<br>Aboriginal<br>Corporation     | Chairperson                                 |         |       |       |
| Bulgandramine<br>Youth<br>Development<br>Aboriginal<br>Corporation     | Chairperson                                 |         |       |       |
| Condobolin<br>LALC   | Chairperson                                 |         |       |       |
| Corroboree<br>Aboriginal<br>Corporation                                | Marilyn<br>Carroll-<br>Johnson,<br>Director |         |       |       |
| Cowra LALC   | Chairperson                                 |         |       |       |
| Eva Coe  |   |         |       |       |
| Little Burning<br>Mountain<br>Aboriginal<br>Corporation                | Chairperson                                 |         |       |       |
| Mooka  | Neville<br>Williams                         |         |       |       |
| Peak Hill LALC   | Chairperson                                 |         |       |       |
| Peter Peckham  |   |         |       |       |
| Trevor<br>Robinson   |   |         |       |       |
| Warramunga<br>Community<br>Advancement<br>Co-opwerative<br>Society LTD | Chairperson                                 |         |       |       |
| Wiradjuri<br>Council of<br>Elders                                      | Robert Clegg                                |         |       |       |

## Appendix 1 Figure 4: Stage 2/3 WEC meeting agenda

**Northparkes Mines**  
A century of mining together

PO Box 995 Parkes NSW 2870 Australia  
T +61 (0) 2 6861 3533  
ABN 17 164 997 317  
www.northparkes.com



### Memorandum – WEC Meeting agenda and overview

|             |  |
|-------------|--|
| <b>Date</b> | Tuesday 26 October 2021  |
| <b>To</b>   | Rob Clegg – WCE<br>Ralph Smith – WCE<br>Russell Dunn – WCE<br>Valda Keed – PHLALC<br>Keisha Keed – PHLALC<br>Stacey Kelly – Northparkes<br>Chris Higgins – Northparkes |
| <b>CC</b>   |  |
| <b>From</b> | Gabe Albert – Northparkes  |

Hi everyone,

For our next meeting, Northparkes would like to provide an update on the upcoming projects and work going forward for the remainder of the year.

Over the last few months Northparkes has been working with the Department of Planning on Modification 6 to our current Project Approval. Previously we have presented that there will be two modifications, however we have recently combined these and there will be only one Modification submitted.

A methodology for the Modification is attached for your review.

What does this mean? Only one modification will go through the department for approval and this will cover E31 and E31N Open Pits, a proposed Portal for the E22 Block Cave and a buttress for the East Embankment of TSF2. We will provide a presentation at the meeting to go through the key updates/points of change.

On the following page, you will see the proposed the agenda items for the next meeting.

Ozark will be present for the first part of the meeting to assist with covering the Modification 6 survey methodology, the E44 survey outcomes and other upcoming work. Following this we will break, and the meeting will continue with just the WEC committee members present.

I would welcome and other agenda items be sent to me by Friday 22 October for review.

CMOC Mining Services Pty Limited (ABN 32 165 717 895) as agent severally for and on behalf of the Northparkes Joint Venture, an unincorporated joint venture between CMOC Mining Pty Limited (ABN 17 164 997 317) (80%), Sumitomo Metal Mining Oceania Pty Ltd (ABN 81 059 761 125) (13.3%) and SC Mineral Resources Pty Ltd (ABN 84 058 323 372) (6.7%) operating under the business name of Northparkes Mines.

**Proposed Agenda**

| No | Agenda Item  | Resp. |
|----|--|-------|
| 1. | E44 Outcomes and review / close out of work  | CH    |
| 2. | Project Modification 6 – review methodology and timing for survey  | CH    |
| 3. | Upcoming work:<br>E22 Portal<br>TSF2 Eastern Embankment<br>TSF2 Western Wall / Infill Extension new embankment<br>Rocklands TSF Agricultural Assessment<br>E44 Haul Route Survey | CH    |
| 4. | <del>Northparkes</del> Presentation Update including<br>-rate review<br>-10 Year Celebration and recognition   | GA    |
| 5. | AOB  | All   |
| 6. | Close out catch up and afternoon tea with WEC field officers (if in Peak Hill)   | All   |

I look forward to seeing you all soon again.

Remember, as we are meeting face to face we will need to ensure masks are worn and being at the Services Club everyone is required to be double vaccinated – you will provide proof when entering the premises.

Many thanks  
Gabe

**Gabe Albert**

Community and External Relations Advisor

~~Northparkes~~  
CMOC-Northparkes Mines  
PO Box 995, Parkes NSW 2870, Australia

T: 02 6861 3533 | M: +61 400 320 543

E: [gabe.albert@au.cmoc.com](mailto:gabe.albert@au.cmoc.com) W: <http://www.northparkes.com>



## Appendix 1 Figure 5: Stage 2/3 RAP feedback

**From:** Corroboree Aboriginal Corporation  
**Sent:** Monday, 1 November 2021 11:38 AM  
**To:** Albert, Gabe (NPM) <[Gabe.Albert@au.cmoc.com](mailto:Gabe.Albert@au.cmoc.com)>  
**Subject:** Re: Modification 6 – Aboriginal Cultural Heritage Assessment Methodology

**CAUTION:** This email originated from outside the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hi Gabe  
We agree with methodology.

Kind regards

[Redacted]

Corroboree Aboriginal Corporation

[Redacted]

On 1 Nov 2021, at 9:13 am, Albert, Gabe (NPM) <[Gabe.Albert@au.cmoc.com](mailto:Gabe.Albert@au.cmoc.com)> wrote:

Good morning,

Could you kindly provide feedback regarding the methodology sent out as per below email.

Please don't hesitate to contact me if you require any further information.

Many thanks  
Gabe

**Gabe Albert**  
Community and External Relations Advisor

## APPENDIX 2: AHIMS SEARCH RESULTS

|  <b>Office of Environment &amp; Heritage</b> <span style="float: right;">Your Ref/PO Number : NPM Surface Water 2<br/>Client Service ID : 585982</span> |   |                  |   |         |          |           |             |                                     |            |               |                |
|--|---|------------------|---|---------|----------|-----------|-------------|-------------------------------------|------------|---------------|----------------|
| <b>AHIMS Web Services (AWS)</b><br>Extensive search - Site list report   |   |                  |   |         |          |           |             |                                     |            |               |                |
| SiteID   | SiteName                                    | Datum            | Zone  | Easting | Northing | Context   | Site Status | Site Features                       | Site Types | Reports       |                |
| 35-6-0221  | NPM-IP16                                    | GDA              | 55  | 599063  | 6355223  | Open site | Valid       | Artefact :-                         |            |               |                |
|  | <a href="#">Contact</a>                     | <b>Recorders</b> | OzArk Environmental and Heritage Management, Mr. Harrison Rochford                    |         |          |           |             |                                     |            |               | <b>Permits</b> |
| 35-6-0222  | NPM-IP17                                    | GDA              | 55  | 599291  | 6355034  | Open site | Valid       | Artefact :-                         |            |               |                |
|  | <a href="#">Contact</a>                     | <b>Recorders</b> | OzArk Environmental and Heritage Management, Mr. Harrison Rochford                    |         |          |           |             |                                     |            |               | <b>Permits</b> |
| 35-6-0223  | NPM-IP18                                    | GDA              | 55  | 599348  | 6354883  | Open site | Valid       | Artefact :-                         |            |               |                |
|  | <a href="#">Contact</a>                     | <b>Recorders</b> | OzArk Environmental and Heritage Management, Mr. Harrison Rochford                    |         |          |           |             |                                     |            |               | <b>Permits</b> |
| 35-6-0224  | NPM-IP19                                    | GDA              | 55  | 599518  | 6354585  | Open site | Valid       | Artefact :-                         |            |               |                |
|  | <a href="#">Contact</a>                     | <b>Recorders</b> | OzArk Environmental and Heritage Management, Mr. Harrison Rochford                    |         |          |           |             |                                     |            |               | <b>Permits</b> |
| 35-6-0225  | NPM-IP20                                    | GDA              | 55  | 599027  | 6354969  | Open site | Valid       | Artefact :-                         |            |               |                |
|  | <a href="#">Contact</a>                     | <b>Recorders</b> | OzArk Environmental and Heritage Management, Mr. Harrison Rochford                    |         |          |           |             |                                     |            |               | <b>Permits</b> |
| 35-6-0226  | NPM-OS5                                     | GDA              | 55  | 598688  | 6355850  | Open site | Valid       | Artefact :-                         |            |               |                |
|  | <a href="#">Contact</a>                     | <b>Recorders</b> | OzArk Environmental and Heritage Management, Mr. Harrison Rochford                    |         |          |           |             |                                     |            |               | <b>Permits</b> |
| 35-6-0227  | NPM-OS6                                     | GDA              | 55  | 599227  | 6354613  | Open site | Valid       | Artefact :-                         |            |               |                |
|  | <a href="#">Contact</a>                     | <b>Recorders</b> | OzArk Environmental and Heritage Management, Mr. Harrison Rochford                    |         |          |           |             |                                     |            |               | <b>Permits</b> |
| 35-6-0211  | NPM-IP10                                    | GDA              | 55  | 598304  | 6355798  | Open site | Valid       | Artefact :-                         |            |               |                |
|  | <a href="#">Contact</a>                     | <b>Recorders</b> | OzArk Environmental and Heritage Management, Miss Philippa Sokol                      |         |          |           |             |                                     |            |               | <b>Permits</b> |
| 35-6-0152  | NPM-Zone1-OS1 (duplicate copy of 35-6-0038) | GDA              | 55  | 597876  | 6355532  | Open site | Destroyed   | Artefact : 13                       |            |               |                |
|  | <a href="#">Contact</a>                     | <b>Recorders</b> | OzArk Environmental and Heritage Management, OzArk Environmental and Heritage         |         |          |           |             |                                     |            |               | <b>Permits</b> |
| 35-6-0153  | A1-Alectown                                 | AGD              | 55  | 597365  | 6355499  | Open site | Valid       | Artefact : 16                       |            | 101519,101520 |                |
|  | <a href="#">Contact</a>                     | <b>Recorders</b> | Robert Paton  |         |          |           |             |                                     |            |               | <b>Permits</b> |
| 35-6-0154  | A2-Alectown                                 | AGD              | 55  | 597177  | 6356740  | Open site | Valid       | Artefact : 1                        |            | 101519,101520 |                |
|  | <a href="#">Contact</a>                     | <b>Recorders</b> | Robert Paton  |         |          |           |             |                                     |            |               | <b>Permits</b> |
| 35-6-0155  | A3-Alectown                                 | GDA              | 55  | 598913  | 6356966  | Open site | Destroyed   | Artefact : 1                        |            | 101519,101520 |                |
|  | <a href="#">Contact</a>                     | <b>Recorders</b> | Robert Paton, OzArk Environmental and Heritage Management, Mr. Harrison Rochford      |         |          |           |             |                                     |            |               | <b>Permits</b> |
| 35-6-0156  | F1-Alectown                                 | GDA              | 55  | 598122  | 6357236  | Open site | Valid       | Modified Tree (Carved or Scarred) : |            | 101519,101520 |                |
|  | <a href="#">Contact</a>                     | <b>Recorders</b> | Mr. John Appleton, OzArk Environmental and Heritage Management, Mr. Harrison Rochford |         |          |           |             |                                     |            |               | <b>Permits</b> |
| 35-6-0157  | F2-Alectown                                 | GDA              | 55  | 598093  | 6356718  | Open site | Destroyed   | Artefact : 1                        |            | 101519,101520 |                |
|  | <a href="#">Contact</a>                     | <b>Recorders</b> | Mr. John Appleton, OzArk Environmental and Heritage Management, Mr. Harrison Rochford |         |          |           |             |                                     |            |               | <b>Permits</b> |
| 35-6-0158  | F3-Alectown                                 | GDA              | 55  | 597283  | 6356117  | Open site | Valid       | Artefact : 1                        |            | 101519,101520 |                |
|  | <a href="#">Contact</a>                     | <b>Recorders</b> | Mr. John Appleton   |         |          |           |             |                                     |            |               | <b>Permits</b> |

Report generated by AHIMS Web Service on 26/04/2021 for Harrison Rochford for the following area at Datum: GDA, Zone : 55, Eastings : 591975 - 604640, Northings : 6349003 - 6364978 with a Buffer of 0 meters. Additional Info : DD. Number of Aboriginal sites and Aboriginal objects found is 81  
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|  <b>Office of Environment &amp; Heritage</b> <span style="float: right;">Your Ref/PO Number : NPM Surface Water 2<br/>Client Service ID : 585982</span> |                         |                  |   |         |          |           |             |               |                |               |                |
|--|-------------------------|------------------|---|---------|----------|-----------|-------------|---------------|----------------|---------------|----------------|
| <b>AHIMS Web Services (AWS)</b><br>Extensive search - Site list report   |                         |                  |   |         |          |           |             |               |                |               |                |
| SiteID   | SiteName                | Datum            | Zone  | Easting | Northing | Context   | Site Status | Site Features | Site Types     | Reports       |                |
| 35-6-0159  | P4-Alectown             | GDA              | 55  | 598014  | 6356014  | Open site | Destroyed   | Artefact : 1  |                | 101519,101520 |                |
|  | <a href="#">Contact</a> | <b>Recorders</b> | Mr. John Appleton, OzArk Environmental and Heritage Management, Mr. Harrison Rochford |         |          |           |             |               |                |               | <b>Permits</b> |
| 35-6-0198  | NPMAL-IP1               | GDA              | 55  | 598711  | 6355153  | Open site | Valid       | Artefact :-   |                |               |                |
|  | <a href="#">Contact</a> | <b>Recorders</b> | OzArk Environmental and Heritage Management, Miss Stephanie Rusden                    |         |          |           |             |               |                |               | <b>Permits</b> |
| 35-6-0199  | NPMA2-IP2               | GDA              | 55  | 598292  | 6355868  | Open site | Valid       | Artefact :-   |                |               |                |
|  | <a href="#">Contact</a> | <b>Recorders</b> | OzArk Environmental and Heritage Management, Miss Stephanie Rusden                    |         |          |           |             |               |                |               | <b>Permits</b> |
| 35-6-0250  | NPM CHW 2               | GDA              | 55  | 597771  | 6355635  | Open site | Destroyed   | Artefact :-   |                |               |                |
|  | <a href="#">Contact</a> | <b>Recorders</b> | OzArk Environmental and Heritage Management, OzArk Environmental and Heritage         |         |          |           |             |               |                |               | <b>Permits</b> |
| 35-6-0251  | NPM CHW 3               | GDA              | 55  | 597249  | 6359230  | Open site | Destroyed   | Artefact :-   |                |               |                |
|  | <a href="#">Contact</a> | <b>Recorders</b> | OzArk Environmental and Heritage Management, OzArk Environmental and Heritage         |         |          |           |             |               |                |               | <b>Permits</b> |
| 35-6-0252  | NPM CHW 4               | GDA              | 55  | 598045  | 6359703  | Open site | Destroyed   | Artefact :-   |                |               |                |
|  | <a href="#">Contact</a> | <b>Recorders</b> | OzArk Environmental and Heritage Management, OzArk Environmental and Heritage         |         |          |           |             |               |                |               | <b>Permits</b> |
| 35-6-0253  | NPM CHW 6               | GDA              | 55  | 599243  | 6356145  | Open site | Destroyed   | Artefact :-   |                |               |                |
|  | <a href="#">Contact</a> | <b>Recorders</b> | OzArk Environmental and Heritage Management, OzArk Environmental and Heritage         |         |          |           |             |               |                |               | <b>Permits</b> |
| 35-6-0254  | NPM CHW 7               | GDA              | 55  | 598995  | 6356049  | Open site | Destroyed   | Artefact :-   |                |               |                |
|  | <a href="#">Contact</a> | <b>Recorders</b> | OzArk Environmental and Heritage Management, OzArk Environmental and Heritage         |         |          |           |             |               |                |               | <b>Permits</b> |
| 35-6-0255  | NPM CHW 8               | GDA              | 55  | 601300  | 6357381  | Open site | Destroyed   | Artefact :-   |                |               |                |
|  | <a href="#">Contact</a> | <b>Recorders</b> | OzArk Environmental and Heritage Management, OzArk Environmental and Heritage         |         |          |           |             |               |                |               | <b>Permits</b> |
| 35-6-0256  | NPM CHW 5               | GDA              | 55  | 598045  | 6359703  | Open site | Destroyed   | Artefact :-   |                |               |                |
|  | <a href="#">Contact</a> | <b>Recorders</b> | OzArk Environmental and Heritage Management, OzArk Environmental and Heritage         |         |          |           |             |               |                |               | <b>Permits</b> |
| 35-6-0257  | NPM CHW 1               | GDA              | 55  | 597755  | 6355665  | Open site | Destroyed   | Artefact :-   |                |               |                |
|  | <a href="#">Contact</a> | <b>Recorders</b> | OzArk Environmental and Heritage Management, OzArk Environmental and Heritage         |         |          |           |             |               |                |               | <b>Permits</b> |
| 35-6-0029  | Site 1:Alectown:        | AGD              | 55  | 595700  | 6358500  | Open site | Valid       | Artefact :-   | Open Camp Site | 1162,98332    |                |
|  | <a href="#">Contact</a> | <b>Recorders</b> | Doctor, Tim Stone   |         |          |           |             |               |                |               | <b>Permits</b> |
| 35-6-0030  | Site 2:Alectown:        | AGD              | 55  | 596000  | 6358200  | Open site | Valid       | Artefact :-   | Open Camp Site | 1162,98332    |                |
|  | <a href="#">Contact</a> | <b>Recorders</b> | Doctor, Tim Stone   |         |          |           |             |               |                |               | <b>Permits</b> |
| 35-6-0031  | Site 3:Alectown:        | AGD              | 55  | 596200  | 6356500  | Open site | Valid       | Artefact :-   | Open Camp Site | 1162,98332    |                |
|  | <a href="#">Contact</a> | <b>Recorders</b> | Doctor, Tim Stone   |         |          |           |             |               |                |               | <b>Permits</b> |
| 35-6-0032  | Site 3:Alectown:        | AGD              | 55  | 595800  | 6356500  | Open site | Valid       | Artefact :-   | Open Camp Site | 1162,98332    |                |
|  | <a href="#">Contact</a> | <b>Recorders</b> | Doctor, Tim Stone   |         |          |           |             |               |                |               | <b>Permits</b> |
| 35-6-0033  | Site 5:Alectown:        | AGD              | 55  | 595700  | 6356700  | Open site | Valid       | Artefact :-   | Open Camp Site | 1162,98332    |                |
|  | <a href="#">Contact</a> | <b>Recorders</b> | Doctor, Tim Stone   |         |          |           |             |               |                |               | <b>Permits</b> |

Report generated by AHIMS Web Service on 26/04/2021 for Harrison Rochford for the following area at Datum: GDA, Zone : 55, Eastings : 591975 - 604640, Northings : 6349003 - 6364978 with a Buffer of 0 meters. Additional Info : DD. Number of Aboriginal sites and Aboriginal objects found is 81  
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| SiteID    | SiteName            | Datum | Zone | Easting   | Northing | Context   | Site Status | Site Features                                    | Site Types                   | Reports    |
|-----------|---------------------|-------|------|---|----------|-----------|-------------|--|------------------------------|------------|
| 35-6-0034 | Site 6:Allectown:   | AGD   | 55   | 597700  | 6352600  | Open site | Valid       | Artefact :- Modified Tree (Carved or Scarred) :- | Open Camp Site, Scarred Tree | 1162.98332 |
|           | <b>Contact</b>      |       |      |   |          |           |             |  |                              |            |
|           | <b>Recorders</b>    |       |      | Doctor, Tim Stone   |          |           |             |  |                              |            |
| 35-6-0035 | Site 7:Allectown:   | AGD   | 55   | 597400  | 6352800  | Open site | Valid       | Artefact :-                                      | Open Camp Site               | 1162.98332 |
|           | <b>Contact</b>      |       |      |   |          |           |             |  |                              |            |
|           | <b>Recorders</b>    |       |      | Doctor, Tim Stone   |          |           |             |  |                              |            |
| 35-6-0036 | Site 8:Allectown:   | AGD   | 55   | 597000  | 6356100  | Open site | Valid       | Artefact :-                                      | Open Camp Site               | 1162.98332 |
|           | <b>Contact</b>      |       |      |   |          |           |             |  |                              |            |
|           | <b>Recorders</b>    |       |      | Doctor, Tim Stone   |          |           |             |  |                              |            |
| 35-6-0037 | Site 9:Allectown:   | AGD   | 55   | 597200  | 6355800  | Open site | Valid       | Artefact :-                                      | Open Camp Site               | 1162.98332 |
|           | <b>Contact</b>      |       |      |   |          |           |             |  |                              |            |
|           | <b>Recorders</b>    |       |      | Doctor, Tim Stone   |          |           |             |  |                              |            |
| 35-6-0038 | Site 10 (Allectown) | AGD   | 55   | 597600  | 6355500  | Open site | Valid       | Artefact :-                                      | Open Camp Site               | 1162.98332 |
|           | <b>Contact</b>      |       |      |   |          |           |             |  |                              |            |
|           | <b>Recorders</b>    |       |      | Doctor, Tim Stone   |          |           |             |  |                              |            |
| 35-6-0039 | Site 11:Allectown:  | AGD   | 55   | 597200  | 6355400  | Open site | Valid       | Artefact :-                                      | Open Camp Site               | 1162.98332 |
|           | <b>Contact</b>      |       |      |   |          |           |             |  |                              |            |
|           | <b>Recorders</b>    |       |      | Doctor, Tim Stone   |          |           |             |  |                              |            |
| 35-6-0040 | Site 12:Allectown:  | AGD   | 55   | 596800  | 6355800  | Open site | Valid       | Artefact :-                                      | Open Camp Site               | 1162.98332 |
|           | <b>Contact</b>      |       |      |   |          |           |             |  |                              |            |
|           | <b>Recorders</b>    |       |      | Doctor, Tim Stone   |          |           |             |  |                              |            |
| 35-6-0041 | Site 13:Allectown:  | AGD   | 55   | 596400  | 6355700  | Open site | Valid       | Artefact :-                                      | Open Camp Site               | 1162.98332 |
|           | <b>Contact</b>      |       |      |   |          |           |             |  |                              |            |
|           | <b>Recorders</b>    |       |      | Doctor, Tim Stone   |          |           |             |  |                              |            |
| 35-6-0042 | Site 14:Allectown:  | GDA   | 55   | 596688  | 6353969  | Open site | Valid       | Artefact :-                                      | Open Camp Site               | 1162.98332 |
|           | <b>Contact</b>      |       |      |   |          |           |             |  |                              |            |
|           | <b>Recorders</b>    |       |      | OzArk Environmental and Heritage Management, Doctor, Tim Stone, Mr Harrison Ro  |          |           |             |  |                              |            |
| 35-6-0043 | Site 16:Allectown:  | AGD   | 55   | 598400  | 6353400  | Open site | Valid       | Artefact :-                                      | Open Camp Site               | 1162.98332 |
|           | <b>Contact</b>      |       |      |   |          |           |             |  |                              |            |
|           | <b>Recorders</b>    |       |      | Doctor, Tim Stone   |          |           |             |  |                              |            |
| 35-6-0160 | NPM-ST1             | GDA   | 55   | 597826  | 6359342  | Open site | Destroyed   | Modified Tree (Carved or Scarred) : 1            |                              |            |
|           | <b>Contact</b>      |       |      |   |          |           |             |  |                              |            |
|           | <b>Recorders</b>    |       |      | Doctor, Jodie Benton, OzArk Environmental and Heritage Management, Mr. Harrison |          |           |             |  |                              |            |
| 35-6-0228 | NPM-IF21            | GDA   | 55   | 599063  | 6354825  | Open site | Valid       | Artefact :-                                      |                              |            |
|           | <b>Contact</b>      |       |      |   |          |           |             |  |                              |            |
|           | <b>Recorders</b>    |       |      | OzArk Environmental and Heritage Management, Mr. Harrison Rochford              |          |           |             |  |                              |            |
| 35-6-0229 | NPM-O89             | GDA   | 55   | 597332  | 6355957  | Open site | Valid       | Artefact :-                                      |                              |            |
|           | <b>Contact</b>      |       |      |   |          |           |             |  |                              |            |
|           | <b>Recorders</b>    |       |      | OzArk Environmental and Heritage Management, Mr. Harrison Rochford              |          |           |             |  |                              |            |
| 35-6-0230 | NPM-O88             | GDA   | 55   | 598823  | 6354479  | Open site | Valid       | Artefact :-                                      |                              |            |
|           | <b>Contact</b>      |       |      |   |          |           |             |  |                              |            |
|           | <b>Recorders</b>    |       |      | OzArk Environmental and Heritage Management, Mr. Harrison Rochford              |          |           |             |  |                              |            |
| 35-6-0231 | NPM-O87             | GDA   | 55   | 598973  | 6354736  | Open site | Valid       | Artefact :-                                      |                              |            |
|           | <b>Contact</b>      |       |      |   |          |           |             |  |                              |            |
|           | <b>Recorders</b>    |       |      | OzArk Environmental and Heritage Management, Mr. Harrison Rochford              |          |           |             |  |                              |            |
| 35-6-0232 | NPM-IF27            | GDA   | 55   | 598240  | 6354130  | Open site | Valid       | Artefact :-                                      |                              |            |
|           | <b>Contact</b>      |       |      |   |          |           |             |  |                              |            |
|           | <b>Recorders</b>    |       |      | OzArk Environmental and Heritage Management, Mr. Harrison Rochford              |          |           |             |  |                              |            |

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| SiteID    | SiteName         | Datum | Zone | Easting  | Northing | Context   | Site Status | Site Features | Site Types | Reports |
|-----------|------------------|-------|------|--|----------|-----------|-------------|---------------|------------|---------|
| 35-6-0233 | NPM-IF26         | GDA   | 55   | 598602   | 6354278  | Open site | Valid       | Artefact :-   |            |         |
|           | <b>Contact</b>   |       |      |  |          |           |             |               |            |         |
|           | <b>Recorders</b> |       |      | OzArk Environmental and Heritage Management, Mr. Harrison Rochford |          |           |             |               |            |         |
| 35-6-0234 | NPM-IF25         | GDA   | 55   | 598602   | 6354278  | Open site | Valid       | Artefact :-   |            |         |
|           | <b>Contact</b>   |       |      |  |          |           |             |               |            |         |
|           | <b>Recorders</b> |       |      | OzArk Environmental and Heritage Management, Mr. Harrison Rochford |          |           |             |               |            |         |
| 35-6-0235 | NPM-IF23         | GDA   | 55   | 598876   | 6354849  | Open site | Valid       | Artefact :-   |            |         |
|           | <b>Contact</b>   |       |      |  |          |           |             |               |            |         |
|           | <b>Recorders</b> |       |      | OzArk Environmental and Heritage Management, Mr. Harrison Rochford |          |           |             |               |            |         |
| 35-6-0236 | NPM-IF24         | GDA   | 55   | 598902   | 6354825  | Open site | Valid       | Artefact :-   |            |         |
|           | <b>Contact</b>   |       |      |  |          |           |             |               |            |         |
|           | <b>Recorders</b> |       |      | OzArk Environmental and Heritage Management, Mr. Harrison Rochford |          |           |             |               |            |         |
| 35-6-0237 | NPM-IF22         | GDA   | 55   | 598901   | 6354825  | Open site | Valid       | Artefact :-   |            |         |
|           | <b>Contact</b>   |       |      |  |          |           |             |               |            |         |
|           | <b>Recorders</b> |       |      | OzArk Environmental and Heritage Management, Mr. Harrison Rochford |          |           |             |               |            |         |
| 35-6-0238 | NPM-IF37         | GDA   | 55   | 600769   | 6355521  | Open site | Valid       | Artefact :-   |            |         |
|           | <b>Contact</b>   |       |      |  |          |           |             |               |            |         |
|           | <b>Recorders</b> |       |      | OzArk Environmental and Heritage Management, Mr. Harrison Rochford |          |           |             |               |            |         |
| 35-6-0239 | NPM-IF38         | GDA   | 55   | 600621   | 6355229  | Open site | Valid       | Artefact :-   |            |         |
|           | <b>Contact</b>   |       |      |  |          |           |             |               |            |         |
|           | <b>Recorders</b> |       |      | OzArk Environmental and Heritage Management, Mr. Harrison Rochford |          |           |             |               |            |         |
| 35-6-0240 | NPM-OS10         | GDA   | 55   | 600737   | 6354950  | Open site | Valid       | Artefact :-   |            |         |
|           | <b>Contact</b>   |       |      |  |          |           |             |               |            |         |
|           | <b>Recorders</b> |       |      | OzArk Environmental and Heritage Management, Mr. Harrison Rochford |          |           |             |               |            |         |
| 35-6-0241 | NPM-IF36         | GDA   | 55   | 600784   | 6355646  | Open site | Valid       | Artefact :-   |            |         |
|           | <b>Contact</b>   |       |      |  |          |           |             |               |            |         |
|           | <b>Recorders</b> |       |      | OzArk Environmental and Heritage Management, Mr. Harrison Rochford |          |           |             |               |            |         |
| 35-6-0242 | NPM-IF35         | GDA   | 55   | 601551   | 6354483  | Open site | Valid       | Artefact :-   |            |         |
|           | <b>Contact</b>   |       |      |  |          |           |             |               |            |         |
|           | <b>Recorders</b> |       |      | OzArk Environmental and Heritage Management, Mr. Harrison Rochford |          |           |             |               |            |         |
| 35-6-0243 | NPM-IF34         | GDA   | 55   | 601352   | 6354582  | Open site | Valid       | Artefact :-   |            |         |
|           | <b>Contact</b>   |       |      |  |          |           |             |               |            |         |
|           | <b>Recorders</b> |       |      | OzArk Environmental and Heritage Management, Mr. Harrison Rochford |          |           |             |               |            |         |
| 35-6-0244 | NPM-IF33         | GDA   | 55   | 601100   | 6354673  | Open site | Valid       | Artefact :-   |            |         |
|           | <b>Contact</b>   |       |      |  |          |           |             |               |            |         |
|           | <b>Recorders</b> |       |      | OzArk Environmental and Heritage Management, Mr. Harrison Rochford |          |           |             |               |            |         |
| 35-6-0245 | NPM-IF31         | GDA   | 55   | 599802   | 6354823  | Open site | Valid       | Artefact :-   |            |         |
|           | <b>Contact</b>   |       |      |  |          |           |             |               |            |         |
|           | <b>Recorders</b> |       |      | OzArk Environmental and Heritage Management, Mr. Harrison Rochford |          |           |             |               |            |         |
| 35-6-0246 | NPM-IF32         | GDA   | 55   | 600175   | 6354677  | Open site | Valid       | Artefact :-   |            |         |
|           | <b>Contact</b>   |       |      |  |          |           |             |               |            |         |
|           | <b>Recorders</b> |       |      | OzArk Environmental and Heritage Management, Mr. Harrison Rochford |          |           |             |               |            |         |
| 35-6-0247 | NPM-IF30         | GDA   | 55   | 601466   | 6354896  | Open site | Valid       | Artefact :-   |            |         |
|           | <b>Contact</b>   |       |      |  |          |           |             |               |            |         |
|           | <b>Recorders</b> |       |      | OzArk Environmental and Heritage Management, Mr. Harrison Rochford |          |           |             |               |            |         |
| 35-6-0248 | NPM-IF29         | GDA   | 55   | 601349   | 6355003  | Open site | Valid       | Artefact :-   |            |         |
|           | <b>Contact</b>   |       |      |  |          |           |             |               |            |         |
|           | <b>Recorders</b> |       |      | OzArk Environmental and Heritage Management, Mr. Harrison Rochford |          |           |             |               |            |         |
| 35-6-0249 | NPM-IF28         | GDA   | 55   | 600938   | 6355039  | Open site | Valid       | Artefact :-   |            |         |
|           | <b>Contact</b>   |       |      |  |          |           |             |               |            |         |
|           | <b>Recorders</b> |       |      | OzArk Environmental and Heritage Management, Mr. Harrison Rochford |          |           |             |               |            |         |

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## AHIMS Web Services (AWS)

### Extensive search - Site list report

| SiteID    | SiteName                | Datum            | Zone | Eastings                                    | Northing                         | Context   | SiteStatus | SiteFeatures | SiteTypes | Reports        |
|-----------|-------------------------|------------------|------|---|----------------------------------|-----------|------------|--------------|-----------|----------------|
| 35-6-0192 | Site 15 Aleetown        | AGD              | 55   | 596700                                      | 6353200                          | Open site | Valid      | Artefact :-  |           | 1162           |
|           | <a href="#">Contact</a> | <b>Recorders</b> |      | Doctor Tim Stone                            |                                  |           |            |              |           | <b>Permits</b> |
| 35-6-0212 | NPM-IP11                | GDA              | 55   | 598120                                      | 6356018                          | Open site | Valid      | Artefact :-  |           |                |
|           | <a href="#">Contact</a> | <b>Recorders</b> |      | OzArk Environmental and Heritage Management | Miss. Philippa Sokol             |           |            |              |           | <b>Permits</b> |
| 35-6-0213 | NPM-OS3                 | GDA              | 55   | 598253                                      | 6355707                          | Open site | Valid      | Artefact :-  |           |                |
|           | <a href="#">Contact</a> | <b>Recorders</b> |      | OzArk Environmental and Heritage Management | Miss. Philippa Sokol             |           |            |              |           | <b>Permits</b> |
| 35-6-0214 | NPM-OS4                 | GDA              | 55   | 598445                                      | 6355812                          | Open site | Valid      | Artefact :-  |           |                |
|           | <a href="#">Contact</a> | <b>Recorders</b> |      | OzArk Environmental and Heritage Management | Miss. Philippa Sokol             |           |            |              |           | <b>Permits</b> |
| 35-6-0200 | NPM-IP9                 | GDA              | 55   | 597810                                      | 6355656                          | Open site | Valid      | Artefact :-  |           |                |
|           | <a href="#">Contact</a> | <b>Recorders</b> |      | OzArk Environmental and Heritage Management | Miss. Stephanie Rusden           |           |            |              |           | <b>Permits</b> |
| 35-6-0201 | NPM-IP8                 | GDA              | 55   | 598661                                      | 6355677                          | Open site | Valid      | Artefact :-  |           |                |
|           | <a href="#">Contact</a> | <b>Recorders</b> |      | OzArk Environmental and Heritage Management | Miss. Stephanie Rusden           |           |            |              |           | <b>Permits</b> |
| 35-6-0202 | NPM-IP7                 | GDA              | 55   | 598776                                      | 6355654                          | Open site | Valid      | Artefact :-  |           |                |
|           | <a href="#">Contact</a> | <b>Recorders</b> |      | OzArk Environmental and Heritage Management | Miss. Stephanie Rusden           |           |            |              |           | <b>Permits</b> |
| 35-6-0203 | NPM-IP6                 | GDA              | 55   | 598810                                      | 6355567                          | Open site | Valid      | Artefact :-  |           |                |
|           | <a href="#">Contact</a> | <b>Recorders</b> |      | OzArk Environmental and Heritage Management | Miss. Stephanie Rusden           |           |            |              |           | <b>Permits</b> |
| 35-6-0204 | NPM-IP5                 | GDA              | 55   | 598665                                      | 6355335                          | Open site | Valid      | Artefact :-  |           |                |
|           | <a href="#">Contact</a> | <b>Recorders</b> |      | OzArk Environmental and Heritage Management | Miss. Stephanie Rusden           |           |            |              |           | <b>Permits</b> |
| 35-6-0205 | NPM-IP4                 | GDA              | 55   | 598772                                      | 6355108                          | Open site | Valid      | Artefact :-  |           |                |
|           | <a href="#">Contact</a> | <b>Recorders</b> |      | OzArk Environmental and Heritage Management | Miss. Stephanie Rusden           |           |            |              |           | <b>Permits</b> |
| 35-6-0206 | NPM-IP3                 | GDA              | 55   | 598789                                      | 6355157                          | Open site | Valid      | Artefact :-  |           |                |
|           | <a href="#">Contact</a> | <b>Recorders</b> |      | OzArk Environmental and Heritage Management | Miss. Stephanie Rusden           |           |            |              |           | <b>Permits</b> |
| 35-6-0207 | NPM-OS2                 | GDA              | 55   | 598725                                      | 6355539                          | Open site | Valid      | Artefact :-  |           |                |
|           | <a href="#">Contact</a> | <b>Recorders</b> |      | OzArk Environmental and Heritage Management | Miss. Stephanie Rusden           |           |            |              |           | <b>Permits</b> |
| 35-6-0208 | NPM-OS1                 | GDA              | 55   | 598804                                      | 6355109                          | Open site | Valid      | Artefact :-  |           |                |
|           | <a href="#">Contact</a> | <b>Recorders</b> |      | OzArk Environmental and Heritage Management | OzArk Environmental and Heritage |           |            |              |           | <b>Permits</b> |
| 35-6-0217 | NPM-IP12                | GDA              | 55   | 598739                                      | 6355747                          | Open site | Valid      | Artefact :-  |           |                |
|           | <a href="#">Contact</a> | <b>Recorders</b> |      | OzArk Environmental and Heritage Management | Mr. Harrison Rochford            |           |            |              |           | <b>Permits</b> |
| 35-6-0218 | NPM-IP14                | GDA              | 55   | 598824                                      | 6355370                          | Open site | Valid      | Artefact :-  |           |                |
|           | <a href="#">Contact</a> | <b>Recorders</b> |      | OzArk Environmental and Heritage Management | Mr. Harrison Rochford            |           |            |              |           | <b>Permits</b> |
| 35-6-0219 | NPM-IP13                | GDA              | 55   | 599107                                      | 6355413                          | Open site | Valid      | Artefact :-  |           |                |
|           | <a href="#">Contact</a> | <b>Recorders</b> |      | OzArk Environmental and Heritage Management | Mr. Harrison Rochford            |           |            |              |           | <b>Permits</b> |
| 35-6-0220 | NPM-IP15                | GDA              | 55   | 599127                                      | 6355210                          | Open site | Valid      | Artefact :-  |           |                |
|           | <a href="#">Contact</a> | <b>Recorders</b> |      | OzArk Environmental and Heritage Management | Mr. Harrison Rochford            |           |            |              |           | <b>Permits</b> |

Report generated by AHIMS Web Service on 26/04/2021 for Harrison Rochford for the following area at Datum : GDA, Zone : 55, Eastings : 591975 - 604640, Northings : 6349003 - 6364978 with a Buffer of 0 meters. Additional Info : DD. Number of Aboriginal sites and Aboriginal objects found is 61

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