Valley of the Winds

APPENDIX N
ABORIGINAL CULTURAL HERITAGE ASSESSMENT REPORT

RAMBOLL Bright ideas. Sustainable change.

View of Old Farm OS-1.

ABORIGINAL CULTURAL HERITAGE ASSESSMENT REPORT

VALLEY OF THE WINDS WIND FARM

COOLAH NSW

APRIL 2022

Report prepared by

OzArk Environment & Heritage

On behalf on

UPC\AC Renewables Australia

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ABORIGINAL CULTURAL HERITAGE ASSESSMENT REPORT COVER SHEET

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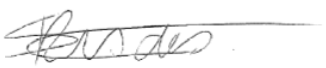

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Acknowledgement

OzArk acknowledge Traditional Owners 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.

The name Coolah is derived from traditional language – meaning Valley of the Winds.

TERMS AND ABBREVIATIONS

Term / Abbreviation	Definition
ACHAR	Aboriginal Cultural Heritage Assessment Report. As set out in the *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales*, all developments where harm to Aboriginal objects is likely must be assessed in an ACHAR.
ACHCRs	*Aboriginal Cultural Heritage Consultation Requirements for Proponents*. 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.
Ancillary infrastructure	Supporting infrastructure for: • construction (temporary) e.g. compounds, batching plants etc. • operational (permanent) e.g. operations and maintenance facilities, access tracks etc.
ASIRF	Aboriginal Site Impact Recording Form
Associated dwellings / associated properties	Dwellings or properties on which the wind turbines, or the transmission line, are located.
Central-West Orana Transmission line	TransGrid's proposed East-West transmission line for the overall renewable energy zone located to the south of the Girragulang Road and Leadville clusters (the project's proposed dispatch to the NEM)
Code of Practice	*Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* under Part 6 NPW Act. Issued by DECCW in 2010, the Code of Practice is a set of guidelines that govern archaeological practice in NSW.
Construction access tracks	Vehicle access tracks for construction and delivery of plant and equipment on private property.
DPE	NSW Department of Planning and Environment
EIS	Environmental Impact Statement. A required document for major projects documenting all potential impacts to the environment, including heritage, that may arise due to the development.
Electrical reticulation	Underground and overhead electrical services that connect the turbines and connect to the substations in each cluster
Girragulang Road Cluster	Cluster east of Black Stump Way and Girragulang Road, south of Coolah
GSE	Ground surface exposure. Refers to the amount of ground surface visible in an area.
GSV	Ground surface visibility. Refers to the amount of the ground surface that can be seen in exposures as portions of exposures may be obscured by factors such as leaf litter.
Heritage NSW	Government department tasked with ensuring compliance with the NPW and Heritage Acts. Heritage NSW is advised by the Aboriginal Cultural Heritage Advisory Committee (ACHAC) and is part of the Department of Premier and Cabinet.
Impact footprint	The area containing all the permanent and temporary project components associated with construction and operation – effectively the disturbance area for the project. Includes the transmission line connecting the wind farm to the Central-West Orana Transmission line and the access tracks to the wind farm clusters.
Leadville Cluster	Cluster north of Golden Highway and east of Leadville township
Mt Hope Cluster	Cluster west of Black Stump Way, southwest of Coolah
Non-associated dwellings / non-associated properties	Dwellings or properties that are potentially impacted by the proposed wind farm, but on which wind turbines or transmission line are not located i.e. indirectly affected by the proposed development.
NPW Act	*National Parks and Wildlife Act 1974*. Primary legislation governing Aboriginal cultural heritage within NSW.
Operational access tracks	Vehicle access tracks for operations and maintenance on associated properties.
Overhead transmission line	The proposed overhead transmission lines (up to 330Kv) dispatching electricity from each cluster and connecting clusters (Mount Hope to Girragulang Road). Also potentially connecting the Leadville cluster to the Girragulang Road high voltage transmission line.
PAD	Potential archaeological deposit. Indicates that a particular location has potential to contain subsurface archaeological deposits, although no Aboriginal objects are visible.

Term / Abbreviation	Definition
project	Refers holistically to the proposed Valley of the Winds Wind Farm, including the wind farm and the transmission line(s).
Proponent	UPC\AC Renewables Australia Pty Ltd (abbreviated to 'UPC\AC')
RAP	Registered Aboriginal Party. An individual or group who have indicated through the ACHCR process that they wish to be consulted regarding the project.
SAL	Sensitive archaeological landform. Refers to landforms with some archaeological sensitivity but not to the point where PAD is expected.
SEARs	*Secretary's Environmental Assessment Requirements* issued by the NSW Department of Planning and Environment.
SSD	State Significant Development.
Transport routes	Public roads that are to be used for delivery of plant and equipment (e.g. rotor blades)
TxL or transmission line	The proposed high voltage (up to 500Kv) overhead transmission line(s) that will connect the wind farm to the Central-West Orana Transmission line
Wind farm site	The wind farm site boundary corresponds with the outer boundary of properties upon which the proposed Valley of the Winds wind farm is located. Includes the three clusters but excludes the transmission line connecting to the Central-West Orana REZ Transmission line.
Impact footprint	The area containing all the permanent and temporary project components associated with construction and operation – effectively the disturbance area for the project. Includes the transmission line connecting the wind farm to the Central-West Orana Transmission line and the access tracks to the wind farm clusters.
Survey boundary	A survey boundary has been developed within the wind farm site boundary for the specialist environmental assessments in this EIS that consider the impacts of vegetation and ground disturbance. The survey boundary provides a 200-metre corridor around access tracks and turbines. This corridor ensures the EIS adequately identifies potential disturbance impacts, but also provides flexibility for the proposed layout to be refined within the surveyed area during detailed design.

EXECUTIVE SUMMARY

UPC Renewables Australia Pty Ltd, operating as UPC\AC Renewables Australia (UPC\AC) (the Proponent), proposes to construct and operate the Valley of the Winds wind farm (the project).

The project would consist of approximately 148 wind turbines across three clusters (Mount Hope, Girragulang Road and Leadville) and supporting infrastructure, including a high voltage transmission line which would run approximately 13 kilometres from the Girragulang Road cluster to a connection point with the Central-West Orana Renewable Energy Zone (REZ) transmission line proposed by TransGrid and the NSW Government.

The wind farm would be located close to the townships of Coolah and Leadville, with the transmission line running generally south to its connection with the Central-West Orana REZ transmission line. The project would be entirely within the Warrumbungle Local Government Area (LGA).

The Proponent seeks State Significant Development (SSD) development consent approval under Division 4.7 of Part 4 of the *Environmental Planning & Assessment Act 1979* (EP&A Act) for the project (SSD-10461).

OzArk Environment & Heritage (OzArk) has been engaged by the Proponent to provide specialist Aboriginal cultural heritage assessment which will support the Environmental Impact Statement.

This assessment follows the *Code of Practice for the Investigation of Aboriginal Objects in New South Wales* (DECCW 2010). Field assessment and reporting followed the *Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW* (OEH 2011). Aboriginal community consultation follows the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (DECCW 2010b).

A search of the Aboriginal Heritage Information Management System (AHIMS) database returned thirteen previously recorded sites within the wind farm site and two sites within the survey boundary (36-3-0111 and 36-3-0113).

The fieldwork component of this assessment was undertaken by OzArk and Registered Aboriginal Parties (RAPs; or their representatives) over 10 days from 17 May to 28 May 2021 (comprising 15 days of actual survey as there were two independent teams in Week 1 of the survey). A one-day site inspection was also completed by OzArk on 31 August 2021 and additional survey was completed by OzArk and a RAP on 19 April 2022.

As a result of the survey associated with the project, five previously unrecorded Aboriginal sites were identified (Orana OS-1, Old Farm OS-1, Kensington OS-1, Cainbil Creek OS-1 and The Rock IF-1). The newly recorded sites include artefact scatters, some with potential archaeological deposits (PAD), a quarry site and an isolated find. A potential ring tree was identified by a RAP representative during the survey; however, the origin of the tree is unknown, and following a

discussion in the field, the OzArk archaeologist concluded that the tree would not be registered on the AHIMS database.

The location of one previously recorded AHIMS site, 36-3-0111, also was ground-truthed.

All five newly recorded sites and the previously recorded AHIMS sites are located within the survey boundary and therefore are liable to be impacted by the project. However, the Proponent has committed to avoiding impact to all sites within the survey boundary, except for Cainbil Creek-OS1 which will be partially impacted by the construction of an access track and The Rock IF-1 which will also be impacted by an access track. Further, while not recorded as an Aboriginal site, the potential ring tree will also be avoided by the project.

Parts of the overhead transmission line connecting to the Central-West Orana REZ transmission line south of the Girragulang Road and Leadville clusters were unable to be surveyed due to access constraints. Previously recorded site 36-3-0113 is in an area where access was not granted. These areas along the overhead transmission line which have not been assessed will be surveyed with RAP representatives following development consent. Predictive modelling for this area indicates that the portions within Survey Unit 2 and 4 have low potential for recording Aboriginal sites, however the areas within Survey Unit 3 have increased potential for recording Aboriginal sites given they contain elevated landforms near the Talbragar River.

Recommendations concerning Aboriginal cultural values within the survey boundary are as follows:

1. Following development consent of the project, the portions of the overhead transmission line not surveyed (**Figure 6-2**) will require survey by an archaeologist and RAP representatives (**Section 9.3**).

2. The Proponent will develop an Aboriginal Cultural Heritage Management Plan (ACHMP) which is to be agreed to by the RAPs and the Department of Planning and Environment (DPE). The ACHMP will quantify the exact sites to be impacted, the methods by which they will be managed and the fate of any artefacts that are recovered prior to the works. The ACHMP will also provide a protocol for unanticipated finds and the discovery of human skeletal material. Examples of these protocols are provided in **Section 9.4.1** and **Section 9.5**.

3. The management and mitigation strategies to manage the impact of the project to Aboriginal heritage listed below should be followed:

    a. Orana OS-1 (**Section 9.2.1**):

        i. The perimeter of the site should be temporarily fenced during the construction of the overhead transmission line in the vicinity of the site.

b. Old Farm OS-1 (**Section 9.2.2**):

   i. The perimeter of the site should be temporarily fenced during the construction of the turbines, access tracks and electrical reticulation in the vicinity of the site.

   ii. The project should allow additional research to take place at Old Farm OS-1. The study should involve non-invasive recording, mapping, and photography.

c. Kensington OS-1 (**Section 9.2.3**):

   i. The perimeter of the site should be temporarily fenced during the construction of the overhead transmission line in the vicinity of the site.

d. Cainbil Creek OS-1 (**Section 9.2.4**):

   i. The part of the site that will be impacted by the proposed access track should have all surface artefacts recorded and collected as outlined in **Section 9.2.4.1**.

   ii. The portions of the site that will not be impacted by the project should be temporarily fenced during the construction of the access track and overhead transmission line in the vicinity of the site (**Section 9.2.4.2**).

e. The Rock IF-1 (**Section 9.2.5**):

   i. The surface artefact should be recorded and collected as outlined in **Section 9.2.4.1**.

f. 36-3-0111 (**Section 9.2.6**):

   i. The portion of the site extent within the survey boundary should be fenced temporarily during the construction of the overhead transmission line in the vicinity of the site.

g. 36-3-0113 (**Section 9.2.7**):

   i. The AHIMS location should be inspected as part of the post commitment survey area (**Section 9.3**).

   ii. If the site is identified within the corridor of the overhead transmission line, the design of the components (towers and access tracks) should ensure they avoid the site.

   iii. Hi-visibility fencing should be temporarily erected around the site extent if there is potential for the site to be inadvertently impacted by the project.

4. The potential ring tree shown in **Figure 3-1** should be avoided by the proposed access track and be temporarily fenced with hi-visibility fencing for the duration of the construction phase (**Section 9.2.8**). A 5 m buffer from the tree trunk will be a suitable buffer.
5. All land-disturbing activities must be confined to within the survey boundary. Should the parameters of the proposed work extend beyond this, then further archaeological assessment may be required.

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TABLES

1 INTRODUCTION

1.1 PROJECT OVERVIEW

UPC Renewables Australia Pty Ltd, operating as UPC\AC Renewables Australia (UPC\AC) (the Proponent), proposes to construct and operate the Valley of the Winds wind farm (the project).

The project would consist of approximately 148 wind turbines and supporting infrastructure, including a high voltage transmission line which would run approximately 13 kilometres (km) from the Girragulang Road cluster to a connection point with the Central-West Orana Renewable Energy Zone (REZ) transmission line proposed by TransGrid and the NSW Government. The project would supply approximately 800 megawatts (MW) of electricity into the National Electricity Market (NEM).

The wind farm would be located close to the townships of Coolah and Leadville, with the overhead transmission line running generally south to its connection with the Central-West Orana REZ transmission line. The project would be entirely within the Warrumbungle Local Government Area (LGA).

The project would involve the construction, operation and decommissioning of three clusters of wind turbines, that would be connected electrically. These are:

- Mount Hope cluster – approximately 76 turbines
- Girragulang Road cluster – approximately 51 turbines
- Leadville cluster – approximately 21 turbines.

The project includes the following key components:

- Approximately 148 wind turbines with a maximum tip height of 250 metres (m) and a hardstand area at the base of each turbine
- Electrical infrastructure, including:
    - substations in each cluster and a step-up facility at the connection to the Central-West Orana REZ Transmission line
    - underground 33 kilovolt (kV) electrical reticulation connecting the turbines to the substations in each cluster
    - overhead transmission lines (up to 330 kV) dispatching electricity from each cluster
    - other electrical infrastructure as required including a potential battery energy storage system (BESS)
    - a high voltage transmission line (up to 500 kV) connecting the wind farm to the Central-West Orana transmission line
- Other permanent on-site ancillary infrastructure:

- permanent operation and maintenance facilities
- meteorological masts (up to thirteen)

- Access track network:
  - access and egress points to each cluster from public roads
  - operational access tracks and associated infrastructure within each cluster on private property

- Temporary construction ancillary facilities:
  - potential construction workforce accommodation on site
  - construction compounds
  - laydown areas
  - concrete batching plants
  - quarry sites for construction material (rock for access tracks and hardstands).

At the end of its practical life, the wind farm would be decommissioned, and the site returned to its pre-existing land use in consultation with the affected landholders.

1.2 SITE CONTEXT

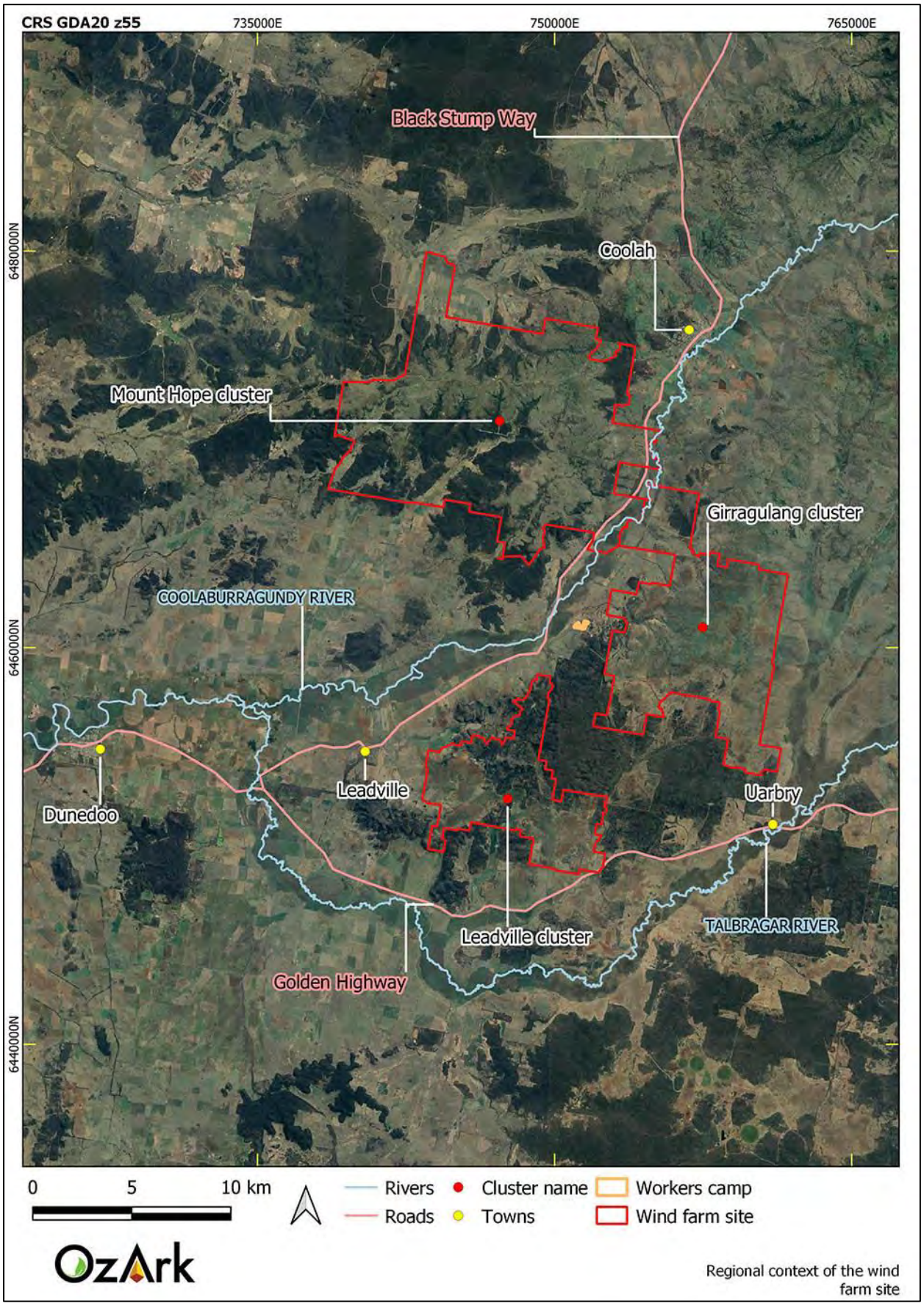
The wind farm site location is shown in (**Figure 1-1**). Land surrounding the wind farm site is characterised by rolling pastoral hills, open flat valleys and ridgelines with scattered vegetation. The hill slopes are generally gentle in gradient and predominantly cleared of vegetation, except for patches of denser remnant vegetation on steeper terrain, near rocky outcrops and between saddles.

The townships of Coolah and Leadville are the closest population centres to the proposed site. These townships are located on gently sloping to level land within valleys near creeks. Most built structures are of low to moderate scale. The main street of Coolah is the focus for local retail and community services in the local area.

Land uses within the locality include:

- Farming – predominantly grazing cattle and sheep, with small patches of cropping (cereal and fodder)
- Rural living – scattered rural dwellings and sheds present throughout the landscape, with a higher density of dwellings in the townships.

Figure 1-1: Regional context of the wind farm site.



1.3 PURPOSE OF THIS REPORT

The capital value of the project would be more than $30 million. Accordingly, the project is a State Significant Development (SSD) under the *State Environmental Planning Policy (State and Regional Development) 2011* (SEPP SR&D) and Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act). Under Section 4.12(8) of the EP&A Act, a development application (DA) for SSD must be accompanied by an environmental impact statement (EIS) that is lodged with the NSW Department of Planning and Environment (DPE) for Development Consent.

The project was also referred to the Commonwealth Department of Agriculture, Water and the Environment for potential impacts to matters of national environmental significance protected by the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). On 13 July 2020, a delegate of the Federal Minister for the Department of Agriculture, Water and the Environment determined that the project was a controlled action under section 75 of the EPBC Act and therefore requires assessment and approval under the EPBC Act. This assessment is to be undertaken under the *Amended Bilateral Agreement* between the Department of Agriculture, Water and the Environment and DPE.

This *Aboriginal Cultural Heritage Assessment Report* (ACHAR) has been prepared to inform the environmental impacts statement (EIS) and the DA for the project.

1.4 WIND FARM SITE

The wind farm site includes the three clusters, Mount Hope, Girragulang and Leadville, which encompasses approximately 25,890 hectares (ha) of land but excludes the overhead transmission line connecting to the Central-West Orana REZ transmission line.

The project components within these areas are shown on **Figure 1-2** to **Figure 1-5**.

Figure 1-2: project components at the Mount Hope cluster.

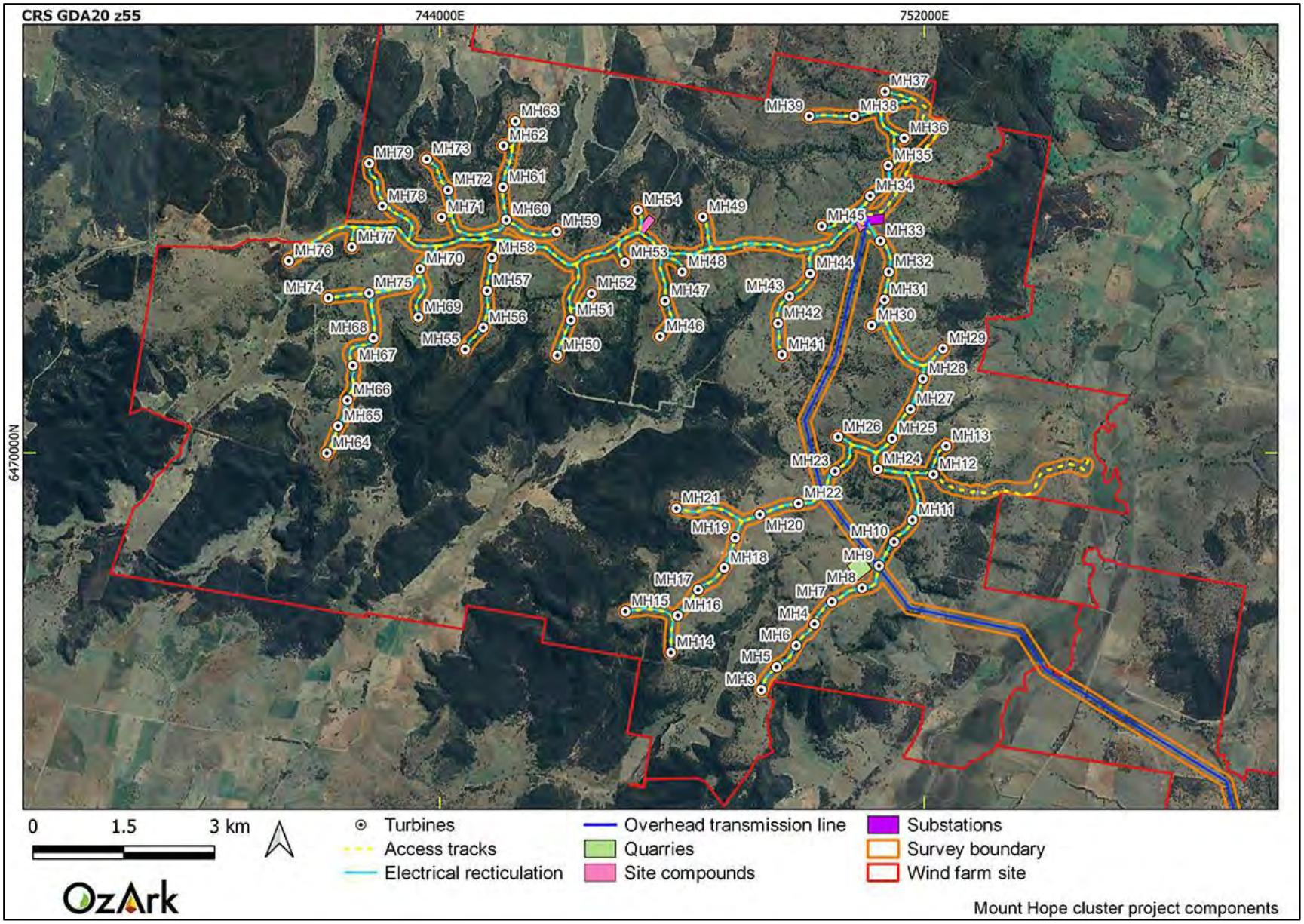


Figure 1-3: project components at the Girragulang Road cluster.

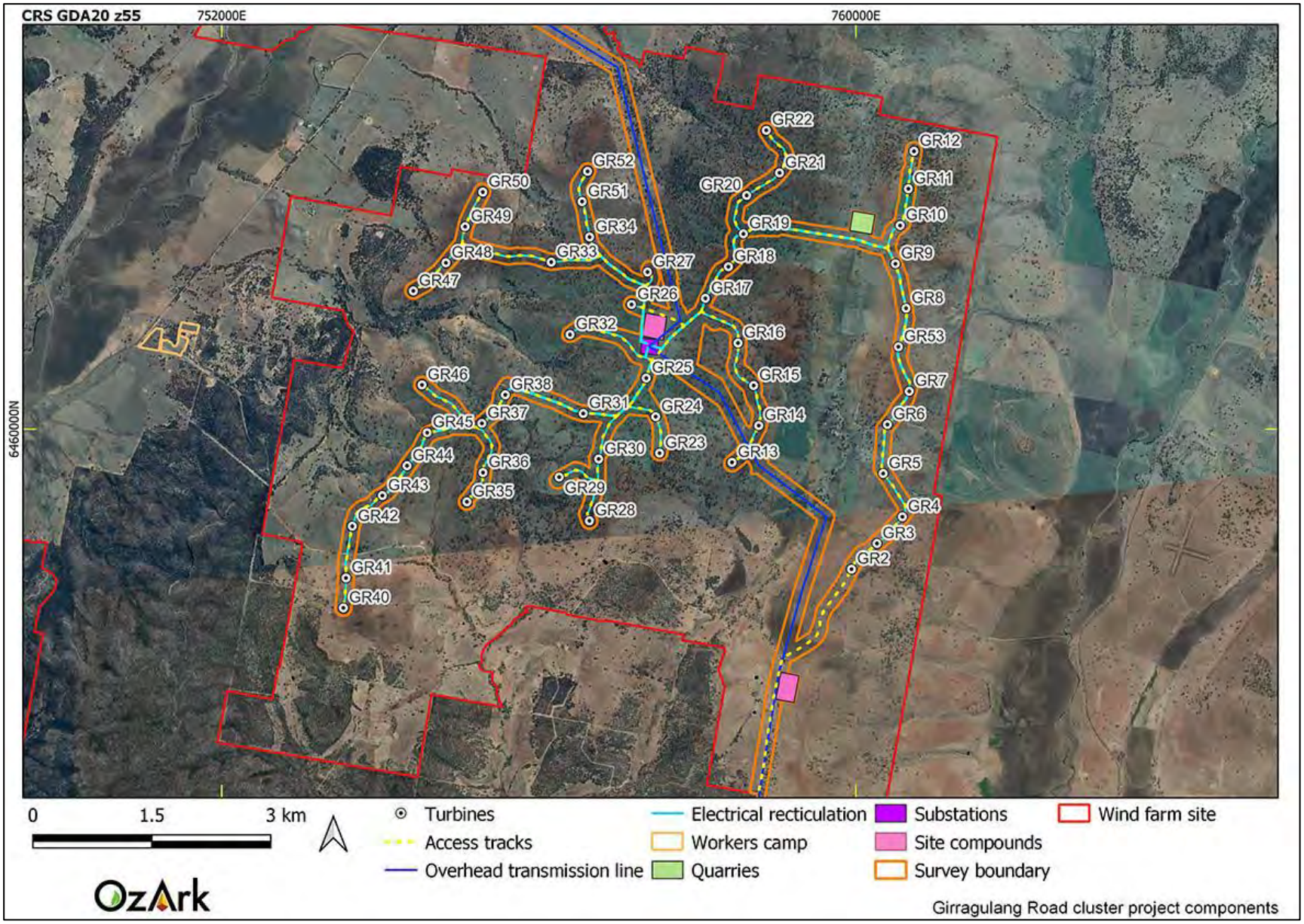
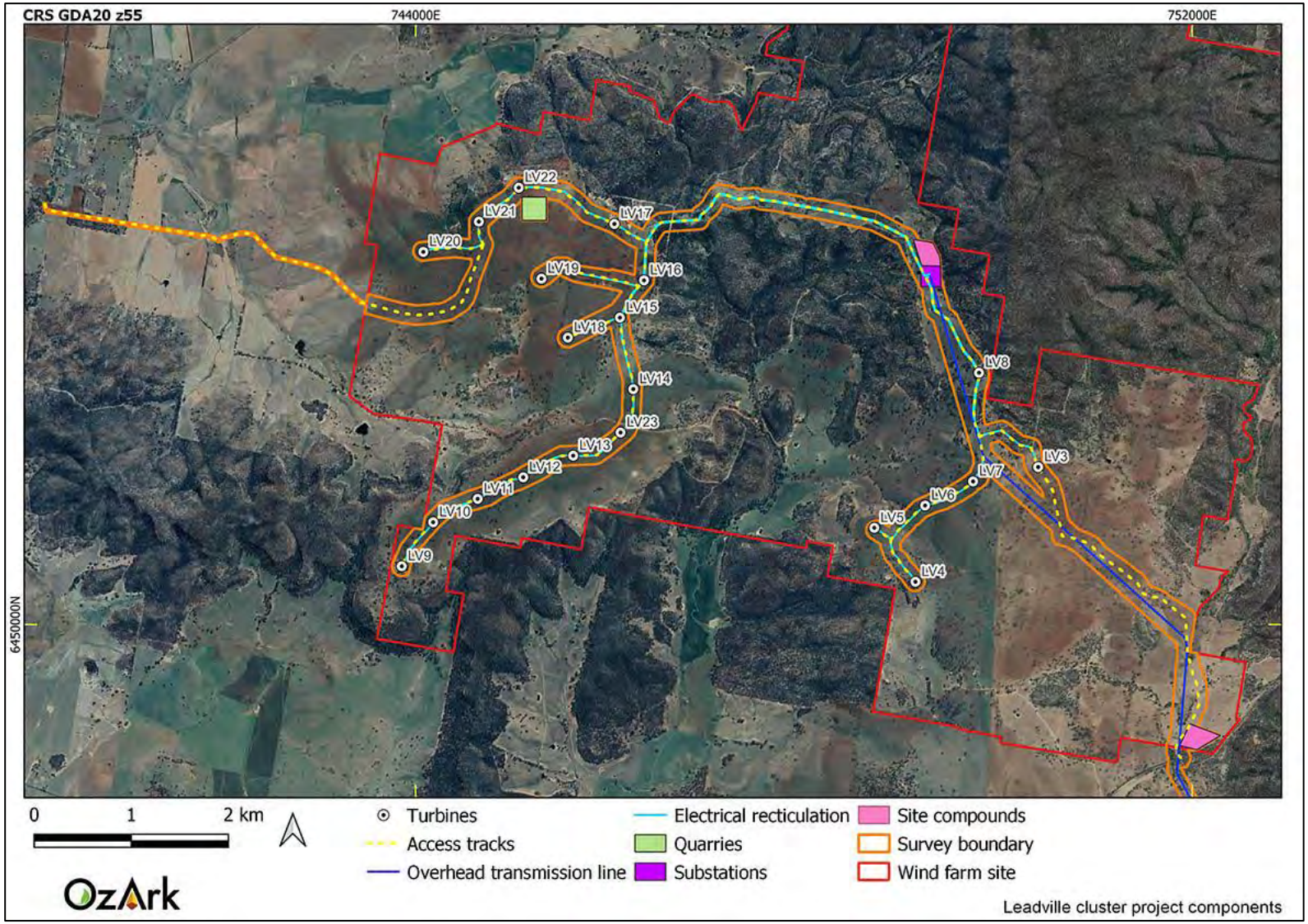
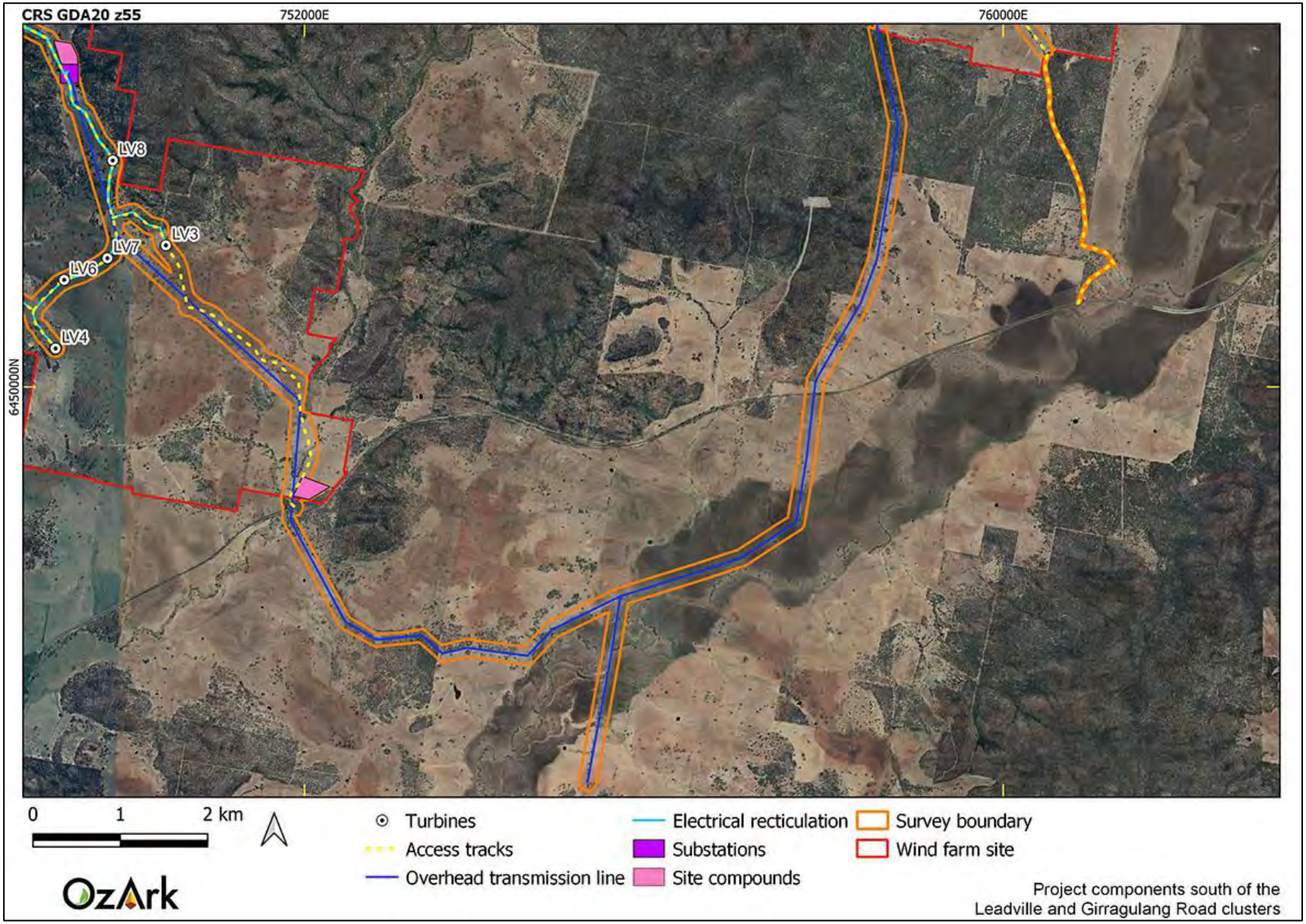


Figure 1-4: project components at the Leadville cluster[1].



[1] Note: the proposed access track shown extending from the western boundary of the wind farm site is no longer proposed to be utilised for the project.

Figure 1-5: project components south of the Girragulang Road and Leadville clusters.



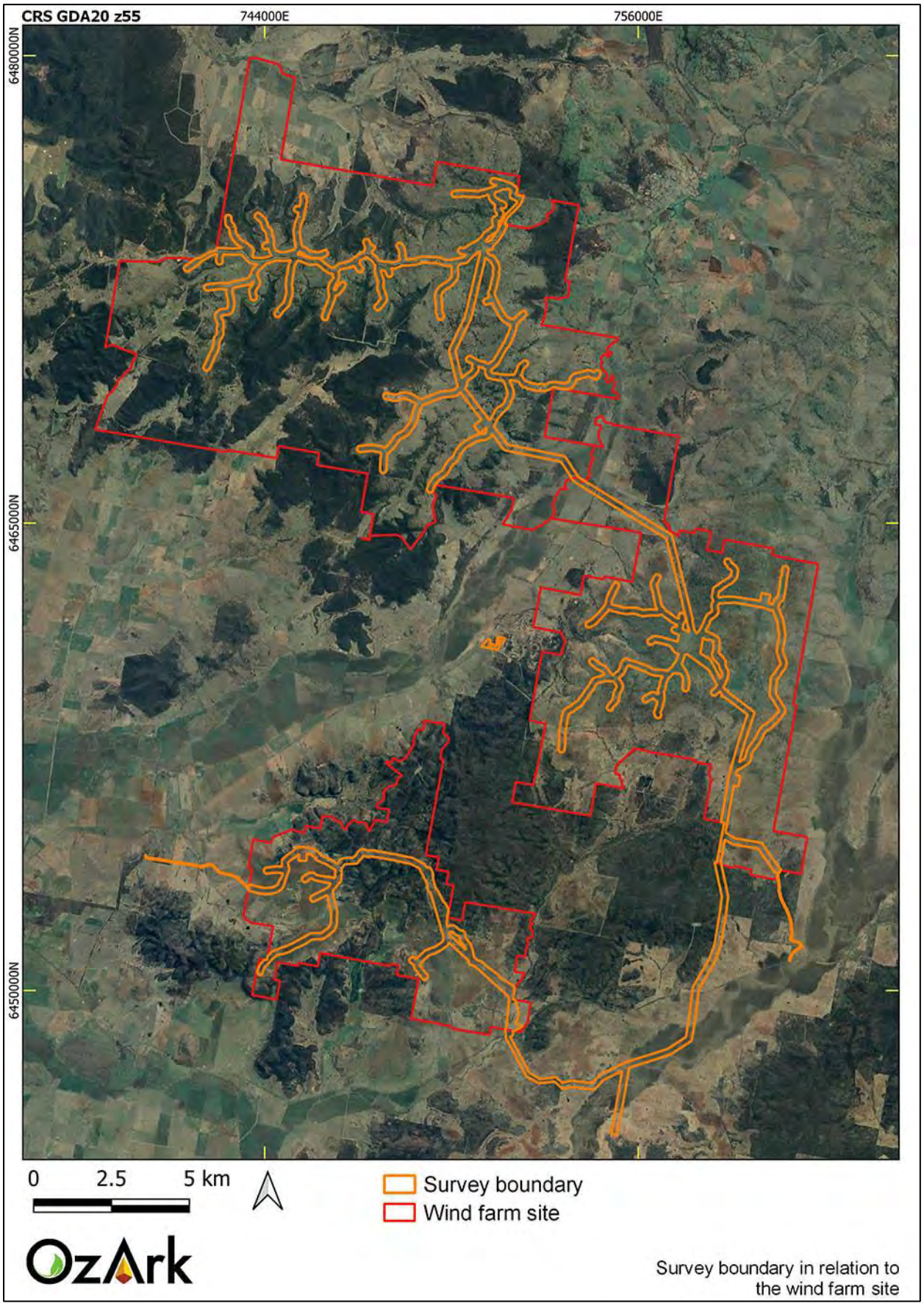
1.5 SURVEY BOUNDARY

As the construction and use of a wind farm does not impact all areas within the wind farm site, the Aboriginal heritage assessment instead concentrated on the survey boundary. The survey boundary describes the area where all project impacts would be located with a suitable buffer to allow some small movement of project components if required.

The survey boundary encompasses approximately 3,274 ha of land which includes only 12.5 per cent of the wind farm site (**Figure 1-6**).

Archaeological survey undertaken for this assessment is confined to the survey boundary and not to the larger wind farm site.

Figure 1-6: Aerial showing the survey boundary.



2 ASSESSMENT INTRODUCTION

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

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 project

It is noted there are no Commonwealth or National heritage listed places within the wind farm site or the survey boundary (**Section 5.3.1.1**), and as such, the heritage provisions of the EPBC Act and other Commonwealth Acts do not apply.

2.1.2 State legislation

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

The EP&A Act and EP&A Regulation provide the framework for environmental planning and assessment in NSW.

The project is declared to be SSD by the provisions of the SEPP State and Regional Development. Development consent is required under Part 4 of the Act for any project that is

considered to be SSD by a SEPP. The project is therefore subject to assessment under Part 4 of the EP&A Act.

Section 4.12(8) of the EP&A Act requires an SSD DA to be accompanied by an EIS prepared in accordance with the EP&A Regulation. Prior to preparation of an EIS, an applicant must make a written application to the SEARs which specify what must be addressed in an EIS for a project. The Proponent made a request for SEARs application accompanied by a Scoping Report as required by Clause 3 of Schedule 2 of the EP&A Regulation. The SEARs for the project were issued on 9 June 2020.

In relation to Aboriginal heritage, the SEARs state:

- Assess the impact to Aboriginal cultural heritage items (archaeological and cultural) in accordance with the *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW* (OEH 2011) and the *Code of Practice for the Archaeological Investigation of Aboriginal Objects in NSW* (DECCW 2010a)
- Provide evidence of consultation with Aboriginal communities in determining and assessing impacts, developing options and selecting options and mitigation measures (including the final proposed measures), having regard to the *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (DECCW 2010b).

To inform the SEARs, the Biodiversity and Conservation Division (BCD) (now Heritage NSW) of DPE provided input regarding Aboriginal cultural heritage. Input from BCD is set out in **Table 2-1** along with a concordance of where BCD requirements are addressed in this ACHAR.

Table 2-1: Concordance between BCD input to the SEARs and this ACHAR.

BCD requirement	Where addressed in the ACHAR
The Environmental Impact Assessment (EIS) must identify and describe the Aboriginal cultural heritage values that exist across the whole area that will be affected by the Valley of the Winds Wind Farm and document these in the Aboriginal Cultural Heritage Assessment Report (ACHAR). This may include the need for surface survey and test excavation. The identification of cultural heritage values must be conducted in accordance with the Code of Practice for Archaeological Investigations of Aboriginal Objects in NSW (OEH 2010), and guided by the *Guide to investigating, assessing and reporting on Aboriginal Cultural Heritage in NSW* (OEH 2011).	This ACHAR contains the results of the Aboriginal archaeological survey undertaken for the project. It also assesses the cultural, scientific, aesthetic, and historic values scientific present within the survey boundary.
Consultation with Aboriginal people must be undertaken and documented in accordance with the *Aboriginal cultural heritage consultation requirements for proponents* (DECCW 2010). The significance of cultural heritage values for Aboriginal people who have a cultural association with the land must be documented in the ACHAR.	This requirement has been followed by the project and is documented in **Section 3** of this ACHAR.
Impacts on Aboriginal cultural heritage values are to be assessed and documented in the ACHAR. The ACHAR must demonstrate attempts to avoid impact upon cultural heritage values and identify any conservation outcomes. Where impacts are unavoidable, the ACHAR must outline measures proposed to mitigate impacts. Any objects recorded as part of the assessment must be documented and notified to Heritage NSW.	Impacts to Aboriginal cultural heritage within the survey boundary are discussed in **Section 7**. Management of Aboriginal cultural heritage within the survey boundary are discussed in **Section 9**.

National Parks and Wildlife Act 1974 (NPW Act)

The NPW Act provides for the protection of Aboriginal objects (sites, objects and cultural material) and Aboriginal places. Under the Act (Part 6), an Aboriginal object is defined as: any deposit, object or material evidence (not being a handicraft for sale) relating to indigenous and non-European habitation of the area that comprises NSW, being habitation both prior to and concurrent with the occupation of that area by persons of European extraction, and includes Aboriginal remains.

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

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

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

Applicability to the project

As the project is a SSD, if approved, Section 4.41 of the EP&A Act will apply and an AHIP under section 90 of the NPW Act to harm Aboriginal objects is not required. Instead, all management related to Aboriginal cultural heritage within the survey boundary will be in accordance with an approved *Aboriginal Cultural Heritage Management Plan* (ACHMP).

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

Any Aboriginal sites within the survey boundary are afforded legislative protection under the NPW Act.

2.2 PURPOSE AND OBJECTIVES

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

2.2.1 Aboriginal cultural and archaeological assessment objectives

This assessment has applied the *Code of Practice for the Investigation of Aboriginal Objects in New South Wales* (Code of Practice; DECCW 2010a) and the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (ACHCRs) (DECCW 2010b) to complete an Aboriginal cultural heritage assessment, to meet the following objectives:

Objective One: Undertake background research to formulate a predicative model for site location within the survey boundary

Objective Two: Identify and record Aboriginal objects or sites within the survey boundary, as well as any landforms likely to contain further archaeological deposits

Objective Three: To undertake an Aboriginal cultural values assessment in consultation with Registered Aboriginal Parties (RAPs) of tangible and intangible cultural heritage values that have potential to be impacted by the project

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

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

2.3 ASSESSMENT APPROACH

The field survey followed the Code of Practice (DECCW 2010a).

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 ACHCRs (DECCW 2010b).

2.4 REPORT COMPLIANCE WITH THE CODE OF PRACTICE

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

Table 2-2: 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	**Section 5**
Requirement 1b	Review AHIMS searches	**Section 5.3.1**
Requirement 2	Review the landscape context	**Section 4**
Requirement 3	Summarise and discuss the local and regional character of Aboriginal land use and its material traces	**Section 5.4**
Requirement 4a	Develop predictive model	**Section 5.4**

Code of Practice Requirement	Context of the Requirement	Concordance in this report
Requirement 4b	Present predictive model results	**Section 5.4.6**
Requirement 5a	Archaeological survey sampling strategy	**Section 6.1**
Requirement 5b	Archaeological survey requirements	This Requirement was fulfilled during the undertaking of the survey
Requirement 5c	Archaeological survey units	**Section 4.1 and Section 6.3**
Requirement 6	Site definition	**Section 5.4.6**
Requirement 7a	Site recording information to be recorded	All sites were recorded in accordance with this Requirement.
Requirement 7b	Site recording: scales for photography	All artefact photographs employed a centimetre scale bar.
Requirement 8a	Geospatial information	All artefact locations were logged using a non-differential handheld GPS.
Requirement 8b	Datum and grid coordinates	All coordinates are provided in GDA Zone 55.
Requirement 9	Record survey coverage data	**Section 6.1**
Requirement 10	Analyse survey coverage	**Section 6.3**
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	Test excavation did not take place as part of this assessment
Requirement 15a	Consultation regarding test excavation	Test excavation did not take place as part of this assessment
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 survey for this assessment was undertaken by OzArk over ten days, including:

- Week 1: Monday 17 May to 21 May 2021
- Week 2: Monday 24 May to 28 May 2021.

A one-day site inspection was also completed on 31 August 2021 to ground-truth areas added to the project following the survey or where access was not granted at the time of the survey. This included areas in the Mt Hope and Leadville clusters and along the overhead transmission line.

An additional day of survey was completed on 19 April 2022 to assess unsurveyed areas within the Mt Hope and Leadville clusters and access tracks and intersection upgrades.

2.6 OZARK INVOLVEMENT

2.6.1 Field assessment

Week 1 of fieldwork consisted of two teams each of which had two OzArk archaeologists and week 2 of fieldwork consisted of one team of two OzArk archaeologists. RAP participants are detailed in **Section 3.2**.

- Week 1
    - Fieldwork Director: Stephanie Rusden (OzArk Senior Archaeologist, BS University of Wollongong, BA University of New England)
    - Lead Archaeologist: Dr Jodie Benton (OzArk Director, BA [Hons] and PhD [Archaeology] University of Sydney)
    - Archaeologist: Brendan Fisher (OzArk Project Archaeologist, BA Archaeology, The University of Sydney)
    - Heritage Officer: Harrison Rochford (OzArk Heritage Specialist, Masters Philosophy (Ancient History) and Bachelor of Liberal Studies [Hons], University of Sydney).
- Week 2
    - Fieldwork Director: Stephanie Rusden
    - Archaeologist: Brendan Fisher.

The one-day site inspection was completed by Stephanie Rusden and Brendan Fisher[2].

The on-day survey was completed by Brendan Fisher.

2.6.2 Reporting

The reporting component of the heritage assessment was undertaken by:

- Report Author: Stephanie Rusden
- Contributor: Brendan Fisher
- Reviewer: Ben Churcher (OzArk Principal Archaeologist; BA [Hons], Dip Ed).

[2] Due to COVID-19 restrictions, RAPs did not participate in the one-day site inspection.

3 ABORIGINAL COMMUNITY CONSULTATION

3.1 ABORIGINAL COMMUNITY CONSULTATION

The Aboriginal cultural heritage assessment of the proposal has followed the ACHCRs (DECCW 2010b). A log and copies of correspondence with Aboriginal community stakeholders is presented in **Appendix 1**.

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

3.1.1 ACHCRs Stage 1

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

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

On 8 January 2021, an advertisement was placed in the '*Mudgee Guardian'* requesting expressions of interest in being consulted about the project (see **Appendix 1 Figure 2**). In addition, the following agencies were contacted to identify potential stakeholders for the area (**Appendix 1 Figure 3**):

- Heritage NSW
- Gilgandra Local Aboriginal Land Council (LALC)
- Office of The Registrar, ALRA
- National Native Title Tribunal
- Native Title Services Corporation (NTSCORP)
- Warrumbungle Shire Council
- Central West Local Land Services.

Letters were then sent to all potential stakeholders asking if they wished to be consulted about the project (**Appendix 1 Figure 4**).

The following individuals/groups registered to be consulted about the project (individuals or groups who did not wish to be identified in the ACHAR are listed as 'Stakeholder 1' etc.):

- Gomeroi People NC2011/006
- Gilgandra LALC
- Dubbo LALC
- Murong Gialinga Aboriginal & Torres Strait Islander Corporation

- Paul Brydon
- AT Gomilaroi Cultural Consultancy
- Michael Long
- Kevin Sampson
- Brian Draper
- Talcon Pty Ltd
- Steve Talbott
- Cacatua General Services
- AGA Services
- Bawurra
- Stakeholder 1
- Stakeholder 2

These individuals/groups constitute the RAPs for the project.

3.1.2 ACHCRs Stages 2 & 3

The aim of Stages 2 and 3 is provide information about the project to the RAPs and to acquire information regarding Aboriginal cultural values associated with the project 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 document was sent to RAPs on 14 April 2021 with a review and comment period closing 12 May 2021. The cover letter that was attached to the assessment methodology invited RAPs to identify whether any Aboriginal cultural values exist in the survey boundary that should be incorporated into the assessment methodology (**Appendix 1 Figure 5**). Dubbo LALC was a late registration and was sent the assessment methodology on 15 April 2021.

The assessment methodology sent to all RAPs is presented in **Appendix 2**.

Comments were received from one RAP group, Murong Gialinga Aboriginal & Torres Strait Islander Corporation, on 10 May 2021. Feedback is as follows:

> *Murong Gialinga Aboriginal & Torres Strait Islander Corporation would like to thank you for giving us the opportunity to comment on the Assessment. Murong Gialinga community looked at the Assessment and our comments are as follows. If any area where there is Aboriginal cultural heritage is to be impacted a full 100% survey and collection is to take place all must be recorded and taken back to OzArk's office in*

Dubbo and placed in a fireproof lockable container .When OzArk have finished with the Aboriginal objects they should be place back on country as close as possible to where they were found GPS reading in an area which is not going to be impacted at all and one rap from each registered Aboriginal group be present.

The comments from Murong Gialinga Aboriginal & Torres Strait Islander Corporation have been incorporated into this ACHAR, however, the procedure for the fate of any artefacts that may be collected following project approval will be set out in the ACHMP that will be considered by all RAPs. Reburial of artefacts on Country is a common desire of the Aboriginal community and is supported by OzArk.

3.1.3 ACHCRs Stage 4

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

A copy of the draft ACHAR was distributed to all RAPs for review on 29 September 2021 with a 28-day review period closing 28 October 2021 (**Appendix 1 Figure 6**). No responses were received on the draft ACHAR.

3.1.4 Project update

Following the closure of Stage 4 it was identified that previously unsurveyed areas within the survey boundary required survey prior to project approval. The additional survey completed on 19 April 2022 with the assistance of a representative from Murong Gialinga Aboriginal & Torres Strait Islander Corporation resulted in an isolated find (The Rock IF-1) being recorded.

As such, an update letter and a copy of the revised ACHAR was sent to the RAPs on 21 April 2022 for the records (**Appendix 1 Figure 7**).

3.2 ABORIGINAL COMMUNITY INVOLVEMENT IN THE ASSESSMENT

Table 3-1 provides a log of the community members and groups who participated in the fieldwork from 17 May to 28 May 2021.

Steven Flick from Murong Gialinga Aboriginal & Torres Strait Islander Corporation attended the additional day of survey on 19 April 2022.

Table 3-1: Log of RAP involvement in the field survey.

Organisation	Representative	Fieldwork dates					Notes
		17/05/21	18/05/21	19/05/21	20/05/21	21/05/21	
Fieldwork Week 1 Team 1							
Murong Gialinga Aboriginal & Torres Strait Islander Corporation	Steven Flick	X	X	X		X	
Michael Long	Jacob Long	X	X	X	X	X	
Fieldwork Week 1 Team 2							
Gilgandra LALC	Darren Carney	X	X	X	X	X	
Gomeroi People NC2011/006							Could not supply a field worker. Re-allocated where possible
Dubbo LALC	Greg Kennedy				X	X	
		24/05/21	25/05/21	26/05/21	27/05/21	28/05/21	
Fieldwork Week 2							
Steve Talbott	Steve Talbott	X	X	X			
AT Gomilaroi Cultural Consultancy	Aaron Talbott		X	X			
Bawurra	Bareki Knox				X	X	
Talcon Pty Ltd	Josh Talbott				X	X	

3.2.1 Comments arising from the assessment

No specific cultural values pertaining to the survey boundary were received during the fieldwork. The general feeling was that the steep sided hills of Survey Unit 2 and the ridgelines and crests of Survey Unit 1 described in **Table 4-1** would not have attracted long term occupation in the past. Therefore, while ground surface visibility (GSV) was very low across Survey Unit 1 and 2 of the survey boundary, it was unlikely sites would be present.

Mr Steve Talbott believed that sites would more likely be located along creek lines and if sites were present across these landforms, they could be associated with subsurface deposits, particularly if there was sandy soil.

In the southeast of the Leadville cluster one of the site officers, Bareki Knox, noted a possible ring tree (**Figure 3-1** and **Figure 3-2**). The tree has been subject to fire damage and is dead. Mr Knox noted that he did not know whether it was a cultural ring tree as he was aware they can be created naturally. It was further added that if it was a cultural ring tree it may be marking a boundary or be part of a walking route. Given the origin of the tree is unknown, it was discussed in the field and the OzArk archaeologist concluded that the tree would not be registered on the AHIMS database. As a precautionary approach, the location of the tree and potential cultural values are noted in the findings of this assessment. Recommended measures to protect the tree are included in **Section 9.2.8**.

Figure 3-1: Location of the identified tree.

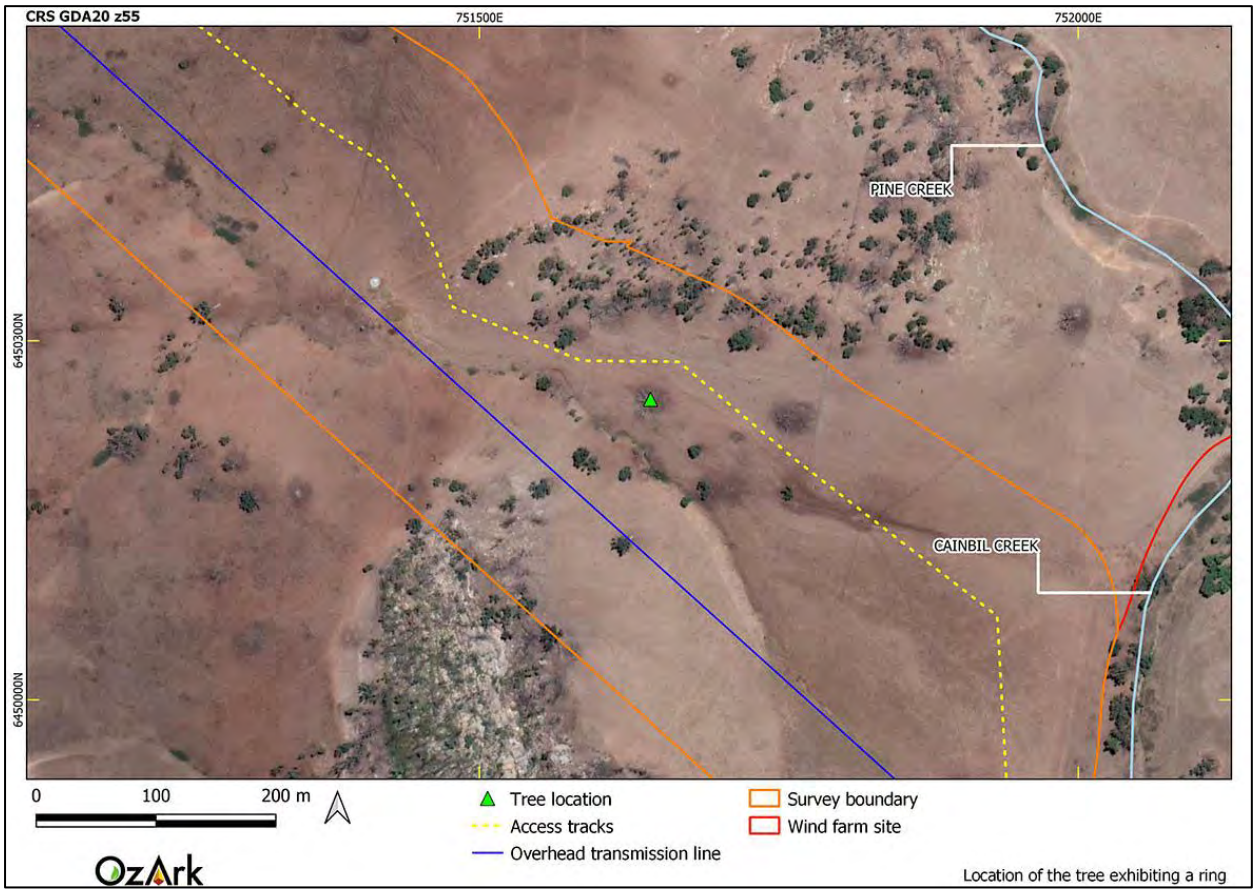


Figure 3-2: View of the identified tree and ring.

1. View northeast towards the tree.

2. View of the 'ring' created between the tree branches.

4 LANDSCAPE CONTEXT

An understanding of the environmental contexts of a study area is requisite in any archaeological investigation (DECCW 2010a). 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 humanly activated landscape processes, influence the degree to which these material culture remains 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 topography of the wind farm site is characterised by ridgelines and associated steep slopes with scattered vegetation, rolling hills, and small open flat valleys. The elevated slopes range from gentle to steep gradients and are usually cleared of vegetation, except for vegetation situated upon steeper terrain, although these are relatively limited in their extent.

Digital Elevation Models (DEMs) of the wind farm site provide an indication of the characteristic terrain of rolling hills and ridgelines with variable gradient (**Figure 4-1** to **Figure 4-3**).

Figure 4-1: DEM of the Mount Hope cluster.

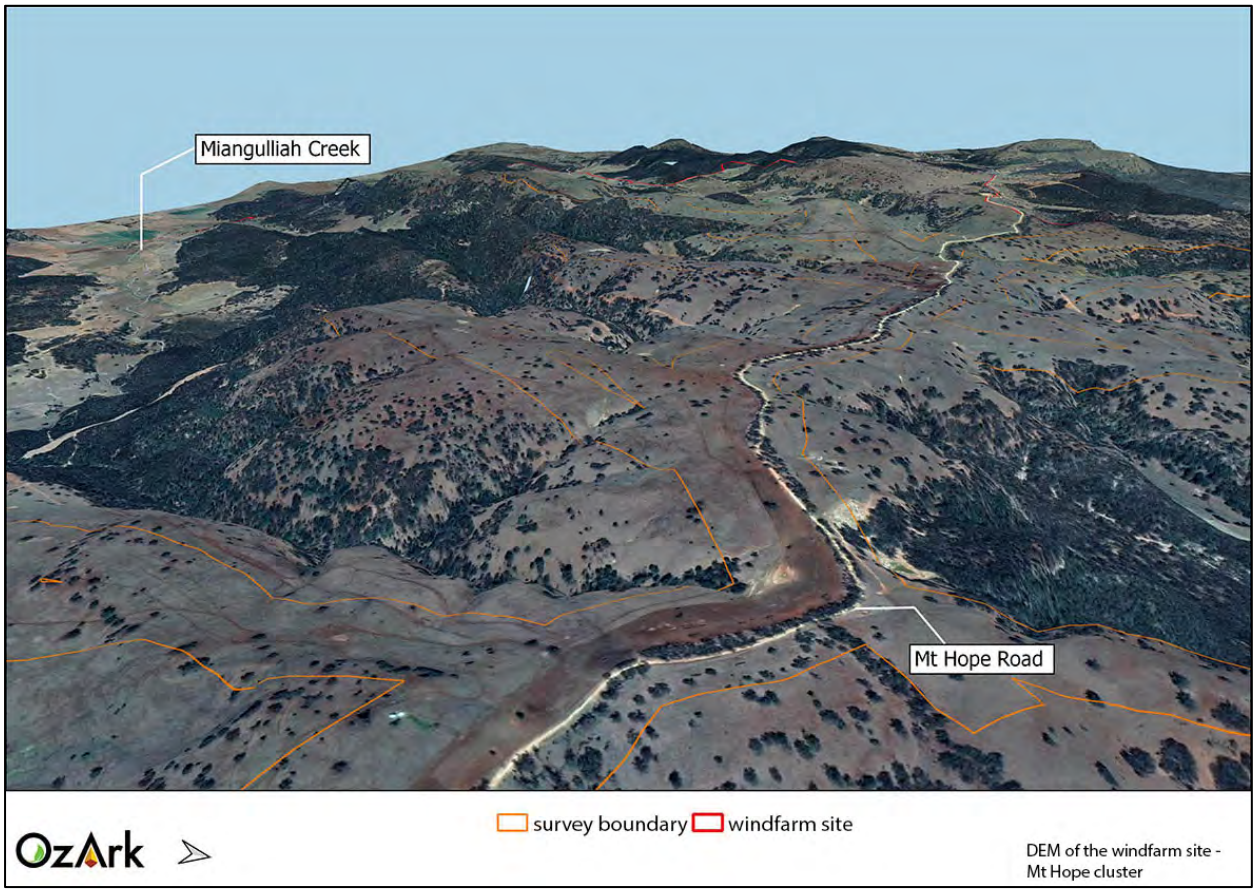


Figure 4-2: DEM of the Girragulang Road cluster.

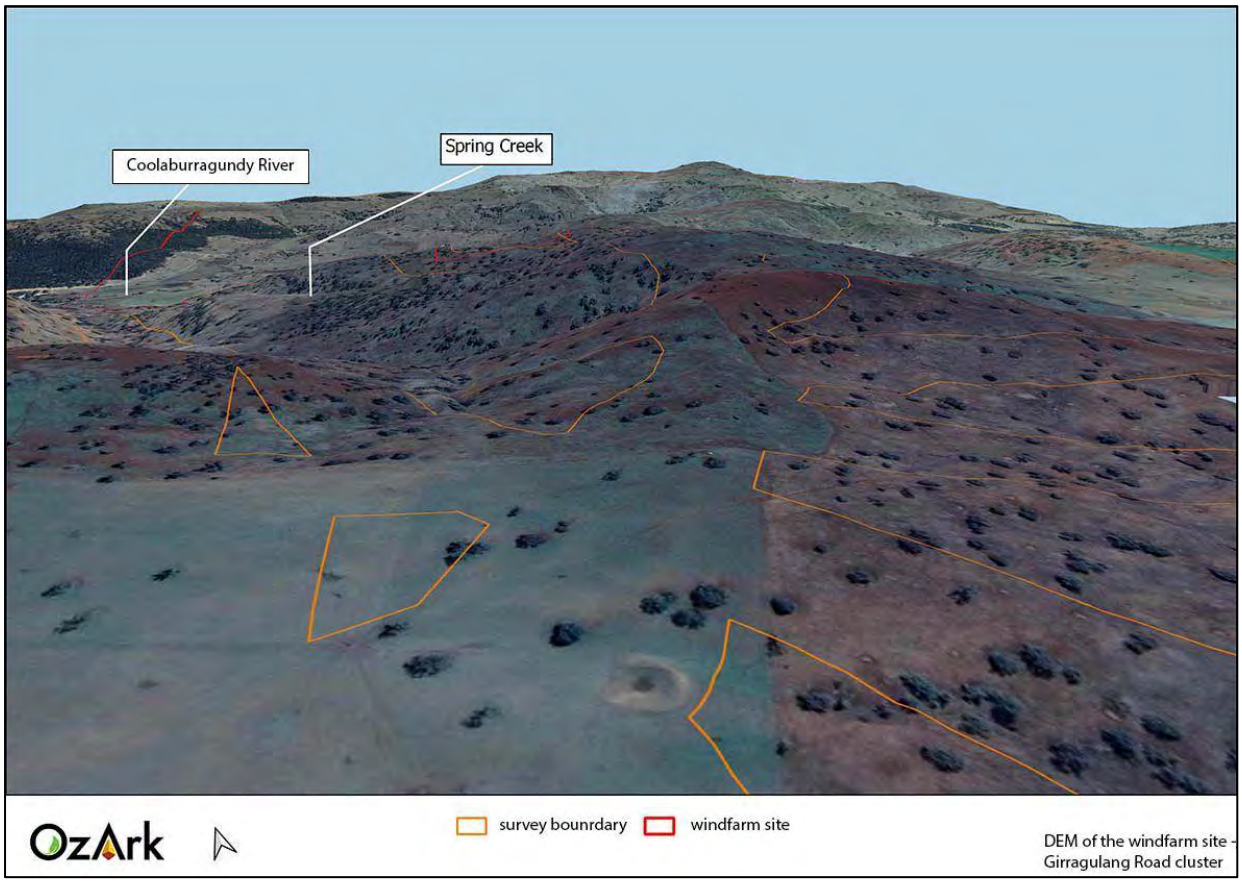
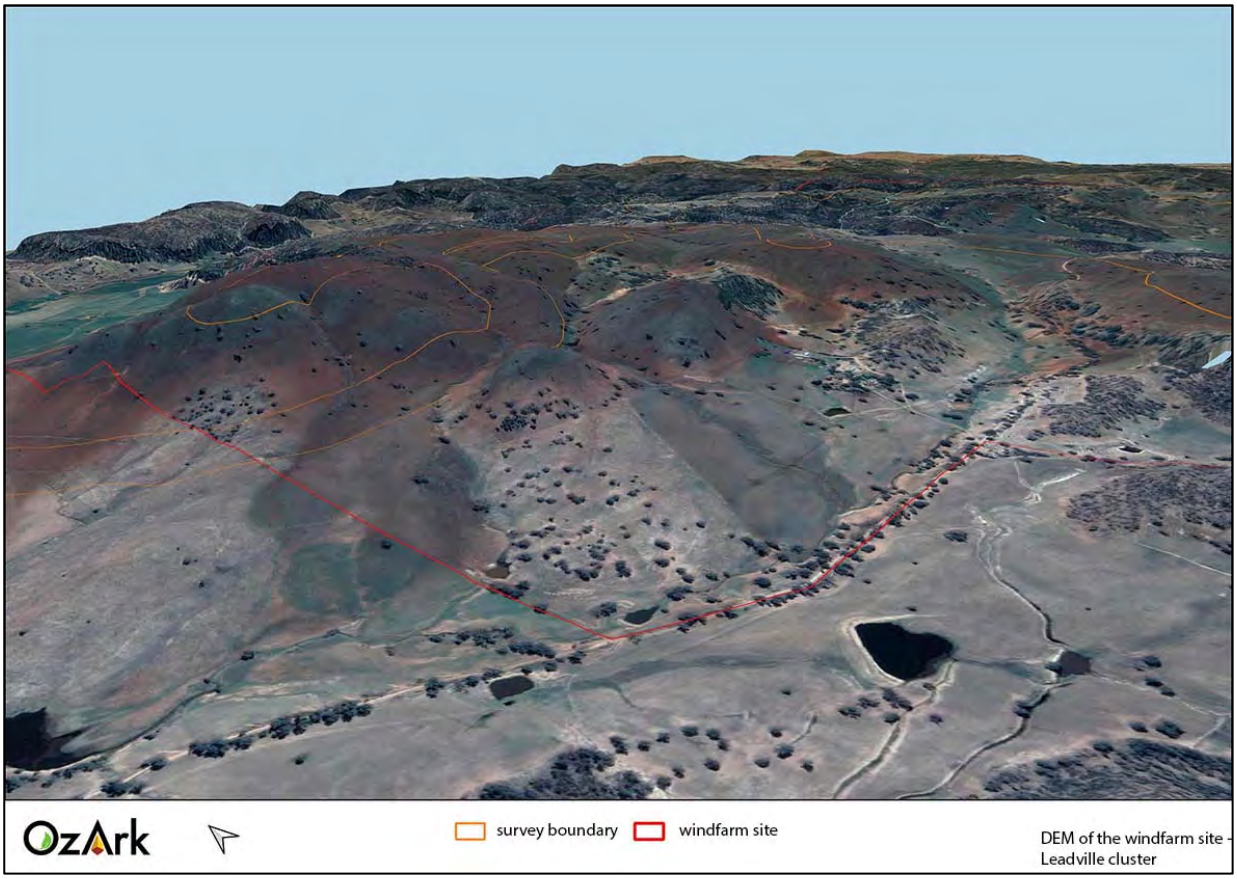
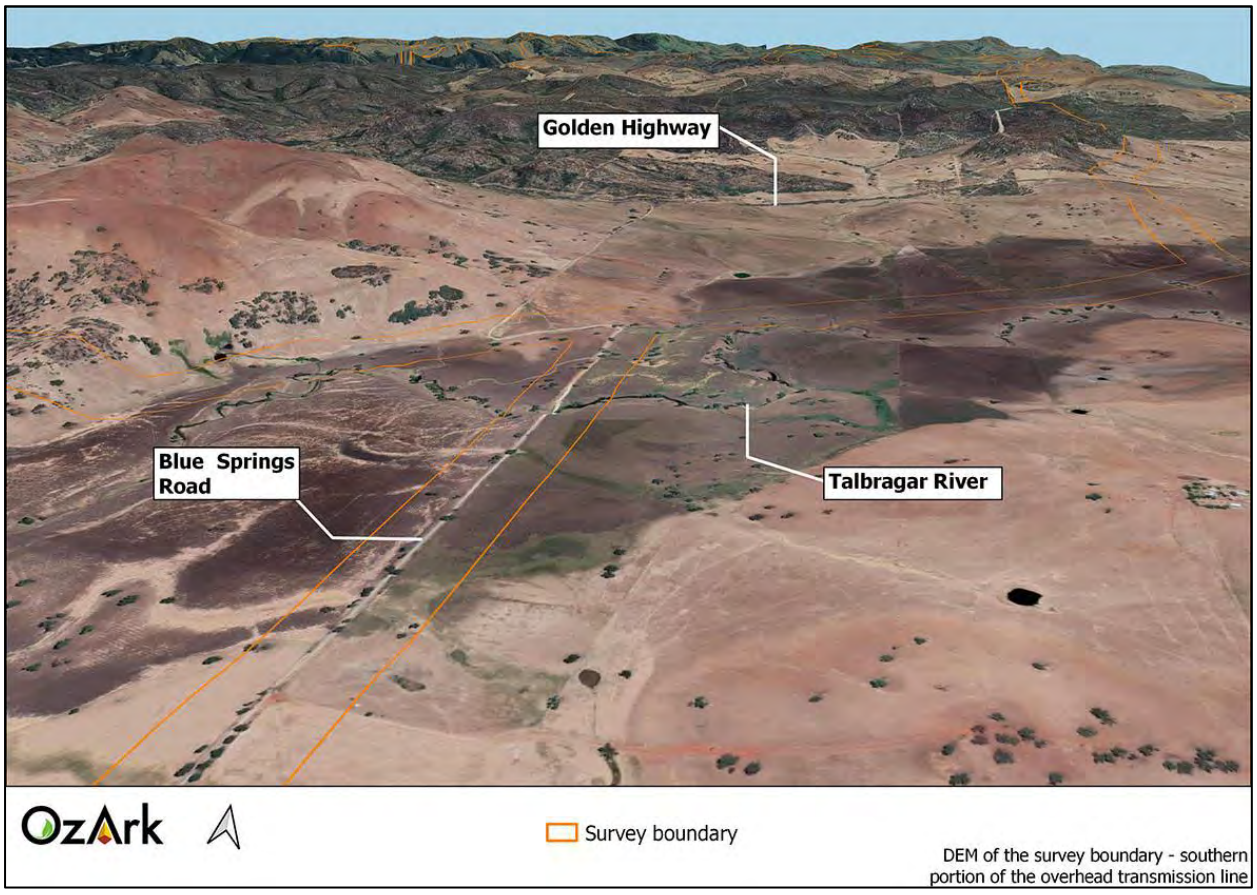


Figure 4-3: DEM of the Leadville cluster.



Although outside of the wind farm site, the survey boundary includes the transmission line that will link the project to the NEM. This alignment is near to the Talbragar River. Landforms in these portions of the survey boundary contain gentle slopes and flat floodplains. A DEM of this portion shows the flat nature of the terrain in contrast with the elevated, rolling terrain and ridgelines within the wind farm site.

Figure 4-4: DEM of the survey boundary associated with the transmission line.



Landform profiles of the wind farm site show that there are few areas of extensive flat landforms and that the landscape is typically characterised by ridgelines that are separated by U- and V-shaped valleys.

Figure 4-5 shows that the western portions of the Mount Hope cluster of the wind farm site is more undulating than the northern portions (see **Figure 4-6**) and has slightly lower altitudes ranging from around 450 m above sea level (asl) to 740 m asl. The Mount Hope cluster of the wind farm site also contains the highest point across the entire wind farm site at approximately 740 m asl, whereas the Leadville cluster contains the lowest at around 400 m in the southern most portion.

Figure 4-6 shows that the northern to central portions of the three clusters within the wind farm site are more elevated and more undulating than the southern portions and typically ranges in elevation from around 740 m asl to 560 m asl.

Both **Figure 4-5** and **Figure 4-6** show that the west–east sections of the wind farm site are more undulating than the north–south profiles. They also show that the wind farm site is predominantly comprised of sloping landforms.

Figure 4-5: West–east section across the three clusters of the wind farm site.

Top: Mount Hope. Middle: Girragulang Road. Bottom: Leadville. Scales in metres.

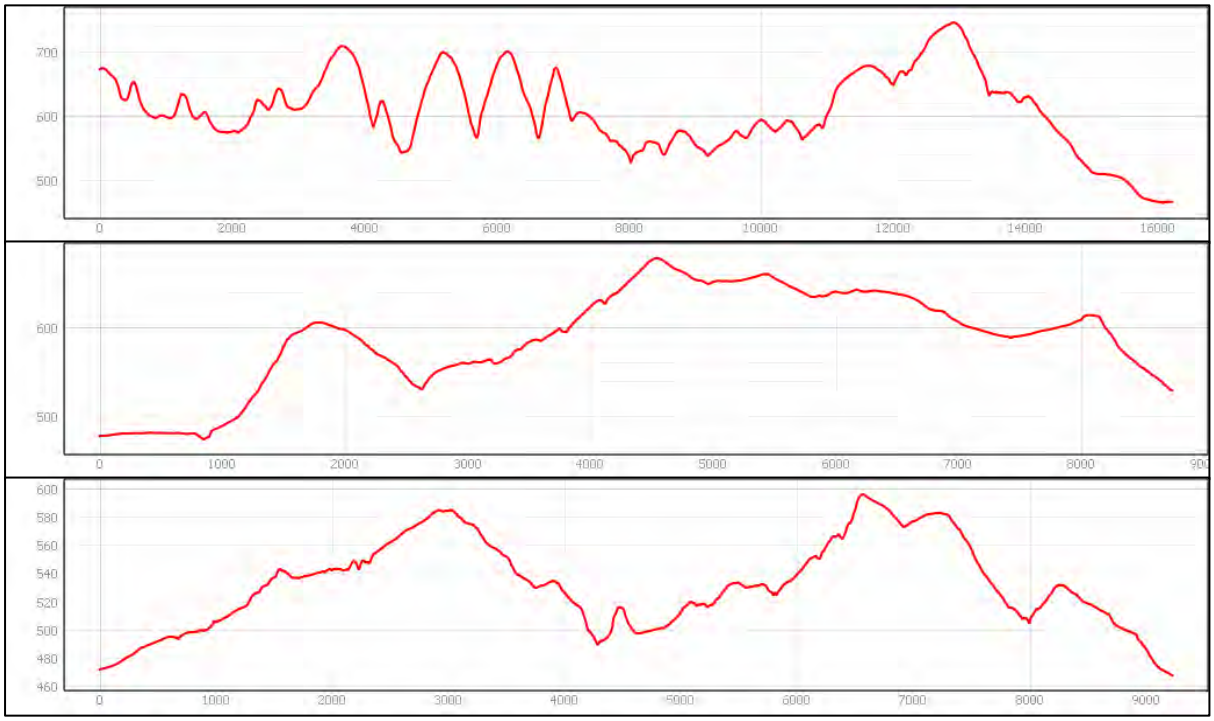
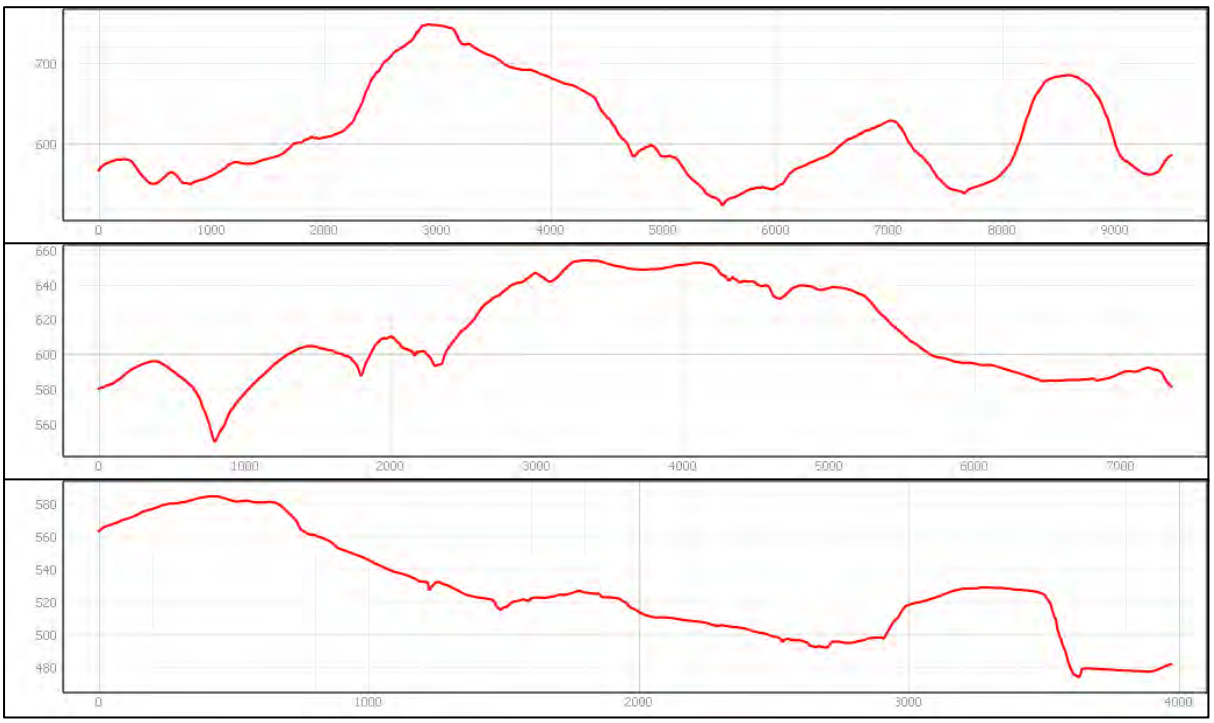


Figure 4-6: North–south section across the three clusters of the wind farm site.

Top: Mt Hope. Middle: Girragulang Road. Bottom: Leadville. Scales in metres



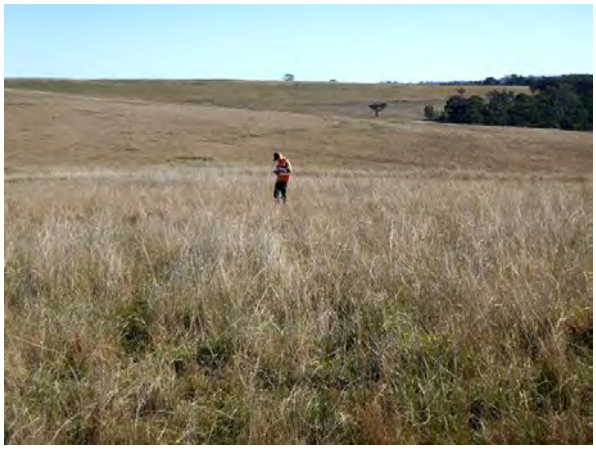
The wind farm site can be divided into four landform units that have been used as Survey Units for this assessment:

- Survey Unit 1. Ridgelines and crest landforms (**Figure 4-7**: images 1 and 2)
- Survey Unit 2: Slopes (**Figure 4-7**: images 3 and 4)
- Survey Unit 3: Low gradient/undulating landforms (**Figure 4-7**: images 5 and 6)
- Survey Unit 4: Floodplain landforms (**Figure 4-7**: images 7 and 8).

The Survey Units are detailed further in **Table 4-1**.

Figure 4-7: Topography of the survey boundary.

<table>
<tr><td>  </td><td>  </td></tr>
<tr><td>1. Example of Survey Unit 1. View of the crest of a ridgeline landform.</td><td>2. Example of Survey Unit 1. View of the crest of a ridgeline.</td></tr>
<tr><td>  </td><td>  </td></tr>
<tr><td>3. Example of Survey Unit 2. View downslope of a steep slope.</td><td>4. Example of Survey Unit 2. Example of a steep upper slope.</td></tr>
</table>



5. Example of Survey Unit 3. View of an undulating landform.

6. Example of Survey Unit 3. View of a gentle undulating landform.

7. Example of Survey Unit 4. View of the floodplain associated with the Coolaburragundy River.

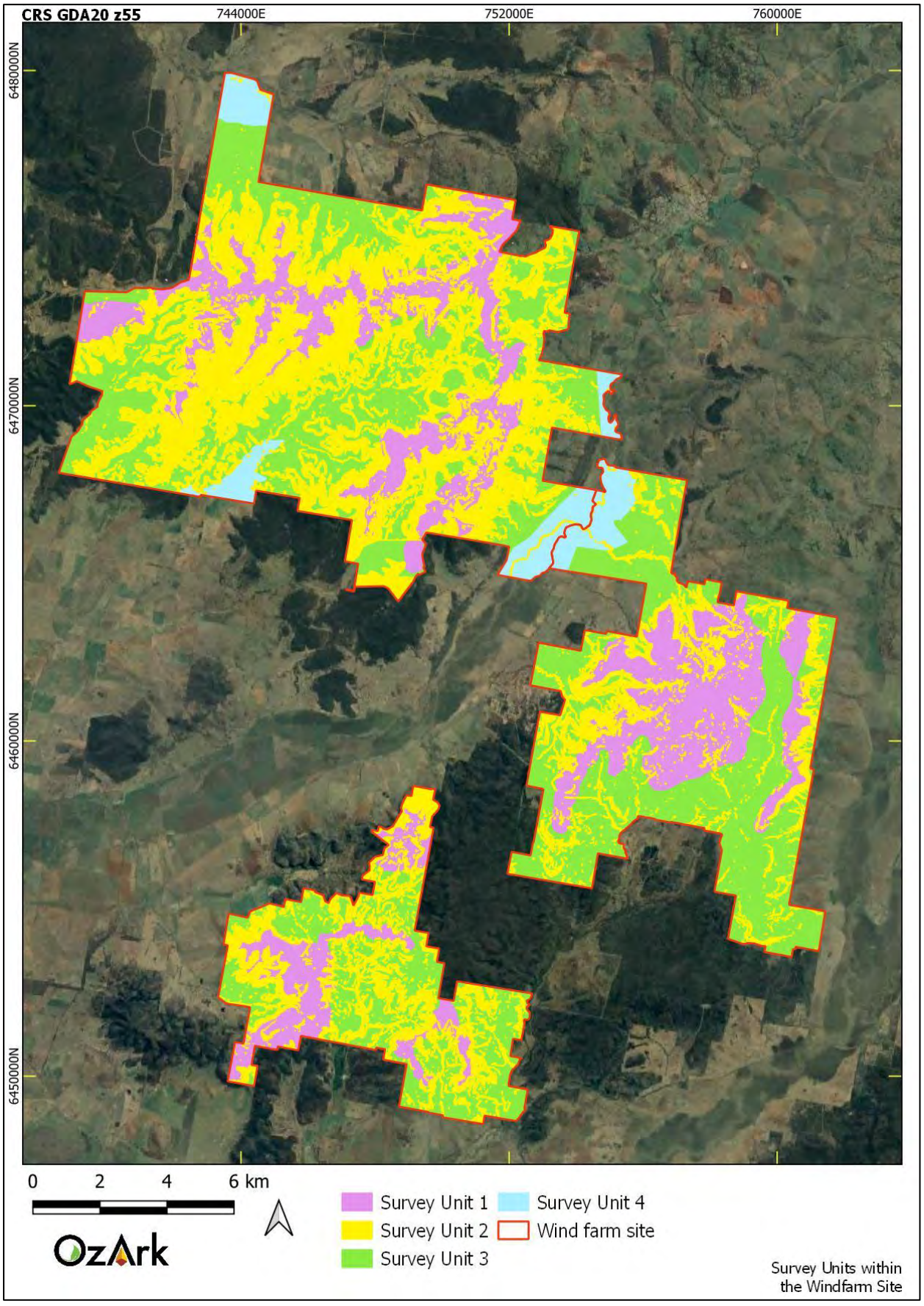
8. Example of Survey Unit 4. View of the floodplain associated with the Talbragar River.

Table 4-1: Survey Units and landforms within the wind farm site.

Survey Unit	Landform type	Definition	Total area within the wind farm site (ha)	Percentage of landform within the wind farm site
1	Ridgelines and crest landforms	Characterised by a either a single crest (the top of a mountain or hill) or a chain of mountains or hills that form a continuous elevated crest (ridgeline)	6,998	27%
2	Slope landforms greater than 10 degrees	Landforms with steeper gradients	10,019	39%
3	Low gradient/undulating landforms	Characterised by sloping landforms with gentle gradients (less than 10 degrees slope). In the wind farm site, these landforms are elevated and often distant to water.	7,798	30%
4	Floodplains	Flat, alluvial plains adjacent to major watercourses	1,075	4%

As shown in **Table 4-1**, most of the wind farm site is characterised by steeply sloping landforms which comprise Survey Unit 2. These steep slopes are often treed, although most have been cleared in the past. Ridgelines and crests (Survey Unit 1) comprise 28% of landforms within the wind farm site and include extensive ridgelines of the type that could have been used as traditional pathways by Aboriginal people. Low gradient/undulating landforms (Survey Unit 3) comprise 30% of the wind farm site and can be best described as undulating landscapes or rolling hills generally distant to water. Floodplains, while comparatively rare, are still present within the wind farm site. The extent of these landform units within the wind farm site is mapped on **Figure 4-8**.

Figure 4-8: Landforms within the wind farm site.



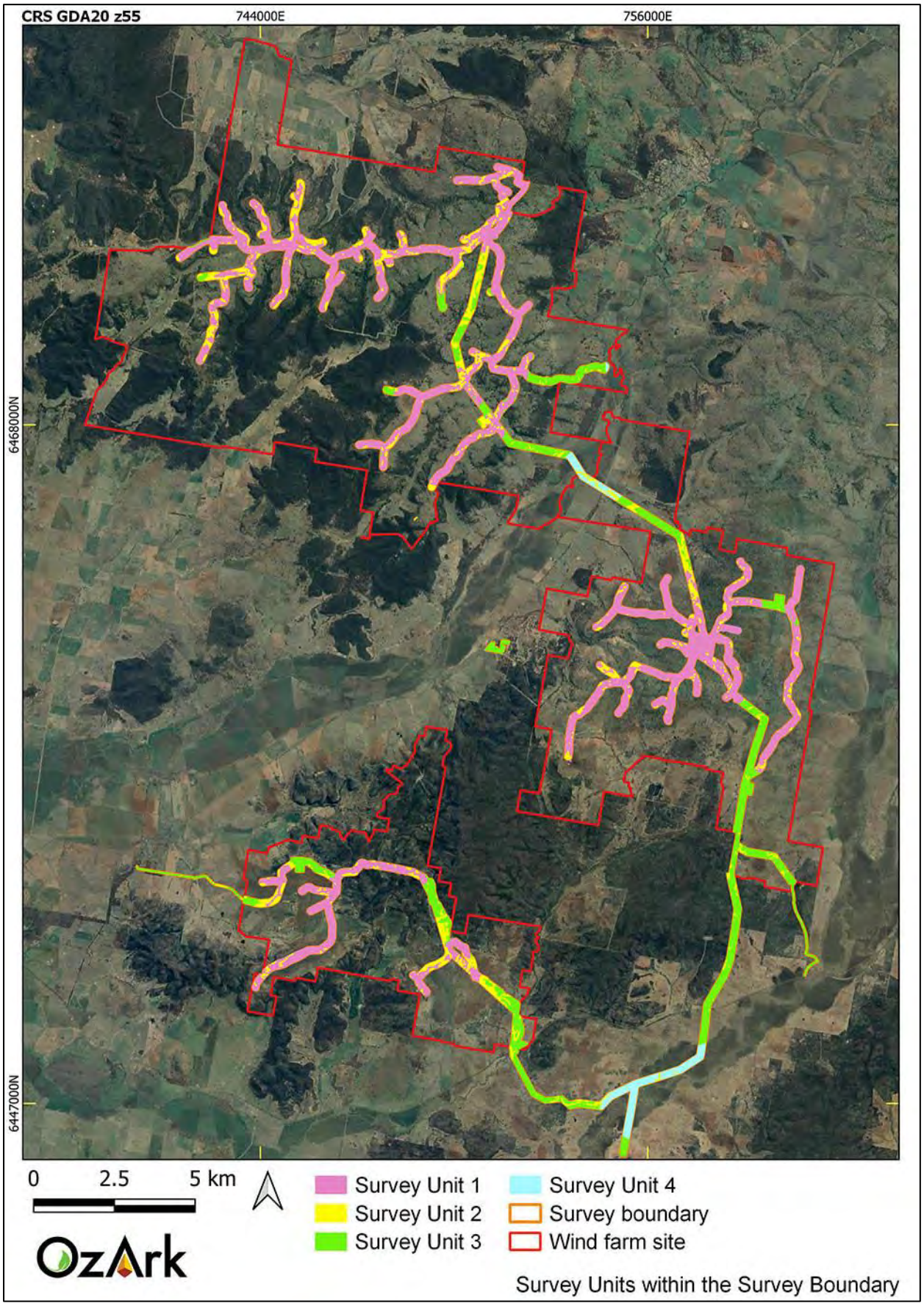
The extents of the Survey Units within the survey boundary are detailed in **Table 4-2**.

Table 4-2: Survey Units and landforms within survey boundary.

Survey Unit	Landform type	Definition	Total area within the survey boundary (ha)	Percentage of landform within the survey boundary
1	Ridgelines and crest landforms	Characterised by a either a single crest (the top of a mountain or hill) or a chain of mountains or hills that form a continuous elevated crest (ridgeline)	1302	40%
2	Slope landforms greater than 10 degrees	Landforms with steeper gradients	526	16%
3	Low gradient/undulating landforms	Characterised by sloping landforms with gentle gradients (less than 10 degrees slope). In the wind farm site, these landforms are elevated and often distant to water.	1294	39.5%
4	Floodplains	Flat, alluvial plains adjacent to major watercourses	152	5%

Figure 4-9 shows the survey boundary in relation to the defined landform types to provide an indication of the landform types in which the proposed works will occur and **Figure 4-7** shows views of the Survey Units within the survey boundary. As can be seen, most impacts are confined to Survey Unit 1 and Survey Unit 2 landforms as would be expected for a wind farm. Most turbine locations are within Survey Unit 1 and Survey Unit 2 landforms, although some turbine locations are adjacent to Survey Unit 3 landforms. The impacts in Survey Unit 3 and Survey Unit 4 landforms are generally limited to linear impacts such as the electrical reticulation, access tracks and the overhead transmission line.

Figure 4-9: Landforms within the survey boundary.



4.2 GEOLOGY AND SOILS

The wind farm site is predominately within Brigalow Belt South Bioregion which is comprised of horizontal bed Triassic and Jurassic (approximately 250 to 150 million years ago) quartz sandstone, and shale, with some portions also containing basalts or conglomerates (NPWS 2003). The wind farm site is also situated near the Liverpool Range which formed between approximately 66 to two million years ago.

The geology of the region has a significant correlation to the topography. Most of the Mt Hope cluster and parts of the Girragulang Road cluster of the wind farm site are within the Piliga subregion which is characterised by stepped sandstone ridges and a high proportion of outcropping rock (basalt). The remaining areas of the Mount Hope and Girragulang Road clusters are within the Liverpool Range subregion which consist of undulating plateau sandstone tops with steep slopes grading to long footslopes. Basalt is common both in cobbles and outcrops. Moving south to the Leadville cluster, the Cerrabee subregion of the Sydney Basin Bioregion consists of sandstone plateaus with cliffs edges and small areas of ridge tops with Tertiary basalt.

Soil analysis has important ramifications for archaeological research through the potential impact of different soils on human activity (such as agricultural exploitation) and the impact of the soils on archaeological evidence (such as post-depositional movement). The soils known to occur throughout the survey boundary are identified here to delineate their nature and impact on the survival and location of archaeological material.

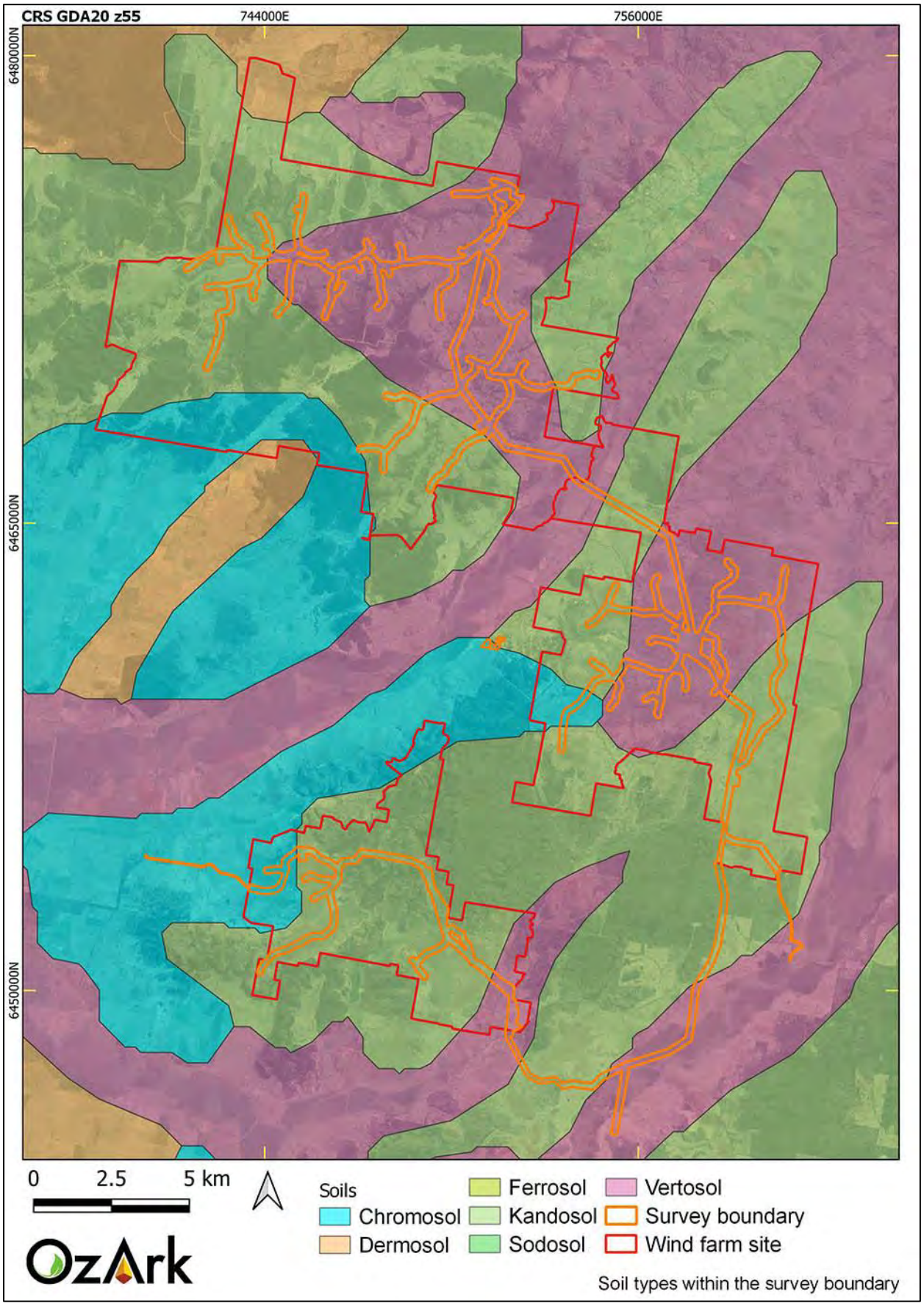
In terms of the wind farm site the dominant soils according to the Australian Soil Classification are Kandosol and Vertosols (**Figure 4-10**). These soils are typically associated with the more elevated landforms, i.e. ridgelines and crests and upper slopes across the wind farm site which have a degrading environment. Vertosols consist of a high clay content and are often referred to as cracking clays. These soils are generally associated with areas of outcropping basalt. Agriculturally these soils have a high nutrient content, but they are poor preservers of archaeological deposits and therefore generally have low archaeological potential.

Kandosols are non-texture contrast soils with little or gradual increase in clay content with depth. These soils are found in poorly drained areas and are considered to have low to moderate agricultural potential with moderate chemical fertility and water-holding capacity. These soils are better preservers of archaeological deposits, although their characteristics of low fertility and poor drainage suggest that landforms dominated by this soil type were not ideal occupation areas.

The soils across the remainder of the wind farm site are Chromosols and Dermosols which are mostly associated within the valleys or low-lying plains and consist of aggrading environments (**Figure 4-10**). These soils are present in the southeast of the wind farm site. Dermosols lack a strong texture contrast between the B1 and B2 horizon and have high agricultural potential because of its good structure, moderate to high chemical fertility, and water-holding capacity. In

contrast, Chromosols have strong texture contrast between A horizons and B horizons, however, they are also suitable for agricultural purposes. Both soil types preserve archaeological deposits and are located in areas that are generally more favourable to past Aboriginal occupation.

Figure 4-10: Soil types of the survey boundary.



4.3 HYDROLOGY

The wind farm site is intersected by many watercourses, both named and unnamed (**Figure 4-11** and **Figure 4-12**). These watercourses occur within open pasture, valleys, and gullies across the wind farm site. The major waterway within the wind farm site is Coolaburragundy River, located between the Mt Hope and the Girragulang Road clusters. In addition, the Talbragar River is located immediately south of the southernmost extent of the survey boundary where the overhead transmission line is proposed. Named creeks within the wind farm site include Moreton Bay, Wallambriwang, Mumdedah, Spring, Collier, Cainbil, and Miangulliah Creeks. Therefore, the wind farm site is well watered with several named creeks that hold permanent or semi-permanent water currently and probably held water more permanently before the hydrological changes brought about by agricultural activity in the modern period.

As shown in **Figure 4-12**, most of the impacts associated with the construction and use of the project are at a distance to waterways as the major project components are generally confined to ridgelines and crests. However, other project components, such as the electrical reticulation and access tracks, cross some minor waterways, while the overhead transmission line is near the major waterway of the Talbragar River. As such, impacts to named waterways are relatively minimal within the survey boundary.

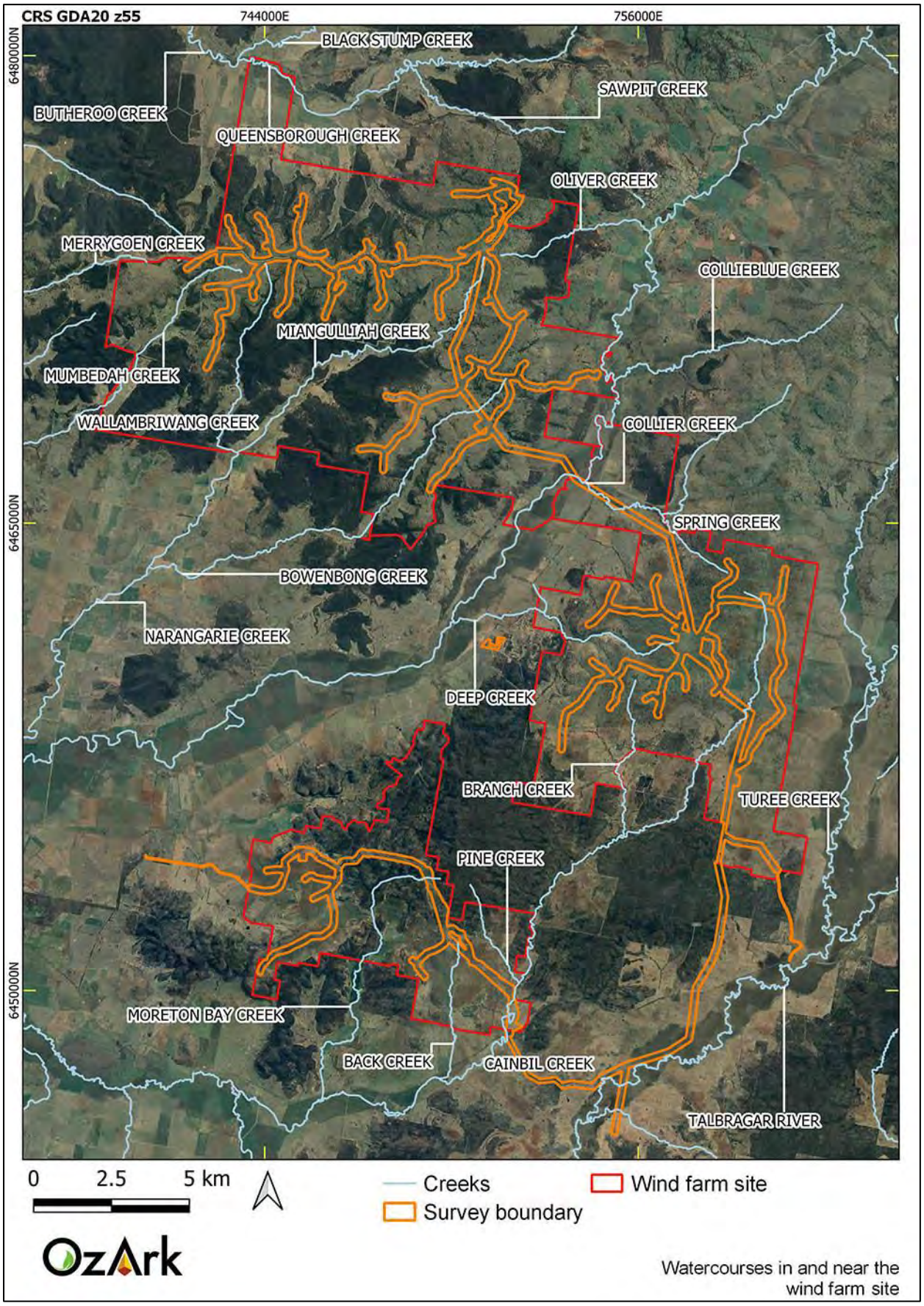
Figure 4-11: Hydrology of the survey boundary.

1. View of the Coolaburragundy River and associated floodplain.

2. View south along Cainbil Creek.

	
3. View of Deep Creek within a V-shaped valley.	4. View of a tributary of Bowenbong Creek within a V-shaped valley.

Figure 4-12: Named watercourses in relation to the wind farm site.



DEMs of the wind farm site show the topography of the local waterways (**Figure 4-13** and **Figure 4-14**). Generally, waterway topographies within the wind farm site can be likened to that illustrated by Deep Creek, meaning that the waterways are within a V-shaped valley without any associated creek flats (**Figure 4-13**). Few waterways such as Coolaburragundy and Talbragar Rivers are associated with alluvial creek/river flats, although only a small portion of this landform is within the survey boundary (**Figure 4-14**).

Figure 4-13: DEM of the topography associated with Deep Creek.

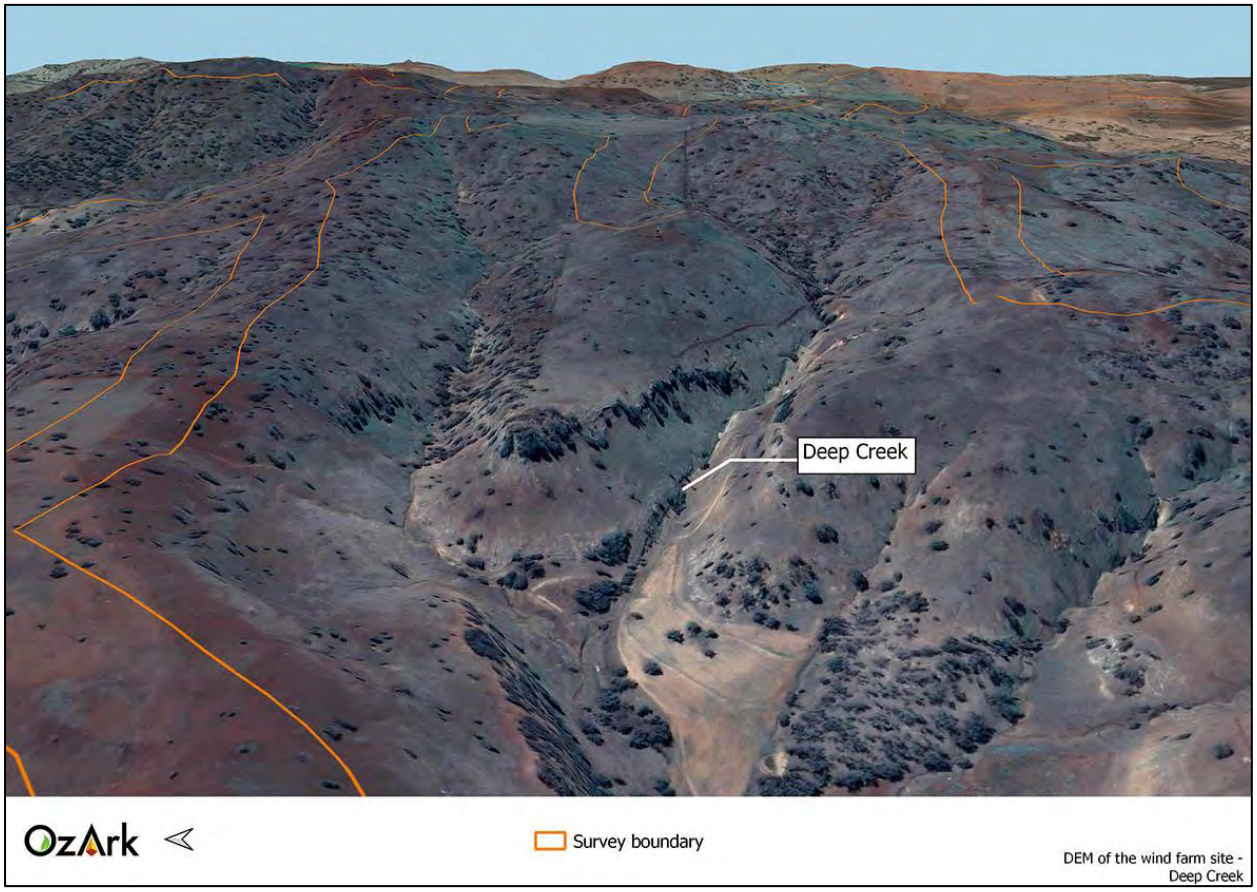
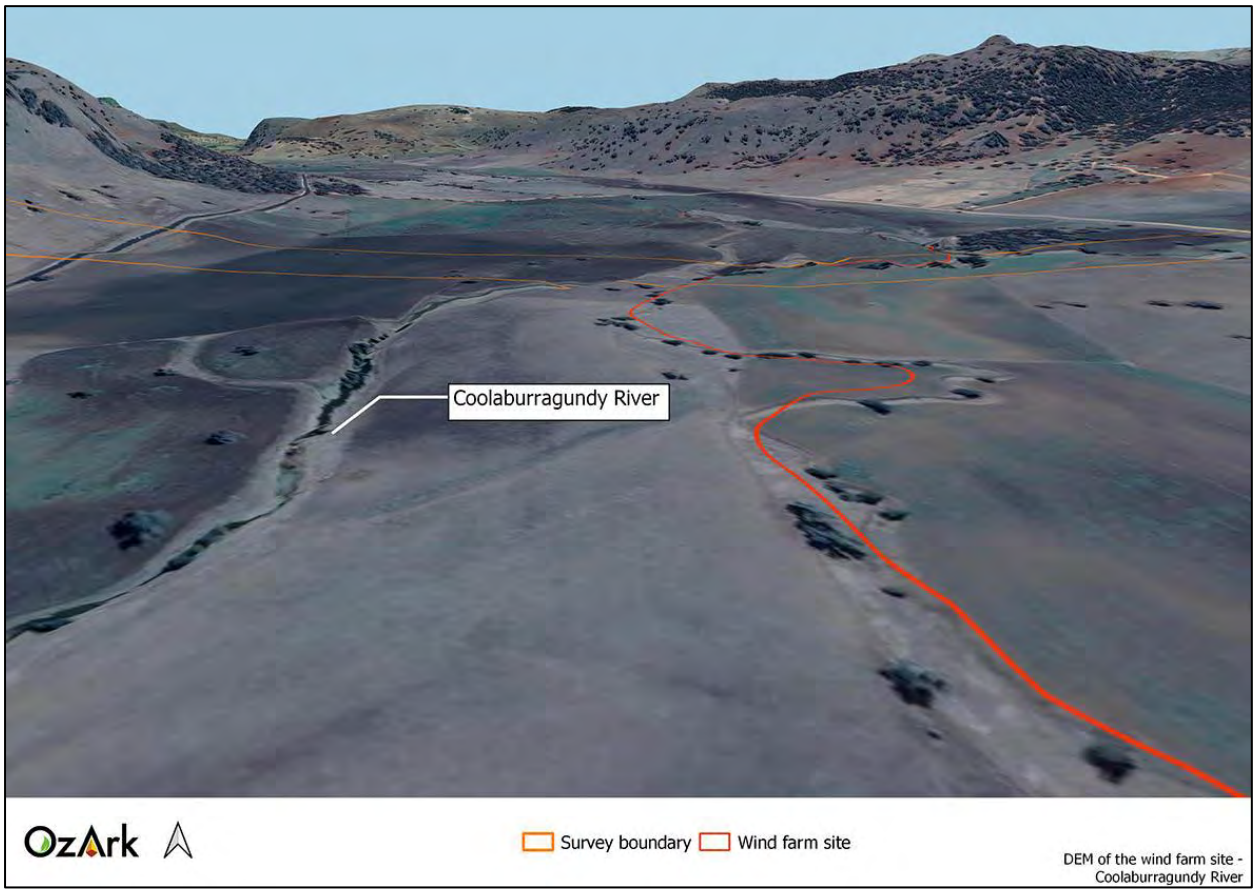


Figure 4-14: DEM of the topography associated with the Coolaburragundy River.



4.4 FLORA AND FAUNA

The distribution of vegetation and fauna resources within the local landscape are important factors influencing patterns of Aboriginal land use and occupation. Additionally, the effectiveness of the archaeological survey is directly impacted by visibility conditions, of which vegetative cover is an important feature.

The survey boundary has experienced widespread changes in vegetation during the past century, with the original vegetation essentially removed (for pastoral grazing), resulting in a mainly open area with minimal remnant vegetation. The original vegetation of the local area consisted of white box with white cypress pine and kurrajongs on the basalt hills; ironbark, white gum, black cypress pine ironbark and rough-barked apple box on stony sandstone plateaus; white box and rough-bark apple box extending along the steeper slopes; Blakely's red gum on lower slopes; and rough-barked apple box, red gum, grey box, yellow box white box, grey box, and fuzzy box in valleys (NPWS 2003).

Due to extensive clearing, the survey boundary now consists of a dense grass cover with limited tree and shrub vegetation in the low and mid strata, although pockets of upper strata vegetation have been retained in steeply sloping landforms where widespread clearing has not been undertaken. The native vegetation mainly consists of regrowth from earlier clearance for grazing

land. These areas are adjacent to, but largely outside of the survey boundary. This grazing process has also resulted in a substantive change in the form of grass cover, with grazing stock preferring the introduced grasses over native grasses.

Numerous fauna species suitable for subsistence by Aboriginal people would have been present throughout the wind farm site. These species include native birds, possums, wallabies, and various species of freshwater fish. The region is home to several threatened or endangered native fauna species, including the regent honeyeater, the swift and superb parrot and the brush-tailed rock-wallaby (EcoLogical 2020). The decline in fauna can be linked to the environmental changes caused by agricultural activities in the area.

4.5 CLIMATE

The climate of the region is characterised by cold winters and hot, dry summers. Maximum temperatures average 32 to 34°C in the summer months and 16 to 18°C in the winter months. Minimum average temperatures for summer and winter range from 17 to 19°C and 5°C, respectively. Mean annual precipitation is relatively sufficient of around 500 millimetres (mm).

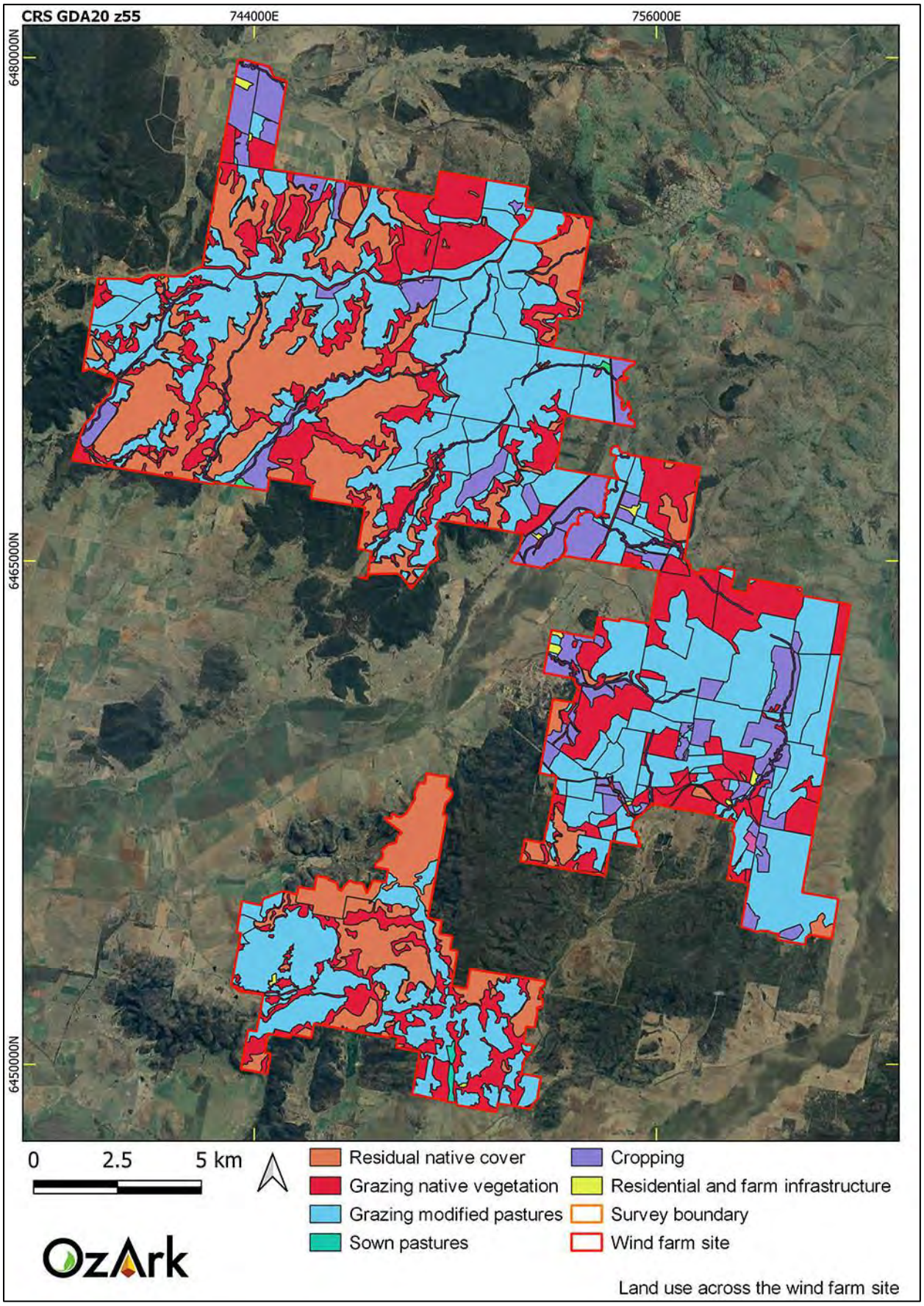
4.6 LAND USE HISTORY AND EXISTING LEVELS OF DISTURBANCE

The predominant land use of the wind farm site is grazing based on the NSW Land use dataset (2017) (**Figure 4-15**). The establishment of the grazing industry involved the widespread clearing of native vegetation and the introduction of heavy, hard hoofed animals. The extent of clearing is evident on aerial images where even some of the steepest slopes have been cleared. Cropping is undertaken along the flats and floodplains of Coolaburragundy and Talbragar Rivers.

The combination of the steeply sloping terrain, a substantial rainfall, vegetation clearance, and the breaking apart of the soil by livestock has meant that the already thin soils have become much thinner. In many portions of Survey Unit 1 and Survey Unit 2, soils on ridgelines and crests and slopes are skeletal. Conversely, sedimentation in waterways, such as the headwaters of Coolaburragundy River, shows the result of the downward movement of soils from the slopes.

Disturbed land within the survey boundary consists of road corridors, farm tracks, farm infrastructure (sheds, cattle yards, dams, fences, etc.), telecommunication aerials, and livestock grazing and trampling.

Figure 4-15: Aerial showing the survey boundary in relation to current land use.



4.7 CONCLUSION

Review of the environmental characteristics of the survey boundary allow conclusions to be formulated in terms of past occupation of Aboriginal people.

Topography: The survey boundary predominantly consists of ridgelines and crests. Some slopes, rolling hills, and low-lying floodplains are also within the survey boundary. The floodplains within the survey boundary are primarily restricted to areas associated with creeks or rivers, such as the overhead transmission line crossing the Coolaburragundy River and Cainbil Creek. Occupation by traditional Aboriginal people will likely be more associated with the larger permanent or semi-permanent waterways and flat plains around the Coolaburragundy River, Cainbil Creek, and the Talbragar River. While ridgelines and crests may have been utilised for certain activities, primarily ceremonial or transit, their exposure makes them unlikely to be the location of large occupational camps.

Geology and Soils: The predominant geology of the area surrounding Coolah and Leadville is sandstone and basalt. Both materials were utilised by the Aboriginal people, as sandstone outcrops were used for shelter and basalt used as a raw material for manufacturing artefacts. Thus, areas with outcropping basalt could contain evidence of past Aboriginal quarrying activity, while sandstone may have provided habitation or suitable areas for grinding.

The fertile soils of the region would have supported various resources that attracted the traditional Aboriginal people to the area. However, colonial use of the fertile soil has resulted in long-term impacts to the environment, including the clearing of vegetation to provide open spaces for intensive grazing. These impacts could have removed certain site types (such as culturally modified trees) or the disturbed artefact sites through soil loss, ploughing, and stock trampling.

Hydrology: As anywhere in Australia, there remains a close association between the recording of Aboriginal sites and the presence of waterways. The survey boundary contains many unnamed seasonal creeks, and a few named creeks such as Cainbil and Collier Creeks. Only two major permanent waterways exist in or near to the survey boundary, the Coolaburragundy and Talbragar Rivers. However, only small portions of these rivers are within the survey boundary.

Flora and Fauna: The region would have provided resources for seasonal occupation by Aboriginal people. The sloping and elevated terrain of most of the survey boundary means that obtaining resources in these areas was likely more difficult when compared to other nearby environments, such as those to the south along the Talbragar River, or those areas adjacent to Coolaburragundy River. It was within these areas where an abundance of more desirable resources would have been located and therefore where more long-term occupation would have taken place.

Climate: The climate of the survey boundary provides adequate temperatures and sufficient rainfall to allow year-round occupation by Aboriginal people in the past. However, the more

exposed areas of the survey boundary such as crests and ridges would have been unsuitable for occupation in the cooler months due to high winds and cooler temperatures. If occupation sites exist in the survey boundary, they would tend to be located on landforms with sufficient shelter from the elements, such as areas with significant sandstone outcropping near permanent waterways.

Land Use: The substantial amount of vegetation clearing to obtain open land for agriculture and farming most likely removed many Aboriginal sites such as culturally modified trees and/or dispersed sites such as artefact scatters through the soil loss that followed vegetation clearing. Sites such as artefact scatters, Bora grounds or stone arrangements are likely to have been disturbed through stock trampling. In areas where farming and agriculture is less intensive, such as hills and slopes, Aboriginal objects are likely to be in a secondary context due to slope wash.

5 ABORIGINAL ARCHAEOLOGY BACKGROUND

5.1 ETHNO-HISTORIC SOURCES OF REGIONAL ABORIGINAL CULTURE

The wind farm site is situated within the traditional lands of the Gamilaraay and the Wiradjuri people. To the immediate west lies the Wailwan tribal and linguistic group (Horton 1994).

The Gamilaraay (also spelt Kamilaroi) country, as defined by the limits of the Gamilaraay language groups, refers to the language or dialect spoken in the area of the Namoi, Gwydir, and Barwon Rivers in north to central New South Wales. The language was spoken over a large area from Walgett to Bingara, and from the upper Hunter Valley to beyond Mungindi (O'Rourke 1997). According to O'Rourke (1997) it is difficult to establish the total Aboriginal population who originally spoke this language.

The Wiradjuri language group is the biggest in New South Wales and occupied the northern parts of the South Eastern Highlands bioregion in the vicinity of Orange and Bathurst. 'Wiradjuri' means '*people of three rivers*', the three rivers being the Macquarie, Murrumbidgee, and Lachlan Rivers. These rivers represented the Wiradjuri people's livelihood and supplied consistent and abundant resources. The Wiradjuri people generally moved in smaller groups along river flats, open land, and waterways.

The explorer and natural scientist Alfred William Howitt was an early pioneer authority on Aboriginal cultures. In *Native Tribes of South-East Australia*, Howitt (1996 [1904]) discusses Gamilaraay social and political organisation, kinship, ritual practices, long distance trade and communication (see also Fison and Howitt 1880). Presbyterian minister Reverend William Ridley (1875) and surveyor and amateur anthropologist Robert Hamilton Mathews (1903) provided early linguistic descriptions of the Gamilaraay language. More recently, Austin and Tindale (1985) provided a translation of the Gamilaraay Dreaming story of the Emu and the Brolga, as recorded by Austin (1993) produced a Gamilaraay reference dictionary.

The area of the Gamilaraay is described as being rich in both flora and fauna resources with the following listed as having been exploited for food. The Gamilaraay caught fish including eels, freshwater crayfish, yabbies, tortoises and freshwater mussels in the rivers, creeks and wetlands in the region (O'Rourke 1997). Watercraft were manufactured from large slabs of bark cut from river red gum trees. Fish were caught using fishing lines and nets made from reed fibre. Nets were used to catch waterbirds, whose eggs were also collected. Some of the other animals that Aboriginal people of the North West Slopes hunted include kangaroos, wallabies, koalas, possums, emus, echidnas, lizards, snakes and frogs (Fison and Howitt 1880; O'Rourke 1997). Plant foods included grass seeds, wild orange, emu apple, melons, tubers, yams, and roots (O'Rourke 1997).

The area of the Wiradjuri people also had an abundance of resources that were utilised with plant species including Kurrajong seeds, growing tips and berries, honey, roots, acacia gum, bulrush, pulp, nuts (quandong), and yams. Animals included possums, native bears, wallabies, wombats (highly prized), bandicoots, kangaroos, rats, platypus, lizards, and snakes. Bird species included emu, plain turkeys, waterfowl, and many other bird species. From the rivers and lagoons came fish (cod, perch and catfish) as well as yabbies, shrimp, and turtles (Garnsey 1942 and Pearson 1981).

Balme (1986) compiled a list of objects that likely comprised the toolkit used by Aboriginal people in the region from reports by Mitchell (1839), Oxley (1820) and Sturt (1834). Based on this list, the toolkit used by Gamilaraay people is likely to have included: bark containers for holding water and gathering food; throwing sticks for hunting; cloaks of kangaroo skin; wooden clubs for fighting; hafted stone axes; nets for catching fish and birds; spears and spear throwers; and fish traps constructed in major creeks and rivers.

One of the key accounts comes from James Patrick Tuckey, an Aboriginal man who was born and worked at the local property Turill, is documented in MHC 2019:

> *Prior to white settlement the natives existed on fish in the Coolaburragundy River, fauna and bird life from the valleys and the seeds of the Coolah grasses which grew of the flats. These seeds were ground into powder by a kind of stone and mill.*
>
> *Grinding beds where the warriors made and sharpened their tomahawks may still be seen on sandstone in several streams that lead into the Coolaburragundy River. Hands on rocks, within the Coolah area, are few and few between. An interesting native made water trap in a small sandstone cliff exists north of Coolah, no doubt once used by members of the Butheroe tribe. A well preserved 'native hide' exists in the Uarbry area* (MHC 2019: 35).

Accounts have also been made of Aboriginal burial practices in the Coolah area. Roy Cameron (as cited in MHC 2019: 36) notes that after burying the dead, Aboriginal people would abandon the area for a certain amount of time, depending on the individuals rank, as it was thought that the spirit of the deceased would haunt them.

During the 1830s European settlement continued in the region with several sheep and cattle pastoral runs. An increasing number of Aboriginal people began working on properties in the region over time. This included King Togee of the Butheroe Tribe of the Gamilaraay people who was from the Butheroe Creek area. Cameron (1993) describes a fatal incident between Togee and Cuttabush, a warrior of a nearby Gamilaraay group:

> *A conflict between Togee and Cuttabush fatally speared Togee in Butheroe Creek not far from the old Vincent-Nevell homestead which was situated near the junction of the present Coolah-Neilrex and Dog-ana-bug-ana-ram road. His body was taken*

to a nearby shed and when he expired and was buried beneath a tree on the southern side of Coolah Neilrex Road about 100 metres from where his headstone stands today. Upon his death the tribe left Butheroe and the legend has it that they never returned. It is thought that King Togee died in the late 1850s. However Cuttabush live a long life dying in 1910 at the age of 85 years (he was a young man when the incident occurred).

The headstone of King Togee is located approximately 11 km west of the northernmost portion of the wind farm site.

5.2 REGIONAL ARCHAEOLOGICAL CONTEXT

The regional archaeological context of an area provides information on the site types and landforms with higher archaeological potential expected to be located in the survey boundary. A number of studies that have occurred in the vicinity of the wind farm site, and in the wider Warrumbungle area, are summarised below.

5.2.1 JMCHM 1998

In 1998 Jo McDonald Cultural Heritage Management (JMCHM) conducted an Aboriginal heritage assessment for a gas pipeline extending from Dubbo to Tamworth via Gunnedah. A total of 226.2 km (70.5%) of the proposed route was surveyed and 98 Aboriginal archaeological sites were recorded. Recorded site types include:

- 40 artefact scatters
- 36 scarred trees
- 17 isolated finds
- Four rockshelters with deposit
- One grinding groove site.

Of the 98 sites recorded, 19 are within the AHIMS search areas completed for the assessment, predominately along Black Stump Way (**Section 5.3.1.2**). These 19 sites include:

- Nine scarred trees
- Seven artefact scatters
- Two isolated finds
- One rockshelter with deposit.

All these sites occur within the alluvial floodplain associated with Coolaburragundy River. Six of the stone artefact sites were considered to have low to moderate subsurface archaeological potential as the paddocks in which they were identified had been subject to intensive livestock

grazing and ploughing. Gotta Rock I (28-6-0039) was the only artefact site recorded with moderate-high potential for subsurface archaeological deposits. The site is located 150 m from Coolaburragundy River on a gentle slope and GSV was very low at the site location. All artefact scatters comprised low-density scatters with overall low integrity. The most common material present at the sites included quartz and quartzite.

5.2.2 Purcell 2002

In 2002 the NPWS conducted investigations for the Resource and Conservation Assessment Council as part of the regional assessments of western New South Wales. The assessment took place in two stages, with stage two focusing on the Brigalow Belt South Bioregion. Throughout this extensive study, at the completion of both stages the project team had:

- Recorded and transcribed 110 oral history interviews
- Located and recorded 1,110 Aboriginal sites
- Documented 60 traditionally used plant species
- Identified and mapped a variety of landforms.

849 of the sites were recorded during Stage Two. Most sites (n=668) were recorded within alluvial landforms. The second largest number of sites (n=475) were recorded in high contour landforms. Terraces and stable deep sand recorded the least number of sites (terraces n=83 and stable deep sand n=7). A total of 17 different site types are associated with the mapped landforms within the bioregion. The relationship between Aboriginal sites recorded during the assessment highlighted a strong association with water. 50% of sites recorded were recorded within 200 m of water.

Although the site inspections for Purcell's study were in different landforms to the wind farm site the general conclusions of Purcell's study suggest that the portions of the wind farm site within the Talbragar – Upper Macquarie Terrace Sands and Gravels landscape unit may have a low archaeological sensitivity.

5.2.3 OzArk 2009a

OzArk (2009a) conducted a heritage assessment for the replacement of Ulindah Bridge along with associated road works over Binnia Creek along Warrumbungle Way, located approximately 6 km south of Binnaway. The assessment area was situated at the junction of the Pilliga sandstone to the west and the Ballimore formation to the east, on active depositional alluvial plains and terraces. The field survey identified no Aboriginal sites; however, a zone of high archaeological sensitivity was noted in the east at the confluence of Binnia Creek and the Castlereagh River. The area of sensitivity was noted as confluences were often a focus for Aboriginal occupation. Given the lack of recorded sites and past disturbance activity, it was

assessed that there was a low potential for intact sub-surface archaeological deposits within the investigation area.

5.2.4 OzArk 2009b

OzArk (2009b) conducted a heritage assessment for approximately 900 m of unsealed road corridor, crossing Saltwater Creek on Coonabarabran Road (MR129) approximately 40 km east of Coonabarabran. The topography of the assessment area was gently undulating with low ridges in parts, and narrow sub-alluvial flood plains associated with the major drainage lines and temporary creeks in the area. During the survey, one scarred tree and a sensitive archaeological landform (SAL) were identified. The SAL extended from the flat elevated creek bank on the western side of Saltwater Creek. The allocation of SAL related to the area being on a landform conducive to Aboriginal occupation: elevated; flat; well drained; with stone outcropping present; and near permanent water.

5.2.5 EMM 2012

EMM (2012) conducted an Aboriginal cultural heritage assessment for the Cobbora Coal project, encompassing 276 square kilometres (km^2) of land near Cobbora. The study area was comprised of sandstone ridges with scree slope edges and rock outcrops from the Dunedoo formation, valley floors, and undulating grounds. Nearby waterways included Sandy Creek, the Cudgegong River, and the Talbragar River. A total of 229 Aboriginal sites were recorded during the survey, including:

- 164 artefact scatters
- 25 scarred trees
- 18 grinding groove sites
- 15 hearths
- Six rockshelters with potential archaeological deposits (PAD)
- One rockshelter with artefacts.

Most of the sites recorded were in landforms associated with valley floors and watercourses and 100 of the sites occurred within 300 m of Sandy or Laheys Creeks. Many of the extensive artefact assemblages were recorded along Mebul Creek near the Cudgegong River, while many of the low density artefact sites were recorded on undulating ground between the Talbragar and Cudgegong River catchments. Many isolated finds were also recorded along unnamed second and third order creeks despite apparent disturbances. It was concluded that the more sensitive landforms were situated in areas that were associated, or at least near, major watercourses (named rivers and creeks) with flowing tributaries along valley floors.

5.2.6 NSW Archaeology 2014

In 2014, NSW Archaeology conducted investigations for the Liverpool Range Wind Farm Stage 1, located to the east of Coolah, containing similar landforms to the wind farm site. Seven Aboriginal sites were recorded during the field survey. The results from the wind farm portion of the study area recorded a very low artefact density including isolated artefacts at LU6/L1 and LU30/L1, and a low-density artefact scatter of two stone artefacts at site LU10/L1. Within the overhead transmission line portion of the study area, sites included TL LU1/L1 (three stone artefacts in an undulating crest landform); TL LU2/L1 (ten stone artefacts on the northern side of a crest with a gentle gradient); TL LU2/L2 (small rockshelter with PAD); and TL LU2/L3 (three artefacts adjacent to a creek). It was noted that artefact densities increased in the landforms comprising the overhead transmission line which was generally at a lower elevation than the wind farm location. The dominant materials identified at the recorded sites was quartz. Smaller quantities of chert, tuff, and a volcanic material were recorded.

5.2.7 OzArk 2016a

OzArk (2016a) was engaged to complete a heritage assessment for Allison Bridge and adjacent landforms which had the potential to be impacted by the bridge realignment. The realignment comprised of a 2 km portion of road along Black Stump Way. The topography of the study area involved gentle slopes associated with Oakey Creek, as well as an alluvial floodplain. The field survey was undertaken using pedestrian transects which included all mature trees and areas of available ground surface exposure. No Aboriginal sites were recorded during the survey and no landforms were considered as likely to have subsurface deposits. The landforms within this study area were considered too disturbed and unsuitable for long term Aboriginal occupation, as the sloping landforms, along with sheet wash erosion and recent soil excavation, diminished the possibility of any primary contexts being present.

5.2.8 NGH 2020

In 2020 NGH conducted archaeological investigations for the Dunedoo Solar Farm. During the investigations 26 Aboriginal sites were identified, consisting of 14 artefact scatters, nine isolated finds and areas of PAD. Due to the results of the survey, test excavations were conducted. Of the 75 test pits excavated across the PADs, only 13 recorded subsurface deposits with a low artefact density (85 artefacts were recorded from the subsurface testing program in total). Artefacts were predominately manufactured from quartz with a lesser number of chert, tuff, quartzite, fine grained siliceous, and basalt artefacts.

5.2.9 Conclusions

Utilising data that has been collected both regionally and locally, broad statements about archaeological sites that have the potential to occur within the survey boundary can be made. These predictions are:

- Aboriginal objects could be present on ridge and crest landforms within the wind farm site, but they are more likely to be located in greater densities in landforms associated with lower altitudes and with less-steep gradients
- Stone artefact sites appear to be more frequent in lower gradient landforms near waterways. All orders of watercourses have a higher potential to record archaeological sites
- Sites on slopes are generally in a secondary context having been displaced by erosional processes. The exception is where there is outcropping rock as this feature may have attracted occupation or use
- Scarred trees can appear wherever appropriate mature aged trees are located and are more likely to be identified along alluvial floodplains outside of impact from agricultural activities
- The predominant material utilised for artefact manufacture is quartz. A smaller number of artefacts in the region are also manufactured from quartzite, chert, and tuff. There is the potential for artefacts manufactured from volcanics to be present.

5.3 LOCAL ARCHAEOLOGICAL CONTEXT

5.3.1 Desktop database searches conducted

A desktop search was conducted on the following databases to identify any potential previously recorded heritage within the survey boundary. The results of this search are summarised in **Table 5-1** and presented in detail in **Appendix 3**.

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

Name of Database Searched	Date of Search	Type of Search	Comment
National and Commonwealth Heritage Listings	25/01/2021	Warrumbungle LGA	No places listed on either the National or Commonwealth heritage lists are located within the survey boundary or the broader wind farm site (**Section 5.3.1.1**).
National Native Title Claims Search	25/01/2021	NSW	The survey boundary includes land currently subject to Native Title Claim by the Gomeroi People (Tribunal File No. NC2011/006, Federal Court No. NSD2308/2011)[3].
Heritage AHIMS	25/01/2021[4]	10 km search radius surrounding the wind farm site (GDA Zone 55:	78 AHIMS sites were returned within the designated search area. Of these thirteen are located within the wind farm

[3] The Proponent will need to obtain legal advice as to whether land tenure will require Native Title consultation.

[4] An additional search of the AHIMS database was completed on 20 April 2022 as it had been over 12 months since the last search was completed. The search confirmed no additional sites have been recorded within the wind farm or survey boundary apart from those recorded as part of this assessment.

Name of Database Searched	Date of Search	Type of Search	Comment
		Eastings: 733435–766815, Northings: 6443765–6484705)	site and two are located within the survey boundary (**Section 5.3.1.2**).
Local Environmental Plan (LEP)	25/01/2021	Warrumbungle LEP of 2013	None of the Aboriginal places noted occur within or near the survey boundary or the broader wind farm site.

5.3.1.1 National Heritage List

The closest place on the National Heritage List to the wind farm site is item 105696 (The Greater Blue Mountains Area - Additional Values), located over 17 km to the southeast. Item 105696 was included on the National Heritage List for its natural beauty, cultural associations, and geology/landforms values.

5.3.1.2 AHIMS search results

The Heritage NSW AHIMS database returned 78 results for Aboriginal sites within a 10 km search radius surrounding the wind farm site. **Table 5-2** presents the site types and frequencies and the location of these sites is shown on **Figure 5-1**.

The AHIMS data shows rockshelter sites with PAD are the dominant site type near to the wind farm site (approximately 20.5%). Artefact scatters, scarred trees, and rock shelters with art closely follow, each making up 16.7% of the overall site assemblage.

Artefact scatters are a relatively stable indicator of past Aboriginal occupation. Sites in this category are less ambiguous to recognise and can remain close to their original deposition context despite disturbances. Grinding grooves and art sites are also relatively stable indicators of past Aboriginal occupation. Conversely, modified trees are more sensitive to common disturbances in the area, such as historic land clearing. As such, the distribution of modified tree sites may be more a reflection of areas of uncleared land rather than something specific to Aboriginal land use strategies.

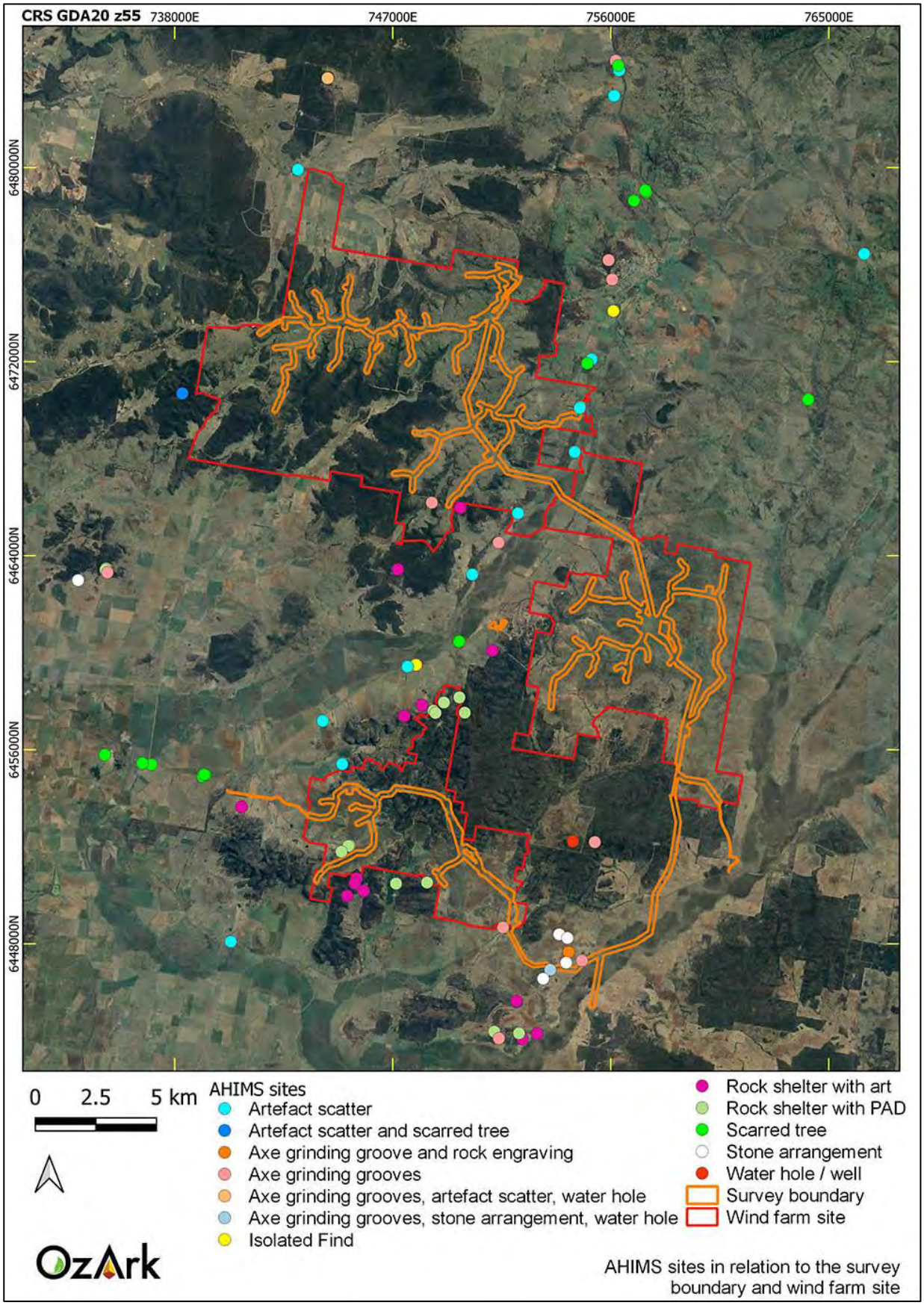
There is a strong relationship between all site types and the Talbragar and Coolaburragundy Rivers. Artefact sites are largely grouped in the confluence of the two major rivers and disperse primarily towards the north and east. Modified tree sites are located primarily along the Coolaburragundy River. Rockshelters are predominately recorded in clusters in the surrounding escarpment.

Table 5-2: AHIMS site types and frequencies.

Site Type	Number	% Frequency
Rock shelter with PAD	16	20.5%
Artefact scatters	13	16.7%
Modified tree (carved or scarred)	13	16.7%
Rock shelter with art (pigment or engraved)	13	16.7%

Site Type	Number	% Frequency
Grinding grooves	10	12.8%
Stone arrangement	6	7.7%
Isolated find	2	2.6%
Axe grinding grooves and rock engraving	1	1.3%
Artefact scatter and scarred tree	1	1.3%
Axe grinding grooves; stone arrangement and water hole / well	1	1.3%
Water hole	1	1.3%
Axe grinding grooves; artefact scatter and water hole / well	1	1.3%
Total	**78**	**100%**

Figure 5-1: Location of previously recorded AHIMS sites in relation to the wind farm site and survey boundary.



Thirteen previously recorded sites are located within the wind farm site and two sites are within the survey boundary (36-3-0111 and 36-3-0113).

These sites are listed in **Table 5-3** and shown on **Figure 5-2** to **Figure 5-4**.

Table 5-3: Known sites within the wind farm site and survey boundary.

Site ID	Site name	GDA Zone 55 Easting	GDA Zone 55 Northing	Site types	Location	Figure
36-3-0111	Argyll No.3	753505	6446926	Axe grinding grooves; stone arrangement and water hole	Within survey boundary – transmission line	**Figure 5-2**
36-3-0113	Argyll No.1	754815	6447306	Axe grinding grooves	Within survey boundary – transmission line	**Figure 5-2**
36-3-0125	Bald Ridge NO:3;	745215	6452046	Rockshelter with deposit	Within wind farm site – Leadville cluster	**Figure 5-3**
36-3-0126	Bald Ridge No:2;	745165	6452026	Rockshelter with deposit	Within wind farm site – Leadville cluster	**Figure 5-3**
36-3-0127	Bald Ridge No:1;	744885	6451796	Rockshelter with deposit	Within wind farm site – Leadville cluster	**Figure 5-3**
28-6-0011	Bong Bong; Coolah;	748615	6466186	Axe grinding grooves	Within wind farm site – Mount Hope cluster	**Figure 5-4**
28-6-0014	Sierra Downs No5	749115	6457946	Rockshelter with PAD	Within wind farm site – Leadville cluster	**Figure 5-3**
28-6-0015	Sierra Downs No2	748685	6457596	Rockshelter with PAD	Within wind farm site – Leadville cluster	**Figure 5-3**
28-6-0016	Sierra Downs No1	748685	6457606	Rockshelter with PAD	Within wind farm site – Leadville cluster	**Figure 5-3**
28-6-0017	Sierra Downs No3	748765	6457516	Rockshelter with PAD	Within wind farm site – Leadville cluster	**Figure 5-3**
28-6-0018	Sierra Downs No4	749755	6458156	Rockshelter with PAD	Within wind farm site – Leadville cluster	**Figure 5-3**
28-6-0034	DTG/OC31	752175	6465746	Artefact scatter	Within wind farm site – Mount Hope cluster	**Figure 5-4**
28-6-0038	DTG/SHDI-4 – Gotta Rock 2-5	754745	6470126	Rockshelter with deposit	Within wind farm site – Mount Hope cluster	**Figure 5-4**
28-6-0039	DTG/OC33 – Gotta Rock 1	754725	6470086	Artefact scatter	Within wind farm site – Mount Hope cluster	**Figure 5-4**
36-3-0088	Gundooee No2;	748422	6450523	Rockshelter with deposit	Within wind farm site – Leadville cluster	**Figure 5-3**

The distribution of sites near the wind farm site conforms to some expected patterns which are outlined below:

- All sites are associated with watercourses of varying degrees

- The highest densities of sites are located along the two major river systems which intersect the area: the Talbragar and Coolaburragundy Rivers.

AHIMS data is not the result of large scale or systematic archaeological investigations and therefore cannot be taken independently as a reflection of past Aboriginal occupation patterns. The distribution of sites discussed above can only be used to formulate a predictive model in conjunction with other methods.

Certain characteristics of AHIMS recordings further limit confidence in the accuracy of the data:

- AHIMS registrations can be made by any individual and, therefore, their reliability as a record of archaeological features can be questionable
- The ‘dots on a map’ approach is not informative as one dot may represent a single stone artefact, and another may represent a cluster of one hundred artefacts
- The AHIMS data tends to skew towards population centres and public land where survey has been undertaken, while private land, where no development has ever been proposed, remain as ‘blanks’ on the map.

As a result, while further data is normally available to interrogate the AHIMS site distribution pattern more fully, at face value it is often of limited use.

Figure 5-2. AHIMS sites in relation to the overhead transmission line.

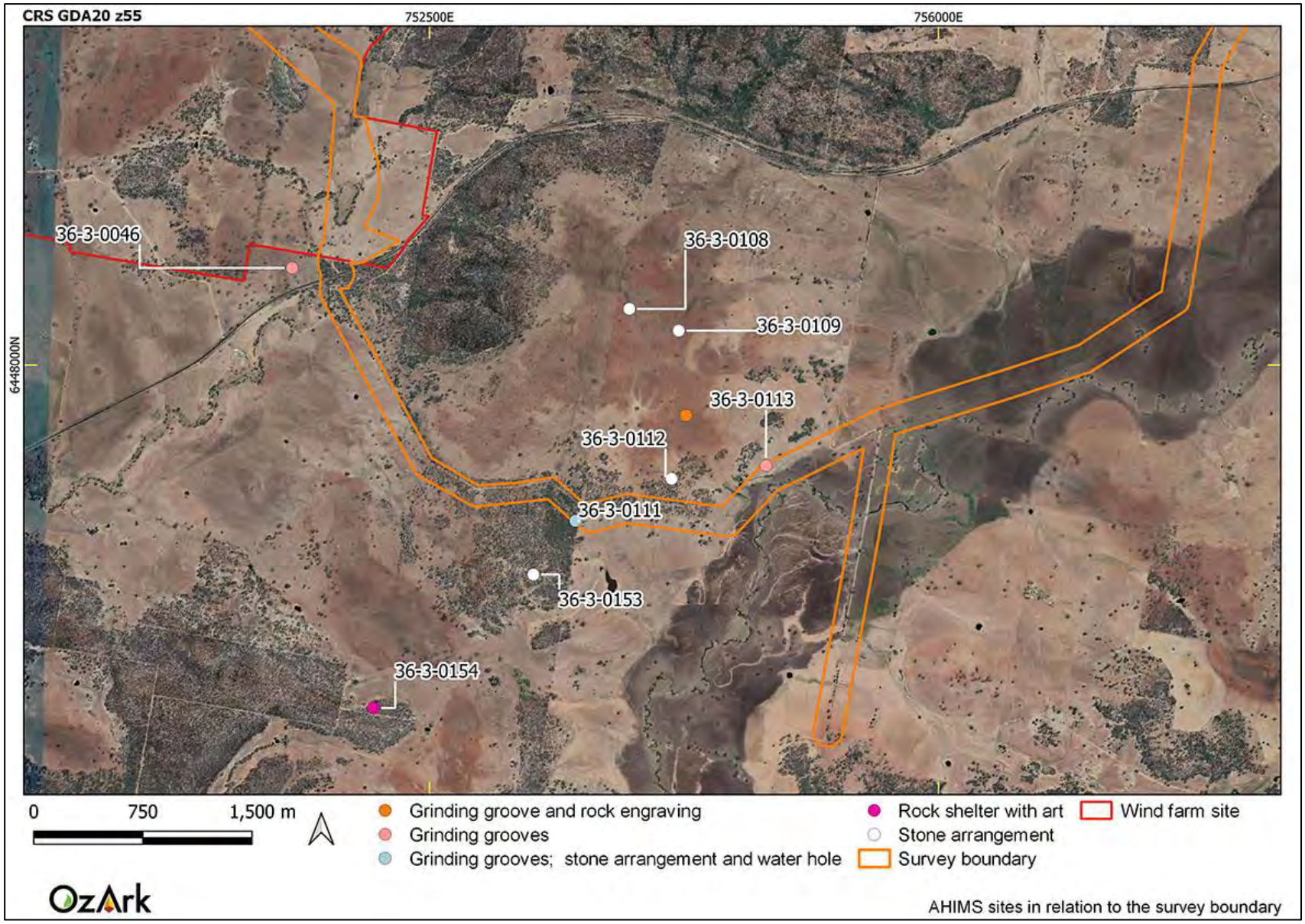


Figure 5-3. AHIMS sites in relation to the Leadville cluster.

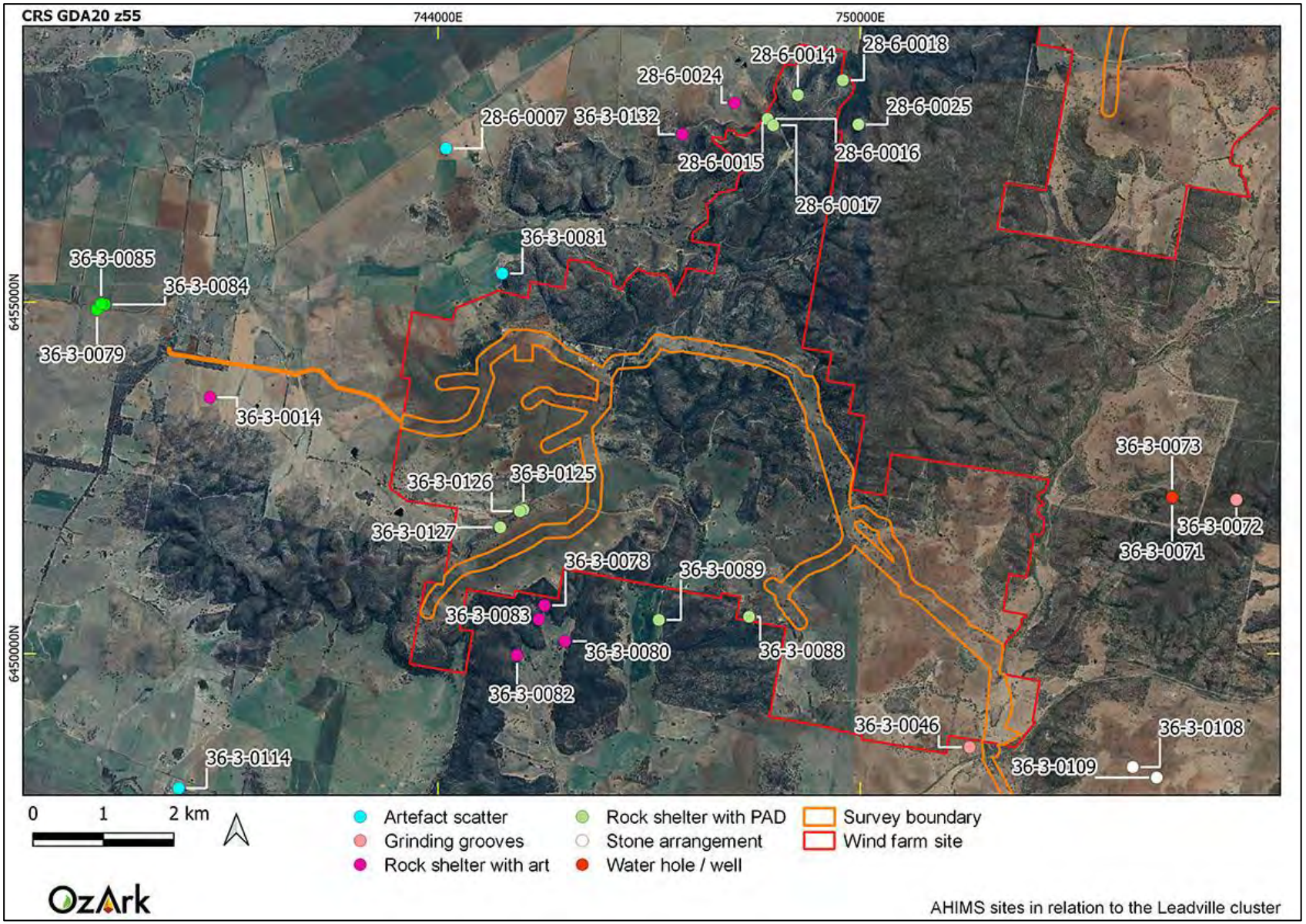
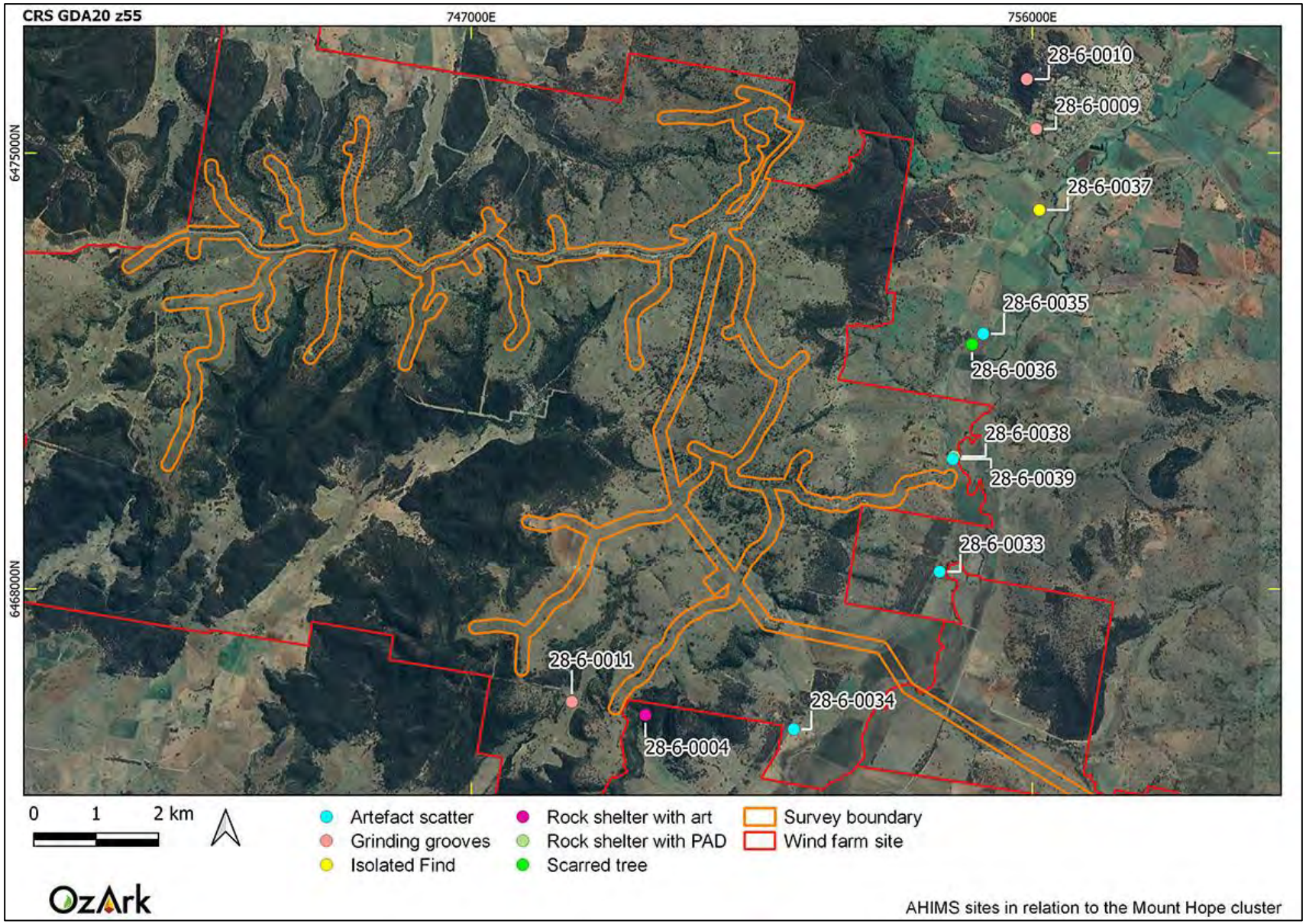


Figure 5-4. AHIMS sites in relation to the Mount Hope cluster.



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, shell, and some bones that remain preserved in the current landscape. Even these, however, may not be found in their original depositional context since these may be subject to either (a) the effects of wind and water erosion/transport—both over short- and long-time scales—or (b) the historical impacts associated with the introduction of 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 Settlement strategies

The number of archaeological studies undertaken near the survey boundary provide sufficient information to obtain an understanding of the distribution of sites and site types within the area. The typical pattern observed is that the most obvious indicator of potential sites is the presence of workable stone material near a natural fresh water source. The upland areas were usually associated with seasonal occupation, as the climate and resources did not tend to be ideal throughout the year.

Landscapes that provided ideal site locations typically involved crests or terraces that were associated, or within proximity, to a reliable water source such as the Talbragar or Coolaburragundy Rivers. Minor waterways that were in association with crested landforms also record sites (NSW Archaeology 2014).

5.4.2 Past land use

The preservation of archaeological sites and deposits is dependent on past land use. The survey boundary and adjacent land has been mainly used for agricultural purposes such as grazing and farming (**Figure 4-15**). These activities involve ploughing the ground surface, or the constant

trampling of hoofed livestock, which significantly shuffles or compacts the ground surface, ultimately accelerating soil loss. Further, a large portion of the survey boundary is comprised of sloping landforms, and because of past vegetation clearing, erosional processes are intensified.

Table 5-4 shows that most AHIMS sites have been recorded in land use categories associated with low levels of ground surface disturbance, such as grazing on native vegetation (33.3%) and other minimal use (28.2%). Most of the sites in the grazing native vegetation category are along Talbragar and Coolaburragundy Rivers. Impacts such as clearing are low in this area, which may contribute to the high number of sites. Comparatively, many sites (28.2%) are also located in areas previously used for cropping. Again, most of these sites are in proximity to the two major river systems.

Table 5-4: AHIMS site frequencies across land use categories.

Land use category	AHIMS sites	Percentage
Grazing native vegetation	26	33.3
Other Minimal Use	22	28.2
Cropping	22	28.2
Grazing modified pastures	8	10.3
Residential and Farming	0	0
Nature Conservation	0	0
Total	**78**	**100**

5.4.3 Previously recorded site types

Previous archaeological studies near the survey boundary or in similar landforms have provided information on the likely site types to be recorded. The predominant site type is rockshelter (habitation structure) sites associated either with PAD or art, followed by stone artefact sites (artefact scatters or isolated finds). Rockshelter sites are only recorded where suitable escarpments are present which generally causes this site type to cluster in a linear fashion in specific areas of the landscape. On the other hand, artefact sites are recorded in landforms of lower gradients, but also, in lesser numbers, in elevated landforms. As a result, rockshelter sites will only be recorded where suitable escarpments are present and artefact sites are most likely to be recorded in lower gradient landforms but can also be recorded in elevated landforms as well, generally in a low-density.

Scarred trees are also commonly identified, particularly on alluvial floodplains. Other possible site types include grinding grooves, and stone arrangements and water holes/wells.

5.4.4 Aboriginal Site Decision Support Tool

Aboriginal site features occur across the entire landscape; however, some parts of the landscape have a greater capacity to contain certain site features or features of different types. The variation in site feature likelihood across the landscape is useful for planning assessments of potential site

impacts. The Aboriginal Site Decision Support Tool (ASDST) has been developed to support the assessment Aboriginal sites issues in NSW at the landscape-scale. The tool extends the AHIMS by illustrating the potential distribution of site features recorded in the database.

The maps of site feature predictions made by the ASDST are based on the application of site predictive modelling. This is a technique used to correlate site information in AHIMS with landscape patterns such as proximity to water, vegetation, terrain, soils etc. The maps provide a regional overview about site feature distribution and related issues about the level of accumulated impacts they have experienced.

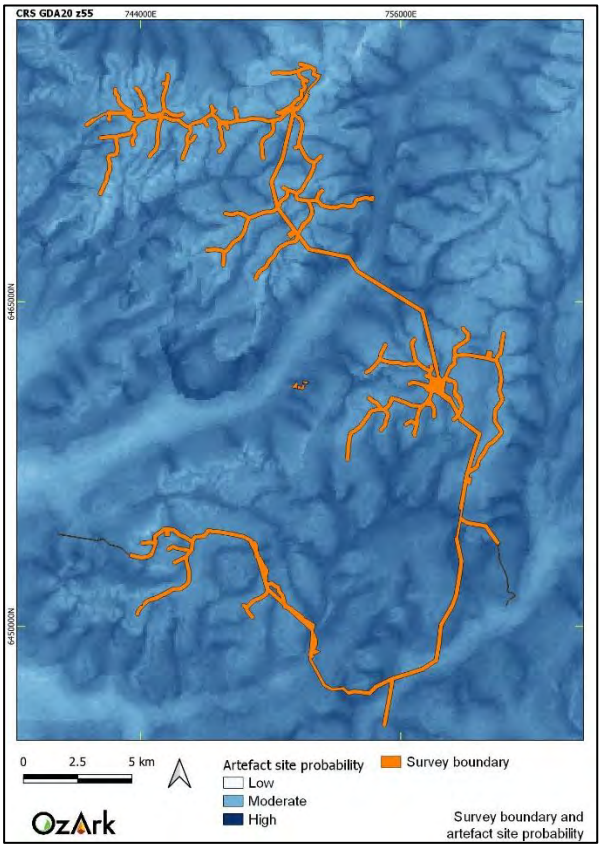
The ASDST has been developed to meet the needs of regional planning. For this reason, it is designed to be used at scales of 1:100,000 and above. Application at finer scales is possible, but it should be noted that the datasets used to derive the products were themselves derived at a scale of 1:100,000 or coarser, and therefore the inaccuracies of those layers at finer scales will be carried through to the ASDST models. In short, The ASDST is a good tool to give a general prediction of certain site types, but it is not accurate at scales less than a square hectare.

Six models have been mapped: artefact site probability; grinding groove site probability; quarry site probability; art site probability; scarred tree site probability and accumulated impacts (**Figure 5-5**).

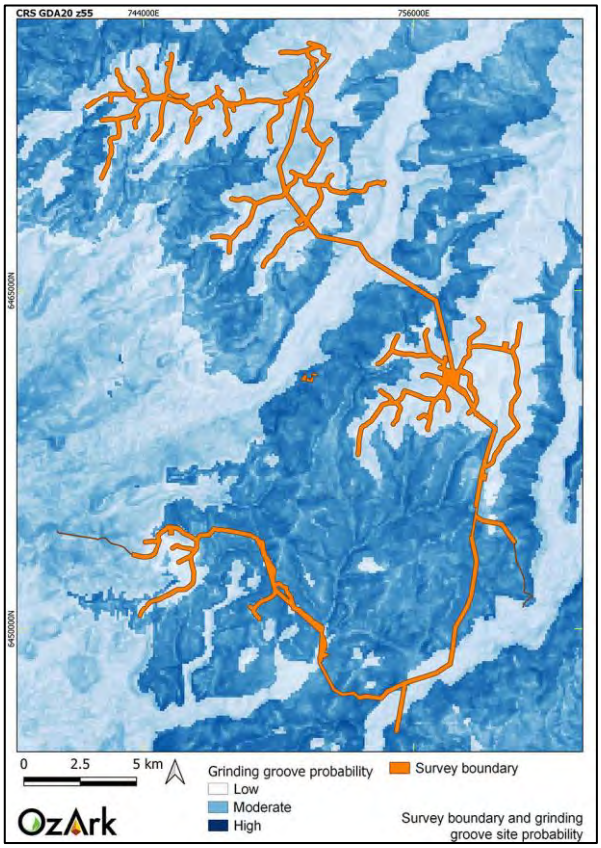
These models show:

- Most of the survey boundary is in landforms with a moderate probability of recording artefact sites. Lower elevation landforms have a higher potential to record this site type comparted to the ridgelines
- Most of the survey boundary has a low likelihood of recording grinding grooves sites, particularly in the more elevated landforms. Landforms with the highest potential for this site type are in the southern portions of the survey boundary
- Art sites are unlikely to be present within the survey boundary with only few landforms such as escarpments within or near the survey boundary
- Most of the survey boundary has low potential to record stone quarry sites. Areas with the greatest potential are in the central and southern portion of the survey boundary
- Most of the survey boundary is in landforms with a low to moderate probability of recording modified tree sites. Landforms adjacent to watercourses have a raised probability of recording this site type
- Most of the survey boundary is in landforms with a low accumulated impact. This raises the possibility of recording sites in these landforms.

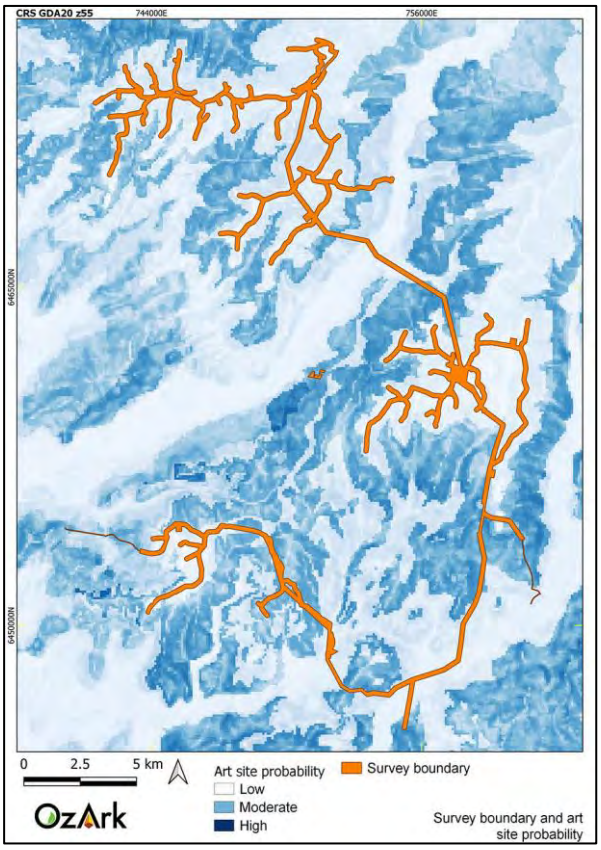
Figure 5-5: ASDST models and the survey boundary.

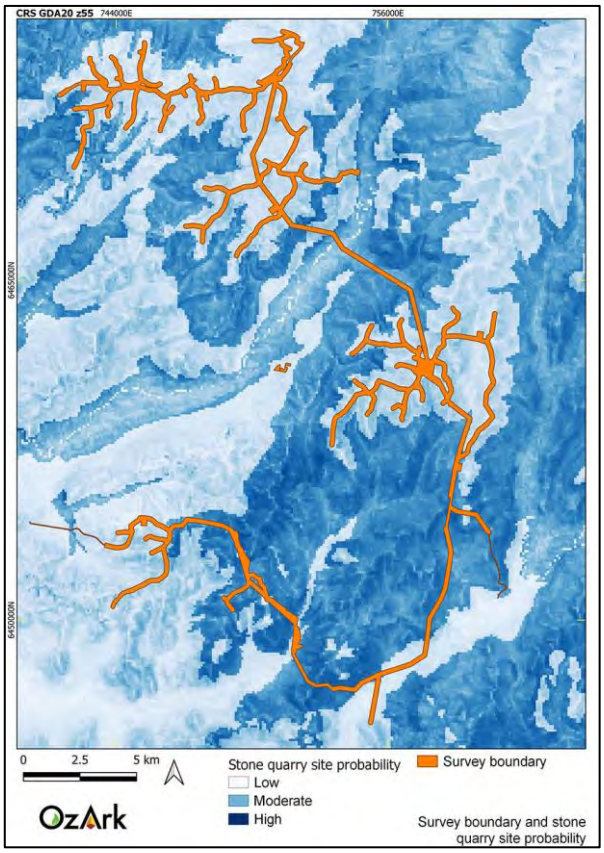


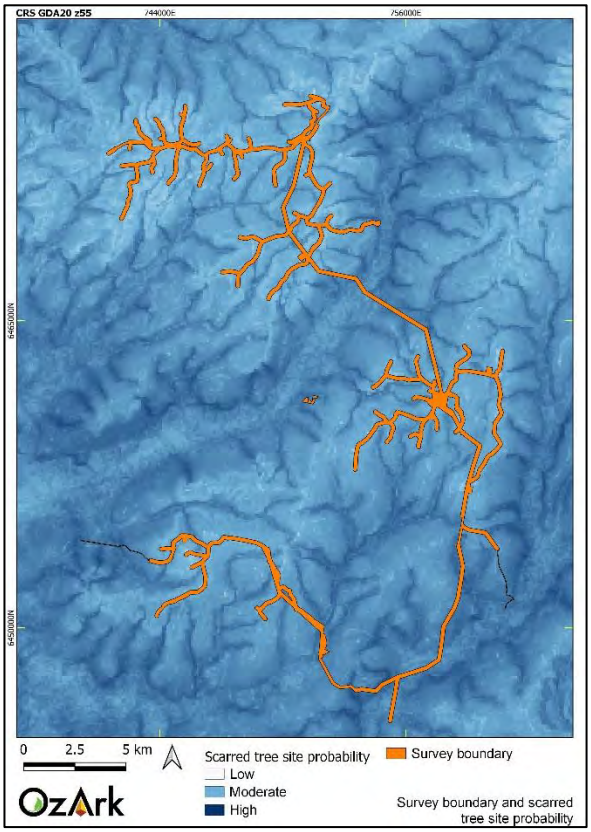
1. ASDST model of artefact site probability.



2. ASDST model of grinding groove site probability.





3. ASDST model of art site probability.	4. ASDST model of quarry site probability.
	
5. ASDST model of scarred tree site probability.	6. ASDST model of accumulated impacts.

5.4.5 Landform modelling

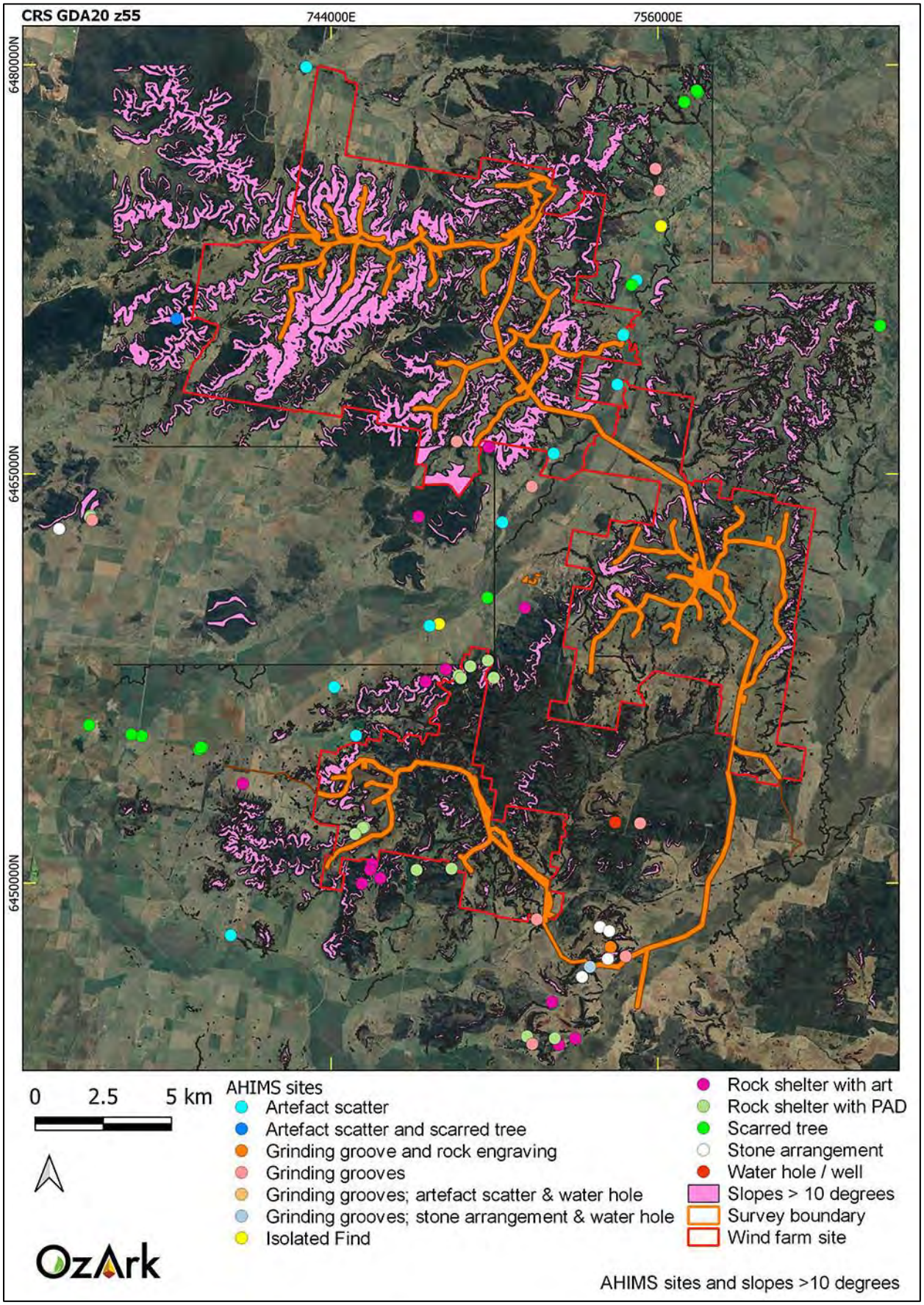
5.4.5.1 Landforms

A consideration of the landforms within the wind farm site and survey boundary enables a prediction regarding the type and distribution of sites to be made (see **Section 4.1** for details of landforms within the wind farm site and survey boundary). A large portion wind farm site is comprised of either low gradient/undulating landforms or slopes with a gradient greater than 10 degrees.

Previous studies in the district (NSW Archaeology 2014) indicate that sloping landforms are not likely to contain intact stone artefact sites as they are likely to have been moved downslope because of erosion. Rather, sites are expected along elevated terraces within reasonable proximity to a water source. Such landforms are rare in the survey boundary.

Figure 5-6 supports the findings of NSW Archaeology, showing that stone artefact sites, in addition to scarred trees and grinding groove sites, will almost exclusively only be recorded on slopes of less than 10 degrees, while rockshelters are the most likely site to be recorded on slopes greater than 10 degrees.

Figure 5-6: Aerial showing the relationship between degree of slope and the recording of different site types.



5.4.5.2 Waterways

Throughout NSW there is an observed and accepted correlation between site location and waterways. Several previous studies conducted by OzArk in different areas of NSW have shown that there is a correlation between distance from water and likelihood of Aboriginal sites being present (OzArk 2014, OzArk 2016b).

Over half (70.5%) of all AHIMS sites near the wind farm site are within 200 m of all waterways. To further investigate, specific distance buffers were applied based on the reliability of the watercourse to contain water throughout the year.

Four types of drainage buffers were used to determine sensitivity in relation to specified waterway types. These buffers consist of:

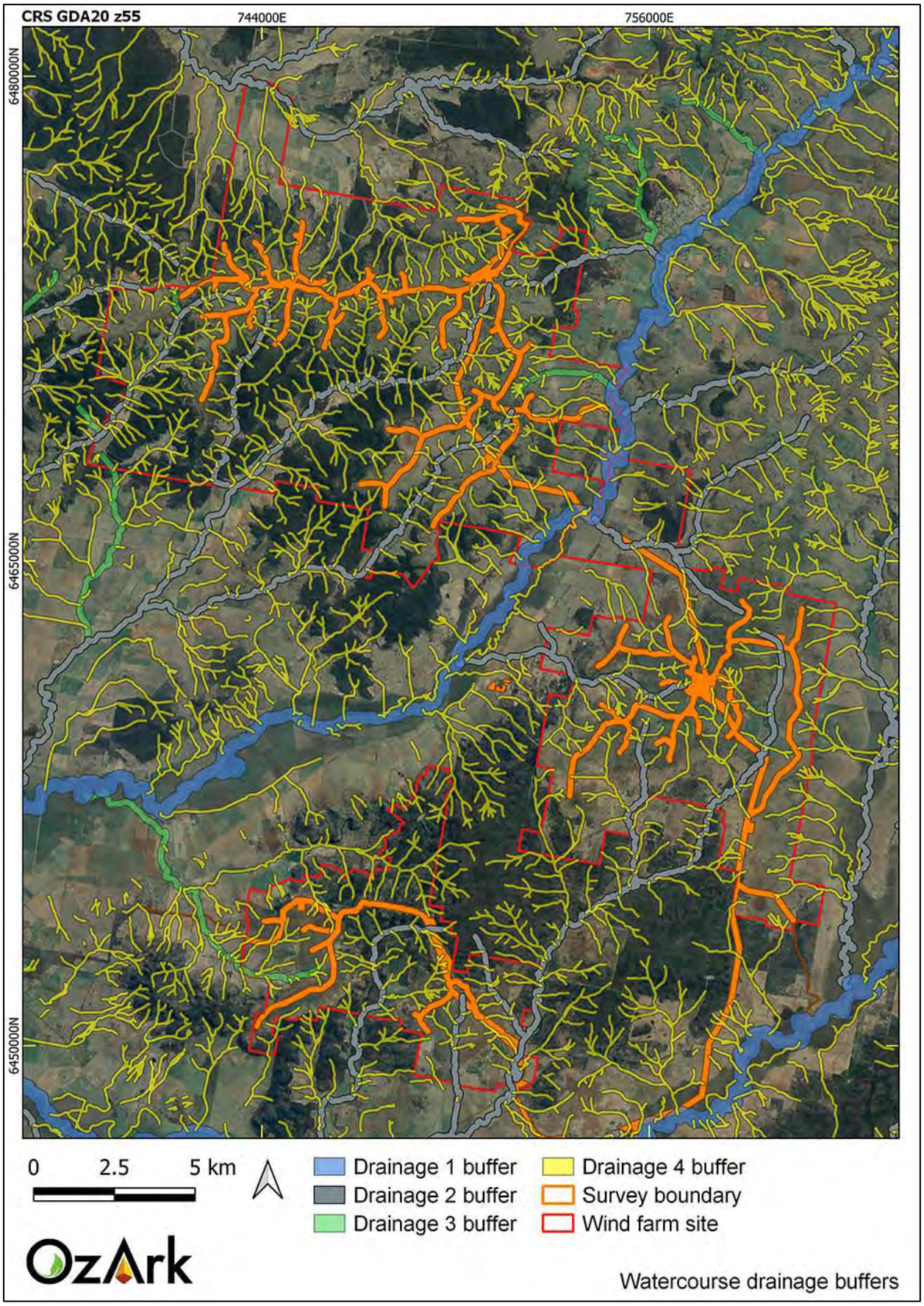
1. A 200 m buffer around river systems that are expected to have permanent water
2. A 100 m buffer around named creek systems that are expected to hold water for significant parts of the year
3. A 100 m buffer around named gullies that could hold water following rainfall in ponds
4. A 50 m buffer around unnamed ephemeral drainage lines that are only expected to hold water for a brief period following rain.

These are detailed in **Table 5-5** and the drainage buffers are shown on **Figure 5-7**.

Table 5-5: Specific distance buffers for types of waterway.

Name	Applied Distance Buffer	Water Feature Type
Drainage Buffer 1	200 m buffer	Named rivers
Drainage Buffer 2	100 m buffer	Named creeks
Drainage Buffer 3		Named gullies
Drainage Buffer 4	50 m buffer	Unnamed watercourses

Figure 5-7: Specific drainage buffer used in the study.



27 sites (34.6%) are within one of the four drainage buffers. The division between the four is shown in **Table 5-6**.

Table 5-6: Number of AHIMS sites in relation to specific drainage buffers.

Drainage Buffer	Number	Frequency (%)
Drainage Buffer 1	5	18.5
Drainage Buffer 2	3	11.1
Drainage Buffer 3	1	3.7
Drainage Buffer 4	18	66.7
Total	**27**	**100**

Figure 5-8: Comparison of AHIMS sites between unspecified and specified buffers

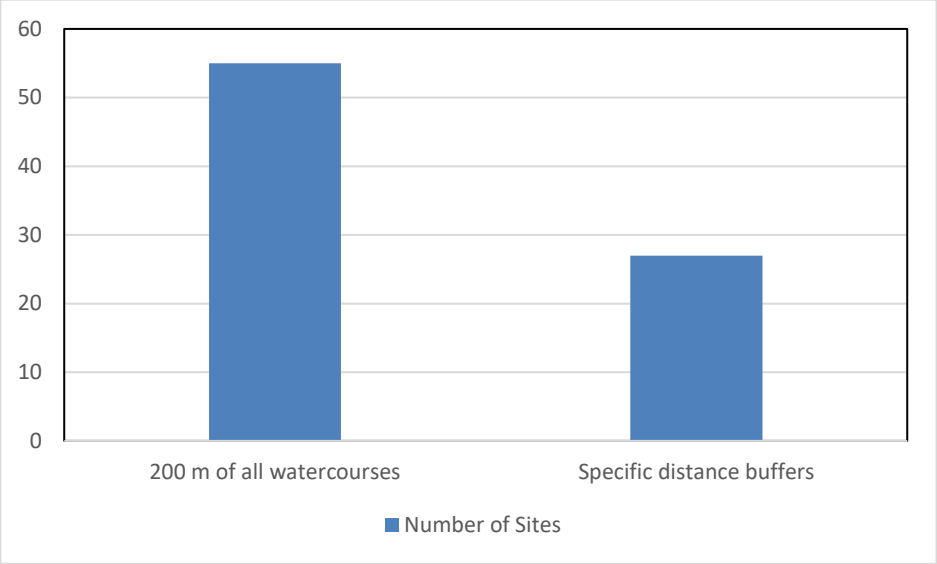


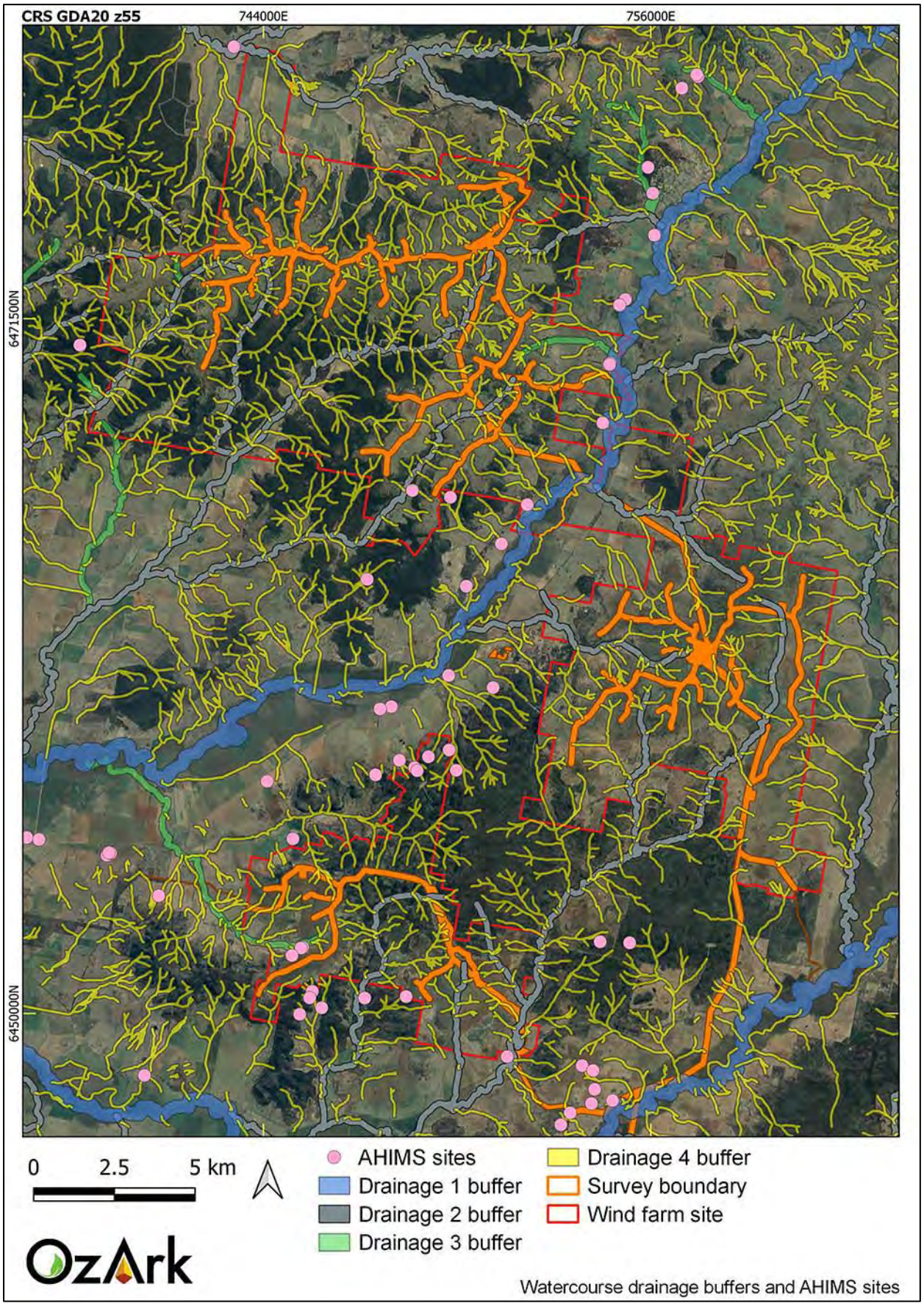
Figure 5-8 shows the total number of AHIMS sites within two separate buffers. The large difference between AHIMS sites within specific watercourse buffers (27) and within 200 m of all watercourses (55) suggests that Aboriginal occupation of the landscape was not restricted to larger and more permanent watercourses (such as the Talbragar and Coolaburragundy Rivers).

Another factor is that land within 200 m of major waterways tends to have been intensively used (hence sites may have been disturbed or dispersed over time) and such land tends to be private property where archaeological surveys have not taken place.

The moderate number of sites distant from water (23 sites over 200 m from any discernible watercourse, 29.5% of all sites) may be a product of specific surveys recording sites at a small number of locations, and it is possible that other environmental or cultural variables are contributing to the patterns of AHIMS site data.

Figure 5-9 shows the location of AHIMS sites in relation to the different types of waterways.

Figure 5-9: AHIMS sites in relation to watercourses.



5.4.6 Conclusion

Based on knowledge of the environmental contexts of the wind farm site and a desktop review of the known local and regional archaeological record, the following predictions are made concerning the probability of those site types being recorded within the survey boundary:

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 sub-surface artefact scatter. They may occur anywhere within the landscape but are more likely to occur in topographies where open artefact scatters typically occur.

- Applicability to the survey boundary: As isolated finds can occur anywhere, particularly within disturbed contexts, it is predicted that this site type could be recorded within the survey boundary.

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

Artefact scatters are most likely to occur on level or low gradient contexts, along the crests of ridgelines and spurs, and elevated areas fringing watercourses or wetlands. Larger sites may be expected in association with permanent water sources.

Topographies which afford effective through-access across, and relative to, the surrounding landscape, such as the open basal valley slopes and the valleys of creeks, will tend to contain more and larger sites, mostly camp sites evidenced by open artefact scatters.

- Applicability to the survey boundary: Artefact scatters are one of the most recorded site types within the surrounding region. A general correlation between different types of watercourses and the nature of the evidence of past Aboriginal occupation is evident. Higher artefact density sites are located near to permanent water sources and low-density artefact distributions are found elsewhere (EMM 2012). Based on this, the moderate to steeply sloping landforms within the survey boundary are unlikely to have been utilised for camping activities that result in artefact scatters. It is likely that such ridgelines were used as pathways in the past and 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. The survey boundary contains few locations of lower topographic areas associated with permanent or semi-permanent watercourses which have higher archaeological potential for more complex and higher density scatters (**Section 4.1**). While there are named waterways within the survey boundary (**Section 4.3**) the major components of the project are not located adjacent to these features. It is therefore predicted that large, complex sites will be absent from the survey boundary.

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.

- Applicability to the survey boundary: Although large portions of the survey boundary have been cleared for agricultural and farming purposes, mature tree clusters remain scattered throughout the survey boundary. Due to modified trees being the second most common site type within the surrounding area, there is potential to record this site type within the survey boundary. Should this site type be identified, it will likely be within the lower elevation landforms and near water.

Quarry sites and stone procurement sites typically consist of exposures of stone material where evidence for human collection, extraction and/or preliminary processing has survived. Typically, these involve the extraction of siliceous or fine grained igneous and meta-sedimentary rock types for the manufacture of artefacts. The presence of quarry/extraction sites is dependent on the availability of suitable rock formations.

- Applicability to the survey boundary: The aerial imagery of the survey boundary shows numerous areas of outcropping rock, so this site type remains a possibility to record within the survey boundary should suitable materials be present. In **Section 4.2** it was noted that basalt, which is a suitable material for stool tool manufacture, occurs predominately on the crests and ridgelines of the survey boundary. It is noted that no quarry sites have been recorded in the surrounding landforms, so it is unlikely to be a common site type.

Grinding grooves are most likely to occur on flat outcrops of coarse-grained sandstone in the vicinity of water sources, however, grinding grooves have been recorded on fine-grained granite outcrops.

- Applicability to the survey boundary: Where there is suitable outcropping rock (most likely sandstone), there is the possibility for there to be grinding grooves. Multiple grinding grooves have been previously recorded in the surrounding area, so if any suitable outcropping rock is evident within the survey boundary, then this site type could be possible.

Rock shelters were utilised in the past for both habitation and ceremonial purposes. The term 'rock shelter site' refers to rock shelters/rock overhangs that contain evidence such as stone artefacts and/or bones and/or plant remains (from meals eaten at the site) and/or hearths (fireplaces). Most rock shelter sites are secular in nature, however, those that also contain rock art or engravings are often believed to be non-secular in nature. The term 'rock art site' generally refers to Aboriginal ochre paintings or ochre or charcoal drawings located on a rock slab (generally in a sheltered place like the floor of a cave or rock shelter), boulder, cliff-face, cave or rock shelter wall or roof, or wall of a rock overhang. Most rock art sites are found in positions that are sheltered from the elements. This observation, however, is probably biased to some extent, as rock art would not preserve well in open positions. Rock art sites are generally believed to be non-secular in nature.

- Applicability to the survey boundary: Rockshelters are the most common Aboriginal feature within the surrounding region and have been recorded either in association with PAD or art (**Section 5.3.1.2**). However, there are limited areas of escarpment landforms in the survey boundary and therefore rockshelters are not expected to be numerous.

Bora/Ceremonial sites are 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.

- Applicability to the survey boundary: This site type does not necessarily follow landform predictability and are more likely to be identified by local Aboriginal people, rather than through archaeological evidence. These sites are generally identified through consultation with the RAPs. It is noted that seven stone arrangements were returned within the AHIMS search area.

Burials are 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.

- Applicability to the survey boundary: Although it is possible that this site type could be found within the survey boundary, it is considered a rare site type given the topography, nature of the soils and geology, and levels of disturbance.

5.5 RESEARCH QUESTIONS

Several research questions can meaningfully be applied to the investigation of the survey boundary. These research questions include:

- What resources were available to the Aboriginal people using the land within the survey boundary (food, stone, and water) and what resources were transported to the area?
- How do the artefact assemblages from the sites along the slopes and ridge crests in the survey boundary differ from sites that are located along creek flats and valley floors?
- What tasks were Aboriginal people undertaking at the sites?
- Did the Aboriginal people use the land within the survey boundary at any particular time of the year?
- Is there potential for burials to be present in the landscape?
- Are the outcropping rock materials present suitable for stone tool procurement and manufacture?
- Is there evidence to suggest that Aboriginal people were using the area earlier than the mid to late Holocene?
- Can dates be obtained for the Aboriginal use of the area?
- Establish how the findings within the survey boundary (if any) accord with the regional archaeological context examined in **Section 5.2**.

6 RESULTS OF ABORIGINAL ARCHAEOLOGICAL ASSESSMENT

6.1 SAMPLING STRATEGY AND FIELD METHODS

Standard archaeological field survey and recording methods were employed in this study (Burke & Smith 2004).

The survey team consisted of two archaeologists and two members of the Aboriginal community each day. In total, there were 15 days of fieldwork (Week 1: 10 days comprising two independent teams over five days and Week 2: five days comprising one team).

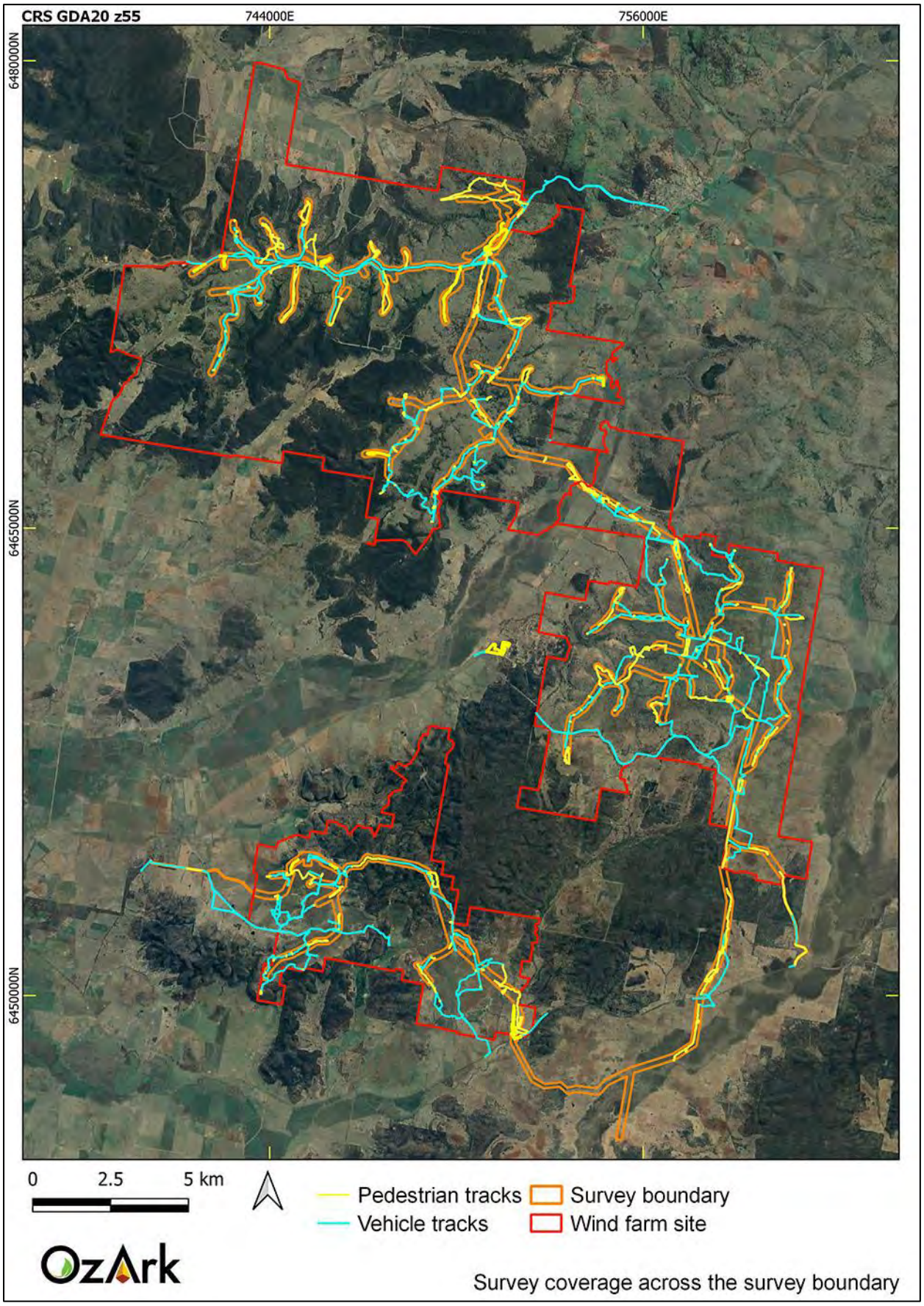
Survey consisted of assessing all turbine locations and sampling other project components such as access tracks, electrical reticulation, overhead transmission lines, ancillary infrastructure locations, and substation locations. **Figure 6-1** shows the areas surveyed via pedestrian means. Large portions of the survey boundary were also driven and the landform potential to contain Aboriginal objects was assessed. The portions driven often consisted of sloping landforms or undifferentiated flat landforms that were not close to water which were assessed as having low archaeological potential.

All turbine and ancillary facility locations were surveyed on foot. Where the access tracks, electrical reticulation and overhead transmission line were situated on high gradient slope landforms, the team walked to the impact areas from the closest access to undertake sample survey. Areas where the overhead transmission line or electrical reticulation alignments are near waterways were also surveyed on foot as these are landforms with higher archaeological potential.

The surveying of turbine locations required that many slopes, ridges, and crest landforms within the survey boundary were surveyed. Flat landforms were also inspected, as the overhead transmission line and some access tracks extend beyond the wind farm site into more level gradients in the south.

At the conclusion of the survey, it was considered by OzArk and the RAPs that a large and representative sample of the landforms within the survey boundary had been appropriately surveyed and assessed.

Figure 6-1: Aerial showing the areas surveyed.



6.2 SURVEY CONSTRAINTS

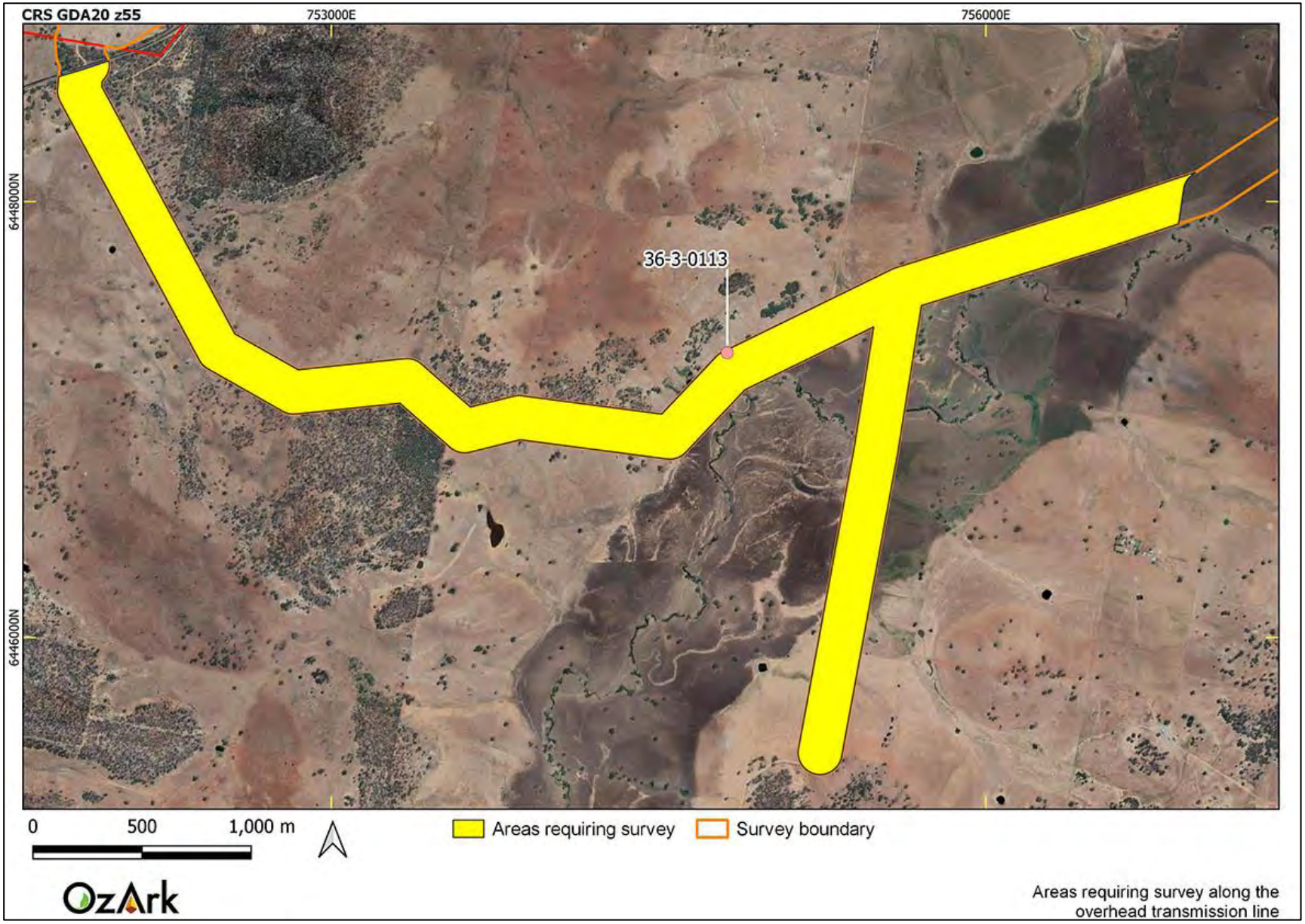
The main constraint during the fieldwork was poor GSV, as this was an issue across most survey units except for Survey Unit 4 (**Section 6.3**). The dense ground cover could be explained by the large amount of rainfall that the region has experienced since early 2020.

Particular areas of the survey boundary contained certain topographies that were considered either inaccessible or too dangerous to walk or drive. The aerial photography does not effectively convey the nature of the terrain and the difficulty manoeuvring through it to reach a particular area. In those areas where proposed access tracks, or electrical reticulation and overhead transmission line alignments are in steep, sloping landforms, sample surveys were conducted within more accessible areas and the surveyors were able to extrapolate the data to areas that were too steep to assess. In addition, some portions of the survey boundary contain extremely dense weed and grass cover, meaning that access on foot was very difficult and generally unwarranted as GSV was zero per cent.

Part of the survey boundary was unable to be surveyed due to landowners not granting access permission. The unsurveyed portion of the survey boundary includes part of the overhead transmission line (**Figure 6-2**). Further, the assessment of any transport route modifications associated with transporting project components from Newcastle Port along the Golden Highway to the wind farm site does not form part of this assessment as these locations have not yet been confirmed.

The area shown in **Figure 6-2**, will be subject to sample survey, in accordance with the Code of Practice, by archaeologists and RAPs following development consent which will also include ground-truthing the location of previously recorded site 36-3-0113 (**Section 9.3**). Any transport route modifications will also need to be assessed prior to the construction of the project.

Figure 6-2: Aerial showing the unsurveyed portion of the survey boundary along the overhead transmission line.



6.3 EFFECTIVE SURVEY COVERAGE

Two of the key factors influencing the effectiveness of archaeological survey are 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 portions of the survey boundary, including the overhead transmission line outside of the wind farm site, which were able to be assessed during the survey (2,913 ha in total). In general, **Table 6-1** presents an approximation of the amount of ground surface able to be seen at any location within particular landform units. For example, on average at any one location within the ridgelines and crest landforms of the survey boundary, less than one per cent of the ground surface could be seen. Exposures in these landforms were generally confined to naturally bare spots under trees, along farm tracks, and around rock outcrops. Other areas, however, were obscured by thick grass and weed cover. The amount of visible ground increased across the slope landforms as these were generally subject to higher levels of erosion. Visibility in the low gradient, undulating landforms was approximately 10% as exposures were afforded by farm and animal tracks, and around fences and gates that were more common in these landforms when compared to sloping landforms. Visibility was moderate in the floodplain landforms associated with the overhead transmission line mostly because of the GSE afforded by recent cropping.

Table 6-1: Effective survey coverage within the survey boundary.

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	Ridgelines and crest landforms	13,020,000	10	<5	65,100	0.5%
2	Slope landforms greater than 10 degrees	5,260,000	30	10	157,800	3%
3	Low gradient/undulating landforms	12,830,000	50	20	1,283,000	10%
4	Floodplains	1,520,000	80	50	608,000	40%

Table 6-2 demonstrates that although the survey efficacy was very low in ridge and crest landforms (<1%), that this did not hamper the recording of a site. Conversely, while the survey efficacy in floodplain landforms was high (40%), the survey did not record any sites in this landform unit. Survey Unit 3 (low gradient, undulating landforms) had a relatively low survey efficacy of 10%, however, three sites were recorded in this landform unit; generally, because the available exposures were in the most archaeologically sensitive areas (i.e. along the banks of waterways).

As a result, it is concluded that the GSV limitations did not significantly hamper the ability of the survey to characterise the landforms of the survey boundary with the conclusion that sites will be rarely recorded in slope or ridgeline and crest landforms and will be much more commonly recorded in lower gradient landforms outside of the agricultural disturbances noted in the floodplain landform unit.

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
Ridgelines and crest landforms	13,020,000	65,100	0.5%	1
Slope landforms greater than 10 degrees	5,260,000	157,800	3%	0
Low gradient/undulating landforms	12,830,000	1,283,000	10%	3
Floodplains	1,520,000	608,000	40%	0

6.4 ABORIGINAL SITES RECORDED

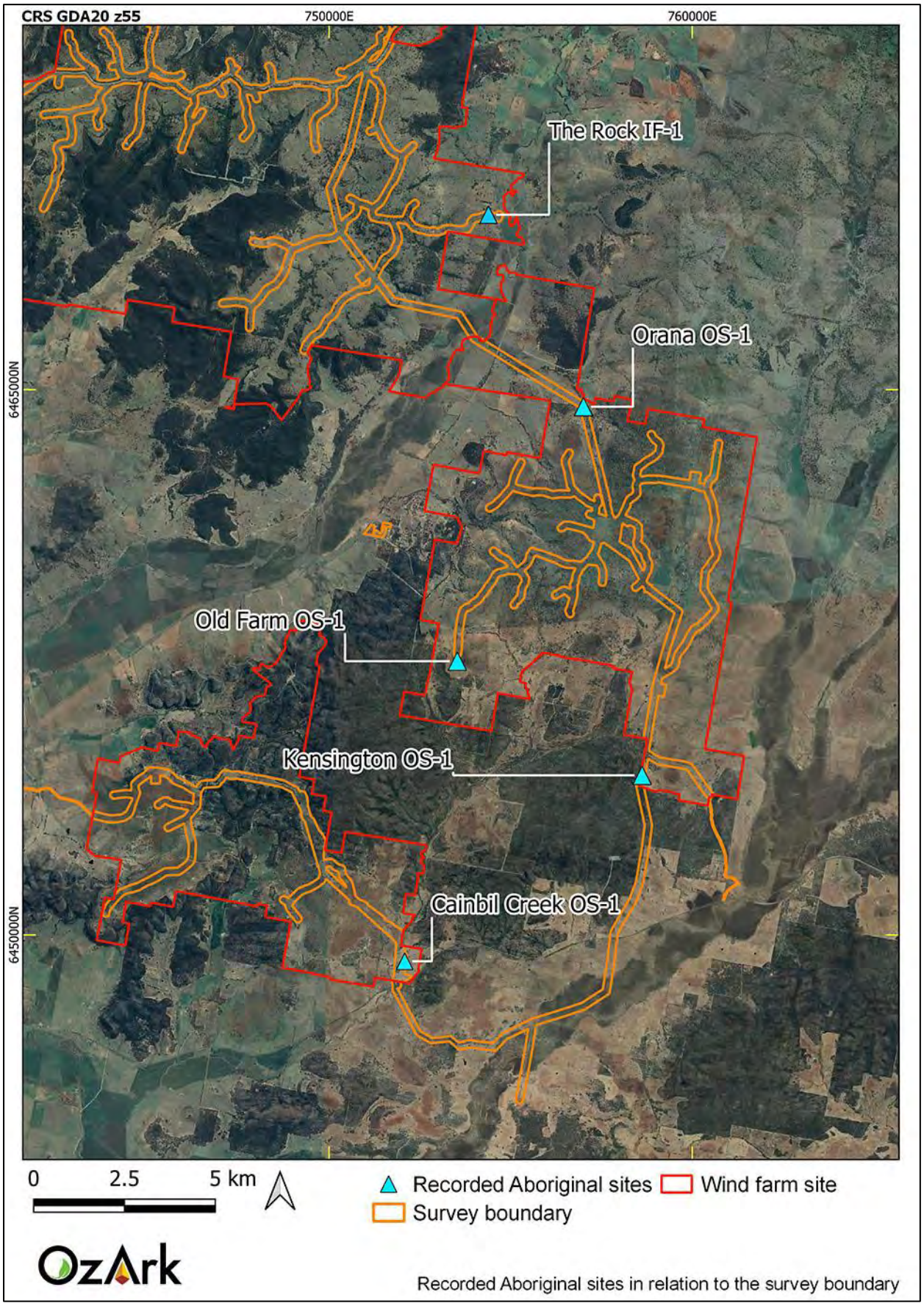
Five previously unrecorded Aboriginal sites were identified during the survey of the survey boundary (**Table 6-3**). **Figure 6-3** shows the location of these sites in relation to the survey boundary.

Further details on each site follows.

Table 6-3: Previously unrecorded Aboriginal cultural heritage sites recorded during the survey.

Site Name	AHIMS ID	Feature(s)	GDA zone 55 Easting	GDA zone 55 Northing	Survey Unit
Orana OS-1	28-6-0060	Artefact scatter with PAD	757004	6464532	3
Old Farm OS-1	28-6-0061	Stone quarry and artefact scatter with PAD	753531	6457532	1
Kensington OS-1	36-3-3805	Artefact scatter	758621	6454390	3
Cainbil Creek OS-1	36-3-3806	Artefact scatter with PAD	752081	6449278	3
The Rock IF-1	TBC	Isolated find	754390	6469811	3

Figure 6-3: Aboriginal cultural heritage sites recorded during the survey.



Orana OS-1

Site Type: Artefact scatter with PAD

GPS Coordinates: 757004E / 6464532N (GDA 2020 / MGA Zone 55)

Location of Site: The site is located approximately 4.2 km to the southeast of the Black Stump Way and Orana Road intersection, and 8.3 km to the northeast of the Black Stump Way and Moorefield Road intersection. The site is also 280 m to the west of Spring Creek and 790 m to the south of Collier Creek (**Figure 6-3** and **Figure 6-4**).

Description of Site: The site consists of four artefacts manufactured from quartz, quartzite, and silcrete, which are situated in an eroding edge of a farm track (**Table 6-4** and **Figure 6-5**). The landform on which the surface artefacts were identified is gently sloping and the artefacts were identified on B-Horizon soils. The surrounding area was heavily grassed with mature trees nearby. Patches of erosion were also evident, and angular gravels were common in areas of exposure. There is potential for subsurface deposits to be present in the area of PAD delineated to the north of the surface artefacts (**Figure 6-4**). This area includes an elevated, flat landform near the confluence of Spring Creek and a drainage line where lower levels of erosion were evident.

Figure 6-4: Aerial showing the location and extent of Orana OS-1.

Table 6-4: Artefact Attributes: Orana OS-1.

Artefact ID	Art. Type	Material	Integrity	Reduction	Length x width x thickness (mm) or size class
1	Flake	Silcrete	Proximal fragment	Tertiary	10x12x3 millimetre (mm)
2	Flake	Quartz	Complete	Tertiary	11x7x1 mm
3	Flake	Quartz	Complete	Tertiary	14x8x2 mm
4	Flake	Quartzite	Complete	Tertiary	60x30x10 mm

Figure 6-5: Orana OS-1. View of site and the recorded artefacts.

1. View to the northwest of Orana OS-1.

2. View to the southeast of Orana OS-1.

3. View of silcrete and quartzite flakes.

4. View of the quartzite flake.

Old Farm OS-1

Site Type: Stone quarry and artefact scatter with PAD

GPS Coordinates: 753531E / 6457532N (GDA 2020 / MGA Zone 55)

Location of Site: The site is located 1.1 km to the southeast of the Moorefield Road and Cainbil Road intersection; 887 m directly south of Moorefield Road, and 692 m directly east of Cainbil Road. Branch Creek is located 2.6 km to the southeast of the site (**Figure 6-3** and **Figure 6-6**).

Description of Site: The site is a relatively isolated area of outcropping quartzite where there is significant evidence of Aboriginal stone quarrying (**Figure 6-7**). The stone material quarried at the site is quartzite that occurs in three forms (red, yellow, and white). It is the white quartzite that appears to be the most ideal for the manufacturing of stone tools at the site as it is the most fine-grained, whereas the red quartzite was extremely coarse-grained.

The predominant stone artefacts recorded included flakes and large opportunistic multidirectional cores, all manufactured from either the white or yellow coloured quartzite (**Table 6-5**). Other site features included locations, recorded as *activity areas*, where there was clear evidence of stone quarrying, often in the form of clear Hertzian cones and an 'apron' of associated artefacts directly adjacent. Soil at the site consists of an orange sandy silt with large outcropping stone (quartzite).

There is little evidence of significant disturbance to the site other than its agricultural land use, wombat burrowing, and modification through slope wash erosion. Consequently, there is some potential for archaeological deposits at Old Farm OS-1, particularly downslope to the west of the outcropping rock.

A sample of 10 artefacts were recorded during the survey, however, the site contains far more artefacts than what was recorded and there could be potential for over 100 artefacts of various forms at the site.

Activity areas

The activity areas present at Old Farm OS-1 are areas of focused quarrying activity (**Table 6-6**). The six recorded 'areas' were located around large outcropping boulders at the centre of the sloped landform where there was clear evidence of quarrying. They comprise a dense accumulation of stone material in a basin or apron–like area surrounding the outcropping stone, typically containing primary and secondary flakes and large opportunistic multidirectional cores. In addition to the numerous artefacts, the outcropping stone also contained evidence of the quarrying in forms of Hertzian cones. These hertzian cones are cone-shaped scars in the primary rock where smaller chunks were knapped off to produce stone tools, in this case, predominantly large flakes and cores.

Figure 6-6: Aerial showing the location and extent of Old Farm OS-1[5].

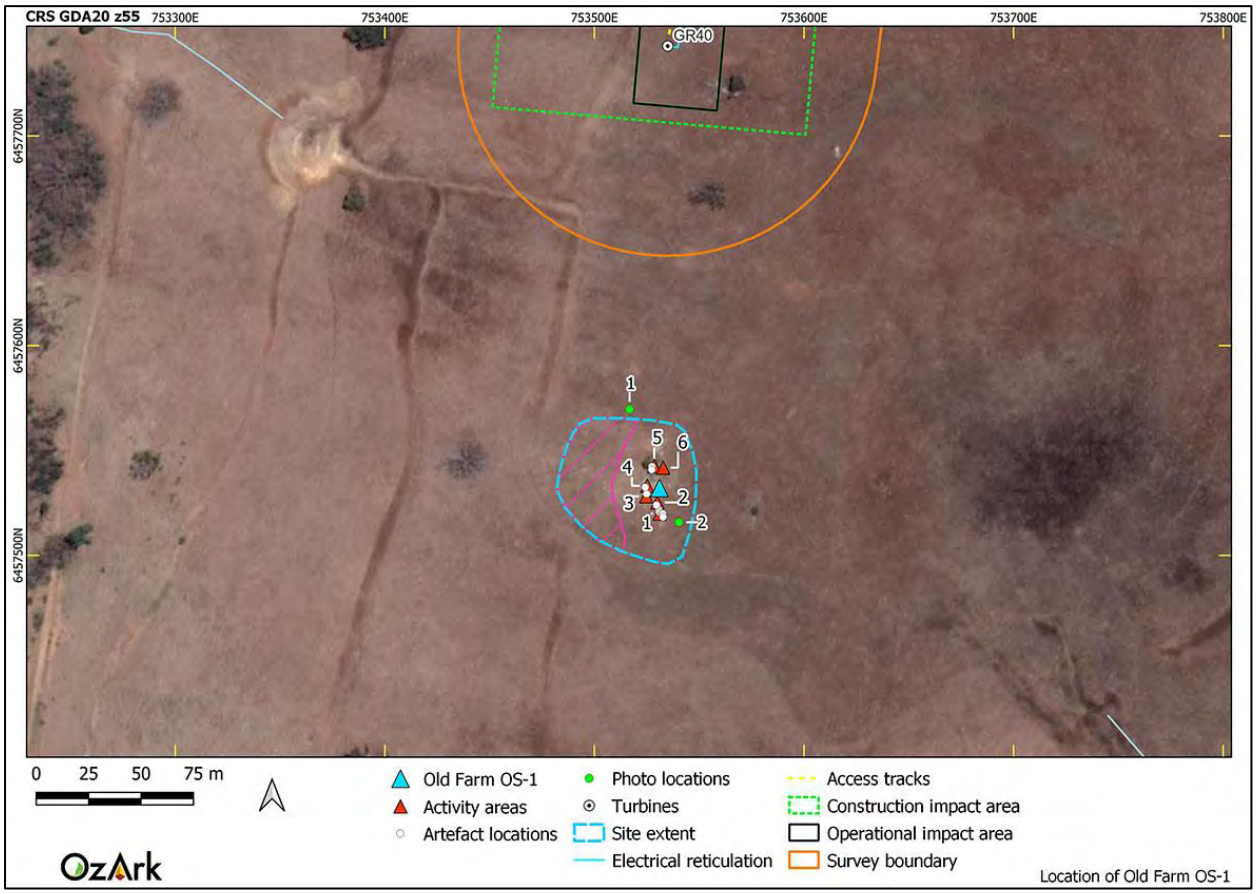


Table 6-5: Artefact Attributes: Old Farm OS-1.

ID	Art. Type	Material	Integrity	Reduction	Length x width x thickness (mm) or size class	Comments
1	Core	Quartzite	-	-	25x18x15 mm	Multidirectional, opportunistic and 10+ flake scars
2	Flake piece	Quartzite	Complete	Tertiary	150x63x43 mm	-
3	Flake piece	Quartzite	Complete	Tertiary	100x100x33 mm	-
4	Flake piece	Quartzite	Complete	Secondary	100x60x28 mm	-
5	Core	Quartzite	-	-	200x29x100 mm	Multidirectional, opportunistic and 10+ flake scars
6	Flake	Quartzite	Complete	Tertiary	100x100x30 mm	-
7	Core	Quartzite	-	-	65x115x105 mm	Multidirectional, opportunistic and 10+ flake scars
8	Flake piece	Quartzite	Complete	Tertiary	165x110x45 mm	Possible retouch
9	Flake	Quartzite	Complete	Tertiary	90x70x25 mm	-
10	Flake	Quartzite	Complete	Tertiary	80x40x10 mm	-

[5] The survey boundary was revised at this location following the recording of Old Farm OS-1 to ensure that it would not be impacted (see **Section 8.1.2**). **Figure 6-9** shows the revised survey boundary and project components.

Table 6-6: Site features: Old Farm OS-1.

ID	Feature	Notes
1	Activity area	5.5x3 m - Outcropping ledge showing possible evidence of quarrying with artefact and material scatter surrounding outcrop.
2	Activity area (Hertzian cones)	6x3 m – Outcropping quartzite boulders with evidence of quarrying and multiple associated flakes and cores.
3	Activity area	6x4 m – Outcropping quartzite boulder with no evidence of quarrying but a core and a few flake pieces.
4	Activity area	4x4 m – Numerous flake pieces scattered across and adjacent to outcropping quartzite boulder.
5	Activity area	3x4 m – Several smaller artefacts surrounding outcropping quartzite boulder.
6	Activity area (Hertzian cones)	20x8 m – Outcropping quartzite boulders (large) with evidence of quarrying and numerous quartzite flakes, flake pieces and cores.

Figure 6-7: Old Farm OS-1. View of site and selection of recorded artefacts.

1. View of Old Farm OS-1 facing southeast.

2. View of Old Farm OS-1 facing northwest.

3. View of hertzian cones in outcropping quartzite in Old Farm OS-1.

4. View of the fine-grained white basalt that was targeted at Old Farm OS-1.

5. View of an activity area at Old Farm OS-1.

6. View of a multidirectional core from Old Farm OS-1.

7. View of flakes from Old Farm OS-1.

8. View of a multidirectional core from Old Farm OS-1.

9. View of an activity area at Old Farm OS-1.

10. View of an activity area at Old Farm OS-1.

Kensington OS-1

Site Type: Artefact scatter

GPS Coordinates: 758621E / 6454390N (GDA 2020 / MGA Zone 55)

Location of Site: The site is located 3.9 km to the northwest of the Turee Street and Main Street intersection in Uarbury, and 4.4 km to the north of the Golden Highway. Cainbil Creek is approximately 1.8 km to the northwest (**Figure 6-3** and **Figure 6-8**).

Description of Site: The site consists of seven artefacts located in an exposure adjacent on either side of an unnamed drainage line (**Figure 6-9**). Recorded artefacts include six flakes and one core manufactured from chert and quartz (**Table 6-7**). The artefacts on the northern side of the drainage line are exposed at the base of a heavily eroded slope, while the artefact on the southern side is on a flat plain which is cropped. Soil at the site is an orange sandy silt with some gravels and small rock inclusions. Due to the disturbance (cropping) at the site and high levels of erosion, the site is not considered to be associated with intact subsurface deposits.

Figure 6-8: Aerial showing the location and extent of Kensington OS-1.

Table 6-7: Artefact Attributes: Kensington OS-1.

Artefact ID	Art. Type	Material	Integrity	Reduction	Length x width x thickness (mm) or size class	Comments
1	Flake	Quartz	Complete	Tertiary	15x11x4 mm	-
2	Flake	Quartz	Complete	Tertiary	20x15x3 mm	-
3	Flake	Quartz	Complete	Tertiary	38x25x8 mm	-
4	Flake	Chert	Proximal fragment	Tertiary	31x21x5 mm	-
5	Flake	Quartz	Complete	Tertiary	30x22x8 mm	-
6	Flake	Chert	Proximal fragment	Secondary	18x10x2 mm	-
7	Core	Chert	-	-	-	Multidirectional, 5 flake scars and a maximum size of 38 mm

Figure 6-9: Kensington OS-1. View of site and the recorded artefacts.

1. View south across Kensington OS-1 on the northern side of the drainage line.

2. View to the north across of Kensington OS-1 on the southern side of the drainage line.

3. View of a chert and two quartz flakes from Kensington OS-1.

4. View of chert core from Kensington OS-1.

Cainbil Creek OS-1

Site Type: Artefact scatter with PAD

GPS Coordinates: 752081E / 6449278N (GDA 2020 / MGA Zone 55)

Location of Site: The site is located 550 m to the north of the Golden Highway and 1.4 km to the northeast of the intersection between Melrose Road and the Golden Highway. The site is located on the northern and southern banks of Cainbil Creek (**Figure 6-3** and **Figure 6-10**).

Description of Site: The site consists of four artefacts located in exposures along the northern and southern banks of a drainage line of Cainbil Creek (**Figure 6-11**). The recorded artefacts include three flakes and one side scraper which have been manufactured from quartzite and quartz (**Table 6-8**). Soil at the site is an orange silty sand with gravels and small rock inclusions, as well as an imported material to form a road base for a property driveway that runs through the western side of the site. Areas of PAD have been identified across the landforms of Cainbil Creek, although it is presumed any associated deposit will be of low-density and with relatively thin A-Horizon soils (**Figure 6-11**).

Figure 6-10: Aerial showing the location and extent of Cainbil Creek OS-1.

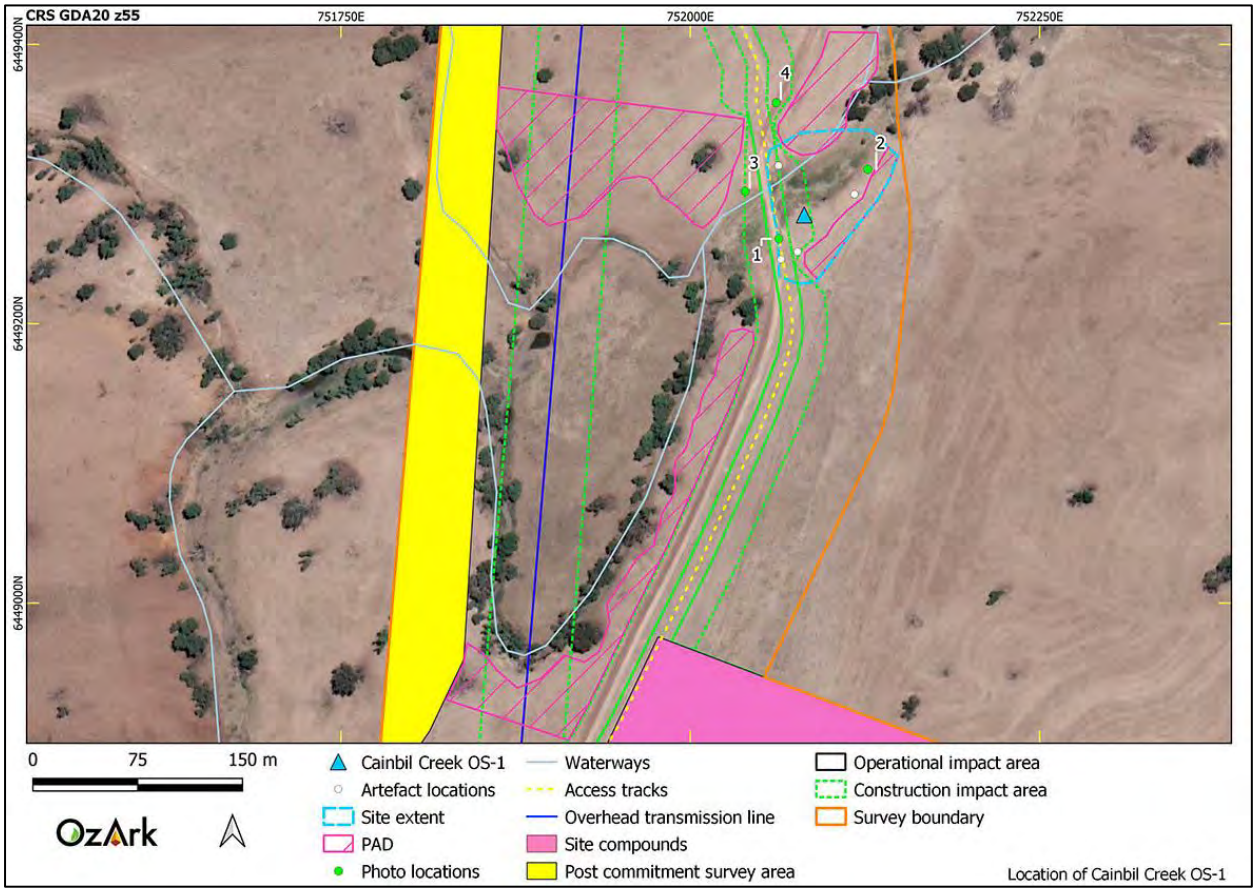


Table 6-8: Artefact Attributes: Cainbil Creek OS-1.

Artefact ID	Art. Type	Material	Integrity	Reduction	Length x width x thickness (mm) or size class
1	Flake	Quartzite	Complete	Tertiary	20x15x9
2	Flake	Quartz	Complete	Tertiary	20x19x9
3	Flake	Quartz	Complete	Tertiary	28x31x8
4	Side scraper	Quartz	Complete	Secondary	50x42x25

Figure 6-11: Cainbil Creek OS-1. View of site and a selection of the recorded artefacts.

1. View to the south of Cainbil Creek OS-1.

2. View to the southwest of Cainbil Creek OS-1.

3. View to the northeast of Cainbil Creek OS-1.

4. View to the southeast of Cainbil Creek OS-1.

5. View of a quartz flake from Cainbil Creek OS-1.

6. View of a quartz flake from Cainbil Creek OS-1.

The Rock IF-1

Site Type: Isolated find

GPS Coordinates: 754390E / 6469811N (GDA 2020 / MGA Zone 55)

Location of Site: The site is located 310 m west of Black Stump Way and 595 m west of Coolaburragundy River, approximately 6.1 km south of the intersection of Black Stump Way and Queensborough Street at Coolah (**Figure 6-3** and **Figure 6-12**).

Description of Site: The site consists of an isolated silcrete core on a bench of a slope (**Figure 6-13** and **Table 6-9**). Soil at the site is an orange sandy silt with some gravels and small rock inclusions, particularly quartz fragments. Due to the use of the access track and high levels of erosion, the site is not considered to be associated with intact subsurface deposits.

Figure 6-12: Aerial showing the location of The Rock IF-1.

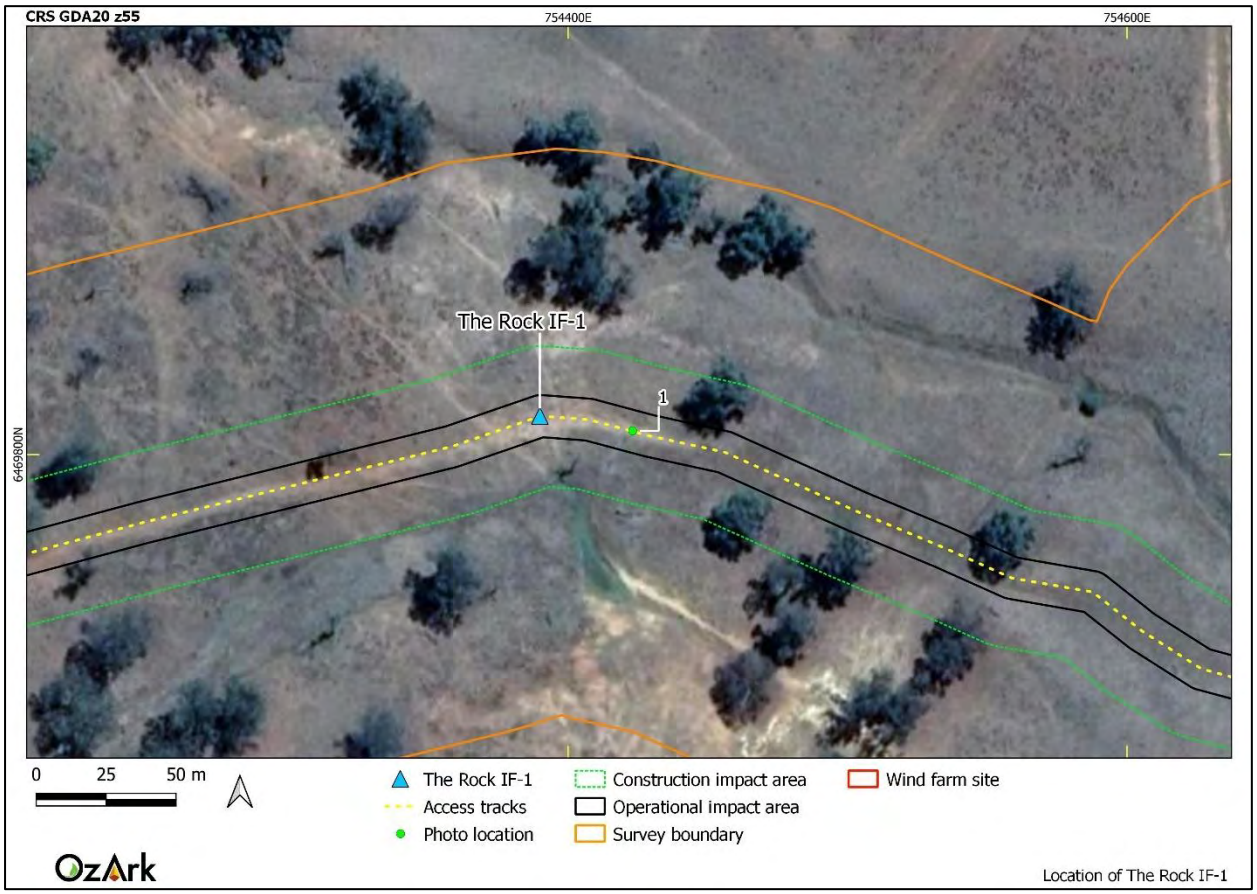


Table 6-9: Artefact Attributes: The Rock IF-1.

Artefact ID	Art. Type	Material	Integrity	Reduction	Maximum size (mm)	Comments
1	Core	Silcrete	N/A	Tertiary	40 mm	Two flake scars; uni-directional

Figure 6-13: The Rock IF-1. View of site and the recorded artefact.

1. View west upslope across The Rock IF-1 site location.

2. View of the silcrete core at The Rock IF-1.

6.5 PREVIOUSLY RECORDED ABORIGINAL SITES LOCATED

As noted in **Section 5.3.1.2**, two previously recorded AHIMS sites, 36-3-0111 and 36-3-0113, are located within the survey boundary, however, they did not form part of the survey boundary at the time of the survey.

Following inclusion of these sites within the survey boundary, an inspection was completed by OzArk to ground-truth the location of 36-3-0111. Access to site 36-3-0113, a grinding groove site, was not granted at the time of the inspection. Site 36-3-0113 falls within the post commitment survey area (**Section 9.3**).

Details of site 36-3-0111 follow.

Argyll No.3 (36-3-0111)

Site Type: Grinding grooves, stone arrangement, waterhole

GPS Coordinates: 753448E / 6446943N[6] (GDA 2020 / MGA Zone 55)

Location of Site: Site 36-3-0111 is located within Lot123 DP 750772, near Uarbry, NSW. The site is 1.8 km and 2.7 km directly south of Uarbry Pinnacle and the Golden Highway, respectively, and 2 km directly west of Blue Springs Road. The site is along an unnamed gully which drains southeast towards the Talbragar River, located 1.2 km to the southeast.

Description of Site: Site 36-3-0111 was originally recorded in 1988 by Warren Bluff. The site includes a large sandstone platform with approximately 70 grinding grooves above a waterhole and a hide mentioned by Bluff (**Figure 6-17** and **Figure 6-18**; images 1, 2 and 3). Approximately 40 m downstream of the waterhole is a single grinding groove on a sandstone platform approximately 35 cm in length (**Figure 6-18**; images 4 and 5). To the west of the single grinding groove is a sandstone overhang (referred to by Bluff as a barron) (**Figure 6-18**; image 6 and 7). The overhang is 1 m high and 3.5 m width. To the east of the waterhole is an additional sandstone platform with up to 10 grinding grooves (**Figure 6-18**; image 8). Further to the east is the stone arrangement (**Figure 6-18**; image 9 and 10). The stone arrangement is on a slope in a treed area and is generally circular although some rocks have fallen. The site card submitted by Bluff notes artefacts are present across the site, however, none were identified by OzArk.

[6] The coordinates provided are the ground-truthed location. OzArk will submit an updated site card to AHIMS to correct the coordinates.

Figure 6-14: Aerial showing the location of features and extent of 36-3-0111.

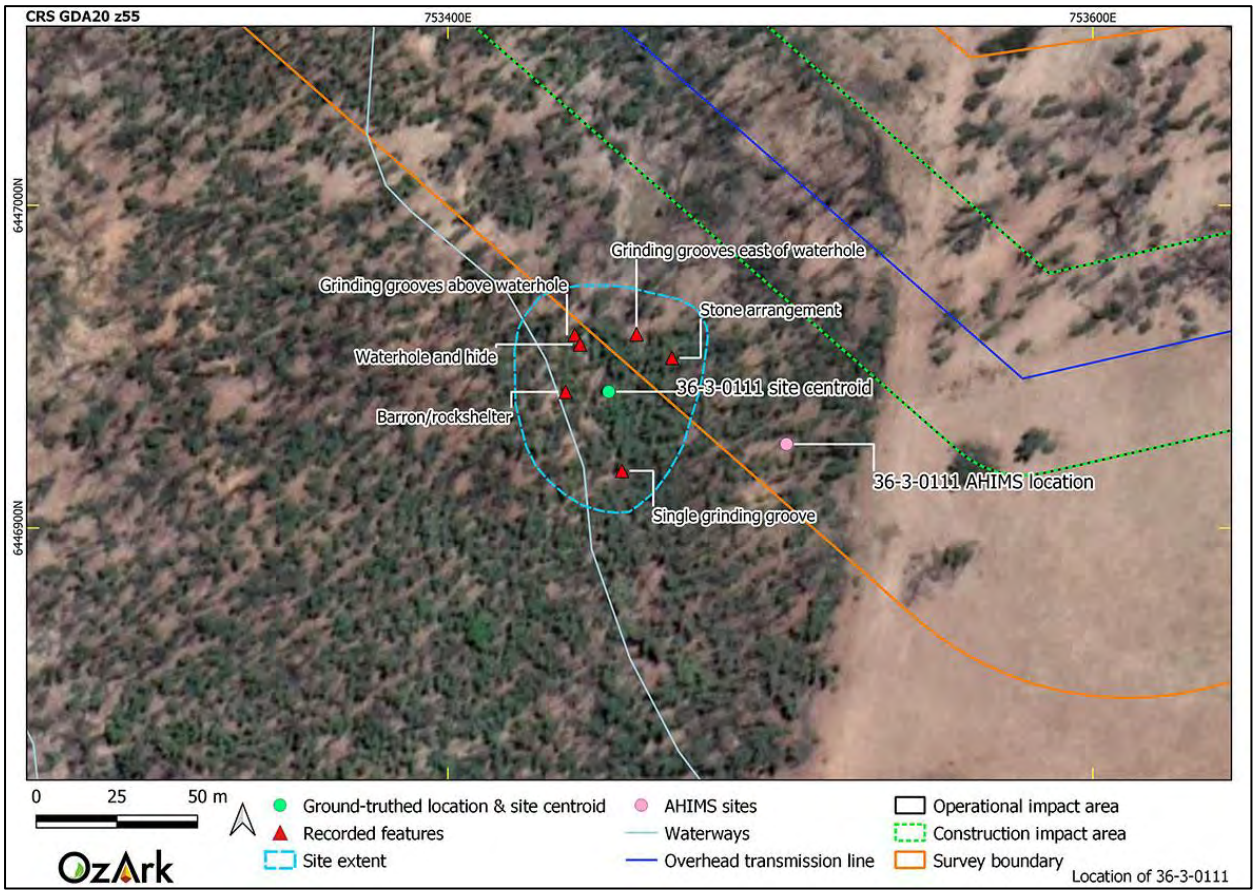


Figure 6-15: Argyll No.3 (36-3-0111). View of previously recorded site.

	
1. View north towards the waterhole, sandstone platform with grinding groves (red circle) and the hide (yellow circle).	2. View east towards the sandstone platform with grinding groves above the waterhole.

3. Detail of the grinding grooves above the waterhole.

4. Location of a single grinding groove (red circle) downstream from the waterhole.

5. View of the single grinding groove on a sandstone platform downstream of the waterhole.

6. View west towards a sandstone overhang.

7. Detail of the deposit within the overhang.

8. View west to a platform of sandstone with grinding grooves (at the measuring tape) located between the stone arrangement and the waterhole.

	
9. View east towards the stone arrangement.	10. View west towards the stone arrangement.

6.6 DISCUSSION OF SURVEY RESULTS

6.6.1 Summary of survey results

Five previously unrecorded Aboriginal sites were identified during the survey of the survey boundary. These sites included one low-density artefact scatter (Kensington OS-1); two low-density artefact scatters with PAD (Orana OS-1 and Cainbil Creek OS-1) and one quarry site incorporating an artefact scatter and PAD (Old Farm OS-1).

The location of one previously recorded AHIMS site (36-3-0111) was ground-truthed during an inspection.

6.6.2 Discussion

In **Section 5.4.5**, previously recorded sites were plotted against slopes greater than 10 degrees and distance to water. It was shown that there was a strong tendency for stone artefact sites to be recorded in topography with slopes less than 10 degrees. In terms of distance to water it was seen that there was not a strong correlation between previous site recordings and permanent or semi-permanent sources of water (**Table 5-6**).

When the sites that were recorded as part of this assessment are plotted against these same variables, the following observations can be made:

- **Figure 6-16** shows the recorded sites plotted against landforms with slopes greater than 10 degrees. This shows with only one exception, all sites were recorded were recorded in lower gradient undulating landforms. The remaining site (Old Farm OS-1) was recorded in the crest/ridgeline landforms.
- **Figure 6-17** shows that the correlation between drainage buffers and recorded sites is a little stronger than was seen with previously recorded sites, but it is still not a clear relationship. Cainbil Creek OS-1 is on the immediate bank of Cainbil Creek, and Orana OS-1 is within 100 m of Spicers Creek. Kensington OS-1 and The Rock IF-1 are within a Drainage 4 buffer, while Old Farm OS-1 plots outside of the drainage buffers.

Figure 6-16: Aerial showing the relationship of recorded sites with degree of slope.

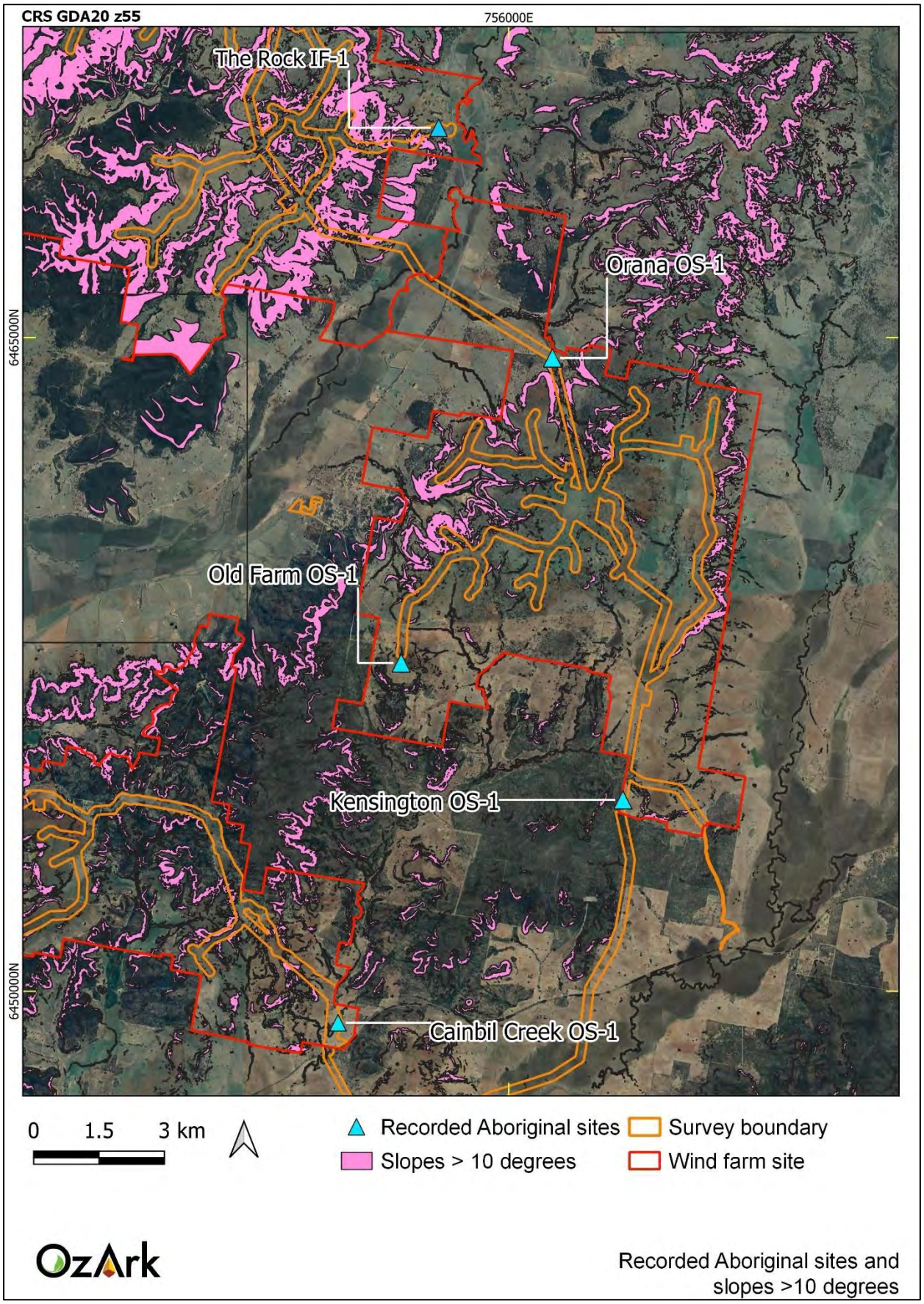
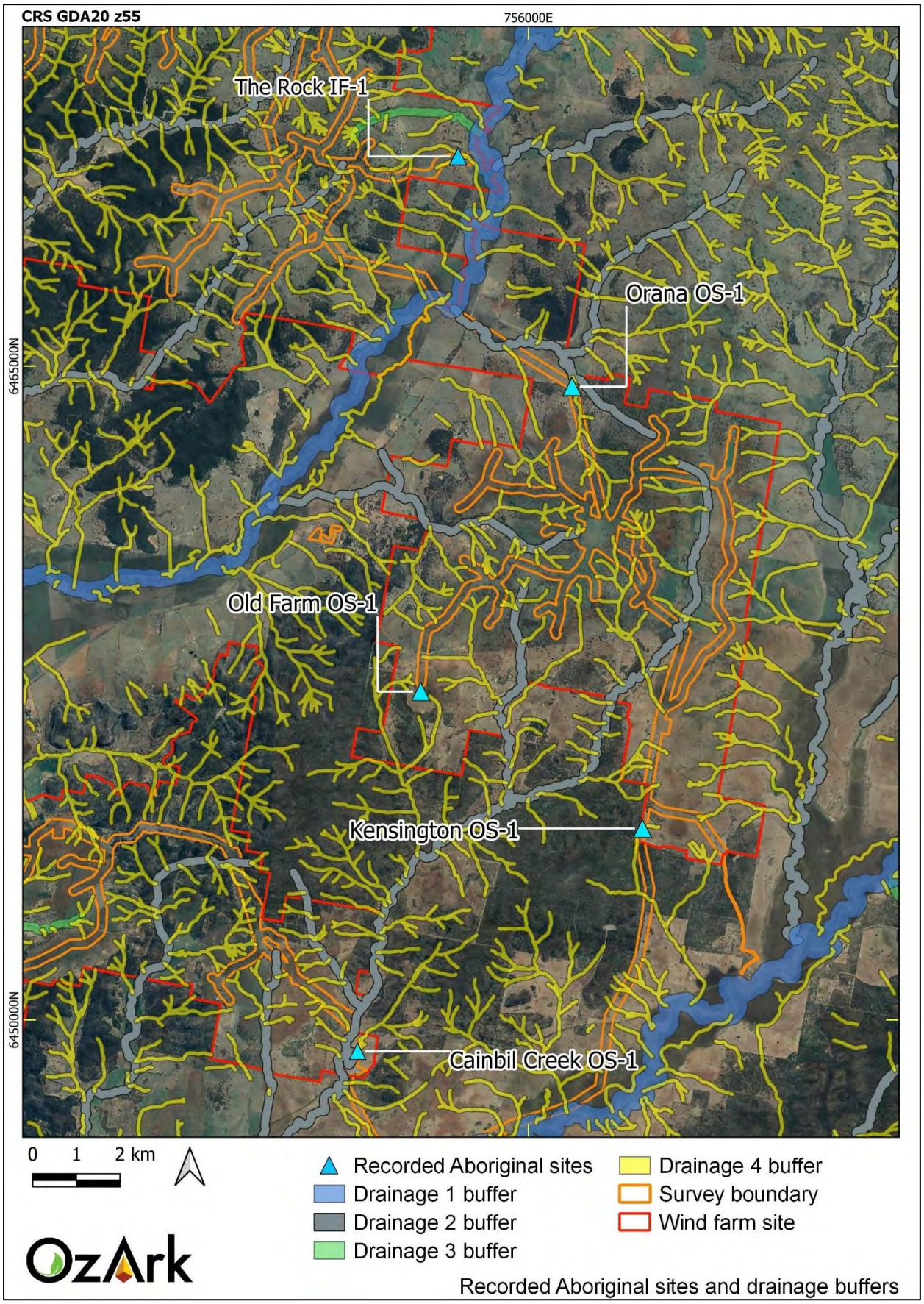


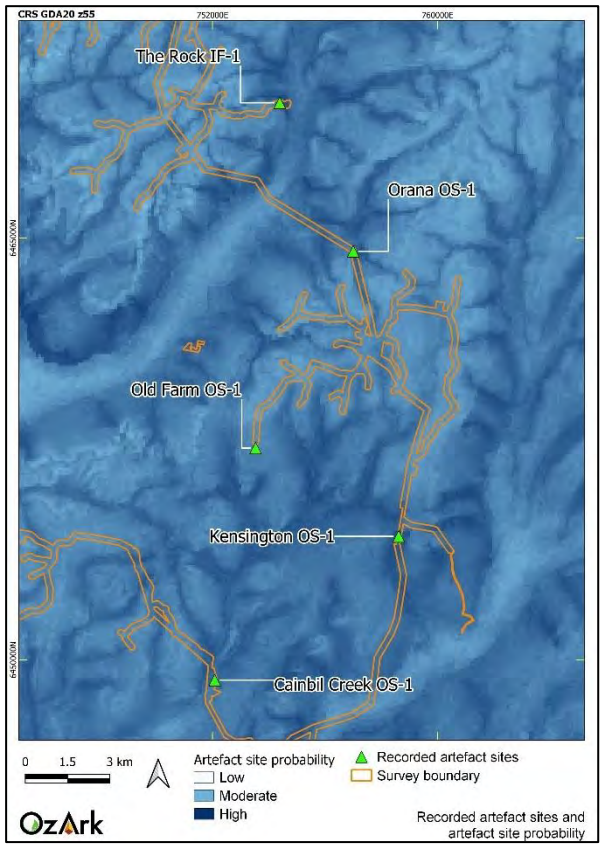
Figure 6-17: Aerial showing the relationship of recorded sites with drainage.



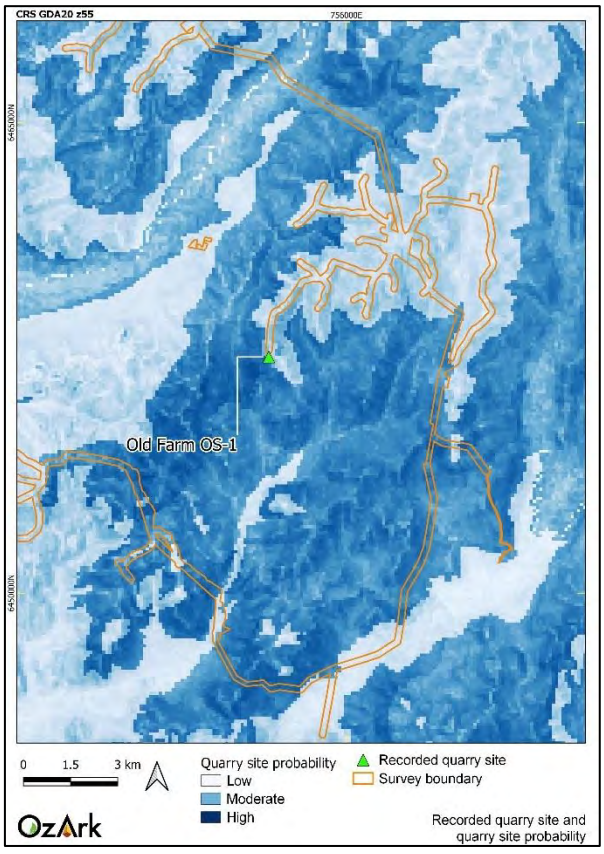
In **Section 5.4.4** the ASDST models were used to develop a predictive model for site location. When the recorded sites are plotted against these models, the veracity of the models can be demonstrated. An examination of **Figure 6-18** allows the following observations to be made:

- The ASDST model predicting the likelihood of an area recording an artefact site is accurate when the sites recorded during the assessment are plotted against the model. As this model uses waterways as a defining variable, it illustrates that the association of Aboriginal camping locations and the availability of water is valid when the findings of the assessment are considered
- The ASDST model predicting the likelihood of an area recording a quarry site is relatively accurate with Old Farm OS-1 being recorded in a landform shown as having moderate to high potential for this site type
- The ASDST model showing accumulative impact shows that sites are recorded where impacts are generally lower. However, not too much can be read into this as most of the survey boundary is within landforms with low accumulative impacts.

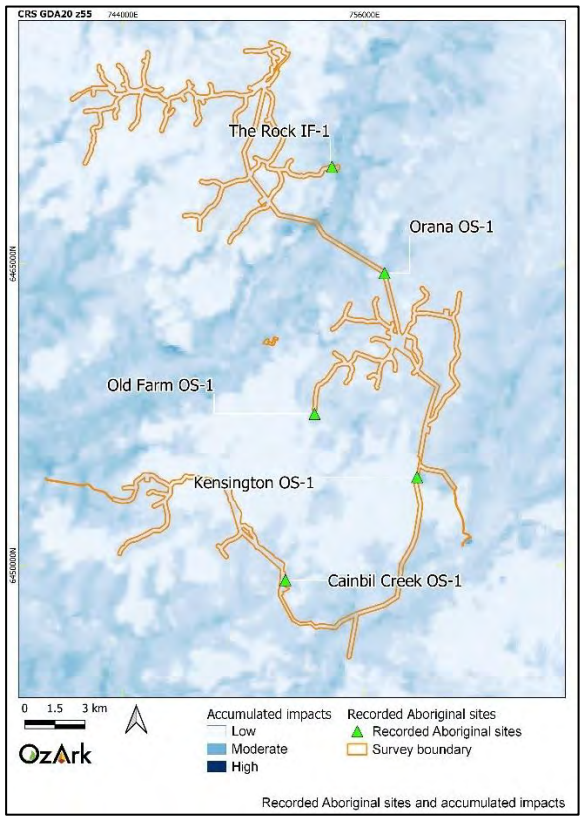
Figure 6-18: Recorded sites in relation to ASDST models.



1. Recorded artefacts sites and the ASDST model of artefact site probability.



2. Recorded quarry site location and the ASDST model of quarry site probability.



3. Recorded sites and the ASDST model of accumulated impacts.

In **Section 5.5**, a series of research questions were posed, and these can be considered in the light of the survey results.

- What resources were available to the Aboriginal people using the land within the survey boundary (food, stone, and water) and what resources were transported to the area?
    - The outcropping quartzite recorded at Old Farm OS-1 provided a suitable stone resource for procurement and manufacture. Cobbles of quartzite were also noted along the creek lines however these were relatively limited. Artefacts identified at sites not associated with Old Farm OS-1 were mostly manufactured from quartz, chert and silcrete. Therefore, the implication is that most of the raw material for tool manufacture was transported into the area. No specific food resource locations were noted.
- How do the artefact assemblages from the sites along the slopes and ridgelines/crests in the survey boundary differ from sites that are located along creek flats and valley floors?
    - Four artefact scatters were recorded along creek flats or gentle slopes and one site with stone artefacts (Old Farm OS-1) was recorded in the ridgelines/crests. The dominant material recorded at the sites within creek flats was quartz, with a relatively high proportion of chert and a low percentage of quartzite and silcrete. In comparison, all artefacts recorded at Old Farm OS-1 were manufactured from quartzite, however, the artefacts are associated with a quartzite quarry and therefore it is not possible to conclusively make meaningful comparisons between the sites.

- What tasks were Aboriginal people undertaking at the sites?
    - The presence of Old Farm OS-1 (a quarry site) provides evidence of procurement of quartzite for stone tool manufacture. The sites recorded in lower undulating landforms did not have sufficient distinguishing features to provide information about what was happening at these sites beyond standard tool manufacture and curation.
- Did the Aboriginal people use the land within the survey boundary at any particular time of the year?
    - The data set is too small to attempt an answer to this question and no evidence was noted that would indicate a seasonal preference for site use.
- Is there potential for burials to be present in the landscape?
    - There was no indication of there being burials in the survey boundary. Generally, the landscape has been farmed for a long period and this may have removed or dispersed any evidence of burials over time had they existed.
- Are the outcropping rock materials present suitable for stone tool procurement and manufacture?
    - An isolated incidence of outcropping quartzite was identified within the survey boundary which showed considerable evidence of quarrying for stone tool procurement. Basalt, another material suitable for stone procurement, was common along the ridgelines and crest and slope landform units, generally in the form of large cobbles but also in some areas of outcropping. While basalt is typically good material for manufacturing stone tools, the basalt within the survey boundary is vesicular and therefore of poor quality for tool manufacture where fine-grained aphanitic basalt is preferred.
- Is there evidence to suggest that Aboriginal people were using the area earlier than the mid to late Holocene?
    - There is no evidence to suggest that Aboriginal people were using the survey boundary earlier than the mid to late Holocene. Such evidence is difficult to obtain outside of rock shelters or deep, stratified terrace landforms, both of which are not found in the survey boundary
- Can dates be obtained for the Aboriginal use of the area?
    - No archaeological features such as hearths or rockshelters with intact deposits were recorded identified during the survey, therefore none of the recorded sites can be dated. However, based on the artefact types recorded, they are typical of mid- to late-Holocene assemblages although artefacts often used as temporal markers, such as backed blades, were not recorded.
- Establish how the findings within the survey boundary (if any) accord with the regional archaeological context examined in **Section 5.2**.
    - Most of the recordings of the current assessment are representative of the findings of other researchers in the region. Regarding Orana OS-1, Kensington

OS-1, Cainbil Creek OS-1 and The Rock IF-1, the type of artefacts, the raw material they are manufactured from, and the range of tool types does not present a unique or distinguishing paradigm to the archaeological context that has been established in the region. The recording of Old Farm OS-1, while not unexpected, does present a new site type recording for the area surrounding the wind farm site and survey boundary.

7 SIGNIFICANCE ASSESSMENT

7.1 INTRODUCTION TO SIGNIFICANCE ASSESSMENT

7.1.1 Identifying cultural significance

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

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

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

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

7.1.2 Social or cultural value

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

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

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

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

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

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

7.1.3 Scientific (archaeological) value

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

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

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

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

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

7.1.4 Aesthetic value

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

7.1.5 Historic value

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

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

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

7.2 ASSESSED SIGNIFICANCE OF THE RECORDED SITES

Table 7-1 presents a summary of the significance assessment of Aboriginal cultural heritage sites recorded during this assessment. Further details of each of the assessment criteria are provided below.

Social or Cultural Value

The social and cultural value of Aboriginal sites is generally determined through consultation with Aboriginal people.

Generally, the Aboriginal community regard all sites as having high cultural significance. This is due to all sites, even displaced artefact sites, being able to provide a connection to their ancestors, as well as being a tangible reminder of the past Aboriginal occupation of the area.

A copy of the draft ACHAR was distributed to all RAPs for review on 29 September 2021 (**Appendix 1 Figure 6**). No feedback was received relating to the social or cultural value of the newly recorded sites or the broader survey boundary area. As such, for the purposes of assessing the potential impact to Aboriginal cultural heritage, the recorded site has been accorded high social and cultural values.

Archaeological/Scientific Value

The sites recorded during the survey range from having low scientific significance (low-density artefact scatter: Kensington OS-1 and isolated find: The Rock IF-1) through to low-moderate scientific significance (low-density artefact scatters with PAD: Orana OS-1 and Cainbil Creek OS-1), and high archaeological significance (quarry with associated artefacts: Old Farm OS-1; and grinding grooves, stone arrangement, and waterhole: 36-3-0111).

Kensington OS-1, Orana OS-1, Cainbil Creek OS-1 and The Rock IF-1 are representative of artefact sites recorded elsewhere in the region in that they mostly consist of quartz, chert, and quartzite artefacts. While some retouch was noted, this was rarely more complicated than simple marginal retouch. In addition, many of the sites were recorded in locations where disturbances from the area's agricultural land use and/or erosion was prevalent. For Kensington OS-1 and The Rock IF-1, the conclusion is that this impact has resulted in the artefacts being in a secondary

context or in landforms subject to high levels of erosion and therefore site integrity is low. While Orana OS-1 and Cainbil Creek OS-1 were recorded in association with PAD, the research potential is slightly raised, although intact stratified deposits are not expected.

Old Farm OS-1 is a rare site type for the region, with no other quarry sites identified within 10 km of the wind farm site. The site is also in very good condition and further research at this site would be of benefit in understanding procurement of stone for tool manufacture in the region.

Site 36-3-0111 is a rare site type for the region which is in good condition. The site can provide further information about the region's ceremonial uses.

Aesthetic Value

Artefact scatter sites Orana OS-1, Kensington OS-1, Cainbil Creek OS-1 and The Rock IF-1 consist of unremarkable stone artefacts scattered on the ground. Sites of this nature do not manifest themselves in the landscape and they are extremely difficult for the layperson to interpret and understand. Unlike sites such as rock art sites, or even scarred trees, that can provide a tangible link to the past, artefact sites are generally only appreciated by specialists or the Aboriginal community. As such, all sites are assessed to have low aesthetic values.

Quarry site Old Farm OS-1 has been assessed as having moderate aesthetic values as they can be more easily interpreted by the layperson and its position in the landscape on the upper slope of a crest overlooking the surrounding escarpment to the west adds to its aesthetic significance.

Site 36-2-0111 has been assessed as having high aesthetic values. The site is located along a drainage line with an associated waterhole in a vegetated area with no obvious signs of disturbance.

Historic Value

None of the recorded sites or 36-3-0111 have any association with important persons, places, or events. Therefore, they have no historic values.

Table 7-1: Aboriginal cultural heritage: significance assessment.

Site Name	Social or Cultural Value	Archaeological / Scientific Value	Aesthetic Value	Historic Value
Orana OS-1	High	Low-moderate	Low	Nil
Old Farm OS-1	High	High	Moderate	Nil
Kensington OS-1	High	Low	Low	Nil
Cainbil Creek OS-1	High	Low-moderate	Low	Nil
The Rock IF-1	High	Low	Low	Nil
36-3-0111	High	High	High	Nil

8 ASSESSING HARM

8.1 AVOIDING AND MINIMISING HARM

8.1.1 Conserving significant Aboriginal cultural heritage

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

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

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

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

8.1.2 Opportunities to conserve Aboriginal cultural heritage values

The Proponent has redesigned project components to ensure the Aboriginal sites within the survey boundary which have high cultural, scientific, and aesthetic values (Old Farm OS-1 and 36-3-0111) will not be directly or indirectly impacted by the project. With regards to Old Farm OS-1, turbine GR39 has been removed from the project so there will be no impacts within 140 m of the site.

Three of the recorded sites, Kensington OS-1, Orana OS-1, and Cainbil Creek OS-1, are within or partially extend into, the overhead transmission line of the survey boundary. As there is flexibility as to where project impacts associated with the overhead transmission line will be located, the final positioning of electricity towers and associated access tracks will be designed to avoid the sites and any associated PAD.

Cainbil Creek OS-1 will be partially impacted by a proposed access track which extends from the Golden Highway to the southeast of the Leadville cluster. While the proposed access track will follow the current alignment of a graded road, further ground surface disturbance work is likely required to allow access across the drainage line of Cainbil Creek. Efforts have been made to avoid the area of PAD associated with Cainbil Creek OS-1 (refer **Section 8.2**).

The Rock IF-1 is located along a proposed access track which extends from Black Stump Way to the east of the Mt Hope cluster and is unable to be avoided by the project.

8.2 LIKELY IMPACTS TO ABORIGINAL HERITAGE FROM THE PROJECT

Table 8-1 presents a summary of impacts to Aboriginal cultural heritage associated with the project.

All new sites recorded as part of this assessment and two previously recorded AHIMS sites are located within the survey boundary and therefore are liable to be impacted by the project. However, as discussed in (**Section 8.1.2**), the Proponent has committed to avoiding impact to all sites within the survey boundary, except for Cainbil Creek-OS1 which will be partially impacted by the project and The Rock IF-1 which will be totally impacted.

The location of previously recorded AHIMS site 36-3-0113 will be assessed following development consent and its location will be considered for the design of the overhead transmission line to ensure it will not be impacted by the project. This will ensure that none of the values associated with the site will be lost.

Table 8-1: Aboriginal cultural heritage: impact assessment.

Site Name	AHIMS ID	Type of Harm (Direct/Indirect / None)	Degree of Harm (Total/Partial / None)	Consequence of Harm (Total/Partial/No Loss of Value)
Orana OS-1	28-6-0060	None	None	No loss of value
Old Farm OS-1	28-6-0061	None	None	No loss of value
Kensington OS-1	36-3-3805	None	None	No loss of value
Cainbil Creek OS-1	36-3-3806	Direct	Partial	Partial loss of value
The Rock IF-1	TBC	Direct	Total	Total loss of value
36-3-0111	Argyll No.3	None	None	No loss of value
36-3-0113	Argyll No.1	None	None	No loss of value

8.3 ECOLOGICALLY SUSTAINABLE DEVELOPMENT PRINCIPLES

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

8.3.1 Intergenerational equity

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

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

opportunities remain for future generations of Aboriginal people to enjoy the cultural benefits of those Aboriginal objects and places.

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

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

8.3.2 The precautionary principle

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

In relation to Aboriginal cultural 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.

8.3.3 Principle of Integration

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

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

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

8.3.4 Applicability to the project

The loss of any Aboriginal cultural values, be they physical sites or intangible values, is to be avoided as much as is possible to ensure that the environmental impacts of the project are as acceptable as is possible. The project achieves this as only two sites, Cainbil OS-1 and The Rock IF-1, will be impacted by the project. The remaining sites within the survey boundary will be conserved in the landscape, and the project will adhere to the ESD principles of ensuring that

impacts are minimised and that the Aboriginal cultural heritage values within the survey boundary are maintained.

Overall, for a project of this scale, there is a very low impact to Aboriginal cultural heritage values.

Table 8-2 examines the application of ESD principles to the project.

Table 8-2: Application of ESD principles to the project.

ESD principle	Response
Avoiding and minimising harm	Due to their cultural, scientific and aesthetic values, the Proponent has revised the project design to ensure Old Farm OS-1 and 36-3-0111 will be avoided by the project. While Kensington OS-1 and Orana OS-1 have been assessed as having either low or low to moderate scientific values, the Proponent has committed to ensuring these sites will be avoided by impacts associated with the overhead transmission line. Given the extent of Cainbil Creek OS-1, is not possible to totally avoid the site. As such, part of the surface manifestation will be partially impacted by the construction of a proposed access track. The Rock IF-1 will be totally impacted by the construction of a proposed access track.
The integration principle	The project has environmental benefits as a project (being for the production of renewable energy) and the development of the project has considered the environmental context of the survey boundary. Wherever possible, Aboriginal cultural heritage values will be conserved in the landscape. These values will be enhanced by the project as it is recommended that one site, Old Farm OS-1, is subject to further research even though it will not be harmed by the project.
The precautionary principle	The undertaking of an archaeological survey which meets the requirements of the Code of Practice ensures that the impacts of the project are adequately understood. For any landforms not physically surveyed, a precautionary approach was undertaken in determining the cultural heritage values that may exist in those landforms.
The intergenerational equity principle	The most significant sites within the survey boundary, Old Farm-OS1 and 36-3-0111, will be conserved in the landscape and further research is recommended to be undertaken at Old Farm-OS1 so that the physical site will be available for future generations, but also that further information regarding the site will be available to the broader community. In addition, the Proponent has committed to avoiding sites Kensington OS-1 and Orana OS-1. Cainbil Creek OS-1 will be partially impacted, and The Rock IF-1 will be totally impacted by the impact, however, surface collection will be undertaken of all surface artefacts within the construction impact area.

9 MANAGEMENT OF ABORIGINAL CULTURAL HERITAGE SITES

9.1 GENERAL MANAGEMENT PRINCIPLES

Appropriate management of cultural heritage items is primarily determined based on their assessed significance as well as the likely impacts of the proposed development. **Section 7.1** and **Section 8.1.2** describe, respectively, the significance / potential of the recorded sites and the likely impacts of the 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 development proposal or in this case by avoiding 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 approval to disturb sites under the authority of an ACHMP must be sought from DPE. The recommendations for site management in this ACHAR will normally be carried over into the ACHMP. Aboriginal community can assess the management recommendations within this ACHAR and the ACHMP when it is developed and offer their comments. The ACHMP procedures will often stipulate that the Aboriginal community should be involved in any salvage activities and will dictate what the fate of any salvaged Aboriginal objects will be.

9.2 MANAGEMENT AND MITIGATION OF RECORDED ABORIGINAL SITES

Based on the construction impact area of the project, one site will be partially impacted, one site will be totally impacted, and five sites will be avoided (**Section 8.2**).

Site specific management and mitigation measures for the sites are detailed in the subsections below.

9.2.1 Orana OS-1

Orana OS-1 is within the corridor of the overhead transmission line but will be avoided through the design of the overhead transmission line components (towers and access tracks).

To ensure the site is not inadvertently impacted by the project, the site extent and area of PAD should be fenced with hi-visibility fencing prior to works commencing in the vicinity of the site. The fencing should remain in place for the duration of construction in the vicinity of the site but there is no requirement to permanently fence the site.

9.2.2 Old Farm OS-1

Old Farm OS-1 has been designed out of the survey boundary through the removal of turbine GR39 to ensure that the site remains *in situ*. Old farm OS-1 is now located 140 m from the construction impact area.

To ensure the site is not inadvertently impacted by the project, the site extent and area of PAD should be fenced with hi-visibility fencing prior to to works commencing in the vicinity of the site. The fencing should remain in place for the duration of construction of turbine GR40 in the vicinity of the site but there is no requirement to permanently fence the site.

It is also recommended that further research should take place at sites Old Farm OS-1 due to its high cultural and scientific values. This research should be non-invasive and include a detailed recording of the site. The recording should include a photographic record, a detailed site plan, and in situ analysis of visible artefacts. It is anticipated that the recording would take place over the course of one day by one archaeologist and a RAP representative.

9.2.3 Kensington OS-1

Kensington OS-1 is within the corridor of the overhead transmission line but will be avoided through the design of the overhead transmission line components (towers and access tracks).

To ensure the site is not inadvertently impacted by the project, the site extent should be fenced prior with hi-visibility fencing prior to works commencing in the vicinity of the site. The fencing should remain in place for the duration of construction in the vicinity of the site but there is no requirement to permanently fence the site.

9.2.4 Cainbil Creek OS-1

Part of the PAD associated with Cainbil Creek OS-1 is within the corridor of the overhead transmission line. This portion of the PAD will be avoided through the design of the overhead transmission line components (towers and access tracks).

Cainbil Creek OS-1 is also intersected by the proposed access track extending from the Golden Highway to the southeast of the Leadville cluster. Impacts within the surface extent of Cainbil Creek OS-1 site are unable to be avoided by the construction of the access track. As such, the site will be partially impacted. However, the extent of the construction impact area has been reduced to ensure the PAD associated with the site will not be impacted.

The management measures for the site should include surface collection and fencing described in the subsections below.

9.2.4.1 Surface collection

For the portion of the site which is not able to be avoided a collection of all surface artefacts should be completed. The methodology of any surface artefact collection would be contained in the ACHMP and would be reviewed by RAPs. A proposed methodology for the surface collection is detailed below:

- All visible surface artefacts at a site should be flagged in the field
- The site should be photographed after flagging and before recording
- All artefacts should have the following artefact information recorded: location, artefact class, artefact type, size, reduction level, raw material and additional notes
- A selection of indicative and / or unusual artefacts from each site will be photographed.

The fate of the artefacts collected would also be determined in consultation with the RAPs and the details provided in the ACHMP.

9.2.4.2 Fencing

Once the extent of the impact is known at Cainbil Creek-OS1, the portions which will not be impacted should be fenced with hi-visibility fencing prior to works commencing in the vicinity of the site. The fencing should remain in place for the duration of the construction phase in the vicinity of the site but there is no requirement to permanently fence the site.

9.2.5 The Rock IF-1

The Rock IF-1 is on a proposed access track extending from Black Stump Way to the east of the Mt Hope cluster. Impacts to the site are unable to be avoided by the construction of the access track. As such, the site will be totally impacted.

The management measures for the site should include surface collection of the artefacts through the methodology outlined in **Section 9.2.4.1**.

9.2.6 Site 36-3-0111

Site 36-3-0113 is partially within the survey boundary, to the south of the proposed overhead transmission line and will be avoided through the design of the overhead transmission line components (towers and access tracks).

To ensure the site is not inadvertently impacted by the project, the portion of the site extent within the survey boundary should be fenced with hi-visibility fencing prior to works commencing in the vicinity of the site. The fencing should remain in place for the duration of construction in the vicinity of the site but there is no requirement to permanently fence the site.

9.2.7 Site 36-3-0113

The AHIMS coordinates for site 36-3-0113 place it within the survey boundary associated with the overhead transmission line. However, the location of the site was not able to be confirmed due to access constraints.

As such, following development consent, the AHIMS location should be inspected (**Section 9.3**).

If the site is identified within the corridor of the overhead transmission line, the design of the components (towers and access tracks) should ensure they avoid the site. Hi-visibility fencing should also be temporarily erected around the site extent if there is potential for the site to be inadvertently impacted by the project.

9.2.8 Possible ring tree

While not recorded as an Aboriginal site, a potential ring tree was noted during the survey (**Section 3.2.1**). The tree is located between a proposed access track and the overhead transmission line (**Figure 3-1**). The Proponent has committed to the protection of this tree, as such it should be temporarily fenced with hi-visibility fencing for the duration of the construction phase in the vicinity of the tree. A 5 m buffer from the tree trunk will be a suitable buffer.

9.3 REQUIREMENT FOR FURTHER ASSESSMENT

As discussed in **Section 6.2**, the overhead transmission line in the south of the survey boundary was not surveyed as access was not permitted at the time of the survey (**Figure 6-2**). Further, the assessment of any transport route modifications associated with transporting project components from Newcastle Port along the Golden Highway to the wind farm site have not been assessed as the impact locations are not yet known.

The unsurveyed portion of the overhead transmission line shown in **Figure 6-2** contains Survey Unit 3 and 4 landforms which comprise lower gradient landforms and floodplains, respectively. Portions of Survey Unit 3 which are located adjacent to the floodplain of the Talbragar River, have increased potential to contain Aboriginal objects or landforms with subsurface potential. During the inspection of this area on 31 August 2021, sandstone outcropping was visible within the Survey Unit 3 landforms, as such, grinding grooves have the potential to be present. The unsurveyed portions within Survey Unit 4 include the floodplains of the Talbragar River. This survey unit is considered to have low potential for Aboriginal sites as the fluvial processes act to destroy, preserve, and modify the archaeological record. Further these landforms have been intensively cultivated which acts to further displace and disperse artefacts. As such, should isolated finds and artefacts scatters be identified, they will be in a secondary context and likely of low-density.

Following development consent of the project, the unassessed area shown in **Figure 6-2** within will be sampled surveyed by archaeologists and RAPs in accordance with the Code of Practice. This will include ground-truthing the location of previously recorded site 36-3-0113. Any transport route modifications will also need to be assessed prior to the construction of the project.

9.4 UNANTICIPATED FINDS PROTOCOL

Should consent for the project be gained, an ACHMP will be developed in consultation with RAPs and DPE. The ACHMP will contain procedures should a new discovery of Aboriginal artefacts be made during construction or operation of the project. The procedure in **Section 9.4.1** is an example of an unanticipated finds protocol that could be incorporated into the ACHMP.

9.4.1 Unanticipated finds protocol example

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

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

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

1. If any Aboriginal object is discovered and/or harmed in, or under the land, while undertaking the proposed development activities, the proponent must:
    a. Not further harm the object
    b. Immediately cease all work at the particular location
    c. Secure the area so as to avoid further harm to the Aboriginal object
    d. Notify Heritage NSW as soon as practical on (02) 9873 8500, providing any details of the Aboriginal object and its location
    e. Not recommence any work at the particular location unless authorised in writing by Heritage NSW.
2. If Aboriginal burials are unexpectedly encountered during the activity, work must stop immediately, the area secured to prevent unauthorised access and NSW Police and Heritage NSW contacted.
3. Cooperate with the appropriate authorities and relevant Aboriginal community representatives to facilitate:
    a. The recording and assessment of the find(s)

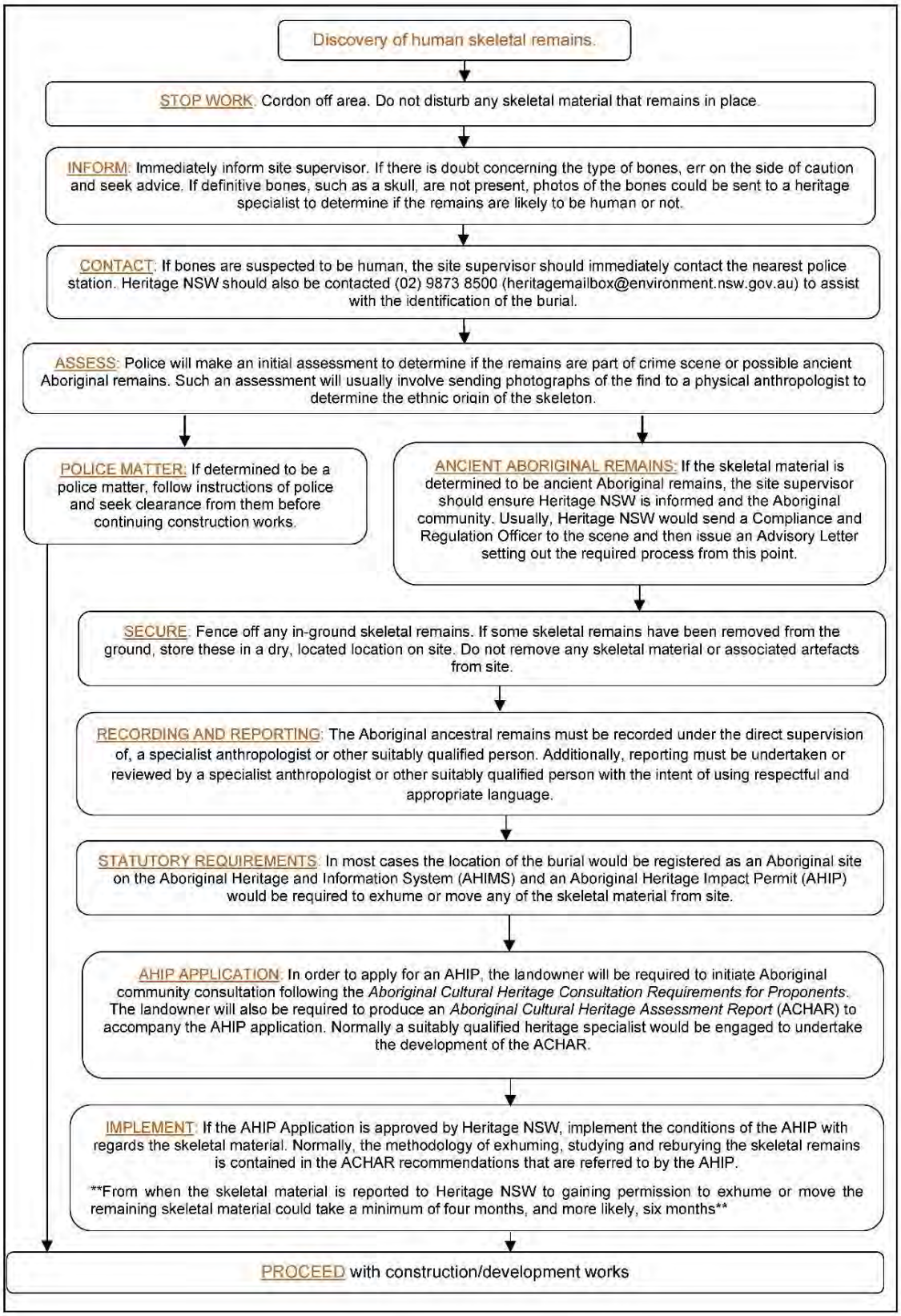
b. The fulfilment of any legal constraints arising from the find(s), including complying with Heritage NSW directions
c. The development and implementation of appropriate management strategies, including consultation with stakeholders and the assessment of the significance of the find(s).

4. Where the find(s) are determined to be Aboriginal object(s), recommencement of work in the area of the find(s) can only occur in accordance with any consequential legal requirements and after gaining written approval from Heritage NSW (normally an Aboriginal Heritage Impact Permit).

9.5 UNANTICIPATED SKELETAL REMAINS PROTOCOL

Should consent for the project be gained, an ACHMP will be developed in consultation with RAPs and DPE. The ACHMP will contain procedures should a new discovery of human skeletal remains be made during construction or operation of the project. A potential flow-chart relating to the discovery of human skeletal remains that could be incorporated into the ACHMP is shown on **Figure 9-1**.

Figure 9-1: Example of a human skeletal remains procedure.



10 RECOMMENDATIONS

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

To this end it is noted that five previously unrecorded Aboriginal sites were recorded during the survey

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

- Legal requirements under the terms of the NPW Act whereby it is illegal to damage, deface or destroy an Aboriginal place or object without the prior written consent of Heritage NSW
- The findings of the current investigations undertaken within the survey boundary
- The interests of the Aboriginal community.

Recommendations concerning Aboriginal cultural values within the survey boundary are as follows:

1. Following development consent of the project, the portions of the overhead transmission line not surveyed (**Figure 6-2**) will require survey by an archaeologist and RAP representatives (**Section 9.3**).
2. The Proponent will develop an Aboriginal Cultural Heritage Management Plan (ACHMP) which is to be agreed to by the RAPs and the Department of Planning and Environment (DPE). The ACHMP will quantify the exact sites to be impacted, the methods by which they will be managed and the fate of any artefacts that are recovered prior to the works. The ACHMP will also provide a protocol for unanticipated finds and the discovery of human skeletal material. Examples of these protocols are provided in **Section 9.4.1** and **Section 9.5**.
3. The management and mitigation strategies to manage the impact of the project to Aboriginal heritage listed below should be followed:
    a. Orana OS-1 (**Section 9.2.1**):
        i. The perimeter of the site should be temporarily fenced during the construction of the overhead transmission line in the vicinity of the site.
    b. Old Farm OS-1 (**Section 9.2.2**):

iii. The perimeter of the site should be temporarily fenced during the construction of the turbines, access tracks and electrical reticulation in the vicinity of the site.

iv. The project should allow additional research to take place at Old Farm OS-1. The study should involve non-invasive recording, mapping, and photography.

c. Kensington OS-1 (**Section 9.2.3**):

ii. The perimeter of the site should be temporarily fenced during the construction of the overhead transmission line in the vicinity of the site.

d. Cainbil Creek OS-1 (**Section 9.2.4**):

iii. The part of the site that will be impacted by the proposed access track should have all surface artefacts recorded and collected as outlined in **Section 9.2.4.1**.

iv. The portions of the site that will not be impacted by the project should be temporarily fenced during the construction of the access track and overhead transmission line in the vicinity of the site (**Section 9.2.4.2**).

e. The Rock IF-1 (**Section 9.2.5**):

ii. The surface artefact should be recorded and collected as outlined in **Section 9.2.4.1**.

f. 36-3-0111 (**Section 9.2.6**):

ii. The portion of the site extent within the survey boundary should be fenced temporarily during the construction of the overhead transmission line in the vicinity of the site.

g. 36-3-0113 (**Section 9.2.7**):

iv. The AHIMS location should be inspected as part of the post commitment survey area (**Section 9.3**).

v. If the site is identified within the corridor of the overhead transmission line, the design of the components (towers and access tracks) should ensure they avoid the site.

vi. Hi-visibility fencing should be temporarily erected around the site extent if there is potential for the site to be inadvertently impacted by the project.

4. The potential ring tree shown in **Figure 3-1** should be avoided by the proposed access track and be temporarily fenced with hi-visibility fencing for the duration of the construction phase (**Section 9.2.8**). A 5 m buffer from the tree trunk will be a suitable buffer.

5. All land-disturbing activities must be confined to within the survey boundary. Should the parameters of the proposed work extend beyond this, then further archaeological assessment may be required.

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APPENDIX 1: ABORIGINAL COMMUNITY CONSULTATION

Appendix 1 Figure 1: Consultation log

Date	Organisation	Comment	Method
5.1.21	Heritage NSW	Rebecca Hardman (RH sent stage1 agency letter requesting potential stakeholders. Closing date 19.1.21	email
5.1.21	Gilgandra Local Aboriginal Land Council	RH sent stage1 agency letter requesting potential stakeholders. Closing date 19.1.21	email
5.1.21	Office of The Registrar, ALRA	RH sent stage1 agency letter requesting potential stakeholders. Closing date 19.1.21	email
5.1.21	National Native Title Tribunal	RH sent stage1 agency letter requesting potential stakeholders. Closing date 19.1.21	email
5.1.21	NTSCORP	RH sent stage1 agency letter requesting potential stakeholders. Closing date 19.1.21	email
5.1.21	Warrumbungle Shire Council	RH sent stage1 agency letter requesting potential stakeholders. Closing date 19.1.21	email
5.1.21	Central West Local Land Services	RH sent stage1 agency letter requesting potential stakeholders. Closing date 19.1.21	email
5.1.21	Mudgee Guardian	RH phoned - N/A	phone
6.1.21	Mudgee Guardian	RH rang - newspaper is printed on a Tuesday and Friday The cut off is by midday the day prior to each	phone
6.1.21	Mudgee Guardian	RH sent ad off to the newspaper	email
6.1.21	Mudgee Guardian	RH received proof	email
6.1.21	Mudgee Guardian	RH approved proof	email
6.1.21	Mudgee Guardian	RH received receipt	email
7.1.21	Gilgandra Local Aboriginal Land Council	RH received confirmation of receipt	email
8.1.21	Mudgee Guardian	RH received tear sheet	email
8.1.21	National Native Title Tribunal	RH received notification *Records held by the National Native Title Tribunal as at 7 Jan 2021 indicate that the Gomeroi People have a determined Native Title over the identified area of the project.*	email
18.1.21	Murong Gialinga Aboriginal & Torres Strait Islander Corporation	Debbie Foley rang and made an EOI.	Phone
15.1.21	Heritage NSW	RH received stakeholder list	email
20.1.21	AT Gomilaroi Cultural Consultancy	Brendan Fisher (BF) sent stage 1 round 2 letters	email
20.1.21	Baradine Local Aboriginal Land Council	BF sent stage 1 round 2 letters	email
20.1.21	Binjang Wellington Wiradjuri Heritage Survey	BF sent stage 1 round 2 letters	email
20.1.21	BJC Cultural Management	BF sent stage 1 round 2 letters	postal
20.1.21	Brian Carr	BF sent stage 1 round 2 letters	postal
20.1.21	Brian Draper	BF sent stage 1 round 2 letters	postal
20.1.21	Chair, Pilliga Nature Reserve Consultative Committee	BF sent stage 1 round 2 letters	postal
20.1.21	Coonabarabran Local Aboriginal Land Council	BF sent stage 1 round 2 letters	email
20.1.21	Corroboree Aboriginal Corporation	BF sent stage 1 round 2 letters	email
20.1.21	Donna Moodie	BF sent stage 1 round 2 letters	postal
20.1.21	Elli Lewis	BF sent stage 1 round 2 letters	postal

Date	Organisation	Comment	Method
20.1.21	Gomeroi Murrri Ganuurr Yuuray Wadi Palinka	BF sent stage 1 round 2 letters	email
20.1.21	Hazel Collines	BF sent stage 1 round 2 letters	postal
20.1.21	Jodie Mckinnon	BF sent stage 1 round 2 letters	postal
20.1.21	Katrina Mckinnon	BF sent stage 1 round 2 letters	email
20.1.21	Kevin Sampson	BF sent stage 1 round 2 letters	postal
20.1.21	Lorraine Towney	BF sent stage 1 round 2 letters	postal
20.1.21	Luke Cameron Cultural Management	BF sent stage 1 round 2 letters	postal
20.1.21	Mavonia Welsh	BF sent stage 1 round 2 letters	postal
20.1.21	ME Griffiths Cultural Management	BF sent stage 1 round 2 letters	postal
20.1.21	Michael Long	BF sent stage 1 round 2 letters	email
20.1.21	Mooka	Letter not sent, as always RTS	
20.1.21	Natasha Rodgers	BF sent stage 1 round 2 letters	email
20.1.21	Paul Brydon	BF sent stage 1 round 2 letters	email
20.1.21	Paul Moodie	BF sent stage 1 round 2 letters	postal
20.1.21	Talcon Pty Ltd	BF sent stage 1 round 2 letters	postal
20.1.21	Ron Smith	BF sent stage 1 round 2 letters	email
20.1.21	Ronald Long	BF sent stage 1 round 2 letters	postal
20.1.21	Rosyln Smith	BF sent stage 1 round 2 letters	postal
20.1.21	Scott Smith	BF sent stage 1 round 2 letters	postal
20.1.21	T&G Culture Consultants	BF sent stage 1 round 2 letters	postal
20.1.21	Trevor Robinson	BF sent stage 1 round 2 letters	postal
20.1.21	Troy Silver	BF sent stage 1 round 2 letters	postal
20.1.21	Walgett Local Aboriginal Land Council	BF sent stage 1 round 2 letters	email
20.1.21	Wellington Valley Wiradjuri Aboriginal Corporation	BF sent stage 1 round 2 letters	email
20.1.21	Wiradjuri Council of Elders	BF sent stage 1 round 2 letters	email
20.1.21	Paul Brydon	Paul phoned to express interest	Phone
18.1.21	Murong Gialinga Aboriginal & Torres Strait Islander Corporation	Debbie phoned to express interest	Phone
20.1.21	AT Gomilaroi Cultural Consultancy	Aaron expressed interest	email
20.1.21	Wellington Valley Wiradjuri Aboriginal Corporation	Brad Bliss emailed to decline registering their EOI, as the project area sits just outside their traditional lands	email
20.1.21	Wellington Valley Wiradjuri Aboriginal Corporation	BF responded to Brad Bliss' email, thanking him for his response.	email
20.1.21	Michael Long	Michael registered an EOI	email
21.1.21	Michael Long	BF confirmed Michael's EOI	email
27.1.21	Kevin Sampson	Kevin phoned HR to register as RAP	phone
27.1.21	Brian Draper	Brian emailed BF to register as RAP	email
27.1.21	Brian Draper	BF confirmed registration	email
27.1.21	Corroboree Aboriginal Corporation	Marilyn Carroll-Johnson registered to the project in full capacity	email
28.1.21	Corroboree Aboriginal Corporation	BF confirmed registration	email
28.1.22	Gunjeewong	Cherie registered as RAP	email
2.2.21	Talcon Pty Ltd	Registered as a RAP	postal
1.2.21	NTSCORP	RH received email registering Steve Talbot as a RAP	email

Date	Organisation	Comment	Method
2.2.21	NTSCORP	RH thanked and asked was Steve Talbott registering as an individual or as the Gomeroi applicant. If individual would the group also like to register?	email
2.2.21	NTSCORP	RH received email asking to register both Steve Talbott as an individual and the Gomeroi applicant	email
2.2.21	NTSCORP	RH thanked	email
5.2.21	Cacatua General Services	RH received call registering 3 groups as RAPs	phone
10.2.21	Troy Silver	Letter RTS	RTS
10.2.21	Donna Moodie	Letter RTS	RTS
16.2.21	Heritage NSW	RH sent notification of RAPs	email
16.2.21	Gilgandra Local Aboriginal Land Council	RH sent notification of RAPs	email
1.3.21	BJC Cultural Management	Letter RTS	postal
14.4.21	Paul Brydon	Taylor Foster (TF) sent Stage 2/3 methodology	email
14.4.21	Murong Gialinga Aboriginal & Torres Strait Islander Corporation	TF sent Stage 2/3 methodology	email
14.4.21	AT Gomilaroi Cultural Consultancy	TF sent Stage 2/3 methodology	email
14.4.21	Michael Long	TF sent Stage 2/3 methodology	email
14.4.21	Kevin Sampson	TF sent Stage 2/3 methodology	email
14.4.21	Brian Draper	TF sent Stage 2/3 methodology	email
14.4.21	Corroboree Aboriginal Corporation	TF sent Stage 2/3 methodology	email
14.4.21	Gunjeewong	TF sent Stage 2/3 methodology	email
14.4.21	Talcon Pty Ltd	TF sent Stage 2/3 methodology	email
14.4.21	Steve Talbot	TF sent Stage 2/3 methodology	email
14.4.21	Gomeroi People NC2011/006	TF sent Stage 2/3 methodology	email
14.4.21	Cacatua General Services	TF sent Stage 2/3 methodology	email
14.4.21	AGA Services	TF sent Stage 2/3 methodology	email
14.4.21	Bawurra	TF sent Stage 2/3 methodology	email
14.4.21	Gomeroi People NC2011/006	TF received email response - "Thank you Taylor, we will circulate amongst the Gomeroi Applicant. For any further correspondence could you please cc' James MacLeod (jmacleod@ntscorp.com.au) in place of Dylan Osborn"	email
14.4.21	Gomeroi People NC2011/006	TF responded to email "Hi Maeve, that's no worries I will change the contact details on our end."	email
14.4.21	Gomeroi People NC2011/006	TF received email: Noting that the project also covers the area of Mount Hope, please can you register the Ngemba, Ngiyampaa, Wangaaypuwan and Wayilwan Peoples as a relevant Aboriginal party. I apologise for the late notice in providing this nomination. When originally notified by Ozark, attached stage 1 letter, NTSCORP was of the understanding that the work to be conducted was focused in the area 'south of Coolah, in the Warrumbungle Shire Council Local Government Area' as stated. Hence, the Ngemba, Ngiyampaa, Wangaaypuwan and Wayilwan People were not notified at that time and did not register. Apologies for any inconvenience.	email

Date	Organisation	Comment	Method
15.4.21	Gomeroi People NC2011/006	RH thanked and asked for contact details for the groups	email
15.4.21	Gomeroi People NC2011/006	RH received contact details	email
15.4.21	Gomeroi People NC2011/006	RH thanked Tilly	email
15.4.21	Ngemba, Ngiyampaa, Wangaaypuwan and Wayilwan Peoples	RH sent Stage 2/3	email
15.4.21	Dubbo Local Aboriginal Land Council	RH sent Stage 2/3	email
15.4.21	Heritage NSW	RH sent updated notification of RAPs	email
15.4.21	Gilgandra Local Aboriginal Land Council	RH sent updated notification of RAPs	email
15.4.21	Dubbo Local Aboriginal Land Council	RH sent updated notification of RAPs	email
15.4.21	Gilgandra Local Aboriginal Land Council	RH sent stage 2	email
26.4.21	Ngemba, Ngiyampaa, Wangaaypuwan and Wayilwan Peoples	RH sent email confirming if wanted to be registered as a RAP and project is not within their area	email
26.4.21	Ngemba, Ngiyampaa, Wangaaypuwan and Wayilwan Peoples	RH received email confirming withdrawal as a RAP	email
26.4.21	Ngemba, Ngiyampaa, Wangaaypuwan and Wayilwan Peoples	RH thanked	email
26.4.21	Paul Brydon	RH phoned to see if available for fieldwork, Paul declined	phone
26.4.21	Cacatua General Services	RH phoned George to get Donnas number	phone
26.4.21	Cacatua General Services	RH phoned left msg for call back	phone
4.5.21	Murong Gialinga Aboriginal & Torres Strait Islander Corporation	RH sent invite to Fieldwork	email
4.5.21	AT Gomilaroi Cultural Consultancy	RH sent invite to Fieldwork	email
4.5.21	Michael Long	RH sent invite to Fieldwork	email
4.5.21	Brian Draper	RH sent invite to Fieldwork	email
4.5.21	Talcon Pty Ltd	RH sent invite to Fieldwork	email
4.5.21	Steve Talbot	RH sent invite to Fieldwork	email
4.5.21	Gomeroi People NC2011/006	RH sent invite to Fieldwork	email
4.5.21	Cacatua General Services	RH sent invite to Fieldwork	email
4.5.21	AGA Services	RH sent invite to Fieldwork	email
4.5.21	Bawurra	RH sent invite to Fieldwork	email
4.5.21	Dubbo Local Aboriginal Land Council	RH sent invite to Fieldwork	email
4.5.21	Gilgandra Local Aboriginal Land Council	RH sent invite to Fieldwork	email
4.5.21	AT Gomilaroi Cultural Consultancy	RH received email confirming attendance at fieldwork. Noted will send public liability	email
4.5.21	AT Gomilaroi Cultural Consultancy	RH thanked and noted we need workers compensation not public liability	email
5.5.21	Michael Long	RH received confirmation of attendance to fieldwork and copy of workers comp	email
6.5.21	Gomeroi People NC2011/006	RH received confirmation of attendance at fieldwork, Steve will attend as representative	email
7.5.21	Talcon Pty Ltd	RH received email: *Thank you for the invitation. I accept your invitation. Please note that I do have a QLD work cover COC but not a NSW work cover COC. Is the NSW Work cover sufficient? I will follow up with a phone call this morning. Thanks for your time.*	email

Date	Organisation	Comment	Method
7.5.21	Talcon Pty Ltd	BF received follow up call re insurance, RH will call back on Monday	Phone
9.5.21	Brian Draper	RH received confirmation of attendance at fieldwork. Sent copy of business insurance and updated contact details	email
10.5.21	Brian Draper	RH thanked Brian and asked if he has any personal injury insurance, he can provide a copy of or RH can put him in touch with a third party employer to be covered by their workers comp	email
10.5.21	Talcon Pty Ltd	RH phoned Ricky back, Ricky will discuss with his insurance company and call RH back. RH said happy with email from insurance company confirming covers NSW	Phone
10.5.21	Steve Talbot	RH phoned Steve and confirmed attendance as himself and Gomeroi Applicant. Steve will send his workers comp through to cover both	email
10.5.21	Michael Long	RH thanked	email
10.5.21	Talcon Pty Ltd	RH received copy of workers comp	email
10.5.21	Talcon Pty Ltd	RH received call back confirming he is covered in NSW as long as the period is less than 6 months	Phone
10.5.21	Murong Gialinga Aboriginal & Torres Strait Islander Corporation	Stephanie Rusden (SR) received phone call confirming attendance at fieldwork	phone
10.5.21	Murong Gialinga Aboriginal & Torres Strait Islander Corporation	RH received stage 2 feedback: *Murong Gialinga Aboriginal &Torres strait Islander Corporation would like to thank you for giving us the opportunity to comment on the Assessment. Murong Gialinga community looked at the Assessment and our comments are as follows. If any area where there is Aboriginal cultural heritage is to be impacted a full100% survey and collection is to take place all must be recorded and taken back to OzArk's office in Dubbo and placed in a fireproof lockable container .When Ozark have finished with the Aboriginal objects they should be place back on country as close as possible to where they were found GPS reading in an area which is not going to be impacted at all and one rap from each registered Aboriginal group be present*	email
10.5.21	Murong Gialinga Aboriginal & Torres Strait Islander Corporation	RH thanked	email
10.5.21	AGA Services/Cacatua/Bawurra	TF called Donna to confirm RAPS for FW. AGA cannot attend. Cacatua and Bawurra stated they could not locate FW invites and asked to resend them to Ashley Sampson address.	Phone
10.5.21	AGA Services/Cacatua/Bawurra	TF sent Cacatua and Bawarra FW invites as per request.	Phone
10.5.21	Dubbo Local Aboriginal Land Council	TF called to confirm RAPS for FW. Receptionist said they would call back to confirm.	Phone
10.5.21	Gilgandra Local Aboriginal Land Council	TF called chasing RAPS for FW. No response, left a message.	Phone
10.5.21	Gilgandra Local Aboriginal Land Council	TF sent follow up email regarding RAP attendance	email
10.5.21	Dubbo Local Aboriginal Land Council	TF received call confirming site officer attendance. Said they would respond to invite email with site officer details and current workers comp.	Phone
11.5.21	Steve Talbot	RH received workers comp	email

Date	Organisation	Comment	Method
11.5.21	Brian Draper	RH received email noting does not currently have persona and accident insurance but will look into it. Asked who 3rd party employer is	email
13.5.21	Steve Talbot	RH thanked	email
13.5.21	Brian Draper	RH emailed to see how got on with insurance and told who 3rd party employer is	email
13.5.21	AGA Services/Cacatua/Bawurra	RH received call from Donna, AGA and Cacatua are unable to attend. Bawurra is able to attend	Phone
13.5.21	Murong Gialinga Aboriginal & Torres Strait Islander Corporation	RH phoned and left message re extra day of FW	Phone
13.5.21	Murong Gialinga Aboriginal & Torres Strait Islander Corporation	RH received call back, Debbie to confirm if can do the Wednesday. Will let us know tomorrow	phone
13.5.21	Michael Long	RH phoned and spoke to Michael, confirmed additional 2 days FW, RH to send revised invite to FW	Phone
13.5.21	Dubbo Local Aboriginal Land Council	RH phoned and left message on landline	Phone
13.5.21	Dubbo Local Aboriginal Land Council	RH phoned mobile number from message bank - disconnected	Phone
13.5.21	Dubbo Local Aboriginal Land Council	RH received call back from CEO, confirmed attendance and will send through workers comp, name and contact number or site officer. Confirmed available for the Thursday as well	Phone
13.5.21	Gilgandra Local Aboriginal Land Council	RH phoned and left message asking for call back by this afternoon or may have to offer position to other groups.	Phone
13.5.21	Gilgandra Local Aboriginal Land Council	RH found phone number for site officer on previous job, phoned and got Sheila's mobile	Phone
13.5.21	Gilgandra Local Aboriginal Land Council	RH phoned Sheila mobile, will see if site officer available for next week, send through workers comp and will call RH back tomorrow	Phone
13.5.21	Dubbo Local Aboriginal Land Council	RH received workers comp and site officer details	email
13.5.21	Dubbo Local Aboriginal Land Council	RH thanked	email
13.5.21	Gilgandra Local Aboriginal Land Council	RH received call back from Sheila, will see if site officer available for next week, send through workers comp and will call RH back tomorrow	Phone
13.5.21	Bawurra	RH send email requesting workers comp	email
13.5.21	AT Gomilaroi Cultural Consultancy	RH send email requesting workers comp	email
13.5.21	AT Gomilaroi Cultural Consultancy	RH received workers comp	email
14.5.21	AT Gomilaroi Cultural Consultancy	RH thanked	email
13.5.21	Gilgandra Local Aboriginal Land Council	RH phoned landline - N/A	Phone
14.5.21	Gilgandra Local Aboriginal Land Council	RH phoned landline - N/A	Phone
14.5.21	Gilgandra Local Aboriginal Land Council	RH phoned Mobile, confirmed attendance	Phone
14.5.21	Gilgandra Local Aboriginal Land Council	RH received workers comp and site officer details	email
14.5.21	Brian Draper	RH phoned and left message re workers comp	phone
17.5.21	Gilgandra Local Aboriginal Land Council	RH received invoice for fieldwork	email
17.5.21	Brian Draper	RH phoned, spoke to Brian re workers comp. He is looking into personal Injury and accident ins, will let RH know tomorrow if goes ahead or needs 3rd party	phone

Date	Organisation	Comment	Method
17.5.21	Bawurra	RH phoned to ask for workers comp, Donna will send through this afternoon	phone
18.5.21	Steve Talbot	RH phoned mobile - N/A	phone
18.5.21	Steve Talbot	RH phoned 2nd mobile - N/A	phone
18.5.21	Steve Talbot	RH emailed Meave and both Steve's emails asking for a call	email
18.5.21	Steve Talbot	RH received call from Meave noting Steve's phone is broken and he is using different number.	phone
18.5.21	Steve Talbot	RH phoned Steve to see if attending fieldwork this week, Steve had confused weeks and will not be available until Thursday. Will attend Thursday and Friday	phone
18.5.21	Steve Talbot	RH emailed Meave to notify and see if Gomeroi Applicant would like to send someone else for Wednesday	email
18.5.21	Brian Draper	RH phoned, left msg re looking into personal Injury and accident insurance or 3rd party	phone
18.5.21	Bawurra	RH received workers comp	email
18.5.21	Bawurra	RH thanked	email
19.5.21	Brian Draper	RH phoned, left msg re looking into personal Injury and accident insurance or 3rd party	phone
20.5.21	Brian Draper	RH received call from Brian withdrawing from fieldwork	phone
20.5.21	Dubbo Local Aboriginal Land Council	RH phoned landline - N/A	phone
20.5.21	Dubbo Local Aboriginal Land Council	RH phoned mobile, spoke to Will, confirmed Greg ok to attend fieldwork Monday	phone
21.5.21	Michael Long	RH received invoice for fieldwork	email
24.5.21	Dubbo Local Aboriginal Land Council	RH received invoice for fieldwork	email
24.5.21	Dubbo Local Aboriginal Land Council	HR phoned Will to get correct number for Greg.	phone
24.5.21	Michael Long	RH Thanked Michael and advised of payment times	email
24.5.21	Dubbo Local Aboriginal Land Council	Attended FW Thu 20/5 and Fri 21/5	in person
24.5.21	Michael Long	Attended FW Mon 17/5 to Fri 21/5 (5 days)	in person
24.5.21	Gilgandra Local Aboriginal Land Council	Attended FW Mon 17/5 to Fri 21/5 (5 days)	in person
24.5.21	Murong Gialinga Aboriginal & Torres Strait Islander Corporation	Attended FW Mon 17/5, Tue 18/5, Wed 19/5 and Fri 21/5 (4 days)	in person
24.5.21	Dubbo Local Aboriginal Land Council	Harrison Rochford (HR) sent FW hours	email
27.5.21	Steve Talbot	RH received invoice for 3 days under himself	email
27.5.21	AT Gomilaroi Cultural Consultancy	RH received invoice	email
4.6.21	Bawurra	RH received invoice	email
9.6.21	Talcon Pty Ltd	RH received invoice	email
9.6.21	Talcon Pty Ltd	RH thanked	email
29.9.21	AT Gomilaroi Cultural Consultancy	CB Stage 4 draft and letter exp 28/10/21	email
29.9.21	Michael Long	CB Stage 4 draft and letter exp 28/10/21	email
29.9.21	Brian Draper	CB Stage 4 draft and letter exp 28/10/21	email
29.9.21	Talcon Pty Ltd	CB Stage 4 draft and letter exp 28/10/21	email
29.9.21	Steve Talbot	CB Stage 4 draft and letter exp 28/10/21	email
29.9.21	Gomeroi People NC2011/006	CB Stage 4 draft and letter exp 28/10/21	email
29.9.21	Cacatua General Services	CB Stage 4 draft and letter exp 28/10/21	email

Date	Organisation	Comment	Method
29.9.21	AGA Services	CB Stage 4 draft and letter exp 28/10/21	email
29.9.21	Bawurra	CB Stage 4 draft and letter exp 28/10/21	email
29.9.21	Dubbo Local Aboriginal Land Council	CB Stage 4 draft and letter exp 28/10/21	email
29.9.21	Gilgandra Local Aboriginal Land Council	CB Stage 4 draft and letter exp 28/10/21	email
29.9.21	Paul Brydon	CB Stage 4 draft and letter exp 28/10/21	email
29.9.21	Murong Gialinga Aboriginal & Torres Strait Islander Corporation	CB Stage 4 draft and letter exp 28/10/21	email
29.9.21	Kevin Sampson	CB Stage 4 draft and letter exp 28/10/21	email
29.9.21	Corroboree Aboriginal Corporation	CB Stage 4 draft and letter exp 28/10/21	email
29.9.21	Gunjeewong	CB Stage 4 draft and letter exp 28/10/21	email
21.4.22	AT Gomilaroi Cultural Consultancy	CB sent project update letter and a copy of the updated ACHAR	email
21.4.22	Michael Long	CB sent project update letter and a copy of the updated ACHAR	email
21.4.22	Brian Draper	CB sent project update letter and a copy of the updated ACHAR	email
21.4.22	Talcon Pty Ltd	CB sent project update letter and a copy of the updated ACHAR	email
21.4.22	Steve Talbot	CB sent project update letter and a copy of the updated ACHAR	email
21.4.22	Gomeroi People NC2011/006	CB sent project update letter and a copy of the updated ACHAR	email
21.4.22	Cacatua General Services	CB sent project update letter and a copy of the updated ACHAR	email
21.4.22	AGA Services	CB sent project update letter and a copy of the updated ACHAR	email
21.4.22	Bawurra	CB sent project update letter and a copy of the updated ACHAR	email
21.4.22	Dubbo Local Aboriginal Land Council	CB sent project update letter and a copy of the updated ACHAR	email
21.4.22	Gilgandra Local Aboriginal Land Council	CB sent project update letter and a copy of the updated ACHAR	email
21.4.22	Paul Brydon	CB sent project update letter and a copy of the updated ACHAR	email
21.4.22	Murong Gialinga Aboriginal & Torres Strait Islander Corporation	CB sent project update letter and a copy of the updated ACHAR	email
21.4.22	Kevin Sampson	CB sent project update letter and a copy of the updated ACHAR	email
21.4.22	Corroboree Aboriginal Corporation	CB sent project update letter and a copy of the updated ACHAR	email
21.4.22	Gunjeewong	CB sent project update letter and a copy of the updated ACHAR	email

Appendix 1 Figure 2: Advertisement: Mudgee Guardian 8 January 2021.

18 MUDGEE GUARDIAN Friday, January 8, 2021 mudgeeguardian.com.au

Mudgee Guardian

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Mudgee Guardian

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Death Notices

LOVELL MEIZER FUNERALS

Neil James Hensley

23 June 1945 - 1 January 2021

Late of Goulburn

Beloved husband of Bettina (dec). Proud father of Dean, Marissa, Todd & Travys. Loving grandfather and great-grandfather.

Prayers of Christian burial to be held at 1.30pm, Friday 15th January 2021 at St Peter and Paul's Old Cathedral, Cnr Verner & Bourke St, Goulburn.

Interment to follow at St Patrick's Cemetery, Goulburn.

Will be fondly remembered by many in the community.

Now reunited with his dear wife Tina.

73 Reynolds St, Goulburn

4822 4400

LMFUNERALS.COM.AU

Australian Funeral Directors Association Member

Funeral Notices

CAMERON OAM - ROY

Peacefully at Coolah on Christmas Day, 25th December 2020.

Dearly beloved husband of Betty (dec). Much loved father and father in law of Ian & Dejay and Peter & Suzana. Adored Grandfather of Sienna and Venetia.

Aged 95 years

Relatives and friends are invited to attend his Funeral Service to be held in St. Andrew's Anglican Church Coolah on Friday, 8th January 2021, commencing at 11.00am. Following the Service, the cortege will proceed to the Coolah Cemetery for interment.

EASTAUGH & CARROLL

Funeral Directors Since 1895

Mudgee & Districts

eastaughandcarroll.com.au

Ph: 02 6372 2384

Funeral Notices

MIDDLETON - RONALD RAYMOND

On Monday, 21st December 2020. Late of Gladstone Street Mudgee. Formerly of West Gosford and Penshurst.

Much loved father and father-in-law of Glenn & Sharon, Kerrie & Peter, Rhonda & Richard and Kirsten. Adored Pop to all his grand children and great grandchildren.

Aged 80 years

"That's life"

Due to Covid restrictions a private Cremation has taken place.

A Memorial will take place at 2pm on Friday, 19th February 2021 to be held in the Beer Garden at the Paragon Hotel, Perry St Mudgee.

Please register your attendance by message (preferred) or phoning Ron's daughter – Kerrie Weall on 0413 018 589

EASTAUGH & CARROLL

Funeral Directors Since 1895

John Hopkins and Peter Hannigan

Cnr. Horatio and Lawson Streets, Mudgee

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Ph: 02 6372 2384 - 24 Hours

Deaths & Funerals

O'BRIEN, John Wilfred.

5th January 2021 Peacefully at home, late of Caledonian Street Gulgong and formerly of "Goodiman" and "The Old Station" Gulgong. Beloved husband of Marlene. Much loved father of Michaeley, Voren, Jim (Cathie), Bergen, Kieren, Julian, Jonathan, their partners and their families.

Aged 80 years

"The night too quickly passes..."

Relatives and friends are kindly invited to attend a Mass of Christian Burial for The Late John O'Brien, which will take place at 11:00am on Wednesday 13th January 2021 at St John The Baptist Catholic Church, Gulgong. Following the Mass the cortège will proceed to Gulgong General Cemetery.

By request, no flowers please.

MACQUARIE VALLEY FUNERALS & MONUMENTS

Members of The N.F.D.A. and The F.D.A. of N.S.W. & Monumental Mason's Assoc. of NSW

118 Market Street, Mudgee

Telephone: 6372 2331 All Hours

Peter Lawrence POWER

3rd January 2021. Late of Kanandah Nursing Home Mudgee, formerly of Turill and Mudgee. Much loved bother of Paul, Neville, Patrick, Margaret, Ruth, Myra & John and their families

Aged 82 years

"Always Loved and Remembered"

Relatives and friends are kindly invited to attend a Mass to celebrate the life of The Late Peter Power, which will take place at 2:00pm on Friday 8th January 2021 at St. Mary's Catholic Church, Mudgee.

At the conclusion of the service the cortege will proceed to Mudgee Monumental Cemetery for interment.

MACQUARIE VALLEY FUNERALS & MONUMENTS

Members of The N.F.D.A. and The F.D.A. of N.S.W. & Monumental Mason's Assoc. of NSW

118 Market Street, Mudgee

Telephone: 6372 2331 All Hours

In Memoriam

In loving memory of my dear old Dad.

John (Jack) McNeil Agnew

29.07.1922 - 24.12.2018

In my heart you will always stay.

Loved and missed every day.

Your daughter Lynette.

EDWARD GEORGE MAHON

(TED)

10-2-1943 to 5-1-2017

sadly missed by

Michael, Sean and families

Wanted to Buy

WATER UNITS WANTED

Looking to buy or lease water units in the Cooyal Wilandra Creek Water Source. Please contact Kristel on 02 6373 5143

OLD OR UNWANTED CHAINSAWS

Please call 6373 3103 or 0400 326 952

The Trusted Source for property.

realestate view .com.au

Public Notices

Vegetation Management

To protect public safety and reliability of electricity supply, Essential Energy is completing vegetation management works in Mudgee and Gulgong. The work includes the trimming of trees in Lawson Street, Mudgee, and the removal of dead trees in Gulgong. Tree removals will be carried out by Essential Energy's vegetation management contractors in January 2021, weather permitting. Any enquiries should be directed to Essential Energy's Senior Program Supervisor, John Lane, on 13 23 91.

Expression of Interest

Cultural Heritage Management

On behalf of UPC/AC Renewables Australia Pty Ltd, OzArk Environment & Heritage have been engaged to seek registration of Aboriginal groups or individuals who are interested in being consulted with regard to an Aboriginal cultural heritage assessment for the proposed Valley of the Winds wind farm (the Project). The Project is located approximately to the south of Coolah, in central western NSW, in the Warrumbungle Shire Council Local Government Area (LGA).

This consultation will form part of an Aboriginal Cultural Heritage Assessment Report (ACHAR) and will assist Heritage NSW in their consideration and determination of the Project.

If you hold cultural knowledge relevant to determining the cultural significance of Aboriginal objects or places in the proposed study area, please register your interest. Registrations can be made by post: OzArk EHM PO Box 2069 Dubbo NSW 2830; email: rebecca@ozarkehm.com.au; or by phoning OzArk on 02 6882 0118. All submissions should be received no later than COB Friday 22nd January 2021.

Positions Vacant

Head Chef

Busy country hotel looking for head chef for an immediate start. Must be flexible working days, nights and weekends. Hands on position. Salary $75,000pa. Email all resumes and enquiries to countryhotels@outlook.com.au

Area: Mudgee

Ph: 0410521778

Email: countryhotels@outlook.com.au

Farm Hand

Family owned cattle business looking for an experienced and motivated Farm Hand to work on a 3800Ha, 3500D SE Cattle operation 15km from Mudgee and 8 Km from Gulgong.

Successful applicant will have previous experience in:

- Animal husbandry
- Machinery operation
- Daily property maintenance

The applicant must have excellent work ethic, be punctual and willing to learn. Working Dog will be an advantage.

The successful applicant will have the opportunity to develop their skills further with relevant training provided.

Salary will be negotiated with successful applicant depending on experience.

Email CV details to:

wtimms@robertoatley.com.au

stating two reference names and contact details.

Area: Gulgong

Ph: 0419671063

Email: wtimms@robertoatley.com.au

adzuna

Positions Vacant

STATION HAND

We have a permanent position available for an experienced Station Hand at our mixed farming operation at Dunedoo.

Experience in operating modern machinery, cropping, cattle, sheep and lucerne hay production.

The property is located 3km from Dunedoo township with primary and secondary schools.

Attractive salary.

Apply Farm Manager 0428 115 526

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1 Industrial Ave, Gulgong 2852 • Ph: 02 6374 1265

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Patrick Ginns 0412 790 122 or 02 6373 4863

email: gulgong.removals@hotmail.com

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Pick-Up Mudgee & Surrounds

0413 069 127

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ANNE

ASIAN STUNNER

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No text please

Ph 0477 499 322

LILY

New to town. Hot Sexy, Gorgeous Asian, Sz7, Simply the best. No text.

0487 105 854

Appendix 1 Figure 3: Stage 1 agency letter (sample)

OzArk

OzArk Environment & Heritage

5 January 2021

Heritage NSW
Department of Premier and Cabinet
Locked Bag 5020
Parramatta NSW 2124
heritagemailbox@environment.nsw.gov.au

ABORIGINAL CULTURAL AND HISTORIC HERITAGE ASSESSMENT FOR THE VALLEY OF THE WINDS WIND FARM

Dear Sir/Madam,

OzArk Environment & Heritage (OzArk) has been engaged by UPC\AC Renewables Australia Pty Ltd (the proponent) to undertake Aboriginal community consultation as per the *'Aboriginal cultural heritage consultation requirements for proponents 2010' (the Guidelines)* to inform an *Aboriginal Cultural Heritage Assessment Report* (ACHAR).

The proponent intends to seek development consent under the *Environmental Planning and Assessment Act 1979* (EP&A Act) to construct and operate the Valley of the Winds wind farm located to the south of Coolah, in central western NSW, in the Warrumbungle Shire Council Local Government Area (LGA). The project consists of approximately 175 wind turbines and supporting infrastructure including a high voltage transmission line which would run approximately 65 kilometres (km) to tie in with the existing Bayswater to Mt Piper 500 kV transmission line (**Figure 1**).

Consistent with Section 4.1 of the Guidelines, we are seeking Expressions of Interest from relevant Aboriginal groups and individuals in the area who wish to be consulted in relation to the Project. This consultation is to assist OzArk and the proponent in preparing the ACHAR, and to assist Heritage NSW in their assessment of the Project.

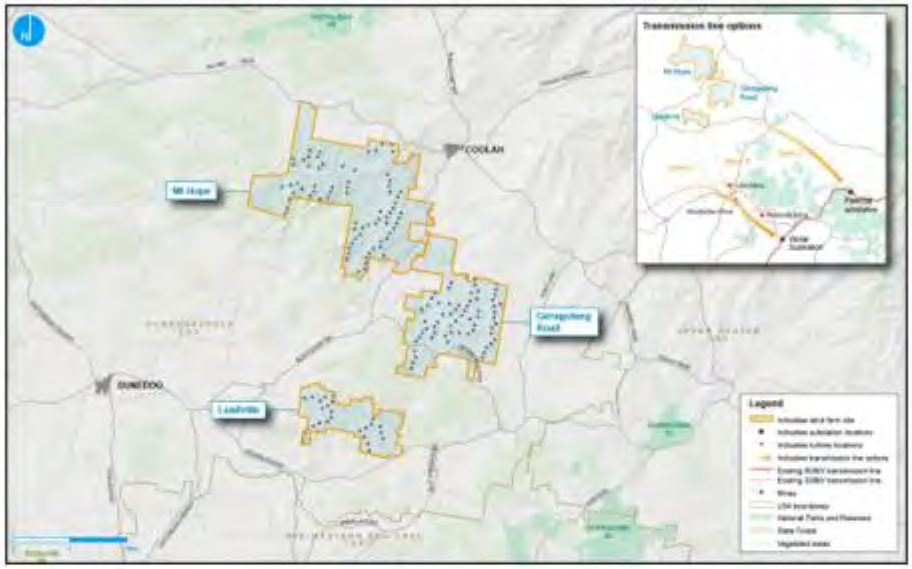
If your organisation can recommend and provide contact details for any known Aboriginal groups or individuals with cultural knowledge relevant to determining any impacts to the cultural significance of the Project, please advise our office. We would appreciate it if you could provide any feedback regarding these Aboriginal stakeholder groups by responding to this email by **COB Tuesday 19th January 2021**, or sooner if possible.

Once relevant groups and individuals have been identified, they will form part of the formal consultation process for the Project.

Kind regards,

Rebecca Hardman
Office Manager

Figure 1. Indicative Project Location



Appendix 1 Figure 4: Stage 1 community letter (sample)

20th January 2021

Members
Coonabarabran Local Aboriginal Land Council
PO Box 110
Coonabarabran NSW 2357
coonabarabran.lalc@bigpond.com

ABORIGINAL CULTURAL AND HISTORIC ASSESSMENT FOR THE VALLEY OF THE WINDS WIND FARM, WARRUMBUNGLE SHIRE COUNCIL LOCAL GOVERNMENT AREA

Dear Members,

OzArk Environment & Heritage is undertaking Aboriginal community consultation as per the "*Aboriginal cultural heritage consultation requirements for proponents 2010*", on behalf of the proponent; UPC/AC Renewables Australia Pty Ltd (the proponent).

The proponent intends to seek development consent under the *Environmental Planning and Assessment Act 1979* (EP&A) for the proposed construction and operation of the Valley of the Winds wind farm located to the south of Coolah, in central western NSW, in the Warrumbungle Shire Council Local Government Area (LGA). The project consists of approximately 175 wind turbines and supporting infrastructure including a high voltage transmission line which would run approximately 65 kilometres (km) to tie in with the existing Bayswater to Mt Piper 500 kV transmission line (**Figure 1**).

Accordingly, we are seeking Expressions of Interest from relevant Aboriginal groups and individuals in the area, to form a consultation group. This consultation is to assist OzArk and the proponent, in preparation of an Aboriginal Cultural Heritage Assessment Report (ACHAR) and to assist Heritage NSW in their consideration and determination of the Project.

If you hold cultural knowledge relevant to determining the impacts to the cultural significance of this project area, please register your interest by contacting our office. The closing date for expressions of interest is **COB Friday 5th February 2021.**

If you wish to register interest it is noteworthy that as per the Heritage NSW guidelines we are required to provide your details to Heritage NSW and the Local Aboriginal Lands Council unless we are advised that you do not wish your details to be released.

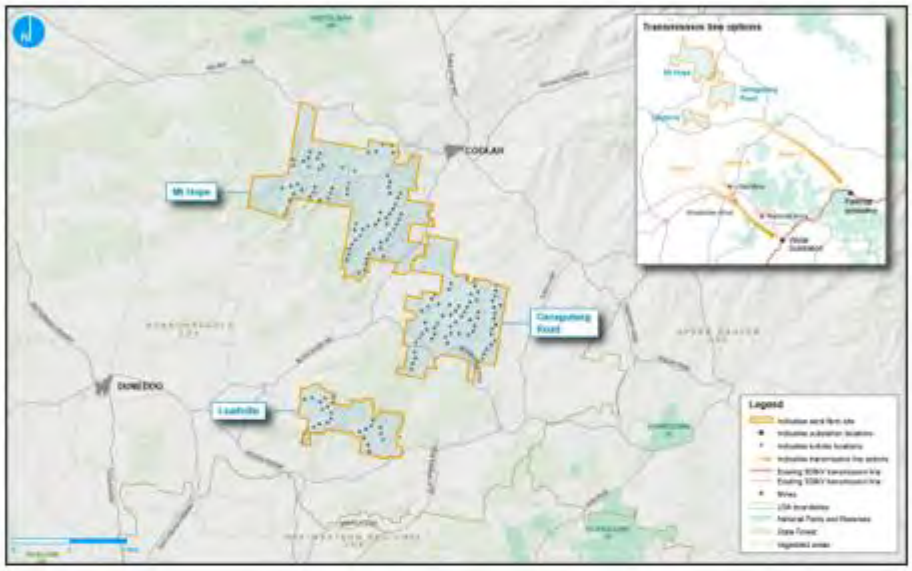
Once relevant groups and individuals have been identified, they will form part of the formal consultation process for the project.

OzArk Environment & Heritage

Kind regards,

Rebecca Hardman
Office Manager

Figure 1: Indicative Project Location.



Appendix 1 Figure 5: Stage 2/3 cover letter

OzArk Environment & Heritage
T: 02 6882 0118
enquiry@ozarkehm.com.au
www.ozarkehm.com.au

ABN 59 104 582 313
145 Wingewarra St
PO Box 2069
DUBBO NSW 2830

15 April 2021

Members
Gilgandra Local Aboriginal Land Council
114 Warren Road
Gilgandra NSW 2827
gil.lalc@bigpond.com

ABORIGINAL HERITAGE ASSESSMENT FOR THE VALLEY OF THE WINDS WIND FARM.

Dear Members,

Thank-you for your registration of interest to become a Registered Aboriginal Party (RAP) to be consulted for the proposed Valley of the Winds wind farm located to the south of Coolah, in central western NSW, in the Warrumbungle Shire Council Local Government Area (LGA).

The purpose of this letter is to invite you to comment on the enclosed draft methodology for the Aboriginal Cultural Heritage Assessment Methodology: Valley of the Winds Wind Farm, Warrumbungle Shire Council LGA, April 2021. This assessment will support a potential AHIP application when lodged with Heritage NSW.

In addition to comments on the draft report, if you can share any Aboriginal cultural heritage knowledge relevant to the proposed study area, we welcome this input so as to improve our assessment outcomes and to ensure Aboriginal cultural values are considered. OzArk is required to give you 28 days to supply feedback on the attached documents. This period closes 5pm **on Wednesday 12th May 2021.**

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

Kind regards,

Rebecca Hardman
Office Manager

Appendix 1 Figure 6: Stage 4 cover letter

OzArk Environment & Heritage ABN 59 104 582 354
Dubbo T: 02 6882 0118 145 Wingewarra St
Queanbeyan enquiry@ozarkehm.com.au PO Box 2069
Newcastle www.ozarkehm.com.au DUBBO NSW 2830

29 September 2021

Members
Gilgandra Local Aboriginal Land Council
c/- Sheila Johnson
114 Warren Road
Gilgandra NSW 2827
gil.lalc@bigpond.com

ABORIGINAL CULTURAL HERITAGE ASSESSMENT: VALLEY OF THE WINDS WIND FARM, COOLAH, NSW

Dear Members,

Thank-you for your continued participation as a Registered Aboriginal Party (RAP) and involvement in the Valley of the Winds project.

UPC\AC Renewables Australia Pty Ltd (the Proponent) would like to offer you the opportunity to provide feedback on the draft report that has been undertaken in accordance with stage four (4) of the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (ACHCR).

As per the ACHCRs we are required to give you twenty-eight (28) days to supply feedback on the attached document. This period closes on the **Thursday 28 October 2021**. Should our office not be contacted within this time frame, we will presume that you are satisfied with the contents of the report as it stands.

If you need any help supplying feedback or have any queries, please do not hesitate to contact our office on (02) 6882 0118 or at catherine@ozarkehm.com.au.

Kind regards,

Catherine Burrowes
Office Manager/ Community Liaison

Appendix 1 Figure 7: Project update letter

OzArk Environment & Heritage ABN 59 104 582 354

Dubbo
Queanbeyan
Newcastle

T: 02 6882 0118
enquiry@ozarkehm.com.au
www.ozarkehm.com.au

145 Wingewarra St
PO Box 2069
DUBBO NSW 2830

21 April 2022

VALLEY OF THE WINDS WIND FARM:
ADDITIONAL SURVEY SUMMARY OF RESULTS

Thank you for your continued interest and participation as a Registered Aboriginal Party (RAP) regarding the *Aboriginal Cultural Heritage Assessment* (ACHA) for the proposed Valley of the Winds wind farm, near Coolah, NSW (the project).

The purpose of this letter is to provide a summary of the results of additional survey completed of previously unsurveyed areas within the survey boundary. The survey was completed on 19 April 2022 by OzArk and a representative from Murong Gialinga Aboriginal & Torres Strait Islander Corporation in accordance with the sampling strategy outlined in the *Aboriginal Cultural Heritage Assessment Methodology. Valley of the Winds, Wind Farm* (OzArk 2021).

The additional survey resulted in an isolated find (The Rock IF-1) being recorded (**Figure 1**). The Rock IF-1 consists of a silcrete core and was identified along a farm track to the west of Black Stump Way (**Figure 2**). The site is located within the construction boundary of a proposed access track and as such will be impacted by the project (**Figure 3**). To mitigate the impact to the site, surface collection has been recommended following approval of the project and the *Aboriginal Cultural Heritage Management Plan* (ACHMP).

OzArk has subsequently updated the *Aboriginal Cultural Heritage Assessment Report: Valley of the Winds Wind Farm, Coolah NSW* (the ACHAR; OzArk 2022) to include newly recorded site The Rock IF-1 (see Section 6.4 of the ACHAR). The original ACHAR was distributed to all RAPs for review on 29 September 2021 as per Stage 4 of the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (ACHCRs). A copy of the updated ACHAR is attached to this email for your records.

If you have any questions on the updated ACHAR or the newly recorded site, please do not hesitate to contact our office on (02) 6882 0118 or stephanie@ozarkehm.com.au.

Kind regards,

Stephanie Rusden
Senior Archaeologist
stephanie@ozarkehm.com.au

Figure 1: Location of The Rock IF-1 in relation to the additional recorded Aboriginal sites.

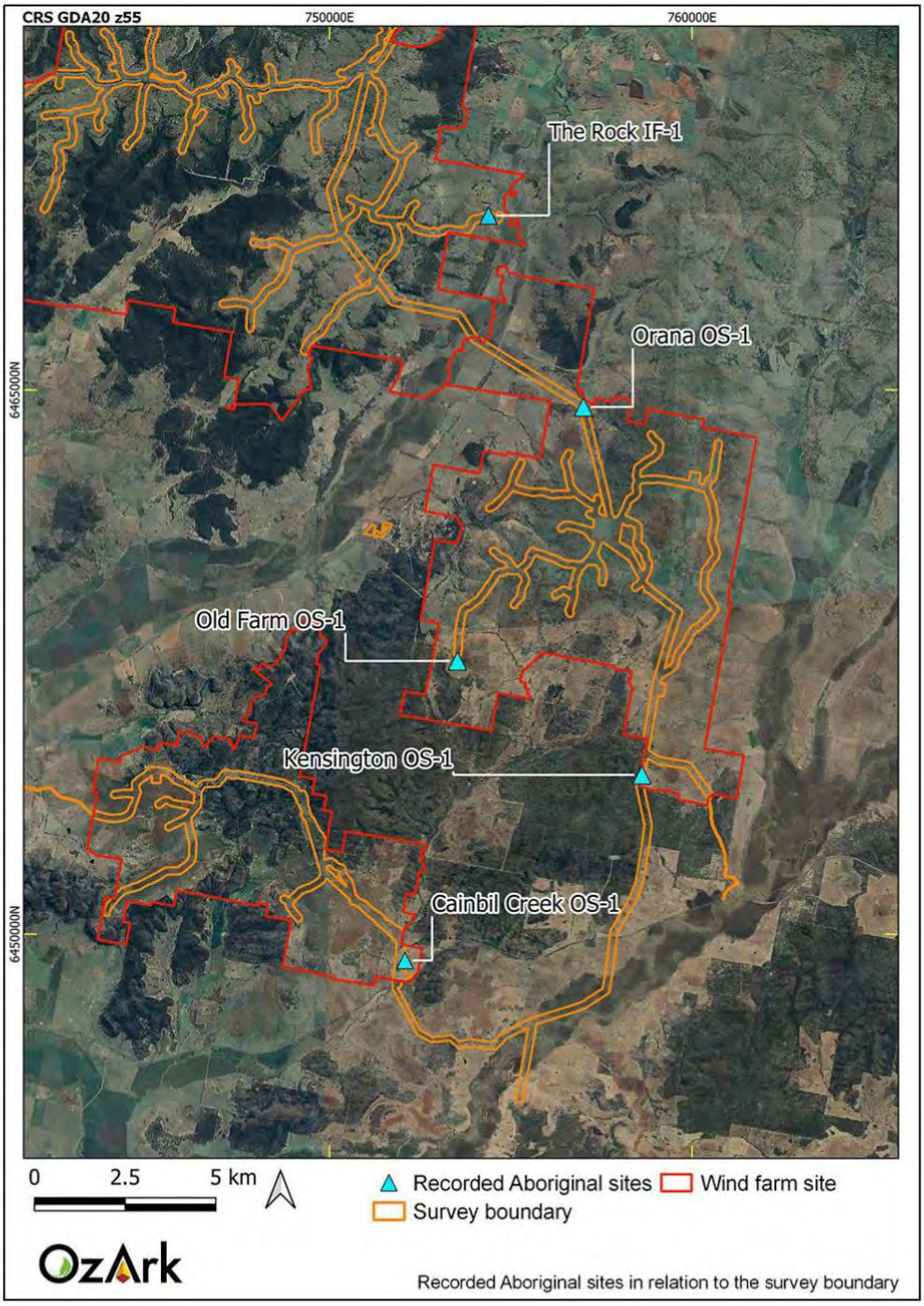
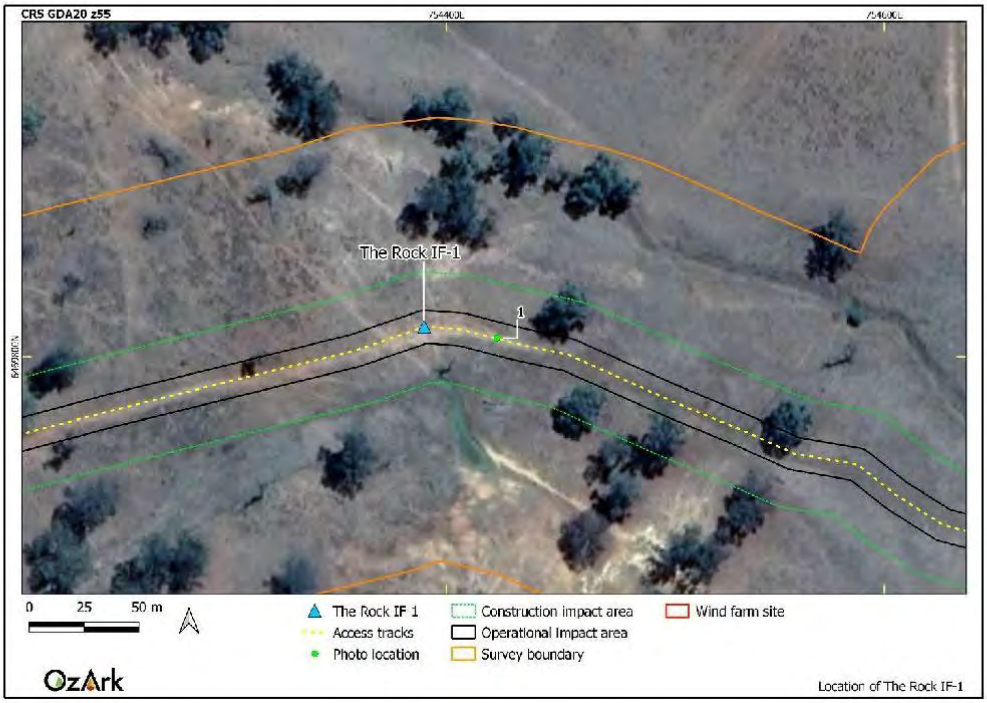


Figure 2: The Rock IF-1. View of site and the recorded artefact.

1. View west upslope across The Rock IF-1 site location.

2. View of the silcrete core at The Rock IF-1.

Figure 3: Aerial showing the location of The Rock IF-1 in relation to the construction impact footprint.



APPENDIX 2: ASSESSMENT METHODOLOGY

ABORIGINAL CULTURAL HERITAGE ASSESSMENT METHODOLOGY

VALLEY OF THE WINDS, WIND FARM

WARRUMBUNGLE SHIRE COUNCIL LGA, NSW

MAY 2021

Report prepared by

OzArk Environment & Heritage

for UPC/AC Renewables

OzArk
Environment & Heritage

145 Wingewarra St
(PO Box 2069)
Dubbo NSW 2830

Phone: (02) 6882 0118
Fax: (02) 6882 0630
enquiry@ozarkehm.com.au
www.ozarkehm.com.au

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OzArk Environment & Heritage

DOCUMENT CONTROLS

Proponent	UPC\AC Renewables
Document Description	*Aboriginal Cultural Heritage Assessment Methodology. Valley of the Winds, Wind Farm.*
File Location	OzArk Job No.
S:\OzArk EHM Data\Clients\EPS\Rangoon Windfarm July 2020\Survey Methodology	2714

Document Status **V3.0 FINAL**	Date 13 May 2021
Draft V1.0 Author to editor OzArk 1st internal	V1.0 TF author 16/03/21
Draft V2.0 Report Draft for release to client	V2.0 BC edit 23/3/21 V2.1 BC incorporates client comments 13/4/21 V2.2 BC amends figure 14/4/21 V2.3 OzArk to RAPs 17/12/21
FINAL V3.0 = Final report	V3.0 OzArk finalises 13 May 2021
Prepared for	Prepared by
Jeremy Ellis | Senior Project Developer UPC\AC Renewables Australia	Taylor Foster Archaeologist OzArk Environment & Heritage 145 Wingewarra Street (PO Box 2069) Dubbo NSW 2830 P: 02 6882 0118 F: 02 6882 6030 taylor@ozarkehm.com.au

OzArk Environment & Heritage

Acknowledgement

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

OzArk Environment & Heritage

CONTENTS

OzArk Environment & Heritage

FIGURES

TABLES

OzArk Environment & Heritage

1 INTRODUCTION

OzArk Environment & Heritage (OzArk) has been engaged by UPC\AC Renewables (UPC\AC) to prepare an assessment methodology for the proposed Valley of the Winds wind farm (Valley of the Winds) (the proposal).

The proposal covers an area of approximately 21,180 hectares (ha) within the Warrumbungle Shire Council Local Government Area (LGA) (**Figure 1-1**).

This methodology project information provided here is in accordance with Stages 2 and 3 of the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (ACHCRs; DECCW 2010b).

1.1 PROJECT OVERVIEW

Valley of the Winds is an 800-megawatt wind farm situated southwest of the township of Coolah and extending towards the Golden Highway. The undulating terrain in this area allows for the wind turbines to be sited on ridgelines within cleared land that is currently being used for livestock grazing. The Project Boundary will be located within the Central West Renewable Energy Zone, recently identified by the NSW Government.

Up to 175 wind turbines are being proposed across three clusters named Mt Hope (10,926 ha), Girragulang Road (7,005 ha), and Leadville (3,248 ha). These clusters will be linked electrically, allowing for approximately 2,500,000 megawatt hours of clean renewable energy to be generated each year.

The wind turbines will have a maximum tip height of 250 metres (m) with underground electricity cabling connecting each turbine to an electricity substation. Gravel access tracks will link the wind turbines and all ancillary infrastructure within private property.

A high voltage transmission line will be required to connect the central substation to the National Electricity Market (NEM) allowing the electricity generated from Valley of the Winds to provide a secure and reliable supply of electricity to NSW, and beyond. An energy battery storage facility is also being considered for the project.

Current farming practices such as livestock grazing will continue next to the wind turbines, continuing the region's close agricultural connection with the land while also allowing the generation of clean renewable energy for the people of NSW.

The investigation set out in this methodology aims to identify Aboriginal cultural values, both tangible and intangible, that exist in the Project Boundary. The results of this investigation will be presented in an *Aboriginal Cultural Heritage Assessment Report* (ACHAR).

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1.2 PROJECT BOUNDARY

The Project Boundary describes the area in which most impacts associated with the proposal will be located (**Figure 1-2**).

A high voltage transmission line is proposed to extend approximately 10–15 kilometres (km) to tie in to the National Electricity Market (NEM). The transmission line is outside of the Project Boundary but will form part of the Survey Boundary (see **Section 1.3**).

The indicative project layout is shown on **Figure 1-2**. This figure does not include the high voltage transmission line as the alignment of this component is still being defined. Additionally, project components such as electricity lines, access tracks, substations, and construction compounds that will be located in the Project Boundary are currently being designed and their location has not yet been finalised.

Figure 1-1: Location of the Project Boundary.

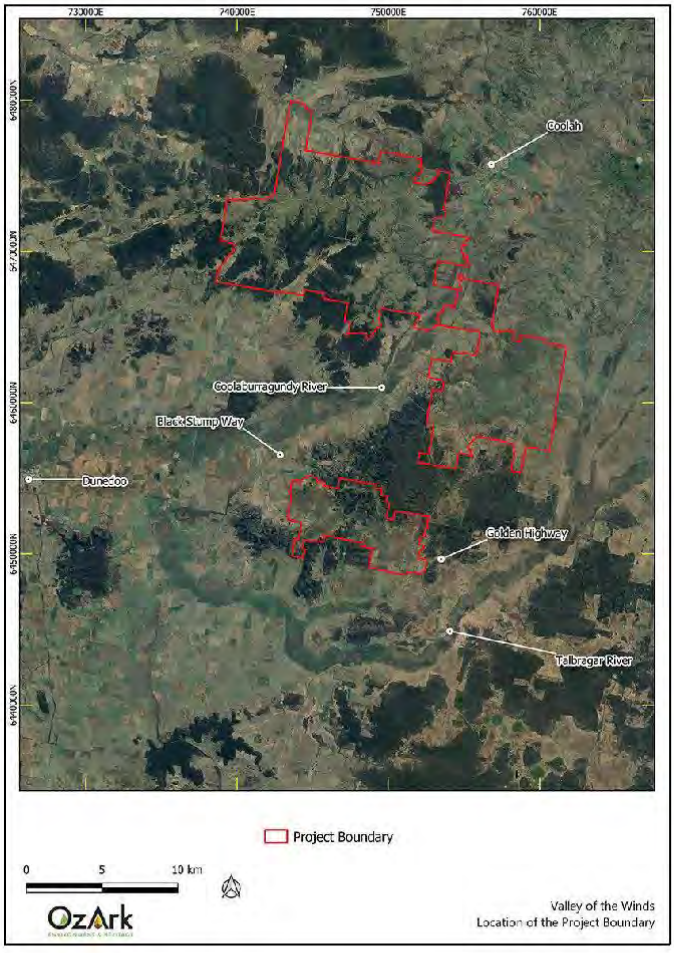

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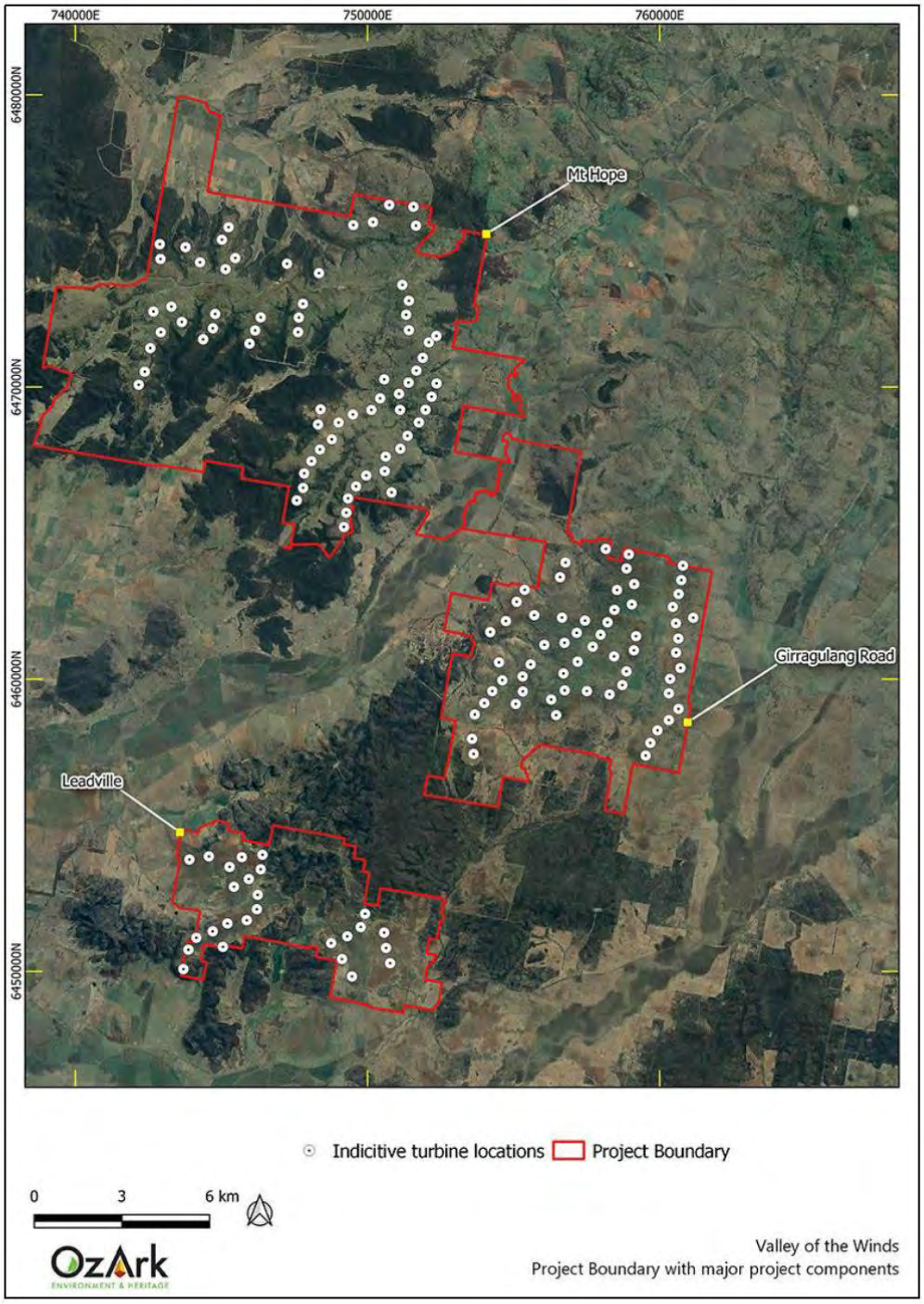
Figure 1-2. Location of the Project Boundary with indicative turbine locations.



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1.3 SURVEY BOUNDARY

As the construction and use of a wind farm does not impact all areas within the Project Boundary, the Aboriginal cultural heritage assessment will instead concentrate on the Survey Boundary. The Survey Boundary describes the area where all new impacts will be located with a suitable buffer to allow some small movement of project components if required. The new impacts are proposed to consist of:

- Turbine locations
- Access tracks
- Overhead and underground electricity reticulation lines
- Construction compounds
- Substations.

All components will be located within the Project Boundary apart from the electrical transmission line that that extends from the Project Boundary 10–15 km to the south. When the design of this transmission line is finalised, it will be included in the Survey Boundary.

All archaeological survey will be confined to the Survey Boundary only and not to the larger Project Boundary.

1.4 CONSULTATION ON THIS METHODOLOGY

Consultation for this proposal has followed the guidelines established in the ACHCRs (DECCW 2010b).

On 8 January 2021, an advertisement was placed in the 'Mudgee Guardian' requesting expressions of interest in being consulted about the project. In addition, the following agencies were contacted to identify potential stakeholders for the area: Heritage NSW; the Gilgandra Local Aboriginal Land Council (LALC); the Office of The Registrar, ALRA; the National Native Title Tribunal; NTSCORP; the Warrumbungle Shire Council; and the Central West Local Land Services.

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

- Murong Gialinga Aboriginal & Torres Strait Islander Corporation
- AT Gomilaroi Cultural Consultancy
- Corroboree Aboriginal Corporation
- Gomeroi People NC2011/006
- Cacatua General Services
- AGA Services
- Bawurra

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- Gunjeewong
- Talcon Pty Ltd
- Paul Brydon
- Michael Long
- Kevin Sampson
- Brian Draper
- Steve Talbot

These individuals/groups constitute the Registered Aboriginal Parties (RAPs) for the project.

The Stage 2/3 document was sent to RAPs on 14 April 2021 with a review and comment period closing 12 May 2021. The cover letter that was attached to the assessment methodology invited RAPs to identify whether any Aboriginal cultural values exist in the survey boundary that should be incorporated into the assessment methodology.

Comments were received from one RAP group, Murong Gialinga Aboriginal & Torres Strait Islander Corporation, on 10 May 2021. Feedback is as follows:

> *Murong Gialinga Aboriginal & Torres Strait Islander Corporation would like to thank you for giving us the opportunity to comment on the Assessment. Murong Gialinga community looked at the Assessment and our comments are as follows. If any area where there is Aboriginal cultural heritage is to be impacted a full 100% survey and collection is to take place all must be recorded and taken back to OzArk's office in Dubbo and placed in a fireproof lockable container .When OzArk have finished with the Aboriginal objects they should be place back on country as close as possible to where they were found GPS reading in an area which is not going to be impacted at all and one rap from each registered Aboriginal group be present.*

1.5 LANDSCAPE CHARACTERISTICS OF THE PROJECT BOUNDARY

The Project Boundary is situated within three NSW bioregions. Most of the Project Boundary is within the Brigalow Belt South region and southern portions of the Project Boundary is within the Sydney Basin and South Western Slopes regions. Within these bioregions the Project Boundary is situated within a number of different Mitchell Landscapes (Mitchell 2002). These landscapes include:

- Cassilis Slopes
- Coolah Tops
- Cope Hills Granite

- Liverpool Range Valleys and Footslopes
- Merrygoen Hills and Slopes
- Talbragar – Upper Macquarie Terrace Sands and Gravels
- Trinkey Plateu
- Upper Castlereagh Alluvial Plains.

The Project Boundary itself largely consists of Slopes landscapes with limited amounts of Alluvial Plains and Plateau landscapes.

Based on findings from the Valley of the Winds Constraints Report (OzArk 2021), the landforms within the Project Boundary with the highest potential for archaeological objects are the Cassilis Slopes and the Talbragar – Upper Macquarie Terrace Sands and Gravels landscape units. Furthermore, the high number of Aboriginal objects that have been recorded within these landscape units nearby (75.6% of known sites within the vicinity of the Project Boundary), suggests that occupation of these areas was consistent over time.

Within the Central West region, Slope landscapes have been identified as having, generally, the highest archaeological potential and are most likely to be artefact sites (OzArk 2016). OzArk 2016 suggests that fluvial landscapes, such as Talbragar – Upper Macquarie Terrace Sands and Gravels landscape unit, are also archaeologically sensitive and have a high potential to record scarred trees (OzArk 2016, although see **Section 3.2.3**). Plateau landscapes are indicated in OzArk 2016 as having low archaeological potential.

The Project Boundary is intersected by a large number of watercourses, both named and unnamed. The Coolaburragundy River intersects the central portions of the Project Boundary. The second closest major waterway is the Talbragar River, located approximately 3 km south of the Project Boundary. A large number of tributaries of both rivers intersect the Project Boundary including many named creeks, such as, Moreton Bay, Cainbil and Miangulliah Creeks.

Throughout NSW there is an observed and accepted correlation between site location and waterways. Several previous studies conducted by OzArk in different areas of NSW have shown that there is a correlation between distance from water and likelihood of Aboriginal sites being present (OzArk 2014, OzArk 2016).

This is confirmed within the region of the Project Boundary as over half (70.5%) of all sites registered on the Aboriginal Heritage Information Management System (AHIMS) are within 200 m of all waterways (OzArk 2021). To further investigate the water resources in the region of the Project Boundary, specific distance buffers were applied based on the reliability of the watercourse to contain water throughout the year:

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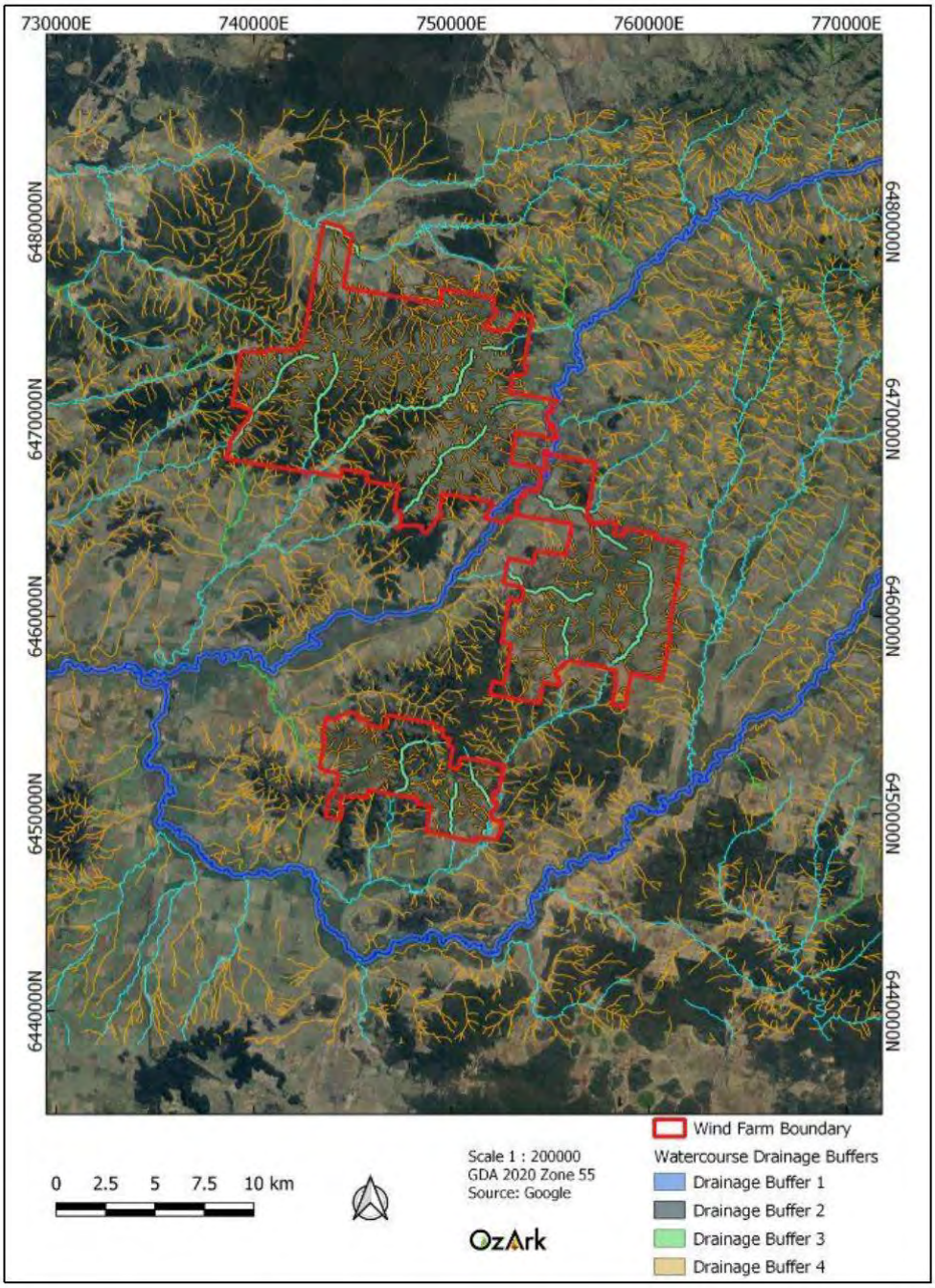
- A 200 m buffer around river systems that are expected to have permanent water
- A 100 m buffer around named creek systems that are expected to hold water for significant parts of the year
- A 100 m buffer around named gullies that could hold water following rainfall in ponds
- A 50 m buffer around unnamed ephemeral drainage lines that are not expected to hold water for long following rain.

These are detailed in **Table 1-1** and the drainage buffers are shown on **Figure 1-3**.

Table 1-1: Specific distance buffers for types of waterway.

Name	Applied Distance Buffer	Water Feature Type
Drainage Buffer 1	200 m buffer	Named Rivers
Drainage Buffer 2	100 m buffer	Named Creeks
Drainage Buffer 3		Named Gullies
Drainage Buffer 4	50 m buffer	Unnamed Watercourses

Figure 1-3: Drainage hierarchy near the Project Boundary.



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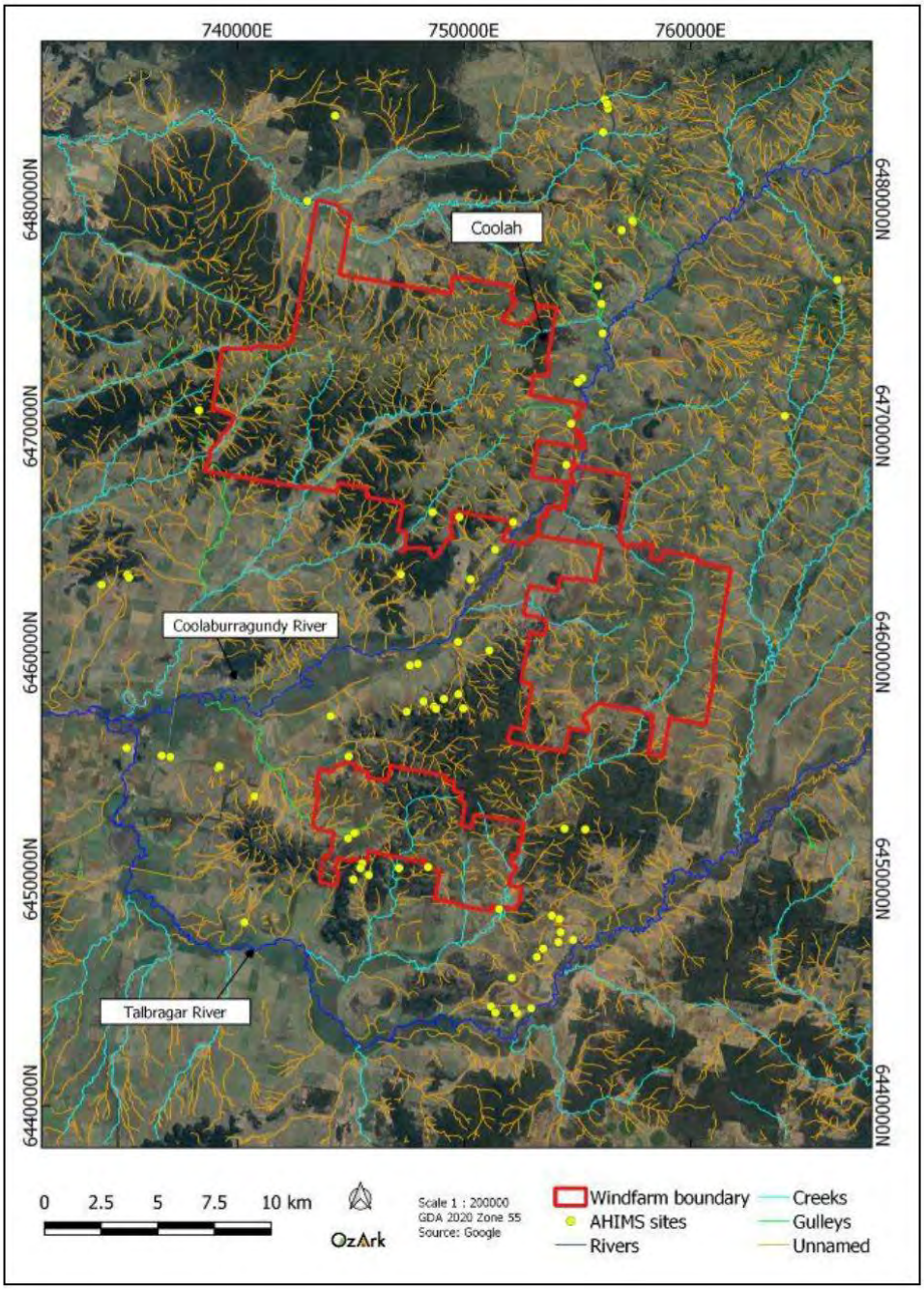
Twenty-seven of the regionally registered sites, (34.6%) are within one of the four drainage buffers (Figure 1-4). The division between the four is shown in **Table 1-2**.

Table 1-2: Number of AHIMS sites in relation to specific drainage buffers.

Drainage Buffer	Number	Frequency (%)
Drainage Buffer 1	5	18.5
Drainage Buffer 2	3	11.1
Drainage Buffer 3	1	3.7
Drainage Buffer 4	18	66.7
Total	**27**	**100**

Within the Constraints Report (OzArk 2021) it was identified that Aboriginal occupation of the landscape was not restricted to larger and more permanent watercourses (such as the Talbragar and Coolaburragundy Rivers). Rather, any landform within 200 m of any sized water course was identified as having an increased archaeological sensitivity.

Figure 1-4: Previously recorded sites in relation to watercourses.



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2 CULTURAL VALUES

2.1 INTRODUCTION TO CULTURAL VALUES

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

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

Fundamentally, culture is living and is not static:

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

2.1.1 Connection to Country

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

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

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

> *"When we say Country we might mean homeland, or tribal or clan area and in saying so we may mean something more than just a place; somewhere on the map. We are not necessarily referring to place in a geographical sense. But we are talking about the whole of the landscape, not just the places on it."*
>
> Professor Mick Dodson AM, August 2007

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2.1.2 Managing Country

Surviving on this land for more than 60,000 years, Aboriginal and Torres Strait Islanders established effective ways to use and sustain resources. One important aspect is the right of certain people to control the use of resources in a particular area. Aboriginal and Torres Strait Islander people do not see themselves as 'owning' land, animals, plants or nature, but rather belonging with these things as equal parts of creation.

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

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

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

Even before 1788 there were complex relationships for long distance trade between Aboriginal and Torres Strait Islander communities especially for coastal shells and stone hatchets. When people from different groups met socially to share resources, for ceremonies or to settle disputes, they brought items to exchange. Items included stones for hatchets, kangaroo skins, timber for spears, ochre or clay for paint and marine shells for decoration.

The exchange of objects was not motivated by a desire for wealth accumulation but a social system to build connection between people and groups.

2.1.3 Recognising lore

In Aboriginal and Torres Strait Islander communities, codes of conduct cover behaviour around:

- Leadership and etiquette
- Property
- Laws around special events like marriage, coming of age and death
- Sacred knowledge.

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,

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leadership roles and caring for Country, Aboriginal lore continues, even in the most urbanised communities.

2.2 IDENTIFYING CULTURAL VALUES

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

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

In addition, should any RAPs have knowledge of cultural values regarding the study area that they wish to share or that may affect the survey methodology set out in **Section 5**, OzArk invites them to contact us so that these values can be recorded and/or responded to in the methodology.

Understanding cultural landscapes can only come from the views of a particular community, in this case, the Aboriginal community. Unless informed, OzArk will not know of the community's feelings towards the cultural landscape in which the project will be located. OzArk, therefore, invites any information on the cultural landscape surrounding the Project Boundary to be forwarded to OzArk, either by telephone or mail or e-mail. Any information received will be treated according to the conditions set out below.

2.2.1 Use of information collected

An ACHAR will be prepared for the project which articulates Aboriginal cultural values and associated conservation methods across the Project Boundary, as identified during the consultations. The ACHAR will be circulated to all RAPs for comment as is set out in the ACHCRs. The ACHAR will be considered by Heritage NSW during the project approval process. The report will be publicly available.

2.2.2 Public / confidential information

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

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2.2.3 Copyright

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

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3 ARCHAEOLOGICAL CONTEXT

3.1 ABORIGINAL PEOPLE OF THE PROJECT BOUNDARY

The Project Boundary is situated within the traditional lands of the Kamilaroi and the Wiradjuri people who have lived in the region for more than 6,000 years.

The Kamilaroi (Gumm-il-uh-rah-ee) country, as defined by the limits of the Kamilaroi language groups, refers to the language or dialect spoken in the area of the Namoi, Gwydir, and Barwon Rivers in north to central New South Wales. The language was spoken over a large area from Walgett to Bingara, and from the upper Hunter Valley to beyond Mungindi (O'Rourke 1997). According to O'Rourke (1997) it is difficult to establish the total Aboriginal population who originally spoke this language.

To the immediate west lies the Wailwan tribal and linguistic group (Horton 2007), and further south, the Wiradjuri tribal and linguistic group (Tindale 1974).

The Wiradjuri language group is the biggest in New South Wales and occupied the northern parts of the South Eastern Highlands bioregion in the vicinity of Orange and Bathurst. 'Wiradjuri' means '*people of three rivers*', the three rivers being the Macquarie, Murrumbidgee, and Lachlan Rivers. These rivers represented the Wiradjuri people's livelihood and supplied consistent and abundant resources. The Wiradjuri people generally moved in smaller groups along river flats, open land, and waterways.

3.2 REGIONAL ARCHAEOLOGICAL CONTEXT

The regional archaeological context of an area provides information on the site types and landforms with higher archaeological potential expected to be located in the Project Boundary. A number of studies that have occurred in the vicinity of the Project Boundary, and in the wider Warrumbungle area, are summarised below.

3.2.1 NSW Archaeology 2014

In 2014, NSW Archaeology conducted investigations for the Liverpool Range Wind Farm Stage 1 in the Warrumbungle Shire Council. Five Aboriginal sites were recorded during the field survey. Three sites were recorded within the wind farm extent, and two were recorded on the transmission line route. The results from the wind farm portion of the study area recorded a very low artefact density including isolated artefacts at LU6 and LU30, and a low density artefact scatter of two stone artefacts at site LU10. Within the transmission line portion of the study area, sites LU1 (three stone artefacts in an undulating crest landform) and LU2 (ten stone artefacts on the northern side of a crest with a gentle gradient) were associated with elevated landforms, while at site LU2, three stone artefacts were recorded in a large area of sheet wash exposure adjacent to a creek. It was noted

that artefact densities increased in the landforms comprising the electricity line which was generally at a lower elevation than the wind farm location.

The NSW Archaeology study area was located to the east of Coolah in similar landforms to the Project Boundary and the results of the study can be directly applied to the Valley of the Winds. It is therefore expected that while Aboriginal objects could be present on ridge and crest landforms within the Project Boundary, they are more likely to be located in greater densities in landforms associated with lower altitudes and with less-steep gradients.

3.2.2 NGH 2020

In 2020 NGH conducted archaeological investigations for the Dunedoo Solar Farm in NSW. During the investigations 26 Aboriginal sites were identified, consisting of 14 artefact scatters, nine isolated finds and areas of Potential Archaeological Sensitivity. Due to the results of the survey test excavations were conducted. Of the 75 test pits excavated across the archaeologically sensitive areas, only 13 recorded subsurface deposits with a low artefact density (85 artefacts were recorded from the subsurface testing program in total).

The topography of the solar farm is different to the Project Boundary as it occupies landforms with less gradient, but the results of the NGH survey and testing program indicate that low density artefact scatters and isolated objects can occur throughout flatter landforms.

3.2.3 Purcell 2002

In 2002 the New South Wales National Parks and Wildlife Service (NPWS) conducted investigations for the Resource and Conservation Assessment Council as part of the regional assessments of western New South Wales. The assessment took place in two stages, with stage two focusing on the Brigalow Belt South Bioregion. Throughout this extensive study, at the completion of both stages the project team had;

- Recorded and transcribed 110 oral history interviews
- Located and recorded 1110 Aboriginal sites
- Documented 60 traditionally used plant species
- Identified and mapped a variety of landforms.

849 of the sites were recorded during stage two. The majority of recorded sites (n=668) were recorded within alluvial landforms. The second largest number of sites (n=475) were recorded in high contour landforms. Terraces and stable deep sand recorded the least number of sites (terraces n=83 and stable deep sand n=7). A total of 17 different site types are associated with the mapped landforms within the bioregion. The relationship between Aboriginal sites recorded during

the assessment highlighted a strong association with water. 50% of sites recorded were recorded within 200 m of water.

Although the site inspections for Purcell's study were in different landforms to the Project Boundary, the general conclusions of Purcell's study suggest that the portions of the Project Boundary within the Talbragar – Upper Macquarie Terrace Sands and Gravels landscape unit may have a low archaeological sensitivity.

3.3 LOCAL ARCHAEOLOGICAL CONTEXT

A search on the Heritage NSW AHIMS database returned 78 results for Aboriginal sites within a 10 km search radius surrounding the Project Boundary (GDA Zone 55: Eastings: 733435–766815, Northings: 6443765–6484705 with no buffer) (see **Table 3-1** for site types and frequencies).

Table 3-1: AHIMS site types and frequencies

Site Type	Number	% Frequency
Artefact Site	31	39.7%
Modified Tree (Carved or Scarred)	13	16.7%
Art (Pigment or Engraved)	13	16.7%
Grinding Groove	10	12.8%
Stone Arrangement	6	7.7%
Art (Pigment or Engraved) & Grinding Groove	1	1.3%
Artefact Site & Modified Tree (Carved or Scarred)	1	1.3%
Grinding Groove, Stone Arrangement & Water Hole	1	1.3%
Water Hole	1	1.3%
Water Hole, Artefact Site & Grinding Groove	1	1.3%
Total	**78**	**100%**

The AHIMS data shows artefact sites are the dominant site type near to the Project Boundary (approximately 40%). Artefact sites are a relatively stable indicator of past Aboriginal occupation. Sites in this category are less ambiguous to recognise and can remain close to their original deposition context despite disturbances. Conversely, one of the most frequent site types modified trees (17% of all sites), are more sensitive to common disturbances in the area, such as historic land clearing. As such, the distribution of modified tree sites may be more a reflection of areas of uncleared land rather than something specific to Aboriginal land use strategies. Art sites are also a prominent site type, and like artefact sites, are a relatively stable indicator of past Aboriginal occupation. There is a strong relationship between all site types and the Talbragar and Coolaburragundy Rivers. Artefact sites are largely grouped in the confluence of the two major rivers and disperse primarily towards the north and east. Modified tree sites are located primarily along the Coolaburragundy River, while art sites are located along both rivers and group close to the confluence of the rivers, similar to the artefact sites. Less common site types follow a similar pattern, largely distributed along the two major river systems.

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Six sites are located within the Project Boundary and these are listed in **Table 3-2.**

Table 3-2: Known sites within the Project Boundary.

Site ID	Site name	GDA Zone 55 Easting	GDA Zone 55 Northing	Site features	Site types	Recorders
36-3-0088	Gundooee No2;	748422	6450523	Artefact Site	Shelter with Deposit	Warren Bluff
36-3-0125	Bald Ridge NO:3;	745215	6452046	Artefact Site	Shelter with Deposit	Warren Bluff
36-3-0126	Bald Ridge No:2;	745165	6452026	Artefact Site	Shelter with Deposit	Warren Bluff
36-3-0127	Bald Ridge No:1;	744885	6451796	Artefact Site	Shelter with Deposit	Warren Bluff
28-6-0011	Bong Bong; Coolah;	748615	6466186	Grinding Groove	Axe Grinding Groove	ASRSYS
28-6-0034	DTG/OC31	752175	6465746	Artefact Site	Open Camp Site	Michael Therin

The distribution of sites within proximity to the Project Boundary conforms to some expected patterns which are outlined below:

- All sites are associated with watercourses of varying degrees
- The highest densities of sites are located along the two major river systems which intersect the area; the Talbragar and Coolaburragundy Rivers.

AHIMS data is not the result of large scale or systematic archaeological investigations and therefore cannot be taken independently as a reflection of past Aboriginal occupation patterns. The distribution of sites discussed above can only be used to formulate a predictive model in conjunction with other methods.

Certain characteristics of AHIMS recordings further limit confidence in the accuracy of the data:

- AHIMS registrations can be made by any individual and, therefore, their reliability as a record of archaeological features can be questionable
- The 'dots on a map' approach is not informative as one dot may represent a single stone artefact, and another may represent a cluster of one hundred artefacts
- The location of sites is more driven by development proposals rather than systematic research. Therefore, the data tends to skew towards population centres and public land while private land, where no development has ever been proposed, remain as 'blanks' on the map.

As a result, while further data is normally available to interrogate the AHIMS site distribution pattern more fully, at face value it is often of limited use.

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Figure 3-1. AHIMS sites in relation to the Project Boundary.

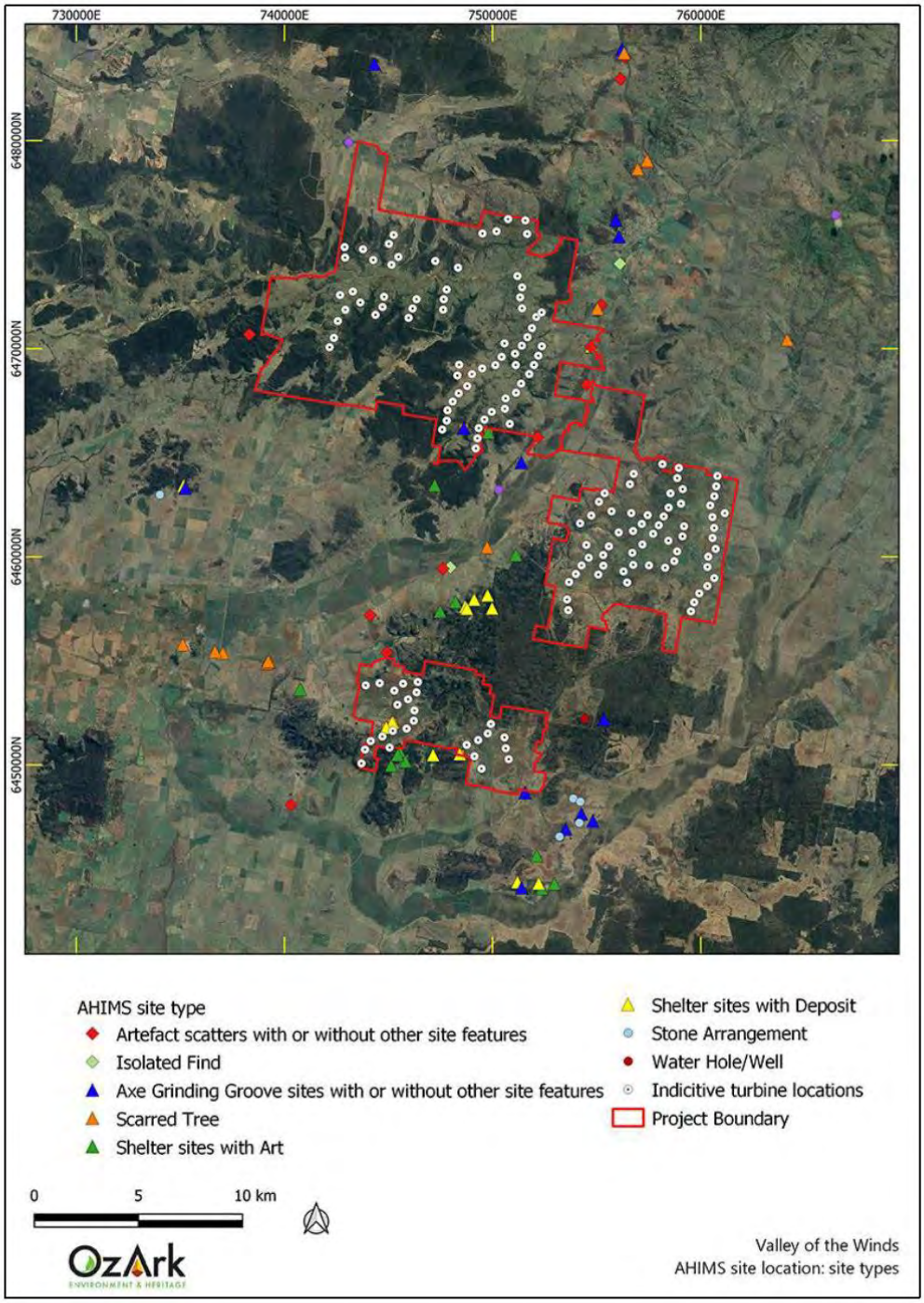

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Figure 3-2. AHIMS sites in relation to the Mt Hope portion of the Project Boundary.

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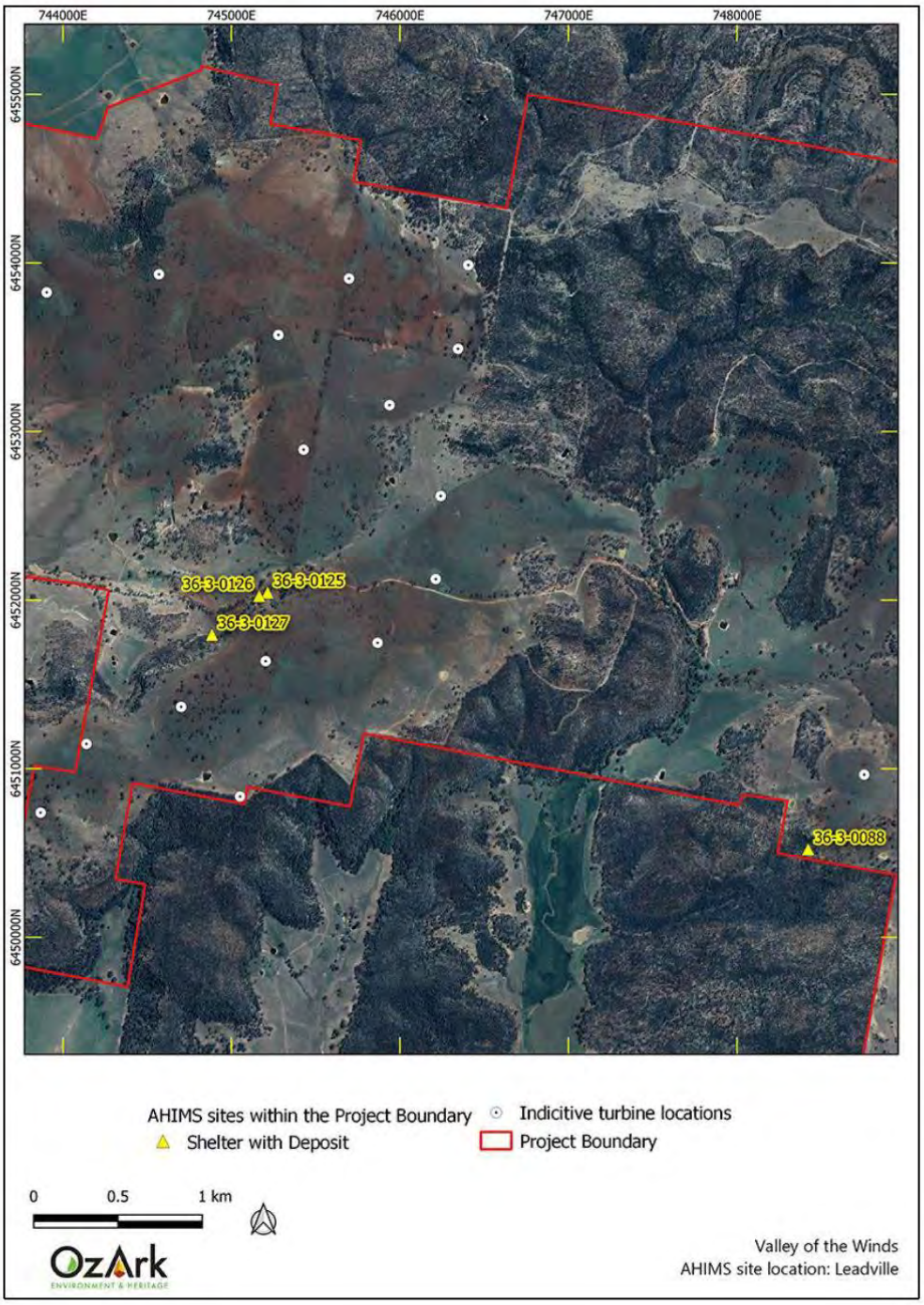
Figure 3-3. AHIMS sites in relation to the Leadville portion of the Project Boundary.



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4 PREDICTIVE MODEL

4.1 LANDFORM MODELLING

Information previously correlated within the Valley of the Winds Constraints Report (OzArk 2021) identified areas of high, moderate, and low archaeological sensitivity. Components of sensitivity consisted of landscape unit, previous land use, previously recorded sites, and distance to water. A summary of the conclusions drawn within the report are presented below.

Watercourses

Aboriginal occupation of the landscape was not restricted to larger and more permanent watercourses (such as the Talbragar and Coolaburragundy Rivers). Proximity to water is typically the key consideration in terms of predictive modelling for Aboriginal sites in western NSW. This variable is also relevant to the search area as over half (70.5%) of all AHIMS sites near the Project Boundary are within 200 m of all waterways. Due to this, any landform within a 200 m radius of a waterway has an increased archaeological sensitivity.

Landscape types

The majority of sites (74.4%) in the region of the Project Boundary are located within Slope landscape units and this landscape unit would appear to have the most archaeological potential. 23.1% of sites are located within the Alluvial Plains landscape units suggesting this landform type has moderate archaeological potential. Plateau and Upland landscapes account for only 2.6% of sites between them and these landscape units have low archaeological potential.

More than half (53.8%) of all previously recorded sites in the area are located within the Cassilis slopes Mitchell Landscape unit. This is unsurprising as this is the largest landscape unit within the search radius for the landscape study. Comparatively, within the search area, the Talbragar – Upper Macquarie Terrace Sands and Gravels landscape unit covers approximately a third of the search area and contains the second largest number of sites in the area. 21.8% (17) of sites fall within this landscape unit. This result is also unsurprising as both major river systems within the search area fall within the Talbragar – Upper Macquarie Terrace Sands and Gravels landscape unit.

Previous Land Use

Most of the AHIMS sites in the region have been recorded in land use categories associated with low levels of ground surface disturbance, such as grazing on native vegetation (33.3%) and other minimal use (28.2%). Most sites in the grazing native vegetation category are along the Talbragar and Coolaburragundy Rivers. Comparatively, a large number of sites (28.2%) were also located in areas previously used for cropping. Again, most of these sites are located in proximity to the two major river systems.

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Most of the Project Boundary is classed as minimal use and grazing modified pastures. While as a whole, these land use categories contain 38.5% of sites, only seven of the previously recorded sites have been identified within the Project Boundary. However, whether this is due to the lack of sites, or the lack of previous investigation, is undetermined.

Previous studies

The archaeological investigations surrounding the Project Boundary as summarised in **Sections 3.2** and **3.3** indicate that:

- Stone artefact sites (isolated finds and artefact scatters), modified trees and art sites are the most commonly recorded site types in the area and that other site types, such as grinding grooves, stone arrangements and waterholes are possible
- Scarred trees can appear wherever appropriate mature aged trees are located
- The most likely indicator of potential sites is the presence of workable stone material within proximity of fresh water
- Sites tend to be associated with alluvial or high contour (predominantly crest) landforms
- Sites on slopes are generally in a secondary context having been displaced by erosional processes. The exception is where there is outcropping rock as this feature may have attracted occupation or use.

4.2 STRATEGIC MAPPING

As a result of the predictive modelling a strategic planning map was developed. While the map should not be used as a definitive record of all areas of Aboriginal cultural heritage at Valley of the Winds, it is designed to identify areas where there is a predicted higher likelihood of Aboriginal sites being located. However, as the map is an interplay between a landform's distance to water, its landscape type, its land use, and the level of previous impact to that landform it is able to show an indication of landforms with higher sensitivity.

Figure 4-1 shows areas of low, moderate, and high archaeological potential. Low potential landforms are areas in white, moderate potential landforms are represented in light blue, and the high potential landforms are represented in dark blue. AHIMS sites have also been identified by triangles as indicated in the map legends. These areas are high potential areas as sites have already been identified at that location.

4.3 FACTORS LIMITING THE RECORDING OF SITES

The Survey Boundary is mostly limited to spurs and crest landforms, steeply sloping landforms, and limited areas of gentle, lower-lying landforms. The implications are that occupation will have been more limited in the landforms that characterise the Survey Boundary. Further, due to agricultural activity, soil loss from elevated landforms is greater when compared to aggrading

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landforms at the base of hills. As most of the Survey Boundary is on elevated landforms, there is the chance that the loss of soil has dispersed intact archaeological deposits.

Figure 4-1: Strategic planning map.

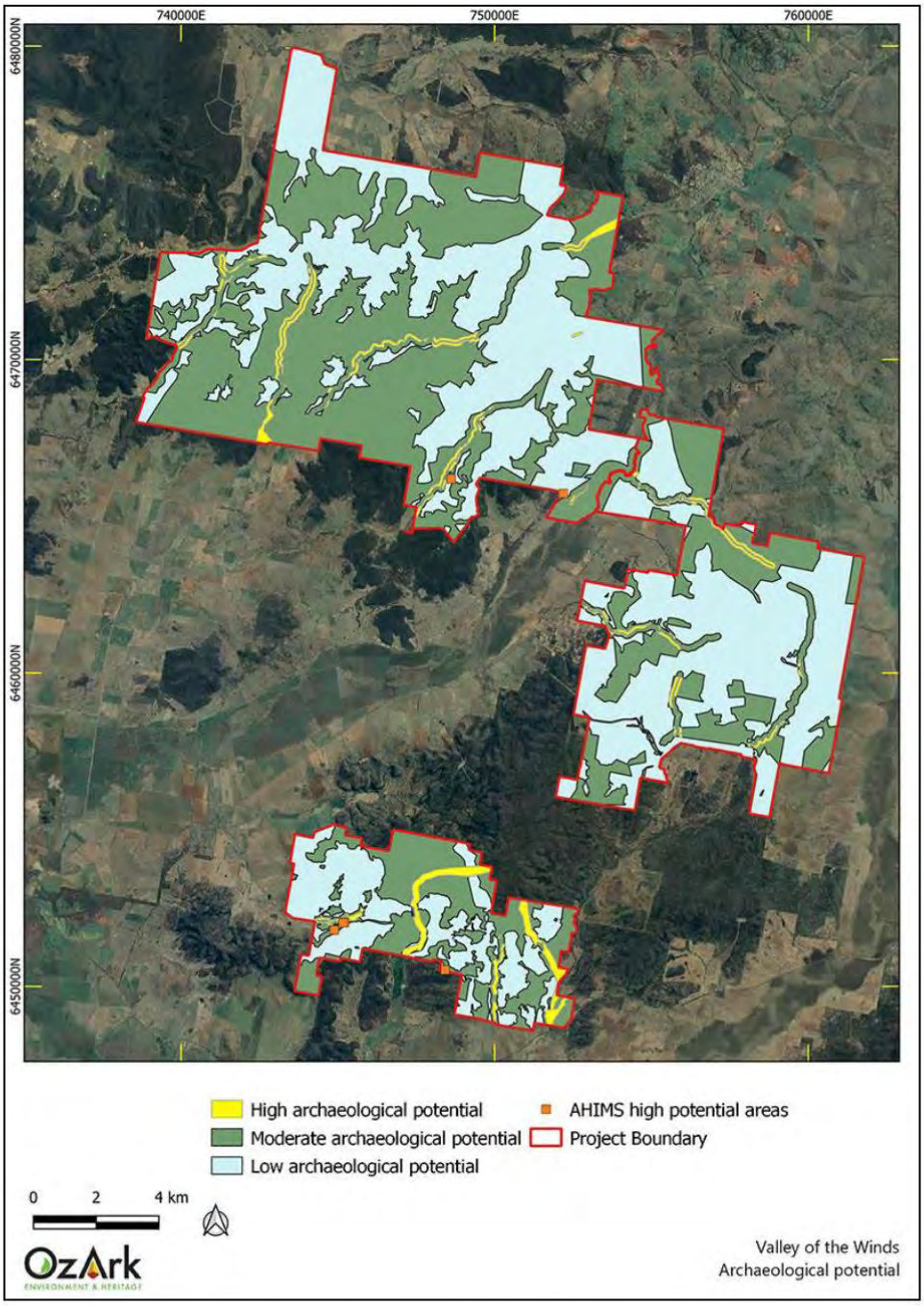

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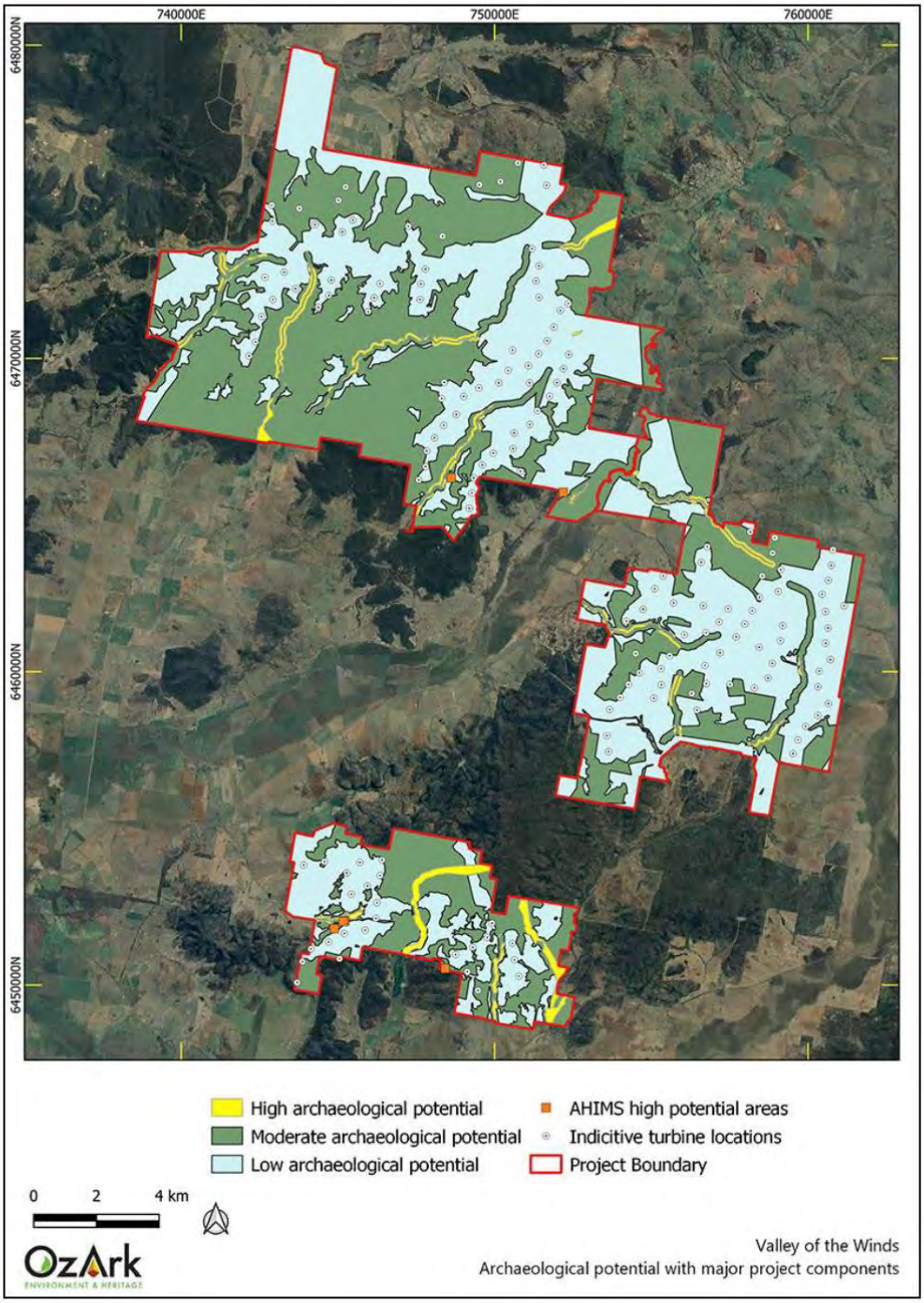
Figure 4-2: Strategic planning map in correlation to turbine locations.



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4.4 RESEARCH QUESTIONS

A number of research questions can meaningfully be applied to the investigation of the Survey Boundary. These research questions include:

- What resources were available to the Aboriginal people using the land within the Survey Boundary (food, stone, and water) and what resources were transported to the area?
- How do the artefact assemblages from the sites along the slopes and ridge crests in the Survey Boundary differ from sites that are located along creek flats and valley floors?
- What tasks were Aboriginal people undertaking at the sites?
- Did the Aboriginal people use the land within the Survey Boundary at any particular time of the year?
- Is there potential for burials to be present in the landscape?
- Are the outcropping rock materials present suitable for stone tool procurement and manufacture?
- Is there evidence to suggest that Aboriginal people were using the area earlier than the mid to late Holocene?
- Can dates be obtained for the Aboriginal use of the area?
- Establish how the findings within the Survey Boundary (if any) accord with the regional archaeological context examined in **Section 3.2**.

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

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5 SURVEY METHODOLOGY

5.1 ASSESSMENT APPROACH

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

Survey for Aboriginal cultural heritage values will concentrate on the Survey Boundary and not the broader Project Boundary. All impacts associated with the proposal will be located within the Survey Boundary.

5.2 SURVEY AIMS

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

- Inspect all landforms in the Survey Boundary so that their archaeological potential can be determined
- Confirm that previously recorded sites within the Project Boundary (AHIMS sites 36-3-0046, 36-3-0088, 36-3-0125, 36-3-0126, 36-3-0127, 28-6-0004 and 28-6-0011) will not be harmed by the project (see **Section 3.3**)
- Evaluate whether the predictive model set out in **Section** Error! Reference source not found. is valid
- Determine if the research questions set out in **Section 4.4** can be answered
- Determine if any landforms of the Survey Boundary require test excavation to understand the archaeological potential at a particular location
- Undertake sufficient assessment in order to satisfy Sections 2.2, 2.4, 2.5, 2.6, and 2.7 in The Guide
- Collect sufficient data so that the results can be presented in an ACHAR as set out in Section 3 of The Guide
- Undertake survey and record keeping satisfying Requirements 1–13 of the Code of Practice.

5.3 SURVEY METHODOLOGY

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

Survey will be restricted to the Survey Boundary and will consist of full pedestrian survey of all turbine locations. A sample survey of all other project components (i.e. the access tracks,

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reticulation lines, workers compounds, substations, and the electricity line) will also by conducted. In this regard, all areas that will be impacted and are located within areas of high or moderate archaeological sensitivity (see **Figure 4-1**) will be surveyed in full. Low potential areas will be sampled as many turbines are to be located in these landforms, but low potential landforms will not be systematically surveyed, particularly if project components are within slopes with a gradient greater than 10 degrees that have been shown to be poor preservers of archaeological deposits. With agreement between the archaeologists and RAPs, additional low potential landforms can be surveyed if it would be archaeologically advantageous to do so.

Survey will consist of two independent teams each consisting of two OzArk archaeologists and accompanying RAPs. Through a combination of vehicle transects (such as driving to a turbine location) and pedestrian survey (such as at turbine locations and at project components in moderate–high archaeological potential landforms), this methodology will ensure that all landform types present in the Survey Boundary will be assessed for their archaeological potential.

5.4 TEST EXCAVATION

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

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APPENDIX 3: AHIMS SEARCH RESULT

2021 search result

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Extensive search - Site list report

Your Ref/PO Number : Valley of the Winds
Client Service ID : 563348

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
28-6-0048	BBS; Gilgandra LALC; Crown Reserve	AGD	55	750172	6463037	Open site	Valid	Artefact : 30		98850
	Contact	Recorders	Phil Purcell,Gilgandra LALC - BBS Survey team					Permits		
28-6-0045	IFG/ST45 ; Cox Gap 1	AGD	55	756090	6470450	Open site	Valid	Modified Tree (Carved or Scarred) : -	Scarred Tree	
	Contact	Recorders	Mr.Mack Rawson					Permits		
36-3-0125	Bald Ridge NO:3;	AGD	55	745100	6451860	Closed site	Valid	Artefact : -	Shelter with Deposit	
	Contact	Recorders	Warren Bluff					Permits		
36-3-0126	Bald Ridge No:2;	AGD	55	745050	6451940	Closed site	Valid	Artefact :	Shelter with Deposit	
	Contact	Recorders	Warren Bluff					Permits		
36-3-0127	Bald Ridge No:1;	AGD	55	744770	6451610	Closed site	Valid	Artefact : -	Shelter with Deposit	
	Contact	Recorders	Warren Bluff					Permits		
36-3-0128	Springdale No:3;	AGD	55	752850	6444110	Closed site	Valid	Art (Pigment or Engraved) :	Shelter with Art	
	Contact	Recorders	Warren Bluff					Permits		
36-3-0129	Springdale No:4;	AGD	55	752250	6443880	Closed site	Valid	Art (Pigment or Engraved) : -	Shelter with Art	
	Contact	Recorders	Warren Bluff					Permits		
36-3-0130	Sprindgdale No:2;	AGD	55	752100	6444120	Closed site	Valid	Artefact :	Shelter with Deposit	
	Contact	Recorders	Warren Bluff					Permits		
36-3-0131	Springdale No:1;	AGD	55	751080	6444190	Closed site	Valid	Artefact : -	Shelter with Deposit	
	Contact	Recorders	Warren Bluff					Permits		
36-3-0132	BULLS GAP;	AGD	55	747360	6457200	Closed site	Valid	Art (Pigment or Engraved) :	Shelter with Art	
	Contact	Recorders	Warren Bluff					Permits		
36-3-0046	Cainbill Creek;Loch Lomond;	AGD	55	751441	6448482	Open site	Valid	Grinding Groove : -	Axe Grinding Groove	
	Contact	Recorders	T.E Wittingham					Permits		
36-3-0071	Cainbill Creek;Loch Lomond;	AGD	55	754319	6452036	Open site	Valid	Water Hole :	Water Hole/Well	
	Contact	Recorders	T.E Whittingham					Permits		
36-3-0072	Cainbill Creek;Loch Lomond;	AGD	55	755232	6452002	Open site	Valid	Grinding Groove : -	Axe Grinding Groove	
	Contact	Recorders	T.E Whittingham					Permits		

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Client Service ID : 563348

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
36-3-0073	Cainbill Creek;Loch Lomond;	AGD	55	754319	6452036	Open site	Valid	Stone Arrangement : -	Stone Arrangement	
	Contact	Recorders	T.E Whittingham					Permits		
36-3-0078	Rock linden;	AGD	55	745400	6450500	Closed site	Valid	Art (Pigment or Engraved) : -	Shelter with Art	
	Contact	Recorders	Warren Bluff					Permits		
36-3-0079	Leadville;	AGD	55	739040	6454710	Open site	Valid	Modified Tree (Carved or Scarred) : -	Scarred Tree	
	Contact	Recorders	Warren Bluff					Permits		
36-3-0080	Rock Linden No 3;	AGD	55	745690	6449990	Closed site	Valid	Art (Pigment or Engraved) : -	Shelter with Art	
	Contact	Recorders	Warren Bluff					Permits		
36-3-0002	Talbragar River;Loch Lomond Darley;	AGD	55	751272	6442912	Open site	Valid	Grinding Groove : -	Axe Grinding Groove	
	Contact	Recorders	Isabel McBryde					Permits		
36-3-0014	Leadville;	AGD	55	740644	6453458	Closed site	Valid	Art (Pigment or Engraved) : -	Shelter with Art	
	Contact	Recorders	Phil Hughes					Permits		
36-3-0081	Old Castle;	AGD	55	744800	6455220	Open site	Valid	Artefact : -	Open Camp Site	
	Contact	Recorders	Warren Bluff					Permits		
36-3-0082	Rock Linden No.1;	AGD	55	745010	6449790	Closed site	Valid	Art (Pigment or Engraved) :	Shelter with Art	1333
	Contact	Recorders	Warren Bluff					Permits		
36-3-0083	Rock Linden No 4;	AGD	55	745320	6450300	Closed site	Valid	Art (Pigment or Engraved) : -	Shelter with Art	
	Contact	Recorders	Warren Bluff					Permits		
36-3-0084	Leadville;	AGD	55	739150	6454780	Open site	Valid	Modified Tree (Carved or Scarred) : -	Scarred Tree	
	Contact	Recorders	Warren Bluff					Permits		
36-3-0085	Leadville;	AGD	55	739100	6454790	Open site	Valid	Modified Tree (Carved or Scarred) : -	Scarred Tree	
	Contact	Recorders	Warren Bluff					Permits		
36-3-0088	Gundooee No2;	AGD	55	748307	6450337	Closed site	Valid	Artefact :	Shelter with Deposit	
	Contact	Recorders	Warren Bluff					Permits		
36-3-0089	GUNDOOEE NO1;	AGD	55	747024	6450293	Closed site	Valid	Artefact : -	Shelter with Deposit	

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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
	Contact	Recorders	Warren Bluff					Permits		
36-3-0108	Argyll No.4;	AGD	55	753760	6448200	Open site	Valid	Stone Arrangement : -	Stone Arrangement	
	Contact	Recorders	Warren Bluff					Permits		
36-3-0109	Argyll No.5;	AGD	55	754100	6448050	Open site	Valid	Stone Arrangement : -	Stone Arrangement	
	Contact	Recorders	Warren Bluff					Permits		
36-3-0111	Argyll No.3;	AGD	55	753390	6446740	Open site	Valid	Grinding Groove : -, Stone Arrangement : -, Water Hole : -	Axe Grinding Groove,Stone Arrangement,Water Hole/Well	
	Contact	Recorders	Warren Bluff					Permits		
36-3-0112	Argyll No.2;	AGD	55	754050	6447030	Open site	Valid	Stone Arrangement : -	Stone Arrangement	
	Contact	Recorders	Warren Bluff					Permits		
36-3-0113	Argyll No.1;	AGD	55	754700	6447120	Open site	Valid	Grinding Groove : -	Axe Grinding Groove	
	Contact	Recorders	Warren Bluff					Permits		
36-3-0114	Warinqie;	AGD	55	740200	6447900	Open site	Valid	Artefact : -	Open Camp Site	
	Contact	Recorders	Warren Bluff					Permits		
28-6-0029	DTG/OC39 - Broombee	AGD	55	747850	6459310	Open site	Valid	Artefact : -	Isolated Find	
	Contact	Recorders	Ms.Adrienne Howe-Piening					Permits	2300,2304	
36-2-0042	DTG/ST15 - Beamsfield	AGD	55	735000	6455600	Open site	Valid	Modified Tree (Carved or Scarred) : -	Scarred Tree	
	Contact	Recorders	Mr.Mark Rawson					Permits		
28-6-0030	DTG/OC30 - Hillside	AGD	55	747500	6459240	Open site	Valid	Artefact : -	Open Camp Site	
	Contact	Recorders	Michael Therin					Permits	2300,2304	
28-6-0031	DTG/ST27 - Naturi	AGD	55	749625	6460275	Open site	Valid	Modified Tree (Carved or Scarred) : -	Scarred Tree	
	Contact	Recorders	Ms.Adrienne Howe-Piening					Permits		
28-6-0032	DTG/OC35 - Baladonga	AGD	55	756030	6482775	Open site	Valid	Artefact : -	Open Camp Site	
	Contact	Recorders	Mr.Mark Rawson					Permits	2300,2304	
28-6-0033	DTG/OC32 - Bindaree	AGD	55	754400	6468090	Open site	Valid	Artefact : -	Open Camp Site	
	Contact	Recorders	Mr.Mark Rawson					Permits	2300,2304	
28-6-0034	DTG/OC31 - Belang	AGD	55	752060	6465560	Open site	Valid	Artefact : -	Open Camp Site	
	Contact	Recorders	Michael Therin					Permits	2300,2304	

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28-6-0035	DTG/OC34 - Coolaburragundy 2	AGD	55	755100	6471910	Open site	Valid	Artefact : -	Open Camp Site	
	Contact	Recorders	Stephanie Garling					Permits	2300,2304	
28-6-0036	DTG/ST32 - Coolaburragundy 1	AGD	55	754920	6471740	Open site	Valid	Modified Tree (Carved or Scarred) : -	Scarred Tree	
	Contact	Recorders	Stephanie Garling					Permits		
28-6-0037	DTG/IF11 - Coolaburragundy 3	AGD	55	756000	6473900	Open site	Valid	Artefact : -	Isolated Find	
	Contact	Recorders	Stephanie Garling					Permits		
28-6-0038	DTG/SHDI-4 - Gotta Rock 2-5	AGD	55	754630	6469940	Closed site	Valid	Artefact : -	Shelter with Deposit	
	Contact	Recorders	Mr.Mark Rawson					Permits		
28-6-0039	DTG/OC33 - Gotta Rock 1	AGD	55	754610	6469900	Open site	Valid	Artefact : -	Open Camp Site	
	Contact	Recorders	Mr.Mark Rawson					Permits	2300,2304	
28-6-0040	DTG/ST31 - Vaughans Gully 1	AGD	55	757350	6478810	Open site	Valid	Modified Tree (Carved or Scarred) : -	Scarred Tree	
	Contact	Recorders	Ms.Adrienne Howe-Piening					Permits		
28-6-0041	DTG/ST30 - Vaughans Gully 2	AGD	55	757310	6478870	Open site	Valid	Modified Tree (Carved or Scarred) : -	Scarred Tree	
	Contact	Recorders	Michael Therin					Permits		
28-6-0042	DTG/OC36 - Black Stump 1	AGD	55	756240	6483820	Open site	Valid	Artefact : -	Open Camp Site	
	Contact	Recorders	Stephanie Garling					Permits		
28-6-0043	DTG/ST33 - Black Stump 2	AGD	55	756200	6484020	Open site	Valid	Modified Tree (Carved or Scarred) : -	Scarred Tree	
	Contact	Recorders	Stephanie Garling					Permits		
36-3-0220	DTG/ST23 - Narangaric	AGD	55	736930	6455200	Open site	Valid	Modified Tree (Carved or Scarred) : -	Scarred Tree	
	Contact	Recorders	Mr.Mark Rawson					Permits		
36-3-0221	DTG/ST14 - Byalla Downs	AGD	55	736550	6455260	Open site	Valid	Modified Tree (Carved or Scarred) : -	Scarred Tree	
	Contact	Recorders	Stephanie Garling					Permits		
28-5-0005	Box Valley Station;	AGD	55	735110	6463120	Open site	Valid	Grinding Groove : -	Axe Grinding Groove	
	Contact	Recorders	Warren Bluff					Permits		

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Client Service ID : 563348

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
28-5-0018	Box Vally No:2;	AGD	55	735050	6463280	Closed site	Valid	Artefact : -	Shelter with Deposit	
	Contact	Recorders	Warren Bluff					Permits		
28-5-0019	Box Vally No:3;	AGD	55	735030	6463230	Closed site	Valid	Artefact : -	Shelter with Deposit	
	Contact	Recorders	Warren Bluff					Permits		
28-5-0020	Box Vally No:4;	AGD	55	733900	6462800	Open site	Valid	Stone Arrangement : -	Stone Arrangement	
	Contact	Recorders	Warren Bluff					Permits		
28-6-0001	Salisbury;Coolah;	AGD	55	738200	6470500	Open site	Valid	Artefact : -, Modified Tree (Carved or Scarred) : -	Open Camp Site,Scarred Tree	
	Contact	Recorders	Glen Morris					Permits		
28-6-0002	Galashiels;	AGD	55	744200	6483500	Open site	Valid	Water Hole : -, Artefact : -, Grinding Groove : -	Axe Grinding Groove,Open Camp Site,Water Hole/Well	2077
	Contact	Recorders	Glen Morris					Permits		
28-6-0003	Pound Gully Estate Area;Pilga Butta;	AGD	55	747100	6463250	Closed site	Valid	Art (Pigment or Engraved) : -	Shelter with Art	2074
	Contact	Recorders	Warren Bluff					Permits		
28-6-0004	Pound Gully Estate Pilga Butta 2	AGD	55	749680	6465790	Closed site	Valid	Art (Pigment or Engraved) : -	Shelter with Art	2074
	Contact	Recorders	R.B Easton					Permits		
28-6-0006	Hannah's Bridge;	AGD	55	751000	6459900	Closed site	Valid	Art (Pigment or Engraved) : -	Shelter with Art	
	Contact	Recorders	Isabel McBryde					Permits		
28-6-0007	Weeraman;	AGD	55	744800	6457000	Open site	Valid	Artefact : -	Open Camp Site	
	Contact	Recorders	R Hawkins					Permits		
28-6-0009	Galandene;Coolah;	AGD	55	755950	6475200	Open site	Valid	Grinding Groove : -	Axe Grinding Groove	1333
	Contact	Recorders	L Ahearn					Permits		
28-6-0010	Coolah;	AGD	55	755800	6476000	Open site	Valid	Grinding Groove : -	Axe Grinding Groove	
	Contact	Recorders	ASRSYS					Permits		
28-6-0011	Bong Bong;Coolah;	AGD	55	748500	6466000	Open site	Valid	Grinding Groove : -	Axe Grinding Groove	
	Contact	Recorders	ASRSYS					Permits		
28-6-0013	Pilca Butta No 2;	AGD	55	751260	6464350	Open site	Valid	Grinding Groove : -	Axe Grinding Groove	

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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
	Contact	Recorders	Warren Bluff					Permits		
28-6-0014	Sierra Downs No5;	AGD	55	749000	6457760	Closed site	Valid	Artefact : -	Shelter with Deposit	
	Contact	Recorders	Warren Bluff					Permits		
36-3-0153	Springdale;	AGD	55	753100	6446370	Open site	Valid	Stone Arrangement : -	Stone Arrangement	1333
	Contact	Recorders	Warren Bluff					Permits		
36-3-0154	Springdale;	AGD	55	752000	6445450	Closed site	Valid	Art (Pigment or Engraved) : -	Shelter with Art	1333
	Contact	Recorders	Warren Bluff					Permits		
28-6-0015	Sierra Downs No2;	AGD	55	748570	6457410	Closed site	Valid	Artefact : -	Shelter with Deposit	
	Contact	Recorders	Warren Bluff					Permits		
28-6-0016	Sierra Downs No1;	AGD	55	748570	6457420	Closed site	Valid	Artefact : -	Shelter with Deposit	
	Contact	Recorders	Warren Bluff					Permits		
28-6-0017	Sierra Downs No3;	AGD	55	748650	6457330	Closed site	Valid	Artefact : -	Shelter with Deposit	
	Contact	Recorders	Warren Bluff					Permits		
28-6-0018	Sierra Downs No4;	AGD	55	749640	6457970	Closed site	Valid	Artefact : -	Shelter with Deposit	
	Contact	Recorders	Warren Bluff					Permits		
28-6-0022	Collieblue;	AGD	55	764040	6470250	Open site	Valid	Modified Tree (Carved or Scarred) : -	Scarred Tree	
	Contact	Recorders	Warren Bluff					Permits		
28-6-0023	Black Stump Creek;	AGD	55	756100	6484220	Open site	Valid	Grinding Groove : -	Axe Grinding Groove	
	Contact	Recorders	Warren Bluff					Permits		
28-6-0024	Serria Downs;	AGD	55	748100	6457650	Closed site	Valid	Art (Pigment or Engraved) : -	Shelter with Art	
	Contact	Recorders	Warren Bluff					Permits		
28-6-0025	Serria Downs;	AGD	55	749860	6457340	Closed site	Valid	Artefact : -	Shelter with Deposit	1333
	Contact	Recorders	Warren Bluff					Permits		
36-3-0003	The Springs Uarbry The Pinnacle	AGD	55	754149	6447466	Open site	Valid	Art (Pigment or Engraved) : -, Grinding Groove : -	Axe Grinding Groove,Rock Engraving	
	Contact	Recorders	Isabel McBryde					Permits		
28-6-0049	BBS; Gilgandra LALC; Road Reserve 1	AGD	55	742973	6479731	Open site	Valid	Artefact : 20		98850

Report generated by AHIMS Web Service on 25/01/2021 for Taylor Foster for the following area at Datum :GDA, Zone : 55, Eastings : 733435 - 766815, Northings : 6443765 - 6484705 with a Buffer of 0 meters. Additional Info : ACHAR. Number of Aboriginal sites and Aboriginal objects found is 78

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Office of Environment & Heritage NSW

AHIMS Web Services (AWS)
Extensive search - Site list report

Your Ref/PO Number : Valley of the Winds
Client Service ID : 563348

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
	Contact	Recorders	Giles Hamm Archaeology,Phil Purcell					Permits		
28-6-0055	Liverpool Range LO6-1,1	GDA	55	766467	6476439	Open site	Valid	Artefact: -		
	Contact	Recorders	Director Jolie Dibden,NSW Archaeology Pty Ltd					Permits		

Report generated by AHIMS Web Service on 25/01/2021 for Taylor Foster for the following area at Datum :GDA, Zone : 55, Eastings : 733435 - 766815, Northings : 6443765 - 6484705 with a Buffer of 0 meters. Additional Info : ACHAR. Number of Aboriginal sites and Aboriginal objects found is 78

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2022 search result

NSW

AHIMS Web Services (AWS)
Extensive search - Site list report

Your Ref/PO Number : VoW
Client Service ID : 676330

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status ***	SiteFeatures	SiteTypes	Reports
36-3-0109	Argyll No.5;	AGD	55	754100	6448050	Open site	Valid	Stone Arrangement: -	Stone Arrangement	
	Contact	Recorders	Warren Bluff					Permits		
28-6-0010	Coolah;	AGD	55	755800	6476000	Open site	Valid	Grinding Groove: -	Axe Grinding Groove	
	Contact	Recorders	ASNSYS					Permits		
28-6-0003	Pound Gully Estate Area;Pilga Burra;	AGD	55	747100	6463250	Closed site	Valid	Art (Pigment or Engraved): -	Shelter with Art	2074
	Contact	Recorders	Warren Bluff					Permits		
28-6-0030	DTG/OC30 Hillside	AGD	55	747500	6459240	Open site	Valid	Artefact: -	Open Camp Site	
	Contact	Recorders	Michael Therin					Permits	2300,2300	
36-3-0088	Gundooee No2;	AGD	55	748307	6450337	Closed site	Valid	Artefact: -	Shelter with Deposit	
	Contact	Recorders	Warren Bluff					Permits		
36-3-0129	Springdale No4;	AGD	55	752350	6443980	Closed site	Valid	Art (Pigment or Engraved): -	Shelter with Art	
	Contact	Recorders	Warren Bluff					Permits		
36-3-0153	Springdale;	AGD	55	753100	6446370	Open site	Valid	Stone Arrangement: -	Stone Arrangement	1333
	Contact	Recorders	Warren Bluff					Permits		
36-3-0536	Barneys Reef Road ST 1	GDA	55	734691	6445104	Open site	Valid	Modified Tree (Carved or Scarred): -		
	Contact	Recorders	OzArk Environmental and Heritage Management - Dubbo,Miss Stephanie Rusden					Permits		
28-5-0019	Box Valley No3;	AGD	55	735050	6463250	Closed site	Valid	Artefact: -	Shelter with Deposit	
	Contact	Recorders	Warren Bluff					Permits		
36-3-0084	Leadville;	AGD	55	739150	6454780	Open site	Valid	Modified Tree (Carved or Scarred): -	Scarred Tree	
	Contact	Recorders	Warren Bluff					Permits		
36-3-0125	Bald Ridge NO:3;	AGD	55	745100	6451860	Closed site	Valid	Artefact: -	Shelter with Deposit	
	Contact	Recorders	Warren Bluff					Permits		
36-3-0115	Argyll No.5	GDA	55	753448	6446945	Open site	Valid	Grinding Groove: - ; Stone Arrangement: - ; Water Hole: -	Axe Grinding Groove,Stone Arrangement,Water Hole/Well	
	Contact	Recorders	Warren Bluff,OzArk Environmental and Heritage Management - Dubbo,Miss Stephanie Rusden					Permits		
36-3-0014	Leadville;	AGD	55	740644	6453458	Closed site	Valid	Art (Pigment or Engraved): -	Shelter with Art	
	Contact	Recorders	Phil Hughes					Permits		

Report generated by AHIMS Web Service on 20/04/2022 for Stephanie Rusden for the following area at Datum : GDA, Zone : 55, Eastings : 733435.0 - 766815.0, Northings : 6443765.0 - 6484705.0 with a Buffer of 0 meters. Number of Aboriginal sites and Aboriginal objects found is 84

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AHIMS Web Services (AWS)
Extensive search - Site list report

Your Ref/PO Number : VNW
Client Service ID : 676330

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
28-6-0001	Salisbury;Coolah;	AGD	55	750200	6470500	Open site	Valid	Artefact: -, Modified Tree (Carved or Scarred): -	Open Camp Site,Scarred Tree	
	Contact	Recorders	Glen Morris					Permits		
36-3-0518	Mangerlowe IF 2	GDA	55	736001	6445104	Open site	Valid	Artefact: -		
	Contact	Recorders	OzArk Environmental and Heritage Management - Dubbo,Miss Stephanie Rusden					Permits		
36-3-0071	Cainhill Creek;Loch Lomond;	AGD	55	754319	6452036	Open site	Valid	Water Hole: -	Water Hole/Well	
	Contact	Recorders	T.E Whittingham					Permits		
36-3-0072	Cainhill Creek;Loch Lomond;	AGD	55	755232	6452002	Open site	Valid	Grinding Groove: -	Axe Grinding Groove	
	Contact	Recorders	T.E Whittingham					Permits		
28-6-0023	Black Swamp Creek;	AGD	55	756100	6484220	Open site	Valid	Grinding Groove: -	Axe Grinding Groove	
	Contact	Recorders	Warren Bluff					Permits		
28-6-0037	DTG/IP12 - Coolaburragundy 3	AGD	55	756000	6473900	Open site	Valid	Artefact: -	Isolated Find	
	Contact	Recorders	Stephanie Garling					Permits		
28-6-0060	Orana OS 1	GDA	55	757004	6464532	Open site	Valid	Artefact: -, Potential Archaeological Deposit (PAD): -		
	Contact	Recorders	OzArk Environmental and Heritage Management - Dubbo,Mr Brendan Fisher					Permits		
36-3-0069	GUNDOOEE N01;	AGD	55	747024	6450293	Closed site	Valid	Artefact: -	Shelter with Deposit	
	Contact	Recorders	Warren Bluff					Permits		
36-3-0131	Springdale No.1;	AGD	55	751080	6444190	Closed site	Valid	Artefact: -	Shelter with Deposit	
	Contact	Recorders	Warren Bluff					Permits		
36-3-0046	Cainhill Creek;Loch Lomond;	AGD	55	751441	6448482	Open site	Valid	Grinding Groove: -	Axe Grinding Groove	
	Contact	Recorders	T.E Whittingham					Permits		
36-3-0082	Rock Linden No.1;	AGD	55	745010	6449790	Closed site	Valid	Art (Pigment or Engraved): -	Shelter with Art	1333
	Contact	Recorders	Warren Bluff					Permits		
36-3-0083	Rock Linden No 4;	AGD	55	745320	6450300	Closed site	Valid	Art (Pigment or Engraved): -	Shelter with Art	
	Contact	Recorders	Warren Bluff					Permits		
28-6-0035	DTG/OCS4 - Coolaburragundy 2	AGD	55	755100	6471910	Open site	Valid	Artefact: -	Open Camp Site	
	Contact	Recorders	Stephanie Garling					Permits	2300,2304	
28-6-0018	Sierra Downs No4;	AGD	55	749640	6457970	Closed site	Valid	Artefact: -	Shelter with Deposit	
	Contact	Recorders	Warren Bluff					Permits		

Report generated by AHIMS Web Service on 20/04/2022 for Stephanie Rusden for the following area at Datum : GDA, Zone : 55, Eastings : 733435.0 - 766815.0, Northings : 6443765.0 - 6484705.0 with a Buffer of 0 meters. Number of Aboriginal sites and Aboriginal objects found is 84

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AHIMS Web Services (AWS)
Extensive search - Site list report

Your Ref/PO Number : VNW
Client Service ID : 676330

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
36-3-0002	Tallrugar River;Loch Lomond Nairby;	AGD	55	751272	6443912	Open site	Valid	Grinding Groove: -	Axe Grinding Groove	
	Contact	Recorders	Isabel McBryde					Permits		
28-6-0061	Old Farm OS 1	GDA	55	755551	6457532	Open site	Valid	Artefact: -, Stone Quarry: -		
	Contact	Recorders	OzArk Environmental and Heritage Management - Dubbo,Mr Brendan Fisher					Permits		
28-5-0020	Box Vally No 4;	AGD	55	753000	6462000	Open site	Valid	Stone Arrangement: -	Stone Arrangement	
	Contact	Recorders	Warren Bluff					Permits		
28-6-0049	BBS; Gilgandra LALC; Road Reserve 1	AGD	55	742975	6479732	Open site	Valid	Artefact: 20		98850
	Contact	Recorders	Giles Hamm Archaeology,Phil Purcell					Permits		
28-6-0007	Weramaui;	AGD	55	744000	6457000	Open site	Valid	Artefact: -	Open Camp Site	
	Contact	Recorders	R Hawkins					Permits		
36-3-0108	Argyll No.4;	AGD	55	753760	6448200	Open site	Valid	Stone Arrangement: -	Stone Arrangement	
	Contact	Recorders	Warren Bluff					Permits		
28-6-0013	Bong Bong Coolah;	AGD	55	748500	6466000	Open site	Valid	Grinding Groove: -	Axe Grinding Groove	
	Contact	Recorders	ASDSYS					Permits		
28-6-0036	DTG/ST32 - Coolaburragundy 1	AGD	55	754920	6471740	Open site	Valid	Modified Tree (Carved or Scarred): -	Scarred Tree	
	Contact	Recorders	Stephanie Garling					Permits		
36-3-0115	Argyll No.1;	AGD	55	754700	6447120	Open site	Valid	Grinding Groove: -	Axe Grinding Groove	
	Contact	Recorders	Warren Bluff					Permits		
28-6-0017	Sierra Downs No3;	AGD	55	748650	6457350	Closed site	Valid	Artefact: -	Shelter with Deposit	
	Contact	Recorders	Warren Bluff					Permits		
28-6-0025	Sierra Downs;	AGD	55	749800	6457340	Closed site	Valid	Artefact: -	Shelter with Deposit	1333
	Contact	Recorders	Warren Bluff					Permits		
28-6-0055	Liverpool Range Lith 1.1	GDA	55	766467	6476439	Open site	Valid	Artefact: -		
	Contact	Recorders	Doctor Julie Dibden,NSW Archaeology Pty Ltd					Permits		
28-5-0005	Box Valley Station;	AGD	55	753110	6463120	Open site	Valid	Grinding Groove: -	Axe Grinding Groove	
	Contact	Recorders	Warren Bluff					Permits		
28-6-0002	Galahiels;	AGD	55	744200	6483500	Open site	Valid	Water Hole: -, Artefact: -, Grinding Groove: -	Axe Grinding Groove,Open Camp Site,Water Hole/Well	2077

Report generated by AHIMS Web Service on 20/04/2022 for Stephanie Rusden for the following area at Datum : GDA, Zone : 55, Eastings : 733435.0 - 766815.0, Northings : 6443765.0 - 6484705.0 with a Buffer of 0 meters. Number of Aboriginal sites and Aboriginal objects found is 84

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AHIMS Web Services (AWS)
Extensive search - Site list report

Your Ref/PO Number : VNW
Client Service ID : 676330

SiteID	SiteName	Datum	Zone	Eastings	Northings	Context	Site Status **	Site Features	Site Types	Reports
	Contact	Recorders	Glen Morris					Permits		
36-3-3806	Cainbil Creek OS 1	GDA	55	752083	6449276	Open site	Valid	Artefact : - Potential Archaeological Deposit (PAD) : -		
	Contact	Recorders	OzArk Environmental and Heritage Management : Dubbo,Mr Brendan Fisher					Permits		
28-6-0040	DTG/ST31 - Vaughans Gully 1	AGD	55	757350	6478810	Open site	Valid	Modified Tree (Carved or Scarred) : -	Scarred Tree	
	Contact	Recorders	Ms.Adrienne Howe-Fleming					Permits		
28-6-0022	Collieflor;	AGD	55	764040	6470250	Open site	Valid	Modified Tree (Carved or Scarred) :	Scarred Tree	
	Contact	Recorders	Warren Bluff					Permits		
28-6-0039	DTG/OC33 - Gotta Rock 1	AGD	55	754610	6469900	Open site	Valid	Artefact : -	Open Camp Site	
	Contact	Recorders	Mr Mark Rawson					Permits	2300,2304	
28-6-0042	DTG/ST33 - Black Stump 2	AGD	55	756200	6483020	Open site	Valid	Modified Tree (Carved or Scarred) :	Scarred Tree	
	Contact	Recorders	Stephanie Garling					Permits		
28-6-0042	DTG/OC36 - Black Stump 1	AGD	55	756240	6483830	Open site	Valid	Artefact : -	Open Camp Site	
	Contact	Recorders	Stephanie Garling					Permits		
28-6-0045	DTG/ST45 - Cox Gap 1	AGD	55	756850	6478450	Open site	Valid	Modified Tree (Carved or Scarred) :	Scarred Tree	
	Contact	Recorders	Mr Mark Rawson					Permits		
28-6-0004	Pound Gully Estate Pilga Butta 2	AGD	55	749680	6465790	Closed site	Valid	Art (Pigment or Engraved) : -	Shelter with Art	3074
	Contact	Recorders	R.B Eastoe					Permits		
28-6-0033	DTG/ST27 - Nandi	AGD	55	749625	6469275	Open site	Valid	Modified Tree (Carved or Scarred) :	Scarred Tree	
	Contact	Recorders	Ms.Adrienne Howe-Fleming					Permits		
36-3-0005	Leaseller;	AGD	55	739100	6454790	Open site	Valid	Modified Tree (Carved or Scarred) : -	Scarred Tree	
	Contact	Recorders	Warren Bluff					Permits		
36-3-0126	Bald Ridge No2;	AGD	55	745050	6451840	Closed site	Valid	Artefact : -	Shelter with Deposit	
	Contact	Recorders	Warren Bluff					Permits		
28-6-0032	DTG/OC35 - Baladonga	AGD	55	756030	6482775	Open site	Valid	Artefact : -	Open Camp Site	
	Contact	Recorders	Mr Mark Rawson					Permits	2300,2304	

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AHIMS Web Services (AWS)
Extensive search - Site list report

Your Ref/PO Number : VNW
Client Service ID : 676330

SiteID	SiteName	Datum	Zone	Eastings	Northings	Context	Site Status **	Site Features	Site Types	Reports
28-6-0009	Galandeene;Coolah;	AGD	55	755950	6478200	Open site	Valid	Grinding Groove :	Axe Grinding Groove	1335
	Contact	Recorders	J. Mahon					Permits		
36-3-3805	Kensington OS 1	GDA	55	750621	6454390	Open site	Valid	Artefact : -		
	Contact	Recorders	OzArk Environmental and Heritage Management : Dubbo,Mr Brendan Fisher					Permits		
28-6-0016	Sierra Downs No1;	AGD	55	748570	6457420	Closed site	Valid	Artefact :	Shelter with Deposit	
	Contact	Recorders	Warren Bluff					Permits		
36-3-0154	Springdale;	AGD	55	752000	6445450	Closed site	Valid	Art (Pigment or Engraved) : -	Shelter with Art	1333
	Contact	Recorders	Warren Bluff					Permits		
36-3-0130	Springdale No2;	AGD	55	752100	6444120	Closed site	Valid	Artefact :	Shelter with Deposit	
	Contact	Recorders	Warren Bluff					Permits		
36-3-0128	Springdale No3;	AGD	55	752850	6444110	Closed site	Valid	Art (Pigment or Engraved) :	Shelter with Art	
	Contact	Recorders	Warren Bluff					Permits		
28-5-0010	Box Vally No2;	AGD	55	735050	6463280	Closed site	Valid	Artefact : -	Shelter with Deposit	
	Contact	Recorders	Warren Bluff					Permits		
36-2-0042	DTG/ST15 - Beamsfield	AGD	55	735000	6455600	Open site	Valid	Modified Tree (Carved or Scarred) : -	Scarred Tree	
	Contact	Recorders	Mr Mark Rawson					Permits		
36-3-0001	Old Castle;	AGD	55	744800	6465220	Open site	Valid	Artefact : -	Open Camp Site	
	Contact	Recorders	Warren Bluff					Permits		
28-6-0041	DTG/ST30 - Vaughans Gully 2	AGD	55	757310	6479870	Open site	Valid	Modified Tree (Carved or Scarred) : -	Scarred Tree	
	Contact	Recorders	Michael Therin					Permits		
36-3-0071	DTG/ST14 - Byalla Downs	AGD	55	736550	6455260	Open site	Valid	Modified Tree (Carved or Scarred) :	Scarred Tree	
	Contact	Recorders	Stephanie Garling					Permits		
28-6-0024	Sierra Downs;	AGD	55	748100	6457650	Closed site	Valid	Art (Pigment or Engraved) :	Shelter with Art	
	Contact	Recorders	Warren Bluff					Permits		
36-3-0112	Argyll No2;	AGD	55	754050	6447030	Open site	Valid	Stone Arrangement : -	Stone Arrangement	
	Contact	Recorders	Warren Bluff					Permits		
28-6-0038	DTG/SHD1-4 - Gotta Rock 2-5	AGD	55	754630	6469940	Closed site	Valid	Artefact : -	Shelter with Deposit	

Report generated by AHIMS Web Service on 20/04/2022 for Stephanie Rusden for the following area at Datum : GDA, Zone : 55, Eastings : 733435.0 - 766815.0, Northings : 6443765.0 - 6484705.0 with a Buffer of 0 meters. Number of Aboriginal sites and Aboriginal objects found is 84

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AHIMS Web Services (AWS)
Extensive search - Site list report

Your Ref/PO Number : VoW
Client Service ID : 676330

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
	Contact	Recorders	Mr Mark Rawson					Permits		
36-3-0003	The Springs Harbry The Pinnacle	AGD	55	754149	6447466	Open site	Valid	Art (Pigment or Engraved) : -, Grinding Groove : -	Axe Grinding Groove,Rock Engraving	
	Contact	Recorders	Isabel McBryde					Permits		
36-3-0073	Cainbill Creek;Loch Lomond;	AGD	55	754319	6452036	Open site	Valid	Stone Arrangement :	Stone Arrangement	
	Contact	Recorders	T.E Whatingham					Permits		
36-3-0132	BULLS GAP;	AGD	55	747360	6457200	Closed site	Valid	Art (Pigment or Engraved) :	Shelter with Art	
	Contact	Recorders	Warren Bluff					Permits		
28-6-0029	DTG/OC39 - Broombee	AGD	55	747850	6459310	Open site	Valid	Artefact :	Isolated Find	
	Contact	Recorders	Ms.Adrienne Howe-Piening					Permits	2300,2304	
28-6-0015	Sierra Downs No2;	AGD	55	748570	6457410	Closed site	Valid	Artefact :	Shelter with Deposit	
	Contact	Recorders	Warren Bluff					Permits		
28-6-0048	BBS; Gilgandra LALC; Crown Reserve	AGD	55	750172	6463037	Open site	Valid	Artefact : 30		98850
	Contact	Recorders	Phil Purcell,Gilgandra LALC - BBS Survey team					Permits		
28-6-0006	Hannah's Bridge;	AGD	55	751000	6459900	Closed site	Valid	Art (Pigment or Engraved) : -	Shelter with Art	
	Contact	Recorders	Isabel McBryde					Permits		
28-6-0034	DTG/OC31 - Belang	AGD	55	752060	6465560	Open site	Valid	Artefact : -	Open Camp Site	
	Contact	Recorders	Michael Therin					Permits	2300,2304	
36-3-0079	Leadville;	AGD	55	739040	6454710	Open site	Valid	Modified Tree (Carved or Scarred) :	Scarred Tree	
	Contact	Recorders	Warren Bluff					Permits		
36-3-0114	Waringle;	AGD	55	740200	6447900	Open site	Valid	Artefact :	Open Camp Site	
	Contact	Recorders	Warren Bluff					Permits		
36-3-0078	Rock linden;	AGD	55	745400	6450500	Closed site	Valid	Art (Pigment or Engraved) :	Shelter with Art	
	Contact	Recorders	Warren Bluff					Permits		
36-3-0080	Rock Linden No 3;	AGD	55	745690	6449990	Closed site	Valid	Art (Pigment or Engraved) :	Shelter with Art	
	Contact	Recorders	Warren Bluff					Permits		
28-6-0033	DTG/OC32 - Bindaree	AGD	55	754400	6468090	Open site	Valid	Artefact :	Open Camp Site	
	Contact	Recorders	Mr Mark Rawson					Permits	2300,2304	
28-6-0014	Sierra Downs No5;	AGD	55	749000	6457760	Closed site	Valid	Artefact : -	Shelter with Deposit	
	Contact	Recorders	Warren Bluff					Permits		

Report generated by AHIMS Web Service on 20/04/2022 for Stephanie Rusden for the following area at Datum :GDA, Zone : 55, Eastings : 733435.0 - 766815.0, Northings : 6443765.0 - 6484705.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 84

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AHIMS Web Services (AWS)
Extensive search - Site list report

Your Ref/PO Number : VoW
Client Service ID : 676330

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
28-6-0013	Pilca Buna No 2;	AGD	55	751260	6464350	Open site	Valid	Grinding Groove :	Axe Grinding Groove	
	Contact	Recorders	Warren Bluff					Permits		
36-3-0220	DTG/ST23 - Narangarie	AGD	55	736950	6455200	Open site	Valid	Modified Tree (Carved or Scarred) :	Scarred Tree	
	Contact	Recorders	Mr Mark Rawson					Permits		
36-3-0127	Bald Ridge No1;	AGD	55	744770	6451610	Closed site	Valid	Artefact :	Shelter with Deposit	
	Contact	Recorders	Warren Bluff					Permits		

** Site Status
Valid - The site has been recorded and accepted onto the system as valid
Destroyed - The site has been completely impacted or harmed usually as consequence of permit activity but sometimes also after natural events. There is nothing left of the site on the ground but proponents should proceed with caution.
Partially Destroyed - The site has been only partially impacted or harmed usually as consequence of permit activity but sometimes also after natural events. There might be parts or sections of the original site still present on the ground
Not a site - The site has been originally entered and accepted onto AHIMS as a valid site but after further investigations it was decided it is NOT an aboriginal site. Impact of this type of site does not require permit but Heritage NSW should be notified

Report generated by AHIMS Web Service on 20/04/2022 for Stephanie Rusden for the following area at Datum :GDA, Zone : 55, Eastings : 733435.0 - 766815.0, Northings : 6443765.0 - 6484705.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 84

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

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