View north across the study area towards Salt Water Creek (tree line in background).

ABORIGINAL CULTURAL HERITAGE ASSESSMENT REPORT

BREWONGLE SOLAR FARM

BATHURST REGIONAL LOCAL GOVERNMENT AREA, NSW

FEBRUARY 2026

Report prepared by

OzArk Environment & Heritage

for Edify Energy Pty Ltd.

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Heritage NSW

ABORIGINAL CULTURAL HERITAGE ASSESSMENT REPORT COVER SHEET

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Report prepared for	Company Name: Edify Energy Contact Person: Patrick Dale Address: Level 3, 201 Charlotte Street, Brisbane QLD 4000 Email: Patrick.dale@edifyenergy.com
Date of Report	February 2026
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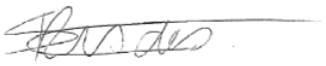

Stephanie Rusden, OzArk Environment & Heritage Director and Senior Archaeologist

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Acknowledgement

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

ABBREVIATIONS AND GLOSSARY

ACHAR	*Aboriginal Cultural Heritage Assessment Report.* As set out in the *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
ACHMP	*Aboriginal Cultural Heritage Management Plan*
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 the DCCEEW, AHIMS is the central register of all Aboriginal sites within NSW
AHIP	Aboriginal Heritage Impact Permit. Issued by Heritage NSW to allow harm to Aboriginal objects
Assemblage:	All artefacts recorded at a location. In this report, assemblage refers to stone artefacts as this was the only artefact class recorded.
BP	Years before present
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 allows limited test excavation without the need to apply for an AHIP
DCCEEW (Cth)	Commonwealth Department of Climate Change, Energy, the Environment and Water. Department responsible for administering the EPBC Act
DCCEEW (state)	NSW Department of Climate Change, Energy, the Environment and Water. DCCEEW contains the Environment and Heritage Group which, in turn, contains Heritage NSW and AHIMS
DPE	Former NSW Department of Planning and Environment. The functions of DPE are now undertaken by DCCEEW and DPHI
DPHI	NSW Department of Planning, Housing, and Infrastructure. DPHI contains the planning group
EIS	Environmental Impact Statement. A required document for major projects documenting all potential impacts to the environment, including heritage, that may arise due to the development

EP&A Act	*Environmental Planning and Assessment Act 1979*. Act that institutes a system of environmental planning and assessment for the State of New South Wales
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999*. Commonwealth legislation that governs matters of national and world heritage significance
GSE	Ground surface exposure. A measure of factors that may reveal surface artefacts such as erosion scalds
GSV	Ground surface visibility. A measure of factors that may obscure the detection of surface artefacts such as leaf litter
Heritage NSW	Government department tasked with ensuring compliance with the NPW Act
Holocene	Geological epoch which lasted from around 12,000 years ago (10,000 BCE) to the present. This period is generally warmer and wetter than the preceding Pleistocene period
NPW Act	*National Parks and Wildlife Act 1974*. Primary legislation governing Aboriginal cultural heritage within NSW
PAD	Potential archaeological deposit. Indicates that a particular location has potential to contain subsurface archaeological deposits, although no Aboriginal objects are visible
Pleistocene	Geological epoch which lasted from about 2.5 million years ago to 10,000 BCE. This period spans the world's recent period of repeated glaciations. Aboriginal occupation of Australia occurs during the upper Pleistocene
RAP	Registered Aboriginal Party. An individual or group who have indicated through the ACHCR process that they wish to be consulted regarding the project
SEARs	Secretary's Environmental Assessment Requirements issued by DPHI

EXECUTIVE SUMMARY

OzArk Environment & Heritage (OzArk) has been engaged by Edify Energy Pty Ltd (the applicant) to complete an *Aboriginal Cultural Heritage Assessment Report* (ACHAR) for the proposed Brewongle Solar Farm (the project). The project is located at 315 Tarana Road, Brewongle, 10 kilometres (km) south-east of Bathurst, in the Bathurst Regional Local Government Area.

The project is a State Significant Development (SSD-648344490) under Part 4 of the *Environmental Planning Assessment Act 1979*. This ACHAR has been undertaken to meet the Secretary's Environmental Assessment Requirements (SEARs) which were issued on 22 December 2023.

The project involves the construction of a ground mounted photovoltaic solar array which would have capacity to generate up to 90 megawatts (MW) of renewable energy. The project intends to connect into the existing 132 kilovolt (kV) transmission line (TransGrid owned) which extends east-west, crossing through the northern section of the study area. This connection will be achieved via an overhead line and will require the construction of a new substation.

A search of the Aboriginal Heritage Information Management System (AHIMS) register on 27 October 2023 returned 45 results for Aboriginal sites within a 20 km radius of the study area. None of the sites are within or near the study area.

Assessment of the study area took place with the assistance of Registered Aboriginal Parties (RAPs) over two days (14-15 February 2024). The survey resulted in four potential archaeological deposits (PADs) being recorded along Salt Water Creek (Salt Water Creek PAD 1 to PAD 4), in the north of the study area. As PADs 1, 3 and 4 are being avoided, test excavation is not warranted.

Test excavation took place on 22 and 23 September 2025 to investigate Salt Water Creek PAD 2. Test excavation did not identify any artefacts or potential resources, as such, it was determined that Salt Water Creek PAD 2 (44-3-0326) was not a PAD and works could proceed in this area.

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

1. Following development consent of the proposal, the applicant will develop an Aboriginal Cultural Heritage Management Plan (ACHMP) in consultation with the RAPs and the Department of Planning, Housing and Infrastructure (DPHI) and Heritage NSW. The ACHMP will include an unanticipated finds protocol, unanticipated skeletal remains protocol, and long-term management of any artefacts. Construction cannot commence until the ACHMP has been approved by DPHI.
2. The applicant has redesigned the layout of the project to avoid harm to Salt Water Creek PAD 1, PAD 3 and PAD 4. These PADs should be protected during the construction of the project through temporary fencing and their location marked on all relevant plans for

construction workers (**Section 10.2**). Erosion control measures should be implemented, if required, to ensure the PADs are not indirectly impacted during the construction of the project.

3. Test excavation at Salt Water Creek PAD 2 determined that no archaeological deposit is present at the location and no further management is required. The AHIMS registration for the site will be updated to 'not a site'. Works may proceed within the previously recorded boundaries of this PAD.
4. All land-disturbing activities must be confined to within the assessed study area (excluding the identified areas of PADs). Should the parameters of the proposed work extend beyond this, then further archaeological assessment may be required.

CONTENTS

FIGURES

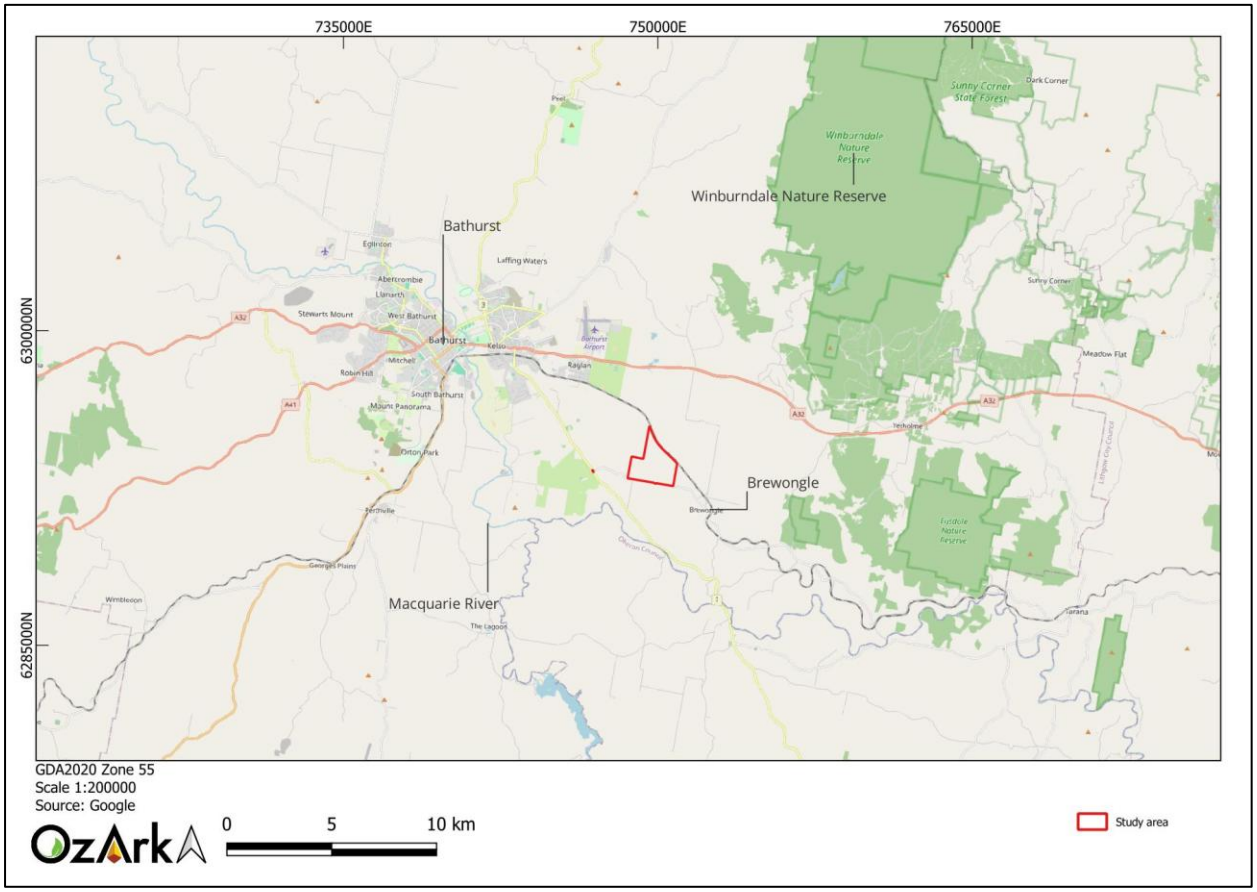
TABLES

1 INTRODUCTION

1.1 DESCRIPTION OF THE PROJECT

OzArk Environment & Heritage (OzArk) has been engaged by Edify Energy Pty Ltd (the applicant) to complete an Aboriginal Cultural Heritage Assessment Report (ACHAR) for the proposed Brewongle Solar Farm (the project). The project is located at 315 Tarana Road, Brewongle, 10 kilometres (km) south-east of Bathurst, in the Bathurst Regional Local Government Area (**Figure 1-1**).

Figure 1-1: Map showing the location of the study area for the project.



1.2 PROJECT OVERVIEW

The project involves the construction of a ground mounted photovoltaic solar array which would have capacity to generate up to 90 megawatts (MW) of renewable energy. The project intends to connect into the existing 132 kilovolt (kV) transmission line (TransGrid owned) which extends east-west, crossing through the northern section of the study area. This connection will be achieved via an overhead line and will require the construction of a new substation.

Other infrastructure for the project includes:

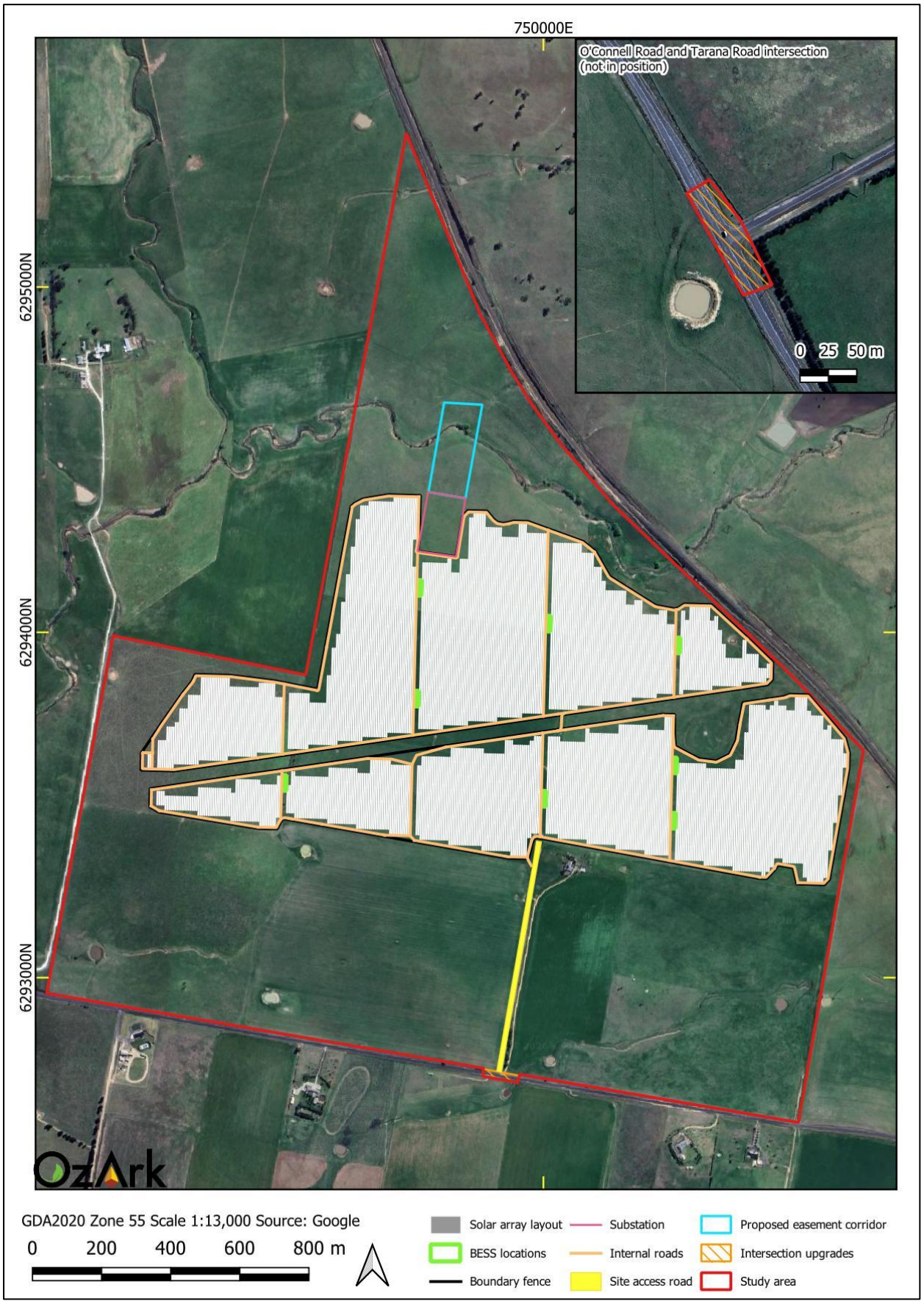
- Solar panel arrays
- Inverters, transformers, overhead lines, and underground cabling

- A battery storage system
- Associated maintenance and administrative buildings
- Access tracks, easement crossings, and perimeter security fencing
- Site access via Tarana Road.

The above infrastructure will be constructed within an indicative impact area covering approximately 153 hectares (ha) of land within the study area (**Figure 1-2**).

The project will also involve two intersection upgrades, the first being along Tarana Road at the site access point and the other being the intersection of O'Connell Road and Tarana Road located to the west of the study area.

Figure 1-2: Conceptual layout of the project.



1.3 STUDY AREA

The study area describes the area in which all impacts associated with the project will be located (**Figure 1-3**). The study area includes Lots 1 and 2 DP1236901, and Lot 1 DP1206130 which is known as '*Mandara*', covering approximately 299 hectares (ha) of rural land which has been historically cleared for agricultural purposes and currently used for livestock grazing. The study area also includes a small parcel of land at the intersection of O'Connell Road and Tarana Road.

Figure 1-3: Aerial showing the study area.

2 THE ABORIGINAL CULTURAL HERITAGE ASSESSMENT

2.1 RELEVANT LEGISLATION

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

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

2.1.1 Commonwealth legislation

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

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

2.1.1.2 Aboriginal and Torres Strait Islander Heritage Protection Act 1984

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

Applicability to the project

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

2.1.2 State legislation

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

This Act established requirements relating to land use and planning. The main parts of the EP&A Act that relate to development assessment and approval are Part 4 (development assessment) and Part 5 (environmental assessment). The purpose of the Part 5 assessment system is to ensure public authorities fully consider environmental issues before they undertake or approve activities that do not require development consent from a council or the Minister. The Minister responsible for the Act is the Minister for Planning.

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

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

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

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

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

- Part 4: Local government development assessments, including heritage. May include schedules of heritage items
    - Division 4.7: Approvals process for state significant development.

Applicability to the project

The current project will be assessed under Division 4.7 of the EP&A Act.

As the project is a State Significant Development (SSD-648344490), if approved, Section 4.41 of the EP&A Act would apply and therefore an AHIP under section 90 of the NPW Act to harm Aboriginal objects would not be required. Instead, all management related to Aboriginal cultural heritage within the study area would be governed by the policies within an approved *Aboriginal Cultural Heritage Management Plan* (ACHMP).

2.1.2.2 National Parks and Wildlife Act 1974 (NPW Act)

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

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

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

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

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

Applicability to the project

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

The Secretary of NSW DCCEEW will be notified of the location of an Aboriginal object recorded by sending the relevant details to the AHIMS register.

2.1.2.3 Secretary's Environmental Assessment Requirements

SEARs were issued by the Department of Planning and Environment (now Department of Planning, Housing and Infrastructure [DPHI]) on 22 December 2023. In relation to Aboriginal cultural heritage, the SEARs state:

- *an assessment of the impact to Aboriginal cultural heritage items (cultural and archaeological) 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, 2010), including results of archaeological test excavations (if required).

- *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, 2010); and*

No additional requirements from Heritage NSW are contained in the SEARs.

2.2 ASSESSMENT APPROACH

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

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

2.3 PURPOSE AND OBJECTIVES

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

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

Objective One: Undertake background research on the study area to formulate a predicative model for site location within the study area

Objective Two: Identify and record Aboriginal cultural heritage values within the survey areas. This includes intangible cultural values, Aboriginal objects, and any landforms likely to contain further archaeological deposits

Objective Three: To assess the significance of any recorded Aboriginal cultural values, Aboriginal objects, or sites in consultation with Registered Aboriginal Parties (RAPs)

Objective Four: Assess the likely impacts of the project to Aboriginal cultural heritage values and provide management recommendations.

2.4 REPORT COMPLIANCE WITH THE CODE OF PRACTICE

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

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

Code of Practice Requirement	Context of the Requirement	Concordance in this report
Requirement 1a	Review previous archaeological work	**Section 5.2**
Requirement 1b	Review AHIMS searches	**Section 5.4**
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 5.5**
Requirement 4a	Develop predictive model	**Section 5.4**
Requirement 4b	Present predictive model results	**Section 5.5**
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 4.1.1**
Requirement 6	Site definition	**Section 5.5**
Requirement 7a	Site recording information to be recorded	Not applicable to this report as no new sites were recorded.
Requirement 7b	Site recording: scales for photography	Not applicable to this report as no new sites were recorded.
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 - 17	Test excavation which is not excluded from the definition of harm	The test excavation program complied with this requirement; see **Section 7**.
Requirement 15a	Consultation regarding test excavation	Consultation has included the ACHCRs, see **Section 3.2.4**.
Requirement 15b	Developing a test excavation sampling strategy	A test excavation methodology was produced (**Appendix 4**) and issued to Registered Aboriginal Parties for their information.
Requirement 15c	Providing Heritage NSW with notification of the test excavation	Heritage NSW was provided with a copy of the test excavation methodology via the heritage mailbox on 19 September 2025 and acknowledged receipt.
Requirement 16a	Test excavation that can be carried out in accordance with the Code of Practice	The test excavation program complied with this requirement; see **Section 7**.
Requirement 18–20	Artefact recording	No artefacts were identified during this assessment.

2.5 DATE OF ARCHAEOLOGICAL ASSESSMENT

The field survey was undertaken by OzArk on the Wednesday 14 and Thursday 15 February 2024.

2.6 OZARK INVOLVEMENT

2.6.1 Field survey

The fieldwork survey was undertaken by:

- Fieldwork Director: Harrison Rochford (OzArk Archaeologist; M. Phil, B Liberal Studies [Hons], University of Sydney)
- Archaeologist: Sophia Grubnic (OzArk Archaeologist; BA [Hons] Art History, University of QLD, BA Art History and Ancient World studies, University of Melbourne).
- Archaeologist: Tenae Robertson (OzArk Archaeologist; B Archaeological Practices, Australian National University)
- Archaeologist: Jordan Henshaw (OzArk Archaeologist; Bachelor of Ancient History, Macquarie University).

2.6.2 Test excavation

- Fieldwork Director: Eleanore Martin (OzArk Archaeologist
- Archaeologist: Gloria Aranda-Spinazze (BA [Archaeology and Environmental Studies], University of Sydney)
- Archaeological assistant: Troy Willoughby (B Archaeology, University of New England – in progress)

2.6.3 Reporting

The reporting component of the heritage assessment was undertaken by:

- Report author: Dr. Bernadette Drabsch (OzArk Heritage Consultant, BA Ancient History, BNHI Hons and PhD Design/Archaeology, University of Newcastle)
- Contributor: Harrison Rochford: **Sections 6-7**
- Contributor: Gloria Aranda-Spinazze: **Section 7**
- Reviewer: Stephanie Rusden (OzArk Director and Senior Archaeologist; BS University of Wollongong, BA University of New England).

3 ABORIGINAL COMMUNITY CONSULTATION

3.1 INTRODUCTION TO CULTURAL VALUES

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

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

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

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

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

3.2 ABORIGINAL COMMUNITY CONSULTATION

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

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

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

3.2.1 ACHCRs Stage 1

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

An advertisement was placed in the *Western Advocate, Bathurst* on 26 October 2023 to solicit expressions of interest (**Appendix 1 Figure 2**).

A letter seeking information from various agencies was sent on 26 October 2023 (**Appendix 1** Figure 3). These agencies were: Office of the Registrar, *Aboriginal Land Rights Act 1983*; Heritage NSW; National Native Title Tribunal; National Native Title Services Corporation Ltd (NTSCORP); Bathurst Local Aboriginal Land Council (LALC), Bathurst Regional Council, and the Central Tablelands Local Land Services.

Letters were sent to individuals and groups whose contact details had been provided by the government agencies on 9 November 2023(**Appendix 1 Figure 4**).

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

- Bathurst LALC
- Didge Ngunawal Clan
- Geoffrey Toomey
- Konanggo Aboriginal Cultural Heritage Services
- Long Gully Cultural Services
- Mingaan Aboriginal Corporation
- Murra Bidgee Aboriginal Corporation
- Stakeholder 1[1]
- Thomas Dahlstrom
- Tim Stubbs
- Wingarra Wilay Aboriginal Corporation
- Wiradjuri Traditional Owners Central West Aboriginal Corporation

During the ACHCRs process, broader community consultation identified an additional potential stakeholder: Wiradjuri Traditional Owners Central West Aboriginal Corporation. The details of the project and an invitation to register as a RAP were sent to available contact details for the group

[1] RAP listed as 'Stakeholder 1' has requested their details not be disclosed.

on 23 February 2024 but no response was received. They have been provided project key information and were sent the ACHAR for comment.

3.2.2 ACHCRs Stage 2

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

Detailed project information was provided in the assessment methodology which was issued to all RAPs for their consideration on 28 November 2023 (**Appendix 1 Figure 5**). Detailed information regarding the test excavation program was provided to RAPs for their consideration on 14 June 2025 (**Appendix 1 Figure 5**)

3.2.3 ACHCRs Stage 3

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

To inform the RAPs of the assessment, an assessment methodology was issued to all RAPs for their consideration on 28 November 2023 (**Appendix 1 Figure 5**). This document provided the archaeological context of the study area, a description of the proposed survey, and asked whether there were any cultural values that should be considered in the assessment.

RAPs were provided the stipulated 28 days in which to review and comment on the assessment methodology as per Stage 3 of the ACHCRs. The closing date for comment was 29 December 2023.

Responses were received from Tim Stubbs and Murra Bidgee Aboriginal Corporation advising that they had reviewed and supported the methodology (**Appendix 1 Figure 6**).

A response from Geoffrey Toomey on 30 November 2023 suggested that it was '*fair to assume there will be artefacts located on site, especially with Saltwater Creek passing through the study area. Also, with Bathurst being a large scale place of cultural significance, serving as a meeting place for grand ceremonies. I feel like it will turn up a few artefacts just based on those key factors*' (**Appendix 1 Figure 6**).

A project update email was provided to all RAPs on 3 June 2024 notifying them the ACHAR was being finalised and would be provided for their review shortly (**Appendix 1 Figure 7**).

3.2.3.1 Aboriginal community participation in the field survey

The field survey was undertaken with the assistance of Tonilee Scott and Mia Dopper on 14 and 15 February 2024, both representing Bathurst LALC. Representatives from Mingaan Aboriginal Corporation were invited to participate in the survey but were unable to attend.

3.2.4 ACHCRs Stage 4

Stage 4 involves the production of a draft ACHAR that is issued to all RAPs for their consideration. The ACHAR will document the results of the assessment, outline opportunities for the conservation of Aboriginal cultural values, and suggest recommendations for the management of Aboriginal objects should impacts to these objects be unavoidable. The draft ACHAR was distributed to all RAPs for their review on Friday 14 June 2024 with a closing date for comment of Friday 12 July 2024 (**Appendix 1 Figure 10**).

Two comments were received during the Stage 4 consultation period, from Konanggo Aboriginal Cultural Heritage Service and Murra Bidgee Aboriginal Corporation (**Appendix 1 Figure 11**).

Following the finalisation of the ACHAR in July 2024, a test excavation program was developed for the project in relation to potential impacts at Salt Water Creek PAD 2. A test excavation methodology was shared with RAPs for their review on 11 September 2025. Five responses were received from the RAPs supporting the proposed methods before the close of the review period on 10 October 2025. These responses are provided in full as **Appendix 1 Figure 9**.

Responses were received from Didge Ngunawal Clan (DNC), Long Gully Cultural Services, Mingaan Aboriginal Corporation, Murra Bidgee Aboriginal Corporation, Thomas Dahlstrom and Wingarra Wilay Aboriginal Corporation.

3.2.4.1 Aboriginal community participation in the test excavation

The test excavation program was undertaken with the assistance of Matt Sullivan (Bathurst LALC) and Jack Brasher (Mingaan) over 22 and 23 of October. Ray Hampton (Thomas Dahlstrom) was present on 22 October and Tim Stubbs on 23 October.

3.3 CULTURAL VALUES IDENTIFIED THROUGHOUT THE ACHCR PROCESS

No specific cultural values were identified by the RAPs to date regarding the study area, however, Geoffrey Toomey provided feedback noting that the presence of Salt Water Creek within the study area indicates that the artefacts would likely to present. Additionally, Mr Toomey has advised that ceremonies were undertaken across the broader Bathurst region. As such, the strong cultural values of Aboriginal communities towards landscapes and cultural heritage sites are recognised.

4 LANDSCAPE CONTEXT

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

4.1 TOPOGRAPHY AND GEOLOGY

The study area is located within Bathurst Granites landscape classification in the South Eastern Highlands bioregion (Mitchell 2002). The Bathurst Granites landscape, as characterised by Mitchell (2002) consists of undulating to steep hills on granites, with rock outcrops common along ridge lines, with the elevations within the landscape classification range between 600 to 1000 metres (m). The topography of the study area differs from the characteristics of the Bathurst Granites as it consists primarily of gentle slopes and flats, with a maximum elevation of 730 m and does not contain outcropping granite (**Figure 4-1**).

Figure 4-1: Topography and drainage of the study area.

4.1.1 Survey units

Based on the topography of the study area, survey units were identified to capture the major topographical features of the study area. The designation of survey units allows a comparison of the archaeological potential of each major topographical feature within the study area to understand whether certain landform types are more likely to contain Aboriginal objects than others.

The topography of the study area is primarily gentle slopes or flats, with the highest points being at the southeastern boundary with an elevation of 730 m and the north at an elevation of 720 m (**Figure 4-2**). The landform then slopes to the west and flattens near Salt Water Creek (where Salt Water Creek is located to the west of the study area) (**Figure 4-1**).

Previous studies in the district (Pickering 1980; Appleton 1999; OzArk 2021) indicate that these gentle slopes or flats have a likelihood to contain isolated finds and artefact scatters, though larger, high-density artefact sites are less likely to be recorded.

Preliminary landform mapping within the study area indicates there are three main landform types (**Figure 4-3**):

- Survey Unit 1: drainage (drainage lines with a 50 m buffer and Salt Water Creek with a 100 m buffer)
- Survey Unit 2: flats
- Survey Unit 3: gentle slopes.

Figure 4-2: Topography of the study area.

<table>
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<tr>
<td>1. View of a gentle slope landform unit in the drainage survey unit of the study area.</td>
<td>2. View towards Salt Water Creek, a perennial watercourse intersecting the study area in the north.</td>
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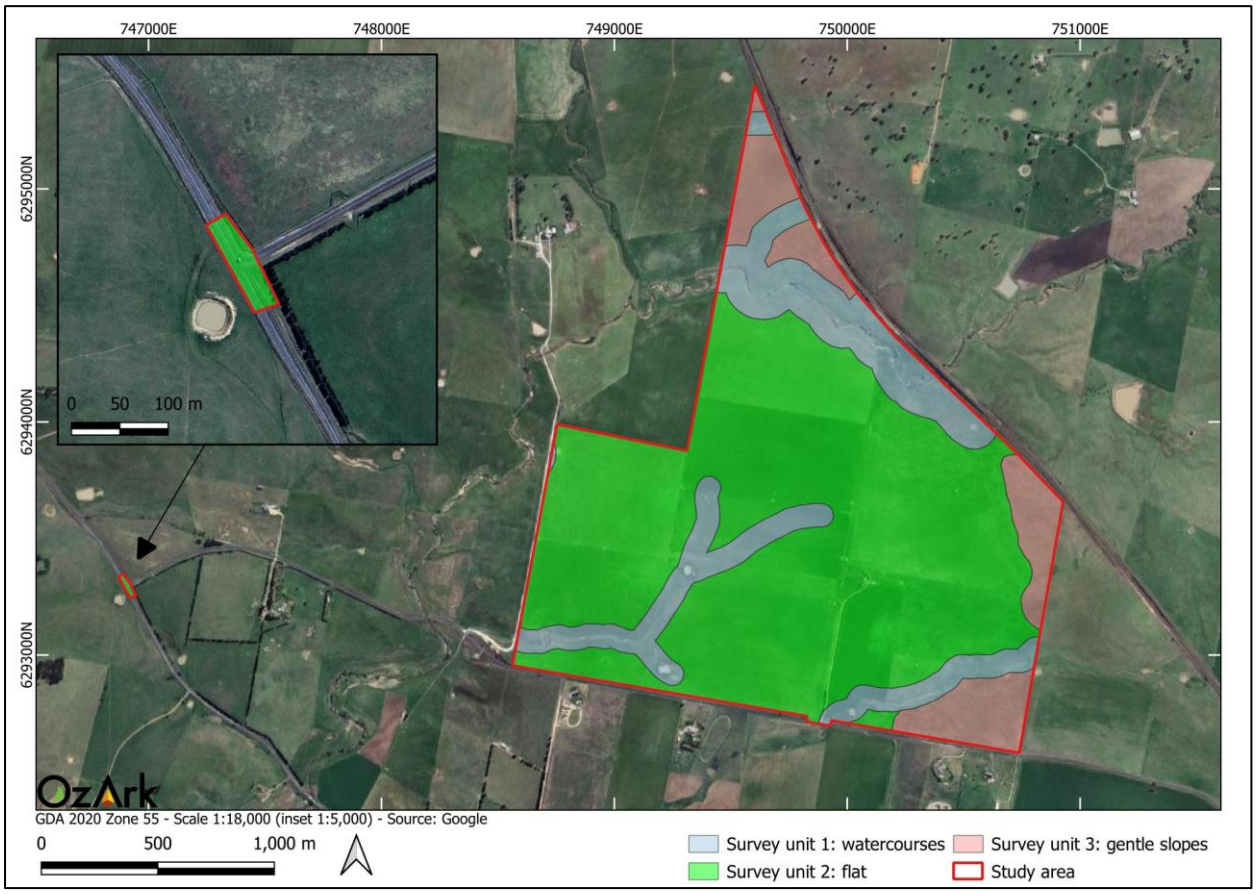
</table>

Figure 4-3: Aerial of the study area showing the location of survey units.



4.2 SOILS

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

The soils within the study area are associated with three soil landscapes: the Bathurst, Macquarie, and Raglan soil landscapes (Murphy and Lawrie 1990). The Raglan soil landscape comprises the largest proportion of the study area, primarily encompassing the southern and northern sections. The Raglan soil landscape consists largely of Red Solodic soils with some Yellow Solodic soils found on lower slopes and within drainage depressions. Raglan topsoil reaches 30 centimetres (cm) in depth and tends to be a sandy loam or loam with a weak structure, while the subsoils tend to be a medium to heavy clay with a strong structure and manganese nodules. Both the topsoils and subsoils of the Raglan soil landscape are highly susceptible to erosion.

The Macquarie soil landscape comprises a smaller proportion of the study area, confined to the alluvial flat along Salt Water Creek in the northern and western-most sections of the study area. The dominant soils within the Macquarie soil landscape are Prairie Soils, which are characterised by a black loam to clay loam topsoil reaching 30 cm in depth, and black light clay subsoils (Murphy

and Lawrie 1990). The topsoils have a moderate erodibility, while the subsoils are less susceptible to erosional processes.

The Bathurst soil landscape comprises the smallest portion of the study area. Located in the southwest corner of the study area, the soils within this landscape are primarily non-calcic Brown Soils, with Yellow Solodic Soils on lower slope and drainage lines (Murphy and Lawrie 1990). The topsoils are weak in structure, consisting of loamy sands with moderate erodibility. The subsoils range from sandy clay loam to heavy clay with a moderately strong structure, with a low erodibility.

4.3 HYDROLOGY

The Fish River is the closest major watercourse and is located approximately 1.5 km south of the study area. Salt Water Creek, a perennial watercourse which flows into the Fish River, intersects directly through the northern section of the study area, running in a general east-west direction. Fish River drains into the Macquarie-Wambuul River, which is the major river system in the region, located approximately 5 km southwest of the study area. Two ephemeral unnamed tributaries of Salt Water Creek and Fish River intersect the southern portion of the study area (**Figure 4-1**).

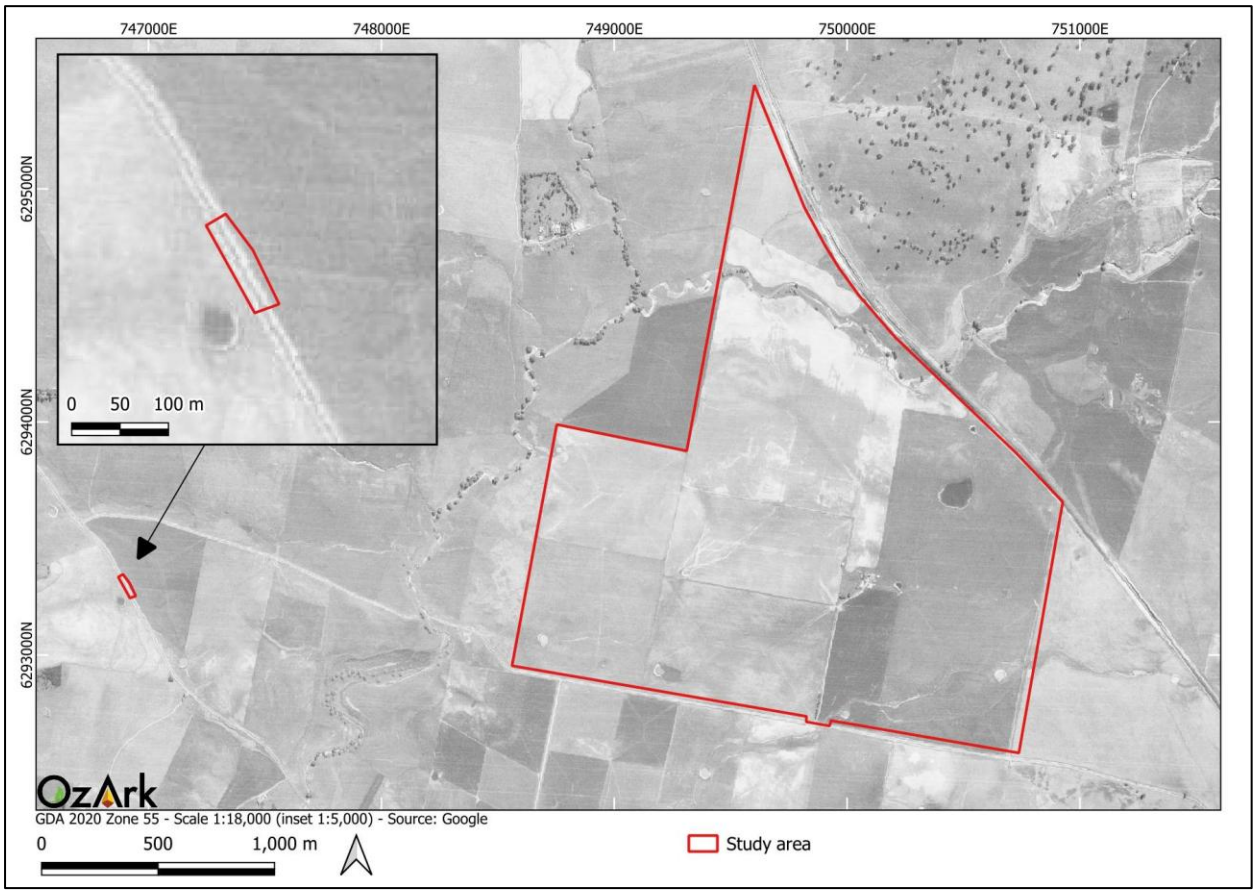
4.4 VEGETATION

Savannah grasslands are the dominant vegetation of the soil landscapes within study area, and the vegetation associated with the Bathurst Granites comprises woodland to open forests of box, gum, and stringybark species, as well as river oak (Mitchell 2002). However, examination of the aerial imagery (**Figure 4-1**) shows that the study area has been cleared of most mature, native vegetation, though some trees remain along the riparian corridors of Salt Water Creek.

4.5 LAND USE HISTORY AND EXISTING LEVELS OF DISTURBANCE

The study area is used primarily for grazing and cultivation purposes. Additional disturbances appear to be limited to construction of homesteads and agriculture infrastructure, fence lines, dams, and unsealed tracks. An aerial from 1972 which covers the study area shows there has been little change in terms of land use over the past 51 years (**Figure 4-4**)

Figure 4-4: 1972 aerial with overlay of study area (source: SS2023).



4.6 CONCLUSION

Historical aerial imagery and scientific research indicates that the landforms of the study area have undergone significant changes. The gentle slopes and flats have historically been used as agricultural land, resulting in a high degree of modification to at least the top 20 cm of the soil profile. The study area is mostly cleared of native vegetation containing a small collection of native trees along the riparian corridors of Salt Water Creek, in the northern portion. The landscape was formed on a granite base overlaid with characteristic textured contrast soils on the slopes. The are no areas of outcropping rock and topsoils are weak in structure and subject to erosion while the subsoils feature a medium to heavy clay with a strong structure and poor drainage. The study area is intersected by two ephemeral waterways in the southern portion and Salt Water Creek in the northern portion, which drains into Fish River, which in turn drains into the Macquarie-Wambuul River. These drainage lines have likely undergone significant changes through erosional activities and also gathered silt since the clearing of native vegetation and the commencement of ploughing. Prior to the clearance of the land Salt Water Creek may have provided resources (i.e. freshwater fauna species) attractive to Aboriginal people.

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

- Topography and hydrology: the flat to gently undulating landforms which dominate the study area would have been hospitable to Aboriginal people, however, apart from Salt Water Creek, there are few areas within the study area which would have encouraged substantial Aboriginal occupation of the landscape.

- Geology and soils: landforms which typically comprise outcropping rock are not present within the study area, and therefore sources of stone procurement for tool manufacture will not be present. Soils present on the gentle slopes inside the study area are likely to have been affected by water erosion and are poor draining. The erosional qualities of the soils present will have had an effect on the likelihood for *in situ* archaeological deposits being present. Furthermore, the widespread and comprehensive use of most of the study area for cultivation would have further promoted soil erosion and loss.

- Vegetation: the study area would have once supported an open woodland which would have provided some resources for Aboriginal subsistence in the past. However, resources likely to have supported a large population of people would have been present closer to the banks of more permanent water sources including the Macquarie-Wambuul River. The broad-scale vegetation clearance which has taken place across the study area for agricultural purposes reduces the likelihood that any culturally modified trees remain present, however, should mature native vegetation remain, particularly along Salt Water Creek, culturally modified trees may be present.

- Land use: ground surface disturbances such as vegetation clearance, cultivation, and grazing exist throughout the study area. These activities may have displaced Aboriginal objects and are likely to have reduced the potential for subsurface archaeological material. However, disturbance at a given location does not necessarily mean that there will be no cultural material present, as often a disturbed context will reveal objects which may have previously been subsurface. As noted above, initial vegetation clearing would also have significantly reduced the likelihood of culturally modified trees remaining.

5 ARCHAEOLOGICAL CONTEXT

5.1 ETHNO-HISTORIC SOURCES OF REGIONAL ABORIGINAL CULTURE

According to Tindale's (1974) and Horton's (1994) maps of tribal or ethno-linguistic boundaries, the Wiradjuri occupied the northern parts of the South Eastern Highlands bioregion near Orange and Bathurst. As such, the study area falls within the Wiradjuri ethno-linguistic group.

Although tribal boundaries still retain some uncertainty, it is thought that the Wiradjuri people were the largest language group in New South Wales, with dialects spoken from Coonabarabran in the north, the Murray River to the south, western Blue Mountains in the east and Condobolin in the west.

The Wiradjuri are the people of the three rivers, inhabiting a widespread area which extended from the Great Dividing Range, west to the Macquarie-Wambuul, Lachlan (Kalare) and the Murrumbidgee (Murrumbidjeri) rivers (Coe, 1989, Bamblett, 2013). Wiradjuri people maintained connections across the long distances, through ceremonial cycles which moved around the tribal area (Tindale 1974). Differences in dialect have been recorded amongst the Wiradjuri, and notably one has been recorded around the Bathurst region (Tindale 1974) which coincides with a distinctive upper Macquarie clan territory centred around Bathurst (Pearson 1984:68).

Oral tradition records the presence of over 20 clans within the broader Bathurst–Mudgee region, organised according to matrilineal descent (Navin Officer 2005: 48). Clans were made up of several fairly independent groups, of up to 20 members, in friendly contact with each other, moving separately for much of the year over a shared territory (Pearson 1981; Haglund 1985).

Early accounts of contact between European and Aboriginal people in the Macquarie-Wambuul River area were provided by Oxley (1820) and Sturt (1834), and later by Garnsey (1942) who was born in Dubbo in 1874 (Whitehead 2003). Early references to Aboriginal people in the Orange and Wellington regions are provided by John Oxley, who passed by Limestone Creek, south of Mt Canobolas, on 12 April 1817, describing the area as "*a beautiful picturesque country of low hills and fine valleys well-watered*" (Whitehead 2003: 351). Further southwest, at the Lachlan River, Oxley met Aboriginal people carrying stone hatchets and possum skin cloaks. Oxley then returned to Bathurst along the Bell and Macquarie-Wambuul Rivers north of Orange in late August, passing near Wellington on 25 August 1817. Oxley noted the abundant natural resources in areas adjacent to the Macquarie-Wambuul River—including emus, ducks, swans, fish and freshwater muscles—and that the country had an abundance of running water, with a spring on every hill (Rawson 1997:8).

Garnsey's interest in local Aboriginal culture led him to record information gleaned from his father and from Wiradjuri Aboriginal elders in the Dubbo area. His work remains a useful account of everyday life and religious/ceremonial practices. Garnsey's (1942:6) description of camp life

suggests that many activities were performed communally, for the benefit of the mob. Campsites comprised a series of bark or bush shelters arranged in a semi-circle opening to the east, arranged around a central fire, with men occupying shelters to the north, women in the centre, and children to the south. Camps moved frequently over short distances due to alterations in social relations and weather, and in response to hygiene concerns, among other factors. Longer distance movements tended to be linked to participation in large-scale gatherings (e.g. ceremony or warfare) or alterations in resource availability. Garnsey (1942:6–23) also provides detailed descriptions of ceremonial practices related to alterations in social status and passages from infancy to adulthood. These descriptions are a composite of various verbal accounts, the accuracy of which is difficult to ascertain. Garnsey (1942:14) suggests that the 'mob' structure began to break down during the 1890s, by which time only older men appeared to retain the tribal markings and knowledge associated with ceremonial practice. Oral histories provided by traditional custodians are likely to elaborate upon and refute aspects of these early accounts.

In the early colonial period, relationships between Europeans and Aboriginal people were relatively amicable while there were few colonists. Pearson analysed observations written by nineteenth century observers from the upper Macquarie region:

> *The upper Macquarie was inhabited by large localised groups of Aborigines, who in normal conditions of daily life were divided into small groups of up to twenty individuals. These small groups could coalesce relatively quickly into groups of from 80 to 150 people to take advantage of a guaranteed or desirable resource (such as seasonal food resources or the goods offered by the Wellington mission), for ceremonial or social obligations, or for special events (such as a pre-arranged gathering to see an explorer or first settler in an area). There seem to have been no over-riding seasonal factors affecting Aboriginal movements in the well-watered upper Macquarie* (Pearson 1984: 64).

Plants were used for food, as well as in the manufacture of practical items, decorative items and medicines, with some species providing more than one resource. Grass stalks could be used for weaving or producing baskets. Large trees were useful in providing bark and fibres used for the manufacture of tools, containers and possibly the construction of watercraft. The resin obtained from Grass Trees, for example, were an adhesive that could be used in hafting processes. Bark fibres were twisted into twine which could then be woven into traps, containers or baskets and a variety of wooden tools. Stone was also used for tools (RPS 2014).

5.2 REGIONAL ARCHAEOLOGICAL CONTEXT

Aboriginal occupation of Australia begins prior to 40,000 BP (years before present) and possibly earlier than 50,000 BP. Dates exceeding 20,000 years occur in almost all parts of Australia resulting in the expectation that most areas should have a Pleistocene (>12,000 BP) occupational

signature. However, such dates remain relatively rare due to a range of factors, both behavioural and post-depositional. These factors include a possible low density of occupation in the Pleistocene period and poor preservation of archaeological materials (particularly dateable organic materials).

There are several broad scale regional archaeological studies which either cover the study area itself or are in general proximity to it. These studies have been summarised below.

Early observations on Aboriginal archaeological sites of the Bathurst region (Gresser 1963)

Prior to 1979, no systematic regional archaeological studies had been undertaken in the Bathurst area, although some interested locals or amateurs had recorded some sites. In the 1960s, Percy Gresser, a Bathurst shearer and amateur historian, described how the hilly land to the north of Bathurst contained numerous camp sites located on low ridges adjacent to creeks and springs. Gresser notes that although most sites are located adjacent to creeks, occasionally they are located elsewhere including elevated ridge tops.

Archaeological analysis within the Upper Macquarie Region (Pearson 1981)

Pearson (1981) analysed the patterns of Aboriginal and early colonial settlement within the Upper Macquarie-Wambuul Region, including some excavation. Three shelters were excavated, yielding occupation dates to around 7,000 BP. Pearson argued that archaeological sites could be divided into two main categories: occupation sites and non-occupation sites (which included grinding grooves, scarred or carved trees, ceremonial and burial sites etc.). Pearson's analysis of site location yielded a site prediction model with occupation sites occurring in areas with:

- Access to water – site size decreased with distance from water
- Good drainage and views over watercourses or river flats
- Level ground
- Adequate fuel
- Appropriate localised weather patterns for summer or winter occupation.

As such, occupation sites were most frequently found on low ridge tops, creek banks, gently undulating hills and river flats and usually in open woodland vegetation (Pearson 1981: 101). The location of non-occupation sites, meanwhile, depended on several factors relating to site function. For instance:

- Grinding grooves only occur where there is appropriate outcropping sandstone, but as close to occupation sites as possible
- Scarred trees are variably located with no obvious patterning, other than proximity to watercourses where camps are more frequently located

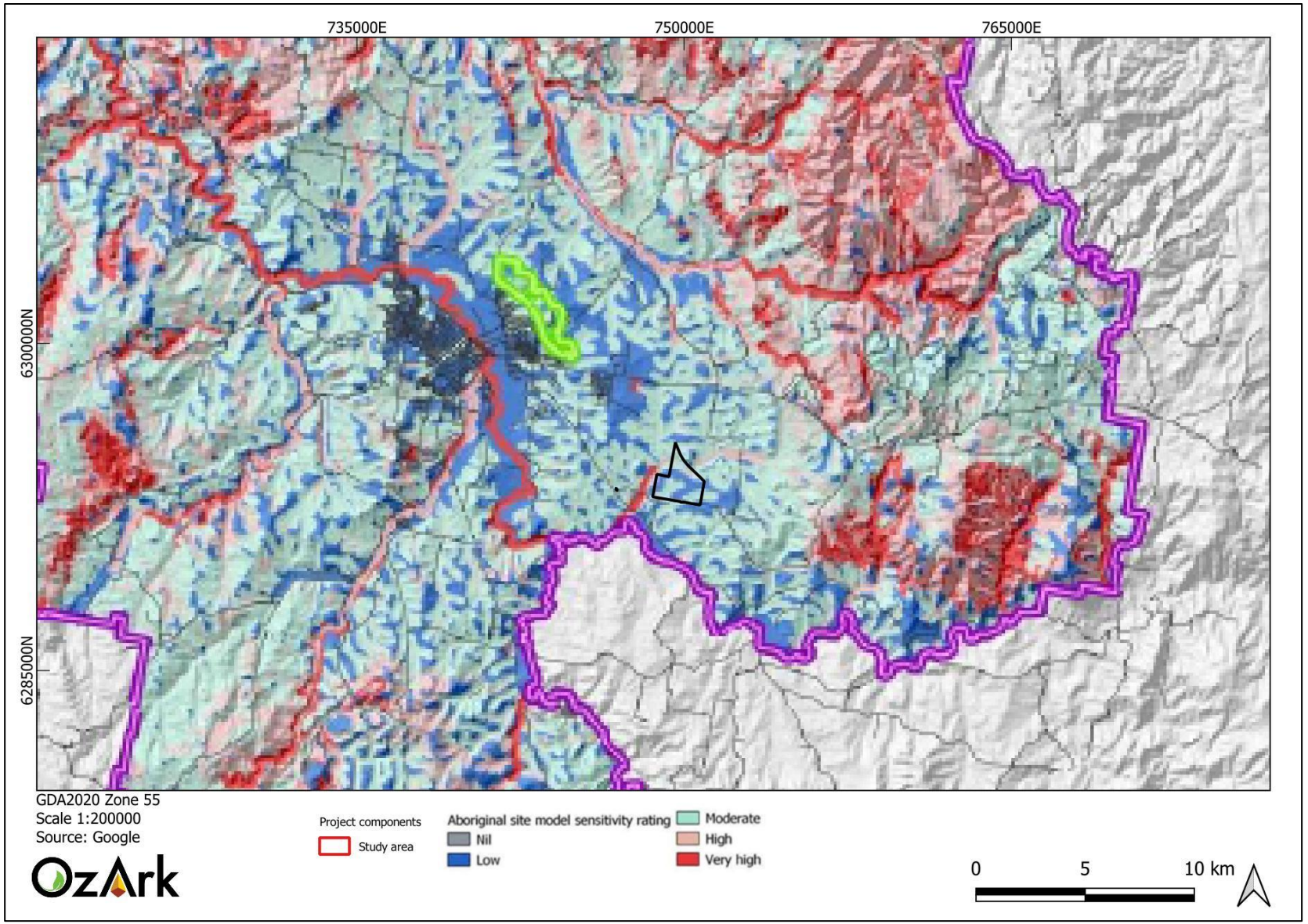
- Burial grounds are generally in soft soils, as close to occupation sites as geological conditions permit
- Ceremonial sites, such as bora rings and stone arrangements, are located away from occupation sites.

Bathurst LGA Heritage Study (Extent 2017)

Extent Heritage completed a heritage study in 2017 of over 220 Aboriginal sites recorded on the Aboriginal Heritage Information Management System (AHIMS) across the Bathurst LGA (Extent 2017). Fifty-five per cent of these sites are artefact based open sites (i.e. sites not within closed contexts, such as a cave or rockshelter). Modified trees are the next most prolific site type, followed by stone arrangements.

The predictive model noted that there was a comparatively small number of AHIMS recordings in the Bathurst LGA (on site per 19 square kilometres [km^2]) (Extent 2017: 45). With a limited sample, the model focused on comparing this data with the Aboriginal Sites Decision Support Tool (ASDST; DECCW 2010) cumulative model. Extent Heritage (2017) concluded that the Bathurst LGA had areas of flats and slopes with higher archaeological site potential than the ASDST modelling would suggest. Based on the Extent sensitivity map, the study area is in a low and moderate sensitivity area for Aboriginal cultural heritage sites (**Figure 5-1**).

Figure 5-1: The study area in relation to Aboriginal heritage sensitivity map prepared by Extent Heritage (2017:48).



5.3 LOCAL ARCHAEOLOGICAL CONTEXT

5.3.1 Desktop database searches conducted

A desktop search was conducted on the following databases to identify any previously recorded heritage within the study area. The results of this search are summarised in **Table 5-1** and presented in detail in **Appendix** 2.

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

Name of Database Searched	Date of Search	Type of Search	Comment
Commonwealth Heritage Listings	27/10/2023	Bathurst Regional LGA	No places listed on either the National or Commonwealth heritage lists are located within or near the study area.
National Native Title Claims Search	27/10/2023	NSW	No Native Title Claims cover the study area.
AHIMS	27/10/2023 and 21/3/2025	20 km radius centred on the study area	45 Aboriginal sites are listed in the search area, with no recorded sites located within or near the study area. The updated search completed on 21/3/2025 also returned 45 results for Aboriginal sites, indicating that there have been no additional sites registered in the search area.
Local Environmental Plan (LEP)	27/10/2023	Bathurst Regional LEP of 2014	None of the Aboriginal places noted occur near the study area.

A search of the AHIMS database on 27 October 2023 returned 45 results for Aboriginal sites within a 20 km radius of the study area (GDA Zone 55 Eastings: 738999 – 758999; Northings: 6283976 – 6303976) (see **Appendix 2**). An additional search was completed on 21 March 2025 using the same details to confirm that no changes had been made to the AHIMS register since the first search. The results of the updated AHIMS search area also presented in **Appendix 2**.

None of the previously recorded sites are located within or near the study area (**Figure 5-2**). **Table 5-2** lists the site types and frequencies returned in the designated search area.

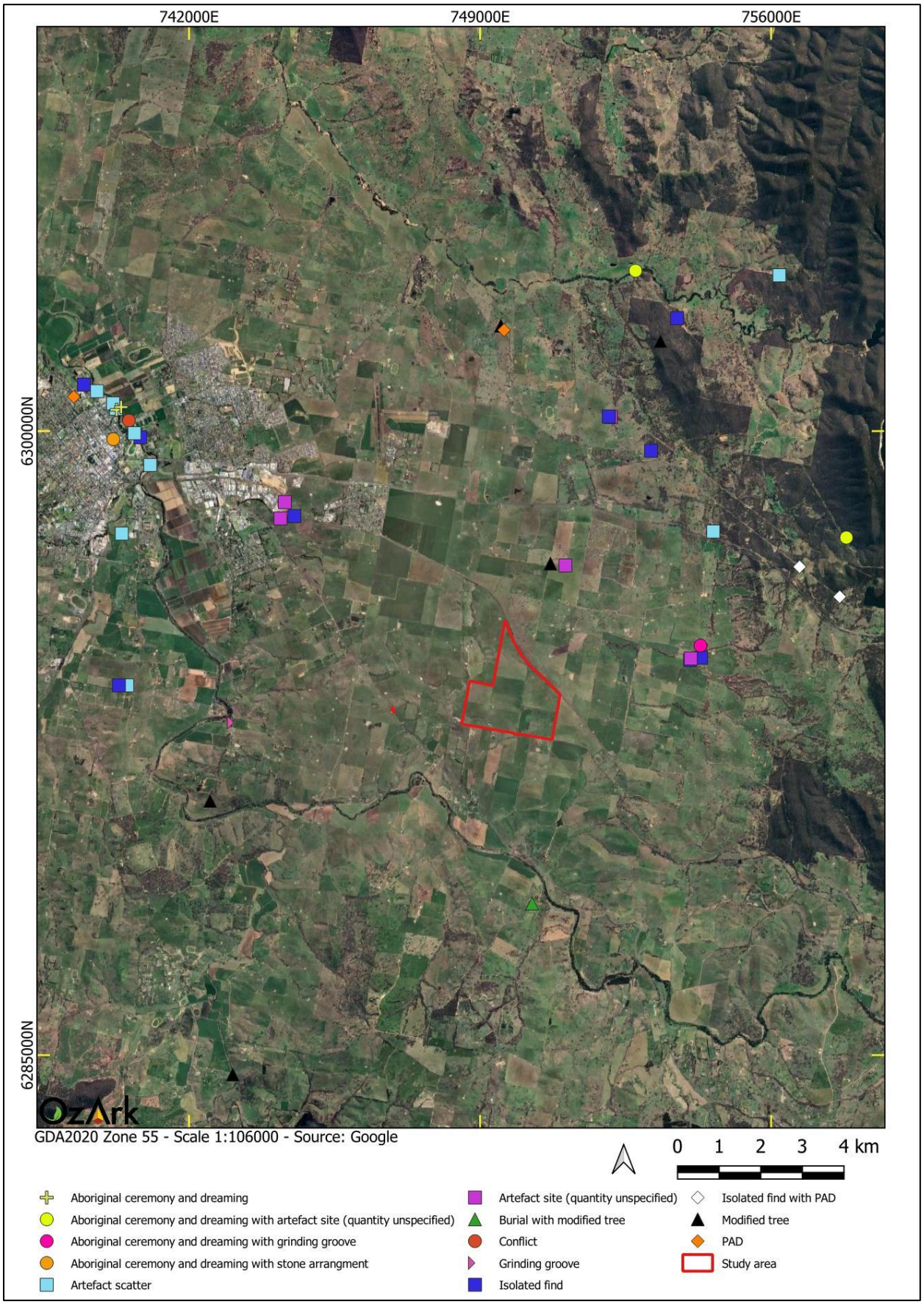
The most frequently recorded site types are isolated finds which contribute 22% of the site types in the vicinity of the study area. Other frequent site types are artefact scatters (22%) and modified trees (15.5%). Less frequent site types recorded in the vicinity include potential artefact deposits (PADs), a burial, and a grinding groove site. Cultural sites such as Aboriginal ceremony and dreaming sites with associated artefacts, stone arrangements, or grinding grooves have also been identified in the designated search area and have been recorded on landforms adjacent to Macquarie-Waambul River, Salt Water Creek, Cave Creek, and the Winburndale Rivulet and in the more mountainous areas to the east of the study area. One ‘restricted site’ was returned in the AHIMS search, which was confirmed through correspondence with AHIMS to be outside the study area. A copy of this correspondence is provided in **Appendix 2**. Additionally, the site of the ‘1824 Potato Field Massacre’ is located approximately 10 km north-west of the study area along the Macquarie-Waambul River.

Open artefact sites (such as isolated finds and artefact scatters) as well as modified trees returned within the search area tend to be located on lower elevation landforms (generally flats or gentle slopes) in proximity to a watercourse (both perennial and non-perennial).

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

Site Type	Number	% Frequency
Isolated find	10	22.2
Artefact scatter	9	20
Modified tree	7	15.5
Artefact site (quantity unspecified)	5	11.1
PAD	2	4.5
Isolated find with PAD	2	4.5
Aboriginal ceremony and dreaming	2	4.5
Aboriginal ceremony and dreaming with artefact site	2	4.5
Aboriginal ceremony and dreaming with grinding groove	1	2.2
Aboriginal ceremony and dreaming with stone arrangement	1	2.2
Grinding groove	1	2.2
Burial with modified tree	1	2.2
Conflict	1	2.2
Restricted site	1	2.2
Total	**45**	**100**

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



5.3.2 Previous studies in or near the study area

Assessment between Bathurst – Raglan – Mount Panorama (Pickering 1980)

Pickering (1980) conducted an assessment for a transmission line between substations at Bathurst, Panorama and Raglan. The survey was conducted approximately 3.5 km northwest of the current study area at its closest point. A total of eight Aboriginal artefact sites were recorded during the survey, all of which were recorded in secondary contexts with a variety of materials, including quartz, quartzite and fine-grain siliceous raw materials.

Archaeological assessment of "Kempfield" near Trunkey, NSW (Appleton 1999)

Appleton (1999) conducted a survey for a proposed mine southwest of Bathurst, approximately 47 km from the current study area. The survey area covered some 3 km^2 of rolling slopes and drainage swales, with Rocky Bridge Creek intersecting through the assessment area in a general south-western direction. Appleton recorded two isolated finds, flakes manufactured of chert materials, both within highly disturbed contexts. It was argued that further sites were not recorded due to erosion and other land disturbances, low visibility, and a lack of natural resources to result in an attractive camp site.

Crudine Ridge Wind Farm (NSW Archaeology 2012)

A survey was undertaken for the proposed Crudine Ridge Wind Farm (NSW Archaeology 2012) located approximately 41 km north of the current study area. The survey covered 16 km north-south broad length of land situated on an elevated broad and undulating plateau west of the Crudine River. During the survey, 45 previously unrecorded Aboriginal sites were identified, all of which comprised isolated finds or low-density artefact scatters. It was concluded that the low density of the artefact distribution could be attributed to the highly erosional context in which the sites were identified which caused significant disturbance and would prevent intact subsurface deposits.

Bridge and Creek Works, Perthville (OzArk 2018)

An Aboriginal heritage assessment was undertaken by OzArk in 2018 along the Queen Charlotte Vale Creek in Perthville, 11.8 km from the current study area. No Aboriginal sites were recorded during the assessment, with the lack of site identification concluded to be the result of poor ground surface visibility. Additionally, it was noted that Aboriginal sites and object could have been washed away, disturbed, or buried by erosion and flooding.

Eglington Solar Farm (OzArk 2021)

In 2020, OzArk undertook a survey of 670 ha of land approximately 14 km northeast of the current study area. The survey resulted in 14 previously unrecorded Aboriginal sites being identified, including eight isolated finds and two open artefact scatters. Eight sensitive archaeological

landforms were also identified during the survey. The survey also found that sites were predominately located in drainage landforms or on the lower slopes of rolling hill landforms.

A test excavation program was undertaken in 2021 in which two Aboriginal sites were recorded. The artefact assemblages were largely comprised of quartz, with chert, silcrete, and volcanic materials also present. The excavations found that, while subsurface deposits were present in areas adjacent to minor drainages and tributaries, further subsurface deposits would likely be at a very low density.

Glanmire Solar Farm (AREA, 2022)

AREA (2022) undertook a survey for a proposed solar farm approximately 1 km northeast of the current study area. The survey covered approximately 150 ha of gently undulating slopes which have been subject to waterlogging and erosion due to clearing, crop cultivation, and grazing. Two previously unrecorded Aboriginal sites were identified during the survey, including a modified tree and an isolated quartz flake. Both sites were recorded within 100 m of an ephemeral watercourse.

5.4 PREDICTIVE MODEL FOR SITE LOCATION

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

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

5.4.1 Site types in the region of the study area

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

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

Site type	Site description
Isolated finds	May be indicative of random loss or deliberate discard of a single artefact, the remnant of a now dispersed and disturbed artefact scatter, or an otherwise obscured or subsurface artefact scatter. They may occur anywhere within the landscape but are more likely to occur in topographies where open artefact scatters typically occur.
Open artefact scatters	Artefact scatters are defined as two or more artefacts, not located within a rock shelter, and located no more than 50 m away from any other constituent artefact. This site type may occur almost anywhere that Aboriginal people have travelled and may be associated with hunting and gathering activities, short- or long-term camps, and the manufacture and maintenance of stone tools. Artefact scatters typically consist of surface scatters or sub-surface distributions of flaked stone discarded during the manufacture of tools but may also include other artefactual rock types such as hearth and anvil stones. Less commonly, artefact scatters may include archaeological stratigraphic features such as hearths and artefact concentrations which relate to activity areas. Artefact density can vary considerably between and across individual sites. Small ground exposures revealing low density scatters may be indicative of a background scatter rather than a spatially or temporally distinct artefact assemblage. These sites are classed as 'open', that is, occurring on the land surface unprotected by rock overhangs, and are sometimes referred to as 'open camp sites'. Artefact scatters are most likely to occur on level or low gradient contexts, along the crests of ridgelines and spurs, and elevated areas fringing watercourses or wetlands. Larger sites may be expected in association with permanent water sources. Topographies which afford effective through-access across, and relative to, the surrounding landscape, such as the open basal valley slopes and the valleys of creeks, will tend to contain more and larger sites, mostly camp sites evidenced by open artefact scatters.
Culturally modified trees	Aboriginal scarred trees contain evidence of the removal of bark (and sometimes wood) in the past by Aboriginal people, in the form of a scar. Bark was removed from trees for a wide range of reasons. It was a raw material used in the manufacture of various tools, vessels, and commodities such as string, water containers, roofing for shelters, shields and canoes. Bark was also removed because of gathering food, such as collecting wood boring grubs or creating footholds to climb a tree for possum hunting. Due to the multiplicity of uses and the continuous process of occlusion (or healing) following removal, it is difficult to accurately determine the intended purpose for any example of bark removal. Scarred trees may occur anywhere old growth trees survive. The identification of scars as Aboriginal cultural heritage items can be problematical because some forms of natural trauma and European bark extraction create similar scars. Many remaining scarred trees probably date to the historic period when bark was removed by Aboriginal people for both their own purposes and for roofing on early European houses. Consequently, the distinction between European and Aboriginal scarred trees may not be clear.
Grinding grooves	Grinding grooves are the remnants of ground edge hatchet manufacture and sometimes from food preparation. The site is most likely to occur on flat outcrops of coarse-grained sandstone in the vicinity of water sources, however, grinding grooves have also been recorded on fine-grained granite and quartzite outcrops.
Burials	Generally found in soft sediments such as aeolian sand, alluvial silts, and rock shelter deposits. In valley floor and plains contexts, burials may occur in locally elevated topographies rather than poorly drained sedimentary contexts. Burials are also known to have occurred on rocky hilltops in some limited areas. Burials are generally only visible where there has been some disturbance of sub-surface sediments or where some erosional process has exposed them.
Bora/Ceremonial sites	Places which have ceremonial or spiritual connections. Ceremonial sites may comprise of natural landscapes or have archaeological material. Bora sites are ceremonial sites which consist of a cleared area and earthen rings.

5.4.2 Landform modelling of archaeological potential

The number of archaeological studies undertaken within the vicinity of the study area provides information to obtain a reasonable understanding of the nature and distribution of archaeological sites within the area. Although there is some conjecture about the relationship between stream order, site numbers and densities, the general pattern is that most sites are present close to watercourses, with good drainage and views over watercourses or river flats. Traditional

Aboriginal people also prominently settled on level ground in areas in the region with appropriate localised weather patterns for summer or winter occupation. Due to this, occupation sites are most frequently found on low ridge tops, creek banks, gently undulating hills, and river flats, and usually in open woodland vegetation where less historical ground disturbance has taken place.

The results of past archaeological investigations near the study area indicate:

- Stone artefact sites (isolated finds and artefact scatters) are the most commonly recorded site types in the area and that other site types, such as ceremonial sites, culturally modified trees, are possible
- The predictive models and results of previous surveys in the local region indicate that the predominant raw materials used for stone artefact manufacture are locally sourced quartz, quartzite, silcrete and volcanics
- Sites tend to be within reasonable distance to reliable water supplies
- 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.

The preservation of archaeological sites and deposits is dependent on past land use. The study area and adjacent land has been mainly used for agricultural purposes. 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. Cropping and the use of ploughing does affect the integrity of archaeological Aboriginal sites, in particular open camp sites, especially if such sites have potential for subsurface deposits. However, ploughing will usually only affect the top 20 cm of topsoil, and so there is the potential for intact subsurface deposits below the plough-zone.

The clearing of vegetation inside the study area is widespread, despite some remnant trees remaining. This is likely to have had an impact on any modified trees which may have been present.

5.4.3 Conclusion

Based on knowledge of the environmental contexts of the study area and a desktop review of the known local and regional archaeological record, the following predictions are made concerning the probability of landforms within the study area to contain Aboriginal objects (**Table 5-4**), and what types of sites may be present within the study area (**Table 5-5**). Overall, at a desktop level the area has a moderate archaeological potential due to the presence of Salt Water Creek within the study area. However, disturbances through long-term agricultural operations has reduced the likelihood of intact occupation sites remaining.

Table 5-4: Likelihood of landforms within the study area to contain Aboriginal objects.

Survey Unit	Landform type	Likelihood to contain Aboriginal objects
1	Drainage	Archaeological studies in the region indicate that banks and elevated terraces adjacent to drainage lines or watercourses were favoured occupation locations and therefore have high potential for occupation sites to be present. Due to the ephemeral nature of the drainages within the southern portion of the study area, occupation sites along these drainages are most likely to be isolated finds or low-density scatters. Due to the perennial nature of Salt Water Creek in the northern portion of the study area, larger sites or archaeologically sensitive landforms are most likely to present in the vicinity of the creek. Previous studies in the district also indicate that these landforms may contain intact deposits however as most of these landforms have been impacted by erosion and cultivation these sites may be dispersed and intact deposits would only be present if deposits are deep.
2	Flats	Flat landforms were favoured occupation locations when in proximity to permanent and semi-permanent water sources. However, the flat landforms characterised in this survey unit include areas over 100 m from Salt Water Creek and 50 m from drainages. Due to this distant and the uniformity of this landform there are no distinct resources which would have encouraged occupation. Past studies show that isolated finds and low-density artefact scatters may still be present in the landforms however they are generally in a secondary context from agricultural practices.
3	Gentle slopes	Slopes are a degrading landform, especially in the study area where vegetation removal has accelerated soil loss. Although these gentle slopes are suitable for habitation and resource gathering, they are unlikely to have been utilised for long-term occupation and therefore are unlikely to contain a high density of sites.

Table 5-5: Likelihood of site types being present at the study area.

Site type	Likelihood of being present in the study area
Isolated finds	As isolated finds can occur anywhere, particularly within disturbed contexts, it is predicted that this site type could be recorded within the study area.
Open artefact scatters	Artefact scatters of differing densities are the most common site type within the surrounding region and there is a general correlation between landform type and the nature of the evidence of past Aboriginal occupation. The higher density artefact scatters are situated on elevated landforms adjacent to permanent waterways. The flat to gently sloping landforms that dominate the study area are unlikely to have been used as occupational locations, but rather as the travel routes or resource gathering areas. Should this site type be present, it will be recorded along the drainage landforms bordering Salt Water Creek. The moderate degree of disturbance in the study area indicates that any scatters will be displaced.
PADs	This site type is considered possible in areas where A-Horizon soils are relatively undisturbed. Given the high levels of disturbance across the study area, this has reduced the likelihood of identifying PADs with intact deposits, unless A-horizon soils are deep. Previous surveys indicate that PADs are typically recorded along permanent or semi-permanent water courses.
Culturally modified trees	Due to the near-total clearance of trees from within the study area, this site type is predicted to be rare. Should this site type be recorded, it will only be present along the riparian corridor of Salt Water Creek.
Grinding grooves	Grinding grooves are unlikely to be recorded in the study area given the geological mapping indicates granite is the underlying rock material (**Section 4.2**).
Burials	Although it is possible that this site type could be found within the study area, it is considered a rare site type especially given the disturbance that has occurred within the study area and the lack of sandy soils.
Bora/Ceremonial sites	This site type does not necessarily follow landform predictability and are, overall, a rare site type with a low likelihood of being present and remaining extant. These sites are generally identified through consultation with the RAPs.

5.5 RESEARCH QUESTIONS

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

- What resources were available to the Aboriginal people using the land within the study area (food, stone, and water) and what resources were transported to the area?
- How do the raw materials recorded within the study area compare to those in recorded in the surrounding region?
- Establish how the findings within the study area (if any) accord with the regional archaeological context examined in **Section 5**.

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).

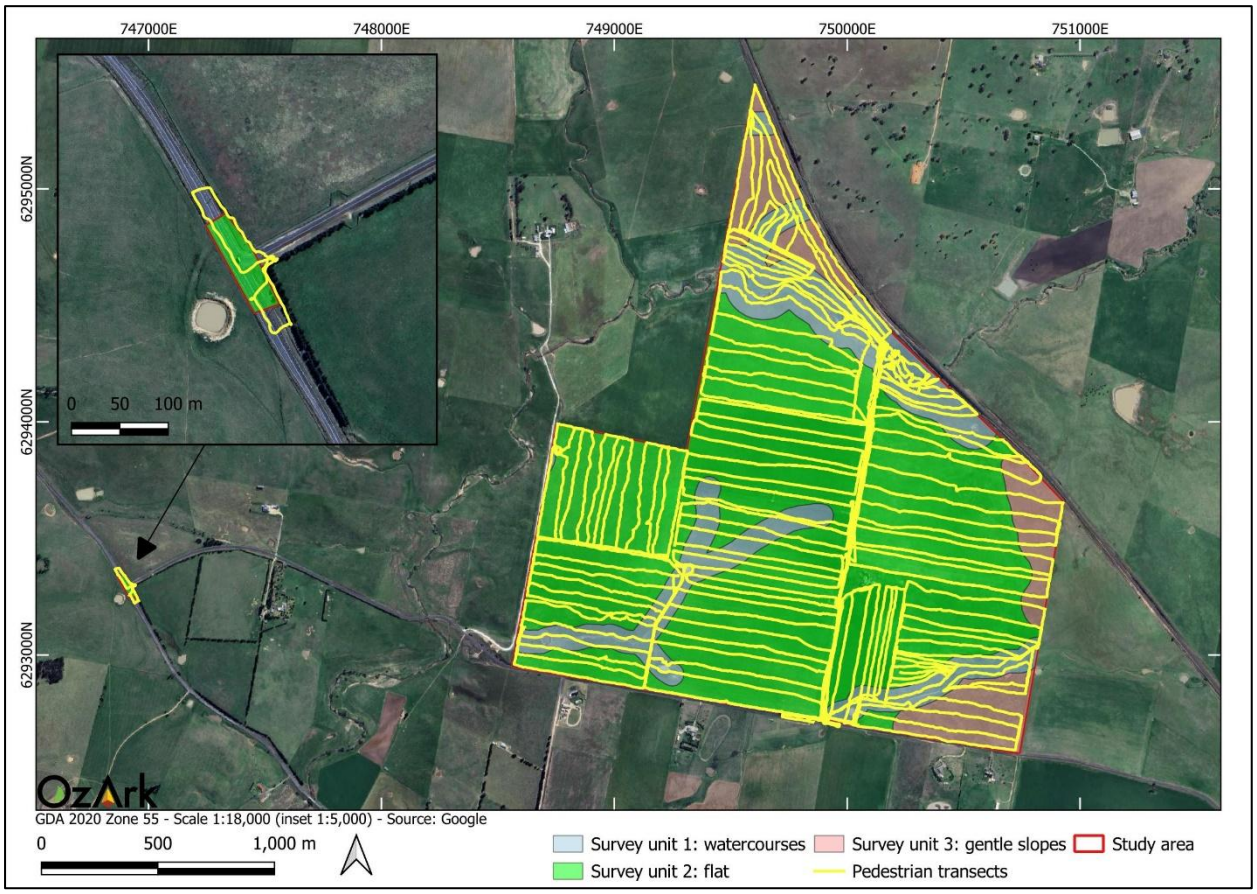
The aim of any archaeological survey is not to locate each artefact in a landscape but to undertake investigations so that the archaeological potential and archaeological characteristics of all landforms within the study area are known. Therefore, the aims of the survey were to:

- Inspect all landform types in the study area so that their archaeological potential could be determined
- Evaluate whether the predictive model set out in **Section 5.4** is valid
- Determine if the research questions set out in **Section 5.5** could be answered
- Determine if any landforms of the study area require test excavation to understand the archaeological potential at a particular location
- Undertake sufficient assessment to satisfy Sections 2.2, 2.4, 2.5, 2.6, and 2.7 in the Guide
- Collect sufficient data so that the results can be presented in an ACHAR as set out in Section 3 in the Guide
- Undertake survey and record keeping satisfying Requirements 1–13 of the Code of Practice.

The assessment methodology for the project outlined that full pedestrian survey would be completed across Survey Units 1 and 3. Full pedestrian survey would also be conducted across the portions of Survey Unit 2 within the indicative development footprint and along the proposed access track. The remaining portions of Survey Unit 2 were subject to sample survey. The proposed intersection upgrade areas outside the study area was also surveyed.

Figure 6-1 shows the survey tracks of the OzArk archaeologists during the survey. As well as the archaeologists, there were two Aboriginal site officers undertaking the survey on each day, so the actual area of survey coverage was greater than is indicated on this figure.

Figure 6-1: Pedestrian coverage of the study area.



6.2 PROJECT CONSTRAINTS

The greatest constraint during fieldwork was the limited amount of ground exposure, as this was low across all survey units (**Section 6.3**). Areas of exposure were typically only present in areas of disturbance i.e. around dams, fence lines, vehicle tracks, farming items, ploughed paddocks, around power poles and areas that have been impacted by erosion (**Figure 6-2**).

Other than low levels of exposure and ground surface visibility (GSV) there were no significant constraints to the assessment of the study area.

Figure 6-2: Examples of exposure and GSV.

<table>
<tr><td>  </td><td>  </td></tr>
<tr><td>1. View south at the west of the study area showing the thick grass cover. .</td><td>2. Areas of dense ground coverage along Salt Water Creek at the centre of the study area.</td></tr>
<tr><td>  </td><td>  </td></tr>
<tr><td>3. Area of moderate exposure in highly disturbed paddocks.</td><td>4. View of extensive erosion along an unnamed drainage line at the south of the study area showing higher levels of exposure.</td></tr>
<tr><td>  </td><td>  </td></tr>
<tr><td>5. View of exposures surrounding a dam.</td><td>6. View of an exposure on the northern edge of Salt Water Creek.</td></tr>
</table>

	
7. View northwest across the intersection of Tarana Road and O'Connell Road showing the level to gently undulating landform modified by road construction.	8. View west along Tarana Road at the proposed entrance to the site.

6.3 EFFECTIVE SURVEY COVERAGE

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

GSV is defined as:

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

GSE is defined as:

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

Table 6-1 calculates the effective survey coverage within the study area. In general, **Table 6-1** presents an approximation of the amount of ground surface able to be seen at any location within specific landform units. For example, at any one location within the watercourses landform, the levels of erosion and absence of gravels meant that the visibility of the ground on scalds was not

obscured (100%). However, the surface area of the erosion scalds only accounts for 10% of the survey unit.

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

Survey Unit	Landform	Survey Unit Area (sq m)	Visibility %	Exposure %	Effective Coverage Area (sq m) (= Survey Unit Area x Visibility % x Exposure %)	Effective Coverage % (= Effective Coverage Area / Survey Unit Area x 100)
1	Watercourses	612,005	100	10	61,200	10
2	Flat	2,412,237	80	10	192,978	8
3	Gentle slopes	364,262	80	10	29,140	8

Table 6-2 demonstrates that the survey efficacy within both the gentle slopes and flats survey units were the lowest at 8 per cent due to the dense vegetation in these areas. The survey efficacy in the most archaeologically sensitive areas, i.e. the watercourses, was the highest, due to exposures along the edges of Salt Water Creek and the minor drainage lines. It was noted that within these landforms the A-horizon soils, if present, were very thin and degraded.

To offset the lack of visibility, the assessment relied on high pedestrian transect coverage and an examination of the archaeological potential of the landforms present. High pedestrian transect cover allowed for identification of the limited areas of exposure to be targeted. Examination of the landforms comprising Survey Unit 2 and Survey Unit 3 concluded that they have low archaeological potential due to distance from water and high levels of historic disturbance, but they were nevertheless extensively surveyed (**Figure 6-1**). The higher potential landforms were identified across Survey Unit 1, given its proximity to Salt Water Creek and ephemeral drainage lines, resulting in four PADs being identified in this survey unit. The assessment concluded that the low survey efficacy did not prevent the archaeological potential of the landforms to be understood.

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

Landform	Landform area (sq m)	Area Effectively Surveyed (sq m) (= Effective Coverage Area)	% of Landform Effectively Surveyed (= Area Effectively Surveyed / Landform x 100)	Number of Sites	Number of Artefacts or Features
1	Watercourses	612,005	10	0	0
2	Flats	2,412,237	8	0	0
3	Gentle slopes	364,262	8	0	0

6.4 POTENTIAL ABORIGINAL SITES RECORDED

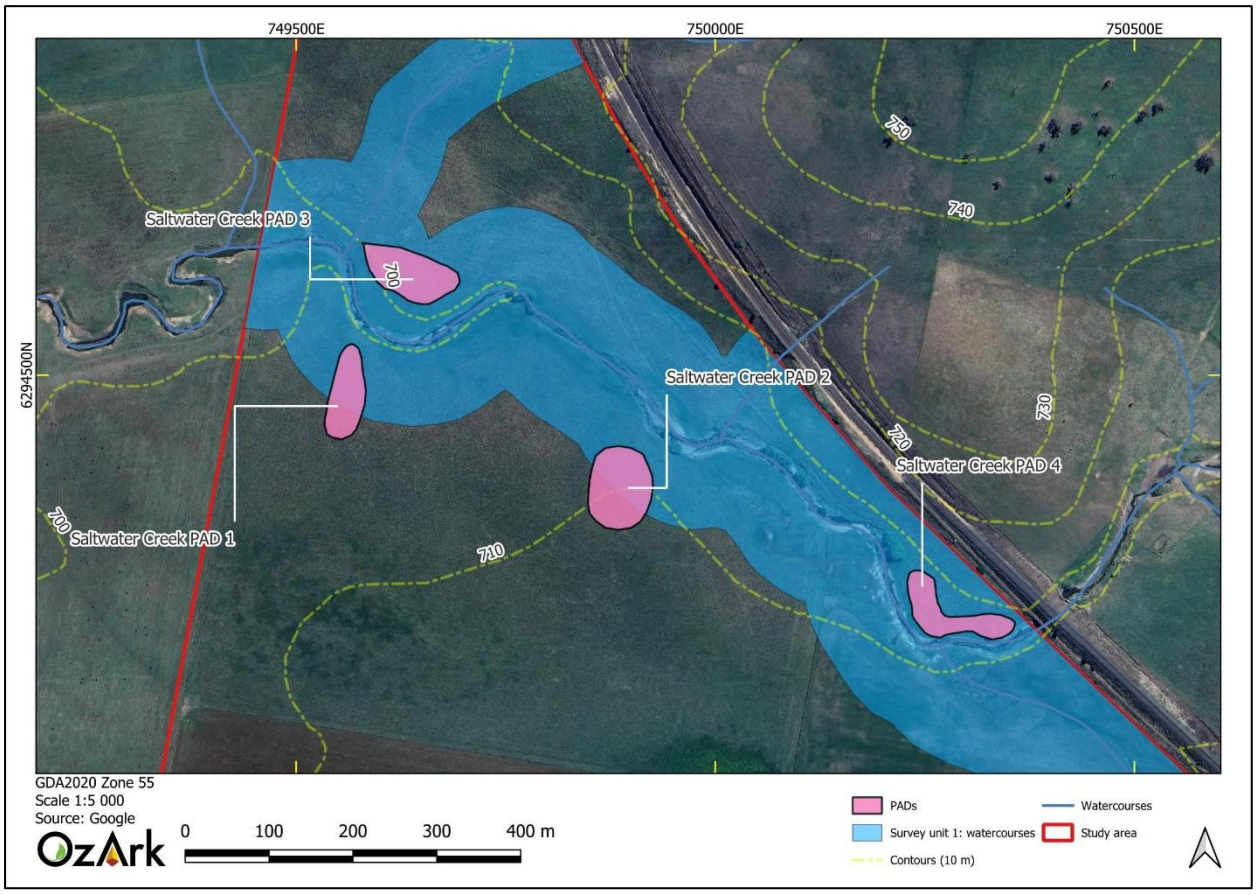
No Aboriginal sites were identified during the survey; however, four PADs were recorded.

Table 6-3 summarises the PADs recorded during the survey of the study area and **Figure 6-3** shows their location.

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

Site name	AHIMS ID	Site type	Coordinates (GDA Zone 55) East	Coordinates (GDA Zone 55) North	Survey Unit
Salt Water Creek PAD 1	44-3-0325	PAD	749560	6294467	1
Salt Water Creek PAD 2	44-3-0326	PAD	749886	6294361	1
Salt Water Creek PAD 3	44-3-0324	PAD	749639	6294616	1
Salt Water Creek PAD 4	44-3-0323	PAD	750267	6294207	1

Figure 6-3: Location of the PADs.



Salt Water Creek PAD 1

Site type: PAD

GPS coordinates: GDA2020 Zone 55, 749560E 6294467N

Location of site: Salt Water Creek PAD 1 is situated on a gentle low slope above the Salt Water Creek flat. The centre of the PAD is located 85 m south of Salt Water Creek, 1.6 km north of Tarana Road and 562 m west of the Main Western Line Rail corridor.

Description of site: The Salt Water Creek PAD 1 extent measures 44 m east-west by 114 m north-south. It is located on a gentle low slope above the creek flat on the southern side of Salt Water Creek. There were no exposures offering GSV on the landform and no cultural material was identified. The landform has been disturbed by vegetation clearance and grazing, although the scale of soil loss and erosion appears less severe that elsewhere along Salt Water Creek (**Figure 6-4**).

The boundaries of Salt Water Creek PAD 1 were determined by the micro-relief of the landforms at the location. The PAD area is on a section of the surrounding landscape that is sloping more gently, indicating higher potential for it to have been a favourable habitation location and a higher likelihood that artefactual material, if present, remains *in situ*.

Figure 6-4: View of Salt Water Creek PAD 1.

	
1. View of Salt Water Creek PAD 1 looking north.	2. View of Salt Water Creek PAD 1 looking northwest.

Salt Water Creek PAD 2

Site type: PAD

GPS coordinates: GDA2020 Zone 55, 749886E 6294361N

Location of site: Salt Water Creek PAD 2 is situated on a wide, flat bench of the lower slopes above Salt Water Creek. The centre of the PAD is located 87 m southwest of Salt Water Creek, 1.64 km north of Tarana Road and 365 m west of the Main Western Line Rail corridor.

Description of site: The Salt Water Creek PAD 2 extent measures 72 m east-west by 99 m north-south. It is located on a wide, flat bench landform to the south of Salt Water Creek. There were no exposures offering GSV on the landform and no cultural material was identified. The landform has been cleared and may have been affected by soil loss in the past, but no significant disturbances were identifiable during the survey. (**Figure 6-5**).

The boundaries of Salt Water Creek PAD 2 were determined by the micro-relief of the landforms at the location. The PAD area is on a level section of the surrounding landscape, indicating higher potential for it to have been a favourable habitation location and a higher likelihood that artefactual material, if present, remains *in situ*.

Figure 6-5: View of Salt Water Creek PAD 2

	
1. View north across Salt Water Creek PAD 2.	2. View northeast across Salt Water Creek PAD 2.

Salt Water Creek PAD 3

Site type: PAD

GPS coordinates: GDA2020 Zone 55, 749639E 6294616N

Location of site: Salt Water Creek PAD 3 is situated on a flat landform surrounded by the low slopes above the Salt Water Creek flat. The centre of the PAD is located 81 m north of Salt Water Creek, 1.85 km north of Tarana Road and 394 m west of the Main Western Line Rail corridor.

Description of site: The Salt Water Creek PAD 3 extent measures 101 m east-west by 60 m north-south. It is located on a level flat landform above the creek line on the northern side of Salt Water Creek. The flat landform has been disturbed by vegetation clearance and grazing but has been less affected by erosion than the surrounding landforms (**Figure 6-6**).

The boundaries of Salt Water Creek PAD 3 were determined by the micro-relief of the landforms at the location. The PAD area is on a level section elevated slightly higher than of the surrounding landforms, indicating higher potential for it to have been a favourable habitation location and a higher likelihood that artefactual material, if present, remains *in situ*.

Figure 6-6: View east across Salt Water Creek PAD 3.

Salt Water Creek PAD 4

Site type: PAD

GPS coordinates: GDA2020 Zone 55, 750267E 6294207N

Location of site: Salt Water Creek PAD 4 is situated on an undulating creek flat above Salt Water Creek. The centre of the PAD is located 24 m north of Salt Water Creek, 1.57 km north of Tarana Road and 136 m west of the Main Western Line Rail corridor.

Description of site: The Salt Water Creek PAD 4 extent follows the curve of the creek bend, measuring 120 m east-west by 72 m north-south. It is located on an undulating flat above the creek channel on the northern side of Salt Water Creek. Exposures were present along animal tracks and areas of erosion, revealing loose, gravelly sand. A mixture of quartz rocks and pebbles were evident, although no cultural material was identified. The landform has been disturbed by vegetation clearance and stock trampling (**Figure 6-7**).

The boundaries of Salt Water Creek PAD 4 were determined by the edges of the creek channel of Salt Water Creek. The PAD area is on a level landform bounded by the creek channel to the south and steep low slopes to the north.

Figure 6-7: View of Salt Water Creek PAD 4

	
1. View west across Salt Water Creek PAD 4 with the creek channel in the background.	2. View north to Salt Water Creek PAD 4 from the southern side of the creek showing towards rail corridor.

6.5 ABORIGINAL COMMUNITY COMMENTS ON THE SURVEY

No specific comments relating to the survey methodology, or the landforms being surveyed were raised by the RAPs who attended the survey. The higher archaeological potential at the locations for the four identified PAD areas was noted by all on the survey team.

A discussion was had regarding the potential cultural values relating to the Bathurst Wars with Tonilee Scott of the Bathurst LALC during the survey. The significance of the Wiradjuri resistance to colonisation to the current Aboriginal community of the Bathurst area was discussed. However, no direct links to the study area were identified and no other cultural values specific to the study area were raised.

6.6 SUMMARY OF SURVEY RESULTS

The survey of the study area resulted in four PADs being recorded along Salt Water Creek (Salt Water Creek PAD 1 to PAD 4). Salt Water Creek PAD 1 and 2 were identified on level to gently sloping landforms on the southern side of Salt Water Creek. Salt Water Creek PAD 3 and 4 were identified on a flat on the northern side of Salt Water Creek. All the PADs were within 100 m of Salt Water Creek, within Survey Unit 1.

Overall, the study area is characterised by gently sloping to flat landforms intersected by Salt Water Creek and ephemeral drainage lines. Areas of exposure revealed some quartz stones and pebbles, although the availability of stone material within the study area was generally low. Where visible, the A-horizon soil was thin and depleted by erosion, ploughing and vegetation clearance. All mature trees were examined, and no cultural modifications were evident.

6.6.1 Discussion

The regional studies and predictive model suggested that isolated finds and artefact scatters would be the most common site types to be recorded and these site types were most likely to be recorded within 100 m of Salt Water Creek, in Survey Unit 1. No artefacts were recorded across this survey unit, which may be attributed to the limited areas of exposure (**Section 6.2**). Assessment of the landforms, levels of disturbance and results of past assessments across similar landforms resulted in four PADs being identified within 100 m of Salt Water Creek. The PADs have been subject to land clearance and grazing but appear to retain A-horizon soils, even if they have been depleted by soil loss. While there are other landforms adjacent to Salt Water Creek within the study area, the survey confirmed those areas have lower archaeological potential due to erosion or steeper slope pitches less conducive to retaining archaeological deposits or encouraging long-term or repeated camping in the past.

The predictive model indicated that Survey Units 2 and 3 had low archaeological sensitivity. It was also predicted that there would be an absence of specific resources attracting habitation and that the land-use history of the study area is likely to have affected the archaeological potential of these landforms. The survey results support these predictions. The slopes to the north of Salt Water Creek rise at a moderate to steep slope gradient, indicating that these landforms are unlikely to have been favoured habitation areas in the past and that they are unlikely to have retained substantial archaeological deposits. The landscape to the south of Salt Water Creek is predominantly flat and gently undulating, slope gradient would not have been a barrier to occupation in this section of the study area. However, there is an absence of specific resources, including access to water, indicating that Aboriginal activities in this part of the study area are more likely to have been transit between camping or meeting locations and hunting. These activities are unlikely to be associated with archaeological deposits of conservation value. In addition, the impact of grazing and cropping on these flatter landforms is such that the potential for *in situ* archaeological material has been significantly reduced. The sections of the study area within the road corridor of Tarana Road and O'Connell Road are mostly within Survey Unit 2. The study area at these locations is an area of high disturbance and no Aboriginal sites or PADs were identified during the assessment.

The survey identified that test excavation would be required if the project were to impact Salt Water Creek PADs 1-4 as these were the only landforms within the study area that meet the Code Requirements to demonstrate that there is a high probability of subsurface Aboriginal objects with potential conservation value. The remaining landforms of the study area do not meet these requirements and test excavation would not be recommended, despite low overall GSE and GSV.

As no Aboriginal sites were recorded during the survey, the research questions cannot be answered.

7 TEST EXCAVATION PROGRAM

7.1 EXCAVATION METHODOLOGY

7.1.1 Purpose of the test excavation program

The test excavation program was completed over two days from 22 – 23 October 2025.

The purpose of the test excavation program was to determine the archaeological characteristics of Salt Water Creek PAD 2.. Data obtained from the test excavation program will inform the mitigation and management options in this ACHAR.

The aims were to:

1. Establish the presence, extent and nature of the subsurface archaeological deposits
2. Use the data gained from the test excavation program to better evaluate the archaeological significance and potential of the identified PAD
3. Develop, in consultation with the RAPs and the applicant, an informed strategy for the management of any Aboriginal cultural heritage likely to be impacted by the project.

7.1.2 Rationale of the test excavation program

The test excavation methodology is provided in **Appendix 4** and sets out the predictive model used to design the test excavation program.

While any test excavation program is limited in the level of research objectives it can achieve due to the restricted nature of the excavations, the test excavations attempted to answer the following research questions:

- Do the investigated PADs have subsurface archaeological deposits?
- Are there intact stratigraphic deposits present that are of conservation value? Can intact deposits (if present) provide datable material or soil luminescence samples?
- Is there evidence providing insight into the tasks Aboriginal people were undertaking?

7.2 SAMPLING METHODOLOGY FOR THE TEST EXCAVATION PROGRAM

The excavation program was undertaken by archaeologists and representatives of RAPs in compliance with the requirements outlined in the Code of Practice. The complete sampling methodology is outlined in **Appendix 4**.

The design for the project was refined and it was determined that there would be no ground disturbing impacts at site Salt Water Creek PAD 04 (45-1-0323), Salt Water Creek PAD 03 (44-3-0324), and Salt Water Creek PAD 01 (44-3-0325) (see **Section 10**). Therefore, no excavation was undertaken at these locations.

As there is only one PAD overlapping with the impact footprint for the project, test excavation was only proposed at Saltwater Creek PAD 2. The calculations of the total area expected to be excavated is provided in **Table 7-1** and the location of the transects is shown on **Figure 7-1**.

Table 7-1: Test excavation and sampling strategy

Site name	Test excavation methodology	Landform description	0.5% of landform area	Rationale
Salt Water Creek PAD 02 (Site 44-0326)	Comprising of two parallel transects: north and south comprising of nine TUs each.	Lower and mid slope landforms	31m^2	Testing of a previously identified PAD area within the project footprint.

7.3 TEST EXCAVATION SUMMARY AND RESULTS

Test excavation was completed over the area of site 44-3-0326 that interacts with the project footprint over two days (22 and 23 October 2025) by OzArk Archaeologists Eleanore Martin (excavation director), Gloria Aranda-Spinazze and Troy Willoughby. Three RAPs for the project were present on each of the days. A log of RAP site officers attending during the excavation program is provided in **Section 3.2.4.1**

Across the project footprint, 18 test units (TUs) were excavated, their surface area totalling 4.5 m^2.

7.3.1 Description of excavation areas

7.3.1.1 Stratigraphy

The first TUs at each excavation area were excavated in 5 cm spits as per the Code of Practice before it was determined that intact stratigraphy was not present, and that the remaining TUs could be excavated in 10 cm spits. **Figure 7-1** shows the location of the test excavation in the context of the project footprint and the layout of the TUs. **Table 7-2** provides individual descriptions of the soil profile at each TU. The general soil sequence was a layer of brown sandy clay topsoil (A Horizon) transitioning into a layer of compact, reddish-brown clay (B Horizon).

Figure 7-1: Location of the test excavation area in relation to the project footprint

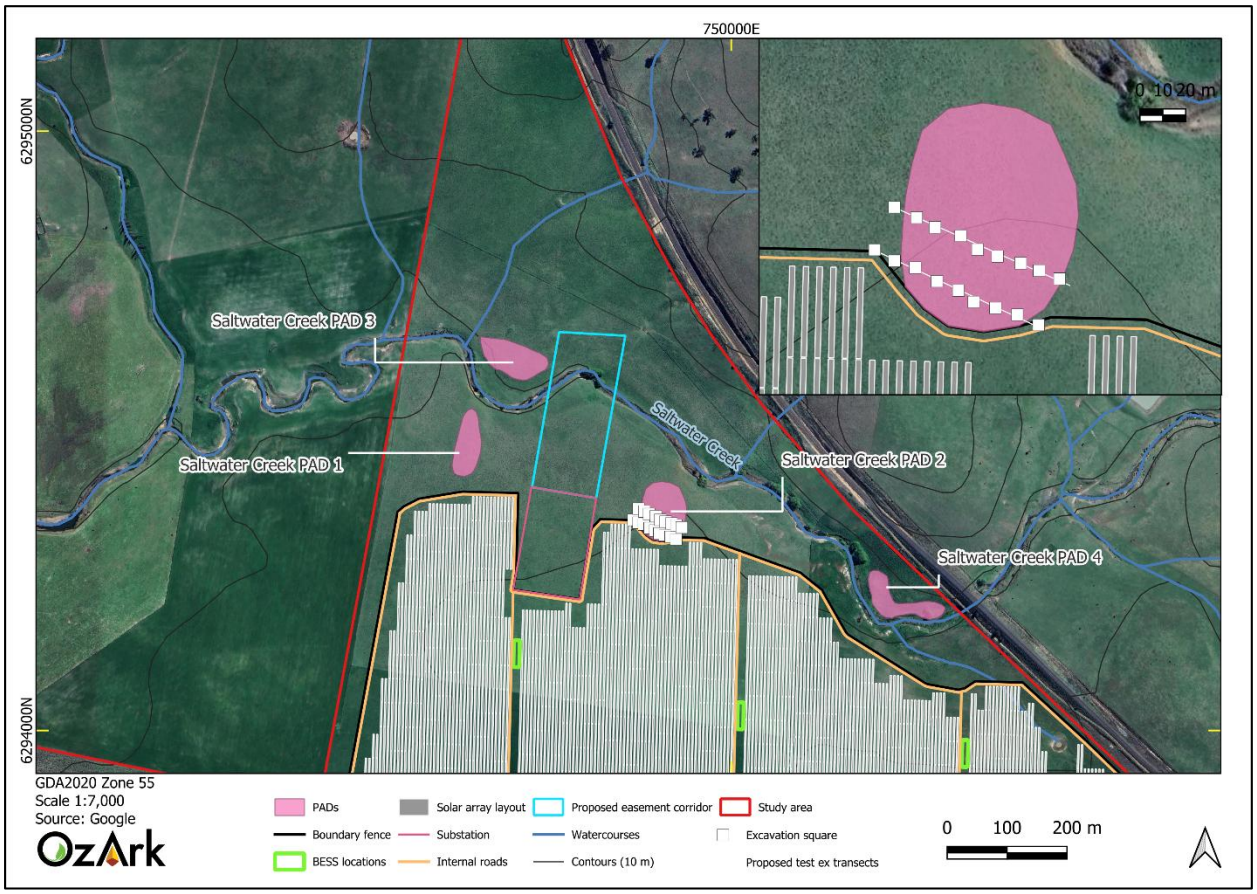


Figure 7-2: Transect and Test Unit locations at site 44-3-0326

Table 7-2: Test Units and soil profile descriptions.

Transect & Square	GDA2020 Zone 55 East	GDA2020 Zone 55 North	Description
Site 44-3-0326			
Transect 1 TU1	749836	6294351	Excavated in 5 cm and 10 cm spits. Dense friable light brown clayey silt to a depth of 22 cm. Some sand and root inclusions. Compacted brown silty clay at base at 20-30 cm.
Transect 1 TU2	749845	6294364	Excavated in 5 and 10 cm spits. Dense friable light brown sandy clay to a depth of 20cm. Root inclusions present with signs of grazing. Compact gritty brown clay with no inclusions to a to base at 30 cm.
Transect 1 TU3	749854	6294343	Excavated in 10 cm spits. Dense friable light brown sandy clay to a depth of 20cm. Root inclusions present with signs of grazing. Compact gritty brown clay with no inclusions to a to base at 30 cm.
Transect 1 TU4	749863	6294337	Excavated in 10 cm spits. Dense friable light brown sandy clay to a depth of 20cm. Root inclusions present with signs of grazing. Compact gritty brown clay with sandy pockets to a to base at 30 cm
Transect 1 TU5	749873	6294333	Excavated in 10 cm spits. Dense friable light brown sandy clay to a depth of 20cm. Root inclusions present with signs of grazing. Compact gritty brown clay with sandy pockets to a to base at 30 cm.
Transect 1 TU6	749879	6294328	Excavated in 10 cm spits. Dense friable light brown sandy clay to a depth of 20cm. Root inclusions present with signs of grazing. Compact gritty brown clay with no inclusions to a to base at 30 cm.
Transect 1 TU7	749889	6294326	Excavated in 10 cm spits. Dense friable light brown sandy clay to a depth of 20cm. Root inclusions present with signs of grazing. Compact gritty brown clay with sandy pockets to a to base at 30 cm.
Transect 1 TU8	749898	6294323	Excavated in 10 cm spits. Dense friable light brown sandy clay to a depth of 20cm. Root inclusions present with signs of grazing. Compact gritty brown clay with sandy pockets to a to base at 30 cm.
Transect 1 TU9	749908	6294318	Excavated in 10 cm spits. Dense friable light brown sandy clay to a depth of 20cm. Root inclusions present with signs of grazing. Compact gritty brown clay with sandy pockets to a to base at 30 cm.
Transect 2 TU1	749845	6294370	Excavated in 10 cm spits. Grey sandy clay through entire pit. Some roots and grazing disturbances in the first 10 cm. There is an increase of clay content with depth until base at 20 cm.
Transect 2 TU2	749854	6294365	Excavated in 10 cm spits. Grey sandy clay through entire pit. Some roots and grazing disturbances in the first 10 cm. There is an increase of clay content with depth until base at 20 cm.
Transect 2 TU3	749862	6294361	Excavated in 10 cm spits. Grey sandy clay through entire pit. Some roots and grazing disturbances in the first 10 cm. There is an increase of clay content with depth until base at 20 cm.
Transect 2 TU4	749874	6294357	Excavated in 10 cm spits. Grey sandy clay through entire pit. Some roots and grazing disturbances in the first 10 cm. There is an increase of clay content with depth until base at 20 cm.
Transect 2 TU5	749881	6294351	Excavated in 10 cm spits. Grey sandy clay through entire pit. Some roots and grazing disturbances in the first 10 cm. There is an increase of clay content with depth until base at 20 cm.

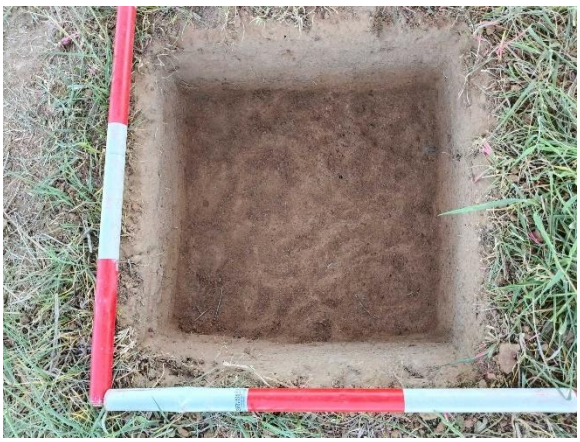
Transect & Square	GDA2020 Zone 55 East	GDA2020 Zone 55 North	Description
Transect 2 TU6	749890	6294348	Excavated in 10 cm spits. Grey sandy clay through entire pit. Some roots and grazing disturbances in the first 10 cm. There is an increase of clay content with depth until base at 20 cm.
Transect 2 TU7	749900	6294345	Excavated in 10 cm spits. Grey sandy clay through entire pit. Some roots and grazing disturbances in the first 10 cm. There is an increase of clay content with depth until base at 20 cm.
Transect 2 TU8	749908	6294342	Excavated in 10 cm spits. Grey sandy clay through entire pit. Some roots and grazing disturbances in the first 10 cm. There is an increase of clay content with depth until base at 20 cm. .
Transect 2 TU9	749917	6294338	Excavated in 10 cm spits. Grey sandy clay through entire pit. Some roots and grazing disturbances in the first 10 cm. There is an increase of clay content with depth until base at 20 cm.

Figure 7-3. Example images of Test Unit stratigraphy.

	
Site 44-3-0326 Transect 1 TU1. View of west section.	Site 44-3-0326 Transect 1 TU1. Aerial view of TU.
	
Site 44-3-0326 Transect 1 TU2. View of west section.	Site 44-3-0326 Transect 1 TU2. Aerial view of TU.
	
Site 44-3-0326 Transect 1 TU3. View of west section.	Site 44-3-0326 Transect 1 TU3. Aerial view of TU.

	
Site 44-3-0326 Transect 1 TU4. View of west section.	Site 44-3-0326 Transect 1 TU4. Aerial view of TU.
	
Site 44-3-0326 Transect 1 TU5. View of west section.	Site 44-3-0326 Transect 1 TU5. Aerial view of TU.
	
Site 44-3-0326 Transect 1 TU6. View of west section.	Site 44-3-0326 Transect 1 TU6. Aerial view of TU.

	
Site 44-3-0326 Transect 2 TU1. View of west section.	Site 44-3-0326 Transect 2 TU1. Aerial view of TU.
	
Site 44-3-0326 Transect 2 TU2. View of west section.	Site 44-3-0326 Transect 2 TU2. Aerial view of TU.
	
Site 44-3-0326 Transect 2 TU3. View of west section.	Site 44-3-0326 Transect 2 TU3. Aerial view of TU.

	
Site 44-3-0326 Transect 2 TU4. View of west section.	Site 44-3-0326 Transect 2 TU4. Aerial view of TU.
	
Site 44-3-0326 Transect 2 TU5. View of west section.	Site 44-3-0326 Transect 2 TU5. Aerial view of TU.
	
Site 44-3-0326 Transect 2 TU6. View of west section.	Site 44-3-0326 Transect 2 TU6. Aerial view of TU.

7.3.2 Discussion of the test excavation program

7.3.2.1 Test excavation summary

The results of the test excavation program provide clarity that there is no subsurface archaeological deposit across the excavation area associated with site 44-3-0326. No artefacts or other cultural material was identified during the test excavation program.

During the survey of the project area, there was very limited GSV along Salt Water Creek due to high grass cover. As such, following the precautionary principle, a series of PADs were identified based on their level landforms in vicinity to the waterway. Archaeological excavation at site 44-3-0326 revealed a shallow and compacted soil profile with no identified subsurface archaeological material. It may be that widespread soil loss across the cleared grazing paddocks has removed an A1 soil horizon with artefact bearing potential. Alternatively, the perennial Salt Water Creek may not have been a focus for Aboriginal habitation in the past and is not associated with repeated habitation that leaves a substantial archaeological trace.

The results of the excavation suggest that the archaeological potential of Salt Water Creek PADs 1,3 and 4 is lower than identified during the survey. However, this cannot be confirmed without further excavation and the sites will retain their PAD listings on AHIMS.

7.3.2.2 Research questions

In **Section 7.1.2**, several research questions were posed for the test excavation program. These have been answered below.

- How does the artefactual material and stratigraphy identified at Salt Water Creek PAD 2 compare to other archaeological excavations undertaken in the local area and the region?
    - OzArk (2020) identified several sub-surface artefacts in a similar landform to Salt Water Creek PAD 2. However, excavations revealed that Salt Water Creek PAD 2 has faced extensive surface disturbances due to grazing and soil loss. Although limited comparisons can be made due to the absence of identified artefacts, the outcome is consistent with previous excavations in lower potential landscapes: AHMS (2006) and Unearthed (2003).
- Are there intact stratigraphic deposits present beneath the ‘plough zone’ that are of conservation value?
    - No, the test excavation revealed a heavily compact sandy-clay deposit which overlaid a heavy, cemented clay layer. The sandy-clay top-soil has been extensively disturbed by pastoral and grazing activities. No artefacts or other inclusions were identified during test excavation that would otherwise indicate archaeological significance.
- Is there evidence providing insight into the tasks were Aboriginal people undertaking at Saltwater Creek PAD 2?

- As no archaeological material was identified during excavation, no insight could be obtained from physical material in the study area.

8 SIGNIFICANCE ASSESSMENT

8.1 INTRODUCTION TO SIGNIFICANCE ASSESSMENT

8.1.1 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.

8.1.1.1 Social or cultural value

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

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

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

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

documentation, and 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.

8.1.1.2 Scientific (archaeological) value

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

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

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

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

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

8.1.1.3 Aesthetic value

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

8.1.1.4 Historic value

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

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

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

8.2 ASSESSED SIGNIFICANCE OF THE RECORDED SITES

Table 8-1 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.

A reply was received from Geoffrey Toomey on 30 November 2023 in response to the assessment methodology, proposing that the study area was in a region of high cultural value to Aboriginal people (**Section 3.2.3**).

It is noted that the identified PADs are potential sites only and that their cultural significance remains unknown. The significance of the potential sites can only be assessed if test excavation were completed.

A copy of the draft ACHAR was distributed to all RAPs for review on 14 June 2024 with a 28 day review period, closing on 12 July 2024. Two comments were received during the Stage 4 review period, no specific comments regarding the cultural values of the study area were made.

Archaeological/Scientific Value

The archaeological value of Salt Water Creek PADs 1, 3 and 4 cannot be assessed without test excavation as their characteristics are unknown. Salt Water Creek PAD 2 was determined to have no archaeological or scientific value.

Aesthetic Value

Salt Water Creek PAD 1 to PAD 4 are potential sites located on landforms that do not have significant aesthetic value, as the integrity of the sensory landscape has been altered in historic and modern times. However, as the PADs may contain Aboriginal objects with aesthetic significance, this category as has been left as unknown.

Historic Value

The study area and identified PADs do not have any known association with important persons, places, or events.

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

Site Name	Social or Cultural Value	Archaeological / Scientific Value	Aesthetic Value	Historic Value
Salt Water Creek PAD 1	Unknown	Unknown	Unknown	Unknown
Salt Water Creek PAD 2	Nil	Nil	Nil	Nil
Salt Water Creek PAD 3	Unknown	Unknown	Unknown	Unknown
Salt Water Creek PAD 4	Unknown	Unknown	Unknown	Unknown

8.2.1 Statement of significance

The intangible Aboriginal cultural values across the wider district relate to a number of important places and themes associated with non-archaeological cultural values. These places mainly relate to spiritual and ceremonial connections across the broader landscape that may encompass areas of culturally significant geographical features.

There may be places with intangible cultural significance within the study area, although no specific locations have been identified by the Aboriginal community.

The scientific value of Salt Water Creek PADs 1,3 and4 cannot be assessed without test excavation. Although the characteristics of Salt Water Creek PADs 1,3 and4 are unexamined, it is understood that potential Aboriginal objects in these landforms would have high cultural significance to the RAPs and the Aboriginal people of the region. No locations with significant aesthetic qualities were identified within the study area.

9 ASSESSING HARM

9.1 AVOIDING AND MINIMISING HARM

9.1.1 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.

9.1.2 Opportunities to conserve Aboriginal cultural heritage values

As a result of the current assessment, four areas of PAD have been recorded. The applicant has redesigned the project components to ensure the PADs are not harmed by the project (**Figure 9-1**).

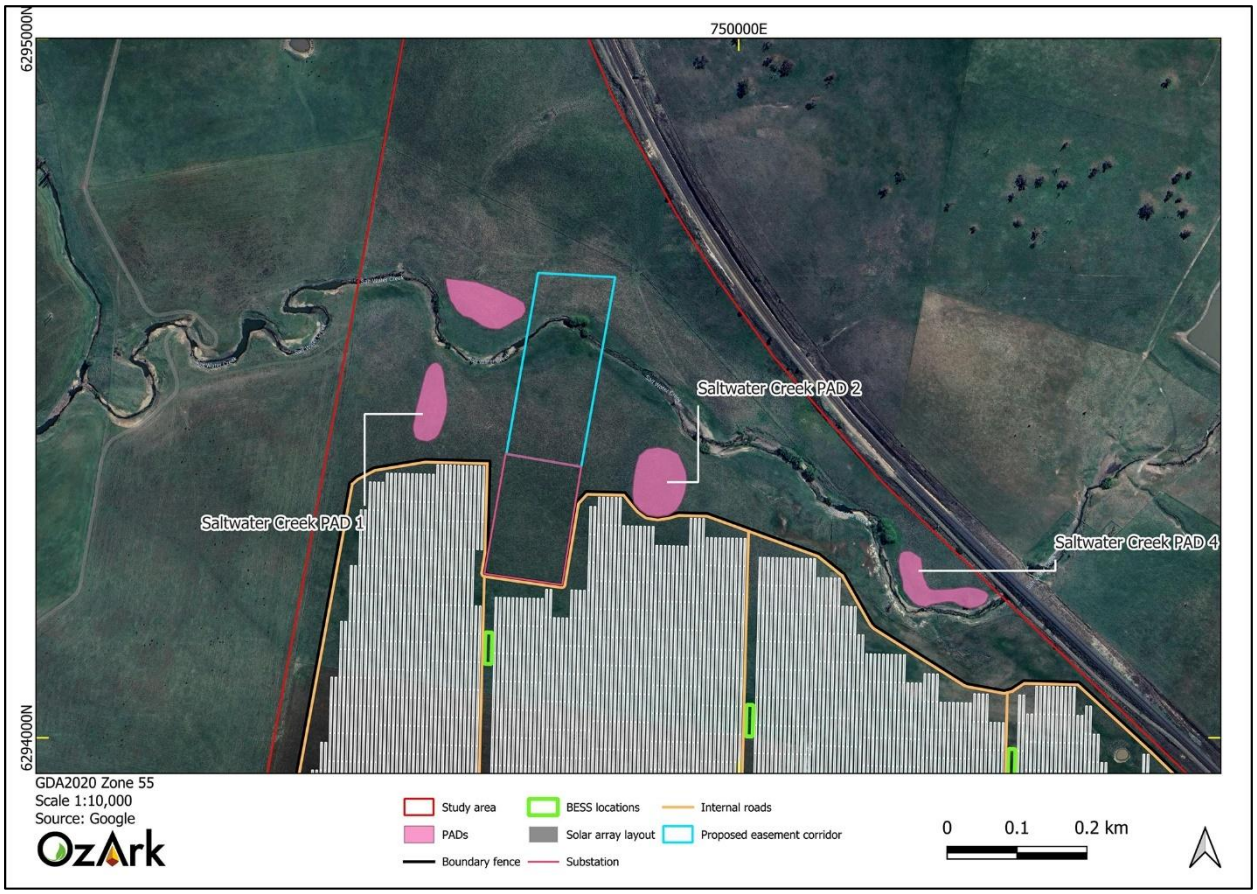
9.2 LIKELY IMPACTS TO ABORIGINAL HERITAGE FROM THE PROJECT

Table 9-1 presents a summary of potential impacts to Aboriginal cultural heritage associated with the project.

Table 9-1: Aboriginal cultural heritage: impact assessment.

Site Name	Type of Harm (Direct/Indirect / None)	Degree of Harm (Total/Partial / None)	Consequence of Harm (Total/Partial/No Loss of Value)
Salt Water Creek PAD 1	None	None	No loss of value
Salt Water Creek PAD 2	None	None	No loss of value
Salt Water Creek PAD 3	None	None	No loss of value
Salt Water Creek PAD 4	None	None	No loss of value

Figure 9-1: PADs in relation to project components.



9.3 ECOLOGICALLY SUSTAINABLE DEVELOPMENT PRINCIPLES

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

9.3.1 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 project.

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

9.3.2 The precautionary principle

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

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

- The project 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.

9.3.3 Principle of Integration

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

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

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

9.3.4 Applicability to the project

The results of the surface survey indicate that significant Aboriginal cultural heritage values will not be harmed within the study area. There is no proposed impact to Aboriginal cultural heritage values as the identified PADs will not be harmed.

Table 9-2 examines the application of ESD principles to the project.

Table 9-2: Application of ESD principles to the project.

ESD principle	Response
Avoiding and minimising harm	Four PADs were identified within the study area, but none are in areas where project works will occur. Management measures are outlined in **Section 10.2** to ensure the PADs are not inadvertently harmed. **Section 10.2** also sets out mechanisms by which to avoid and minimise harm if unknown heritage items are encountered during the construction works.

ESD principle	Response
The integration principle	The project presents a strong case for the broader environmental benefits arising from environmentally responsible development. The environmental consequences of the project have been carefully assessed.
The precautionary principle	The Aboriginal cultural heritage investigation has followed the precautionary principle though undertaking a robust Aboriginal cultural heritage assessment to ensure that harm to Aboriginal objects and values is minimised. The survey adopted a precautionary principle when it came to describing and assessing landforms within the survey areas.
The intergenerational equity principle	It is assessed that the project will not harm significant Aboriginal cultural heritage values and given that no archaeological objects or values will be impacted by the proposed development, the overall cumulative impact on the archaeological record will be nil. Therefore, cumulative impacts are considered negligible with the only impact being a manageable change to the visual aesthetics of the study area.

10 MANAGEMENT OF ABORIGINAL CULTURAL HERITAGE SITES

10.1 GENERAL MANAGEMENT PRINCIPLES

Appropriate management of cultural heritage items is primarily determined based on their assessed significance as well as the likely impacts of the project. **Section 8.2** and **Section 9.2** describe, respectively, the significance / potential of the recorded sites and the likely impacts of the project. The following management options are general principles, in terms of best practice and desired outcomes, rather than mitigation measures against individual site disturbance.

- Avoid impact by altering the project to avoid impact to a recorded Aboriginal 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 DPHI. Normally the management recommendations contained in the ACHAR become policies of the ACHMP. As the Aboriginal community have been provided the opportunity to view the draft ACHAR, the ACHAR must make it clear that a future ACHMP will manage Aboriginal cultural heritage within the study area so that the Aboriginal community can assess the management recommendations with this knowledge.

10.2 MANAGEMENT AND MITIGATION OF RECORDED ABORIGINAL SITES

There are no recorded Aboriginal objects within the study area, however three PADs remain relevant to the project.

Following project approval an ACHMP will be developed to protect any Aboriginal cultural heritage values within the study area. As there are no known Aboriginal objects, the ACHMP will focus on protecting the PADs and unanticipated finds. An example of the procedures that could be incorporated into the ACHMP are provided in **Appendix 5** (unanticipated finds) and **Appendix 6** (unanticipated skeletal remains).

To ensure Salt Water Creek PAD 1, 3 and 4 will not be harmed during construction of the project, they should be temporarily demarcated with high visibility fencing prior to construction commencing. Erosion control measures should be implemented near the PADs, if required, to ensure they are not indirectly impacted during the construction of the project.

The location of the PADs should also be marked on all relevant plans for construction workers.

11 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 four areas of PAD were recorded during the assessment.

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

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

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

1. Following development consent of the proposal, the applicant will develop an ACHMP in consultation with the RAPs and DPHI (with input from Heritage NSW). The ACHMP will also include an unanticipated finds protocol, unanticipated skeletal remains protocol, and long-term management of any artefacts (**Section 10.2**). Construction cannot commence until the ACHMP has been approved by DPHI.
2. The applicant has redesigned the layout of the project to avoid harm to Salt Water Creek PAD 1, PAD 3 and PAD 4. These PADs should be protected during the construction of the project through temporary fencing and their location marked on all relevant plans for construction workers (**Section 10.2**). Erosion control measures should be implemented, if required, to ensure the PADs are not indirectly impacted during the construction of the project.
3. Test excavation at Salt Water Creek PAD 2 determined that no archaeological deposit is present at the location and no further management is required. The AHIMS registration for the site will be updated to ‘not a site’. Works may proceed within the previously recorded boundaries of this PAD.
4. All land-disturbing activities must be confined to within the assessed study area (excluding the identified areas of PADs). 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: Aboriginal community consultation log.

Aboriginal Community Consultation Log			
Date	**Organisation**	**Comment**	**Method**
24.10.23	Paper	Catherine Burrowes (CB) emailed - Western Advocate Bathurst news paper is printed on a daily basis. The cut off is by 2.30pm day before. - will be published Thursday 26.10.23 **closing date 9.11.23.**	Email
26.10.23	Heritage NSW	CB sent stage 1 agency letter requesting potential stakeholders. **Closing date 9.11.23**	Email
26.10.23	Bathurst LALC	CB sent stage 1 agency letter requesting potential stakeholders. **Closing date 9.11.23**	Email
26.10.23	Office of The Registrar, ALRA	CB sent stage 1 agency letter requesting potential stakeholders. **Closing date 9.11.23**	Email
26.10.23	National Native Title Tribunal	CB sent stage 1 agency letter requesting potential stakeholders. **Closing date 9.11.23**	Email
26.10.23	NTSCORP	CB sent stage 1 agency letter requesting potential stakeholders. **Closing date 9.11.23**	Email
26.10.23	Bathurst Regional Council	CB sent stage 1 agency letter requesting potential stakeholders. **Closing date 9.11.23**	Email
26.10.23	Central Tablelands Local Land Services	CB sent stage 1 agency letter requesting potential stakeholders. **Closing date 9.11.23**	Email
27.10.23	Bathurst LALC	CB received email registering for the project	Email
27.10.23	Bathurst LALC	CB replied with thanks	Email
31.10.23	Heritage NSW	CB received community list	Email
9.11.23	Bill Allen	CB sent stage 1 community letter requesting potential stakeholders. **Closing date 23.11.23**	Email
9.11.23	Corroboree Aboriginal Corporation	CB sent stage 1 community letter requesting potential stakeholders. **Closing date 23.11.23**	Email
9.11.23	Cowra LALC	CB sent stage 1 community letter requesting potential stakeholders. **Closing date 23.11.23**	Email
9.11.23	Dhuuluu-Yala Aboriginal Corporation	CB sent stage 1 community letter requesting potential stakeholders. **Closing date 23.11.23**	Email
9.11.23	Didge Ngunawal Clan	CB sent stage 1 community letter requesting potential stakeholders. **Closing date 23.11.23**	Email

Aboriginal Community Consultation Log			
9.11.23	Gundungurra Aboriginal Heritage Association Inc.	CB sent stage 1 community letter requesting potential stakeholders. **Closing date 23.11.23**	Email
9.11.23	Gundungurra Tribal Council Aboriginal Corporation	CB sent stage 1 community letter requesting potential stakeholders. **Closing date 23.11.23**	Email
9.11.23	Gunhigal Mayiny Wirradyuri-Dylang Enterprise	CB sent stage 1 community letter requesting potential stakeholders. **Closing date 23.11.23**	Email
9.11.23	Kamilaroi Yankuntjatjara Working Group	CB sent stage 1 community letter requesting potential stakeholders. **Closing date 23.11.23**	Email
9.11.23	Konanggo Aboriginal Cultural Heritage Services	CB sent stage 1 community letter requesting potential stakeholders. **Closing date 23.11.23**	Email
9.11.23	Mingaan Aboriginal Corporation	CB sent stage 1 community letter requesting potential stakeholders. **Closing date 23.11.23**	Email
9.11.23	Murra Bidgee Aboriginal Corporation, Cultural Heritage	CB sent stage 1 community letter requesting potential stakeholders. **Closing date 23.11.23**	Email
9.11.23	North- Eastern Wiradjuri	CB sent stage 1 community letter requesting potential stakeholders. **Closing date 23.11.23**	Email
9.11.23	Thomas Dahlstrom	CB sent stage 1 community letter requesting potential stakeholders. **Closing date 23.11.23**	Email
9.11.23	Timothy Stubbs	CB sent stage 1 community letter requesting potential stakeholders. **Closing date 23.11.23**	Email
9.11.23	Warrabinga Native Title Claimants Aboriginal Corporation	CB sent stage 1 community letter requesting potential stakeholders. **Closing date 23.11.23**	Email
9.11.23	Wiradjuri Council of Elders	CB sent stage 1 community letter requesting potential stakeholders. **Closing date 23.11.23**	Email
9.11.23	Wiradjuri traditional Owners Central West Aboriginal Corporation	CB sent stage 1 community letter requesting potential stakeholders. **Closing date 23.11.23**	Email
9.11.23	Woka Aboriginal Corporation	CB sent stage 1 community letter requesting potential stakeholders. **Closing date 23.11.23**	Email
9.11.23	Yurwang Gundana Consultancy Cultural Heritage Services.	CB sent stage 1 community letter requesting potential stakeholders. **Closing date 23.11.23**	Email
9.11.23	Geoffrey Toomey	CB sent stage 1 community letter requesting potential stakeholders. **Closing date 23.11.23**	Email
9.11.23	Dharramalin	CB sent stage 1 community letter requesting potential stakeholders. **Closing date 23.11.23**	Email
9.11.23	Girragirra Murun Aboriginal Corporation	CB sent stage 1 community letter requesting potential stakeholders. **Closing date 23.11.23**	Email

Aboriginal Community Consultation Log			
9.11.23	Wingarra Wilay Aboriginal Corporation	CB sent stage 1 community letter requesting potential stakeholders. **Closing date 23.11.23**	Email
9.11.23	Long Gully Cultural Services	CB sent stage 1 community letter requesting potential stakeholders. **Closing date 23.11.23**	Email
9.11.23	Guthers Aboriginal Corporation	CB sent stage 1 community letter requesting potential stakeholders. **Closing date 23.11.23**	Email
9.11.23	CSU Elders Group	CB sent stage 1 community letter requesting potential stakeholders. **Closing date 23.11.23**	Email
9.11.23	Jodie Mckinnon	CB sent stage 1 community letter requesting potential stakeholders. **Closing date 23.11.23**	Post
9.11.23	Trevor Robinson	CB sent stage 1 community letter requesting potential stakeholders. **Closing date 23.11.23**	Post
9.11.23	Windradyne	CB sent stage 1 community letter requesting potential stakeholders. **Closing date 23.11.23**	Post
9.11.23	Wiradjuri Interim Working Party	CB sent stage 1 community letter requesting potential stakeholders. **Closing date 23.11.23**	Post
9.11.23	Geoffrey Toomey	CB received email registering for the project	Email
9.11.23	Geoffrey Toomey	CB replied with thanks	Email
10.11.23	Didge Ngunawal Clan	CB received email registering for the project	Email
10.11.23	Didge Ngunawal Clan	CB replied with thanks	Email
10.11.23	Konanggo Aboriginal Cultural Heritage Services	CB received email registering for the project	Email
10.11.23	Konanggo Aboriginal Cultural Heritage Services	CB replied with thanks	Email
10.11.23	Long Gully Cultural Services	CB received email registering for the project	Email
10.11.23	Long Gully Cultural Services	CB replied with thanks	Email
10.11.23	Wiradjuri Cultural Care Corporation	CB sent stage 1 community letter requesting potential stakeholders. **Closing date 23.11.23**	Email
10.11.23	Wingarra Wilay Aboriginal Corporation	CB received email registering for the project	Email
13.1123	Wingarra Wilay Aboriginal Corporation	CB replied with thanks	Email
13.11.23	Mingaan Aboriginal Corporation	CB received email registering for the project	Email
13.11.23	Mingaan Aboriginal Corporation	CB replied with thanks	Email
15.11.23	Corroboree Aboriginal Corporation	CB received email registering for the project	Email

Aboriginal Community Consultation Log			
15.11.23	Corroboree Aboriginal Corporation	CB replied with thanks	Email
15.11.23	Murra Bidgee Aboriginal Corporation, Cultural Heritage	CB received email registering for the project	Email
15.11.23	Murra Bidgee Aboriginal Corporation, Cultural Heritage	CB replied with thanks	Email
15.11.23	Timothy Stubbs	CB received email registering for the project	Email
16.11.23	Timothy Stubbs	CB replied with thanks	Email
23.11.23	Thomas Dahlstrom	CB received email registering for the project	Email
23.11.23	Thomas Dahlstrom	CB replied with thanks	Email
24.11.23	Heritage NSW & Bathurst LALC	CB sent notification emails re RAP groups registrations	Email
28.11.23	Bathurst LALC	CB emailed Stage 2/3 methodology - **closing date 29.12.23**	Email
28.11.23	Geoffrey Toomey	CB emailed Stage 2/3 methodology - **closing date 29.12.23**	Email
28.11.23	Didge Ngunawal Clan	CB emailed Stage 2/3 methodology - **closing date 29.12.23**	Email
28.11.23	Konanggo Aboriginal Cultural Heritage Services	CB emailed Stage 2/3 methodology - **closing date 29.12.23**	Email
28.11.23	Long Gully Cultural Services	CB emailed Stage 2/3 methodology - **closing date 29.12.23**	Email
28.11.23	Wingarra Wilay Aboriginal Corporation	CB emailed Stage 2/3 methodology - **closing date 29.12.23**	Email
28.11.23	Mingaan Aboriginal Corporation	CB emailed Stage 2/3 methodology - **closing date 29.12.23**	Email
28.11.23	Tim Stubbs	CB emailed Stage 2/3 methodology - **closing date 29.12.23**	Email
28.11.23	Corroboree AC	CB emailed Stage 2/3 methodology - **closing date 29.12.23**	Email
28.11.23	Murra Bidgee AC	CB emailed Stage 2/3 methodology - **closing date 29.12.23**	Email
28.11.23	Thomas Dahlstrom	CB emailed Stage 2/3 methodology - **closing date 29.12.23**	Email
29.11.23	Murra Bidgee Aboriginal Corporation, Cultural Heritage	CB received email response to methodology - *I have read the project information and methodology for the above project, I endorse the recommendations made*	Email
4.12.23	Murra Bidgee Aboriginal Corporation, Cultural Heritage	CB replied with thanks	Email
29.11.23	Tim Stubbs	CB received email response to methodology - *I have reviewed the methodology and agree with it*	Email

Aboriginal Community Consultation Log			
4.12.23	Tim Stubbs	CB replied with thanks	Email
30.11.23	Geoffrey Toomey	CB received email response to methodology -*Comments in folder*	Email
4.12.23	Geoffrey Toomey	CB replied with thanks	Email
14.2.2023	Bathurst LALC	Site officers attended survey	In person
14.2.2023	Bathurst LALC	Site officers attended survey	In person
22.2.2024	Wiradjuri Traditional Owners Central West Aboriginal Corporation	Added as a late registration to RAP list after discussing the project with the applicant	Phone
23.2.2024	Wiradjuri Traditional Owners Central West Aboriginal Corporation	Harrison Rochford (HR) emailed Stage 1 letter	Email
3.6.24	Bathurst LALC	CB emailed project update email	Email
3.6.24	Geoffrey Toomey	CB emailed project update email	Email
3.6.24	Didge Ngunawal Clan	CB emailed project update email	Email
3.6.24	Konanggo Aboriginal Cultural Heritage Services	CB emailed project update email	Email
3.6.24	Long Gully Cultural Services	CB emailed project update email	Email
3.6.24	Wingarra Wilay Aboriginal Corporation	CB emailed project update email	Email
3.6.24	Mingaan Aboriginal Corporation	CB emailed project update email	Email
3.6.24	Tim Stubbs	CB emailed project update email	Email
3.6.24	Corroboree AC	CB emailed project update email	Email
3.6.24	Murra Bidgee AC	CB emailed project update email	Email
3.6.24	Thomas Dahlstrom	CB emailed project update email	Email
3.6.24	Wiradjuri Traditional Owners Central West Aboriginal Corporation	CB emailed project update email	Email
14.6.24	Bathurst LALC	CB emailed Draft Stage 4 ACHAR- closing date 12.7.24	Email

Aboriginal Community Consultation Log			
14.6.24	Geoffrey Toomey	CB emailed Draft Stage 4 ACHAR- closing date 12.7.24	Email
14.6.24	Didge Ngunawal Clan	CB emailed Draft Stage 4 ACHAR- closing date 12.7.24	Email
14.6.24	Konanggo Aboriginal Cultural Heritage Services	CB emailed Draft Stage 4 ACHAR- closing date 12.7.24	Email
14.6.24	Long Gully Cultural Services	CB emailed Draft Stage 4 ACHAR- closing date 12.7.24	Email
14.6.24	Wingarra Wilay Aboriginal Corporation	CB emailed Draft Stage 4 ACHAR- closing date 12.7.24	Email
14.6.24	Mingaan Aboriginal Corporation	CB emailed Draft Stage 4 ACHAR- closing date 12.7.24	Email
14.6.24	Tim Stubbs	CB emailed Draft Stage 4 ACHAR- closing date 12.7.24	Email
14.6.24	Corroboree AC	CB emailed Draft Stage 4 ACHAR- closing date 12.7.24	Email
14.6.24	Murra Bidgee AC	CB emailed Draft Stage 4 ACHAR- closing date 12.7.24	Email
14.6.24	Thomas Dahlstrom	CB emailed Draft Stage 4 ACHAR- closing date 12.7.24	Email
14.6.24	Wiradjuri Traditional Owners Central West Aboriginal Corporation	CB emailed Draft Stage 4 ACHAR- closing date 12.7.24	Email
17.6.24	Konanggo Aboriginal Cultural Heritage Services	CB received email response to draft ACHAR -*KACHS has reviewed the very detailed ACHAR of the Brewongle Solar Farm and acknowledge all processes*	Email
18.6.24	Konanggo Aboriginal Cultural Heritage Services	CB replied with thanks	Email
20.6.24	Murra Bidgee AC	CB received email - *I have read the draft ACHAR for the above project, I endorse the recommendations*	Email
25.6.24	Murra Bidgee AC	CB replied with thanks	Email
11.9.25	**Bathurst LALC**	**CB emailed Draft Stage 2/3 Text excavation- closing date 10.10.25**	**Email**
11.9.25	Geoffrey Toomey	CB emailed Draft Stage 2/3 Text excavation- closing date 10.10.25	Email
11.9.25	Didge Ngunawal Clan	CB emailed Draft Stage 2/3 Text excavation- closing date 10.10.25	Email
11.9.25	Konanggo Aboriginal Cultural Heritage Services	CB emailed Draft Stage 2/3 Text excavation- closing date 10.10.25	Email
11.9.25	Long Gully Cultural Services	CB emailed Draft Stage 2/3 Text excavation- closing date 10.10.25	Email
11.9.25	Wingarra Wilay Aboriginal Corporation	CB emailed Draft Stage 2/3 Text excavation- closing date 10.10.25	Email
11.9.25	Mingaan Aboriginal Corporation	CB emailed Draft Stage 2/3 Text excavation- closing date 10.10.25	Email

11.9.25	Tim Stubbs	CB emailed Draft Stage 2/3 Text excavation- closing date 10.10.25	Email
11.9.25	Corroboree AC	CB emailed Draft Stage 2/3 Text excavation- closing date 10.10.25	Email
11.9.25	Murra Bidgee AC	CB emailed Draft Stage 2/3 Text excavation- closing date 10.10.25	Email
11.9.25	Thomas Dahlstrom	CB emailed Draft Stage 2/3 Text excavation- closing date 10.10.25	Email
11.9.25	Wiradjuri Traditional Owners Central West Aboriginal Corporation	CB emailed Draft Stage 2/3 Text excavation- closing date 10.10.25	Email
11.9.25	Didge Ngunawal Clan	CB received email - DNC is happy to move on with the next stage	Email
12.9.25	Didge Ngunawal Clan	CB replied with thanks	Email
12.9.25	Long Gully Cultural Services	CB received email - I have read the methodology for this project and I'm happy with it.	Email
12.9.25	Long Gully Cultural Services	CB replied with thanks	Email
12.9.25	Thomas Dahlstrom	CB received email - *I have read thru the methodology and I don't have a problem with the modus operandi.*	Email
15.9.25	Thomas Dahlstrom	CB replied with thanks	Email
16.9.25	Wingarra Wilay Aboriginal Corporation	CB received email - Wingarra Wilay has received, read, accepts and agrees with the methodology Test excavation Draft for the Brewongle Solar Farm.	Email
21.9.25	Murra Bidgee AC	CB received email - I have read the project information and draft test methodology for the above project, I endorse the recommendations.	Email
22.9.25	Wingarra Wilay Aboriginal Corporation	CB replied with thanks	Email
22.9.25	Murra Bidgee AC	CB replied with thanks	Email
8.10.25	Bathurst LALC	CB emailed FW invite	Email
8.10.25	Thomas Dahlstrom	CB emailed FW invite	Email
8.10.25	Mingaan Aboriginal Corporation	CB emailed FW invite	Email
8.10.25	Tim Stubbs	CB emailed FW invite	Email
8.10.25	Tim Stubbs	CB received email of acceptance	Email
8.10.25	Thomas Dahlstrom	CB received email of acceptance & insurance	Email
16.10.25	Thomas Dahlstrom	EM received email stating: Hi Catherine, I hope you are well. Greg Kennedy will be my representative next Wednesday at Brewongle. Kind regards, Thomas D	Email
16.10.25	Thomas Dahlstrom	EM responded with thanks and requested contact details	Email
16.10.25	Thomas Dahlstrom	EM received Greg's contact details	Email
17.10.25	Mingaan Aboriginal Corporation	HR attempted to call to confirm FW attendance	Phone
17.10.25	Mingaan Aboriginal Corporation	HR received call back	Phone
17.10.25	Bathurst LALC	EM attempted to call Bathurst LALC to confirm FW attendance	Phone
17.10.25	Bathurst LALC	CB received email from Bathurst LALC confirming attendance	Email
17.10.25	Bathurst LALC	EM responded with thanks for confirmation	Email

Appendix 1 Figure 2: Stage 1 Advertisement placed in the *Western Advocate*.

westernadvocate.com.au Thursday, October 26, 2023 WESTERN ADVOCATE 19

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Deaths & Funerals

Joyce Ford (nee Heunks)
72 years of age
Passed away peacefully at home on 18th October 2023.
Missed by family and friends.
REST IN PEACE
Privately cremated.
RENSHAW'S 6331 4265

Clifford Leslie Rushworth "Cliff"
71 years of age
Passed away on Sunday 22nd October 2023.
Beloved lifelong partner of Estelle. Cherished father of Vivian, Treasured brother and brother-in-law of Col & Val (dec.), John & Francie, Patricia & Delwyn, Maureen, Terry & Lynda, Trevor (dec.) & Carol, Tony & Lorraine (dec.), Darrell & Janene and Robert & Rhonda. Loved uncle of many nephews and nieces. Friend of many.
TOO WELL LOVED TO EVER BE FORGOTTEN
Relatives and friends are invited to attend a graveside service to celebrate Cliff's life at 11:00am on Friday 3rd November 2023 at The Bathurst Cemetery.
RENSHAW'S 6331 4265

Public Notices

Expression of Interest
Cultural Heritage Management
OzArk Environment & Heritage has been engaged by Edify Energy (the proponent) to complete an Aboriginal cultural heritage assessment for a solar farm at 315 Tarana Road, Brewongle, to be known as the Brewongle Solar Farm (the project). The project is located 12 kilometres south-east of Bathurst, NSW, in the Bathurst Regional Local Government Area.
OzArk is seeking persons or groups who wish to be consulted about the Project and this consultation group will assist OzArk and the proponent in the preparation of an Aboriginal Cultural Heritage Assessment Report and to assist Heritage NSW and the Department of Planning and Environment in their consideration and determination of the Project.
If you hold cultural knowledge relevant to determining the cultural significance of Aboriginal objects or places in the study Area, please register your interest to be consulted.
Registrations can be made by
OzArk PO Box 2069 Dubbo NSW 2830;
catherine@ozarkehm.com.au or by
OzArk on 02 6882 0118.
All submissions should be received no later than 9 November 2023.

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We have two permanent full time positions available to join us as a Telesales Consultant in our Bathurst and Orange offices. Both are in office, front desk, customer facing sales positions.
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RM6400150
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Bathurst position number 10062
Orange position number 11946

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view.com.au | See all

Appendix 1 Figure 3: Letter to agencies (sample).

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

26 October 2023

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

ABORIGINAL CULTURAL HERITAGE ASSESSMENT
BREWONGLE SOLAR FARM

Dear Sir/Madam,

OzArk Environment & Heritage (OzArk) has been engaged by Edify Energy (the proponent) to undertake Aboriginal community consultation as per the *Aboriginal cultural heritage consultation requirements for proponents 2010* (DECCW 2010) for the Brewongle Solar Farm (the project).

Edify Energy proposes to develop a solar farm in the locality of Brewongle, NSW. The study area is located approximately 12 kilometres (km) south-east of Bathurst, in the Bathurst Regional Local Government Area (LGA) (**Figure 1**). The study area is approximately 299 hectares (ha) in size, across Lots 1 and 2 DP1236901 & Lot 1 DP1206130 however project infrastructure is only likely to be located across approximately 180 ha of land (**Figure 2**). These activities may result in harm to Aboriginal cultural heritage.

We are therefore seeking Expressions of Interest from relevant Aboriginal stakeholder groups and individuals in the area who hold cultural knowledge relevant to determining the significance of Aboriginal objects or places within the Bathurst LGA.

This consultation group will assist OzArk in preparing the Aboriginal Cultural Heritage Assessment Report (ACHAR) and to assist Heritage NSW and the Department of Planning and Environment in their consideration and determination of the project.

If your organisation can recommend and provide contact details for any known Aboriginal groups or individuals with cultural knowledge relevant to determining the impacts to the cultural significance of the above-mentioned project, please advise our office.

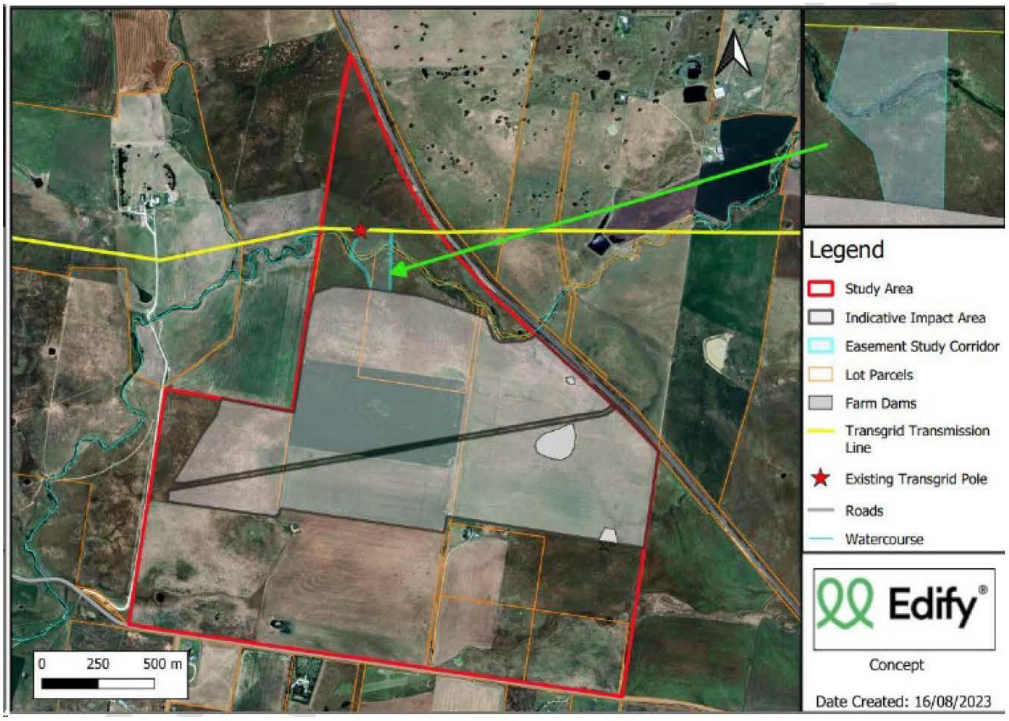
We would appreciate it if you could provide any feedback, by responding to this email catherine@ozarkehm.com.au, regarding these Aboriginal stakeholder groups by COB 9th November 2023, or sooner if possible.

Kind regards,

Catherine Burrowes
Office Manager/ Community Liaison

Figure 1: Regional setting of the project.

Figure 2: Conceptual project layout.



Appendix 1 Figure 4: Letter to community (sample).

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

9 November 2023

ABORIGINAL CULTURAL HERITAGE ASSESSMENT
BREWONGLE SOLAR FARM

Dear Sir/Madam,

OzArk Environment & Heritage (OzArk) has been engaged by Edify Energy (the proponent) to undertake Aboriginal community consultation as per the *Aboriginal cultural heritage consultation requirements for proponents 2010* (DECCW 2010) for the Brewongle Solar Farm (the project).

Edify Energy proposes to develop a solar farm in the locality of Brewongle, NSW. The study area is located approximately 12 kilometres (km) south-east of Bathurst, in the Bathurst Regional Local Government Area (LGA) (**Figure 1**). The study area is approximately 299 hectares (ha) in size, across Lots 1 and 2 DP1236901 & Lot 1 DP1206130 however project infrastructure is only likely to be located across approximately 180 ha of land (**Figure 2**). These activities may result in harm to Aboriginal cultural heritage.

Accordingly, we are seeking Expressions of Interest from relevant Aboriginal groups and individuals in the Bathurst area, to form a consultation group. This consultation group will assist OzArk in preparing the Aboriginal Cultural Heritage Assessment Report (ACHAR) to assist Heritage NSW and the Department of Planning and Environment 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 on (02) 6882 0118 or responding to this email catherine@ozarkehm.com.au. The closing date for expressions of interest is 23 November 2023.

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.

Kind regards,

Catherine Burrowes
Office Manager/ Community Liaison

Figure 1: Regional setting of the project.

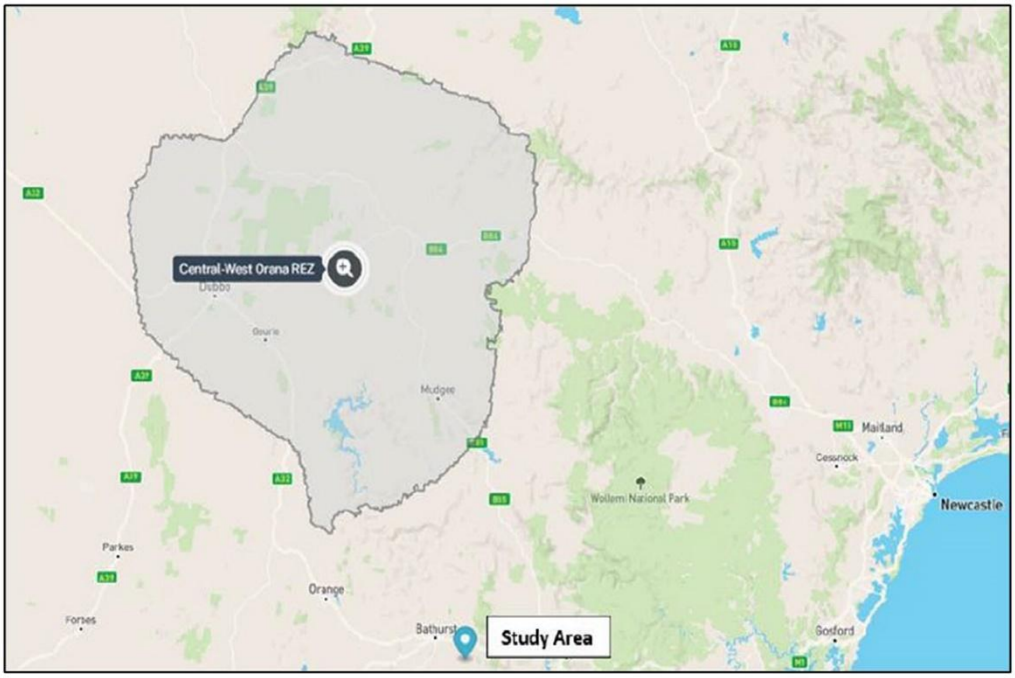
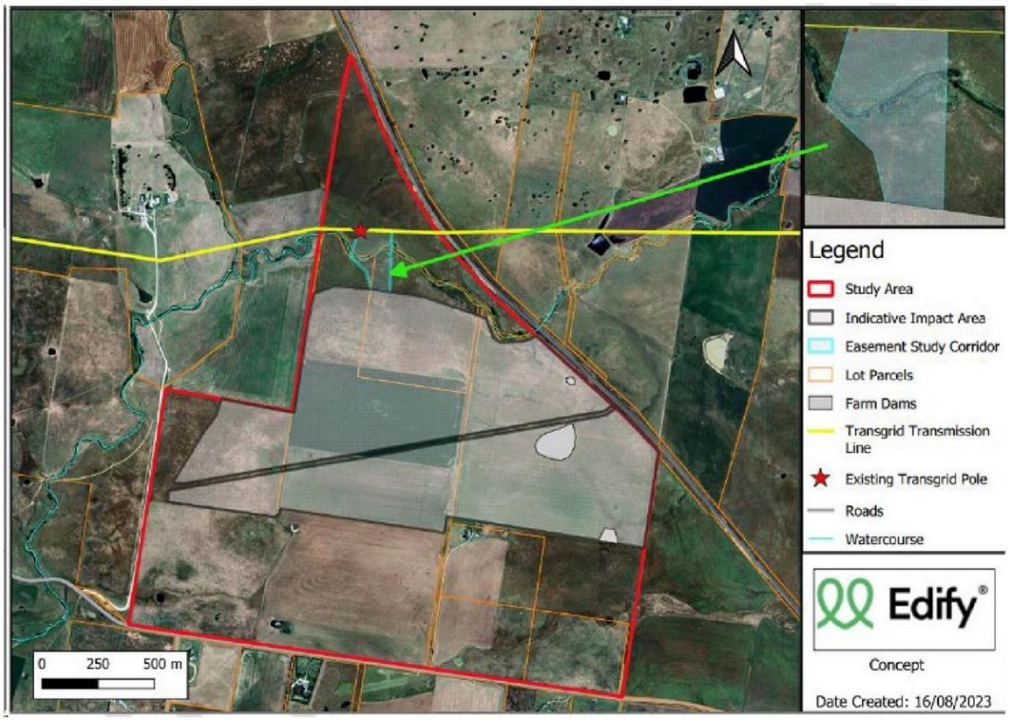


Figure 2: Conceptual project layout.



Appendix 1 Figure 5: Stage 2/3 cover letter and Assessment Methodology.

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

28 November 2023

Bathurst LALC
CEO@Bathurstlalc.com

Aboriginal Cultural Heritage Assessment Methodology:

Proposed Brewongle Solar Farm

Dear Members,

Thank-you for your registration of interest to become a Registered Aboriginal Party (RAP) to be consulted regarding the proposed Brewongle Solar Farm. The study area is located approximately 12 kilometres (km) south-east of Bathurst, in the Bathurst Regional Local Government Area. The project will be assessed as a State Significant Development (SSD) under Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

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

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

OzArk Environment & Heritage is required to give you 28 days to supply feedback on the attached documents. This period closes 5pm on **Friday 29 December 2023**.

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

Kind regards,

Catherine Burrowes
Customer Liaison

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28 November 2023

Bathurst LALC
CEO@Bathurstlalc.com

Aboriginal Cultural Heritage Assessment Methodology:

Proposed Brewongle Solar Farm

Dear Members,

Thank-you for your registration of interest to become a Registered Aboriginal Party (RAP) to be consulted regarding the proposed Brewongle Solar Farm. The study area is located approximately 12 kilometres (km) south-east of Bathurst, in the Bathurst Regional Local Government Area. The project will be assessed as a State Significant Development (SSD) under Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

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

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

OzArk Environment & Heritage is required to give you 28 days to supply feedback on the attached documents. This period closes 5pm on **Friday 29 December 2023**.

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

Kind regards,

Catherine Burrowes
Customer Liaison

ABORIGINAL CULTURAL HERITAGE ASSESSMENT METHODOLOGY

BREWONGLE SOLAR FARM

BATHURST REGIONAL LOCAL GOVERNMENT AREA, NSW

NOVEMBER 2023

Report prepared by

OzArk Environment & Heritage

for Edify Energy Pty Ltd

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DOCUMENT CONTROLS

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Document Description	Brewongle Solar Farm Assessment Methodology
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Acknowledgement

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

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CONTENTS

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FIGURES

TABLES

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1 INTRODUCTION

1.1 PREAMBLE

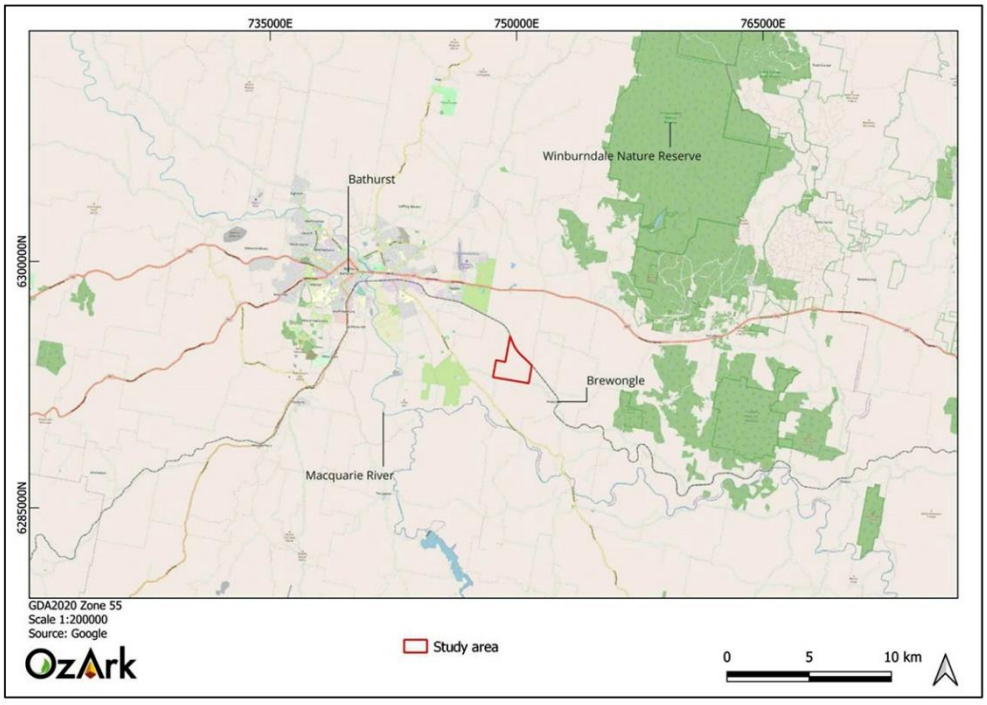
OzArk Environment & Heritage (OzArk) has been engaged by Edify Energy Pty Ltd (the proponent) to prepare an assessment methodology for the proposed Brewongle Solar Farm (the project).

The proposal is located approximately 12 kilometres (km) southeast of Bathurst, in the Bathurst Regional Local Government Area (Error! Reference source not found.).

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

The investigation set out in this methodology aims to identify Aboriginal cultural values, both tangible and intangible, associated with the proposed location of the proposal. The results of this investigation will be presented in an *Aboriginal Cultural Heritage Assessment Report* (ACHAR).

Figure 1-1: Location of the study area for the project



1.2 PROJECT OVERVIEW

The project involves the construction of a ground mounted photovoltaic solar array which would have capacity to generate up to 90 megawatts (MW) of renewable energy. The project intends to

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connect into the existing 132 kilovolt (kV) transmission line (TransGrid owned) which extends east-west, crossing through the northern section of the study area. This connection will be achieved via an overhead line and will require the construction of a new substation.

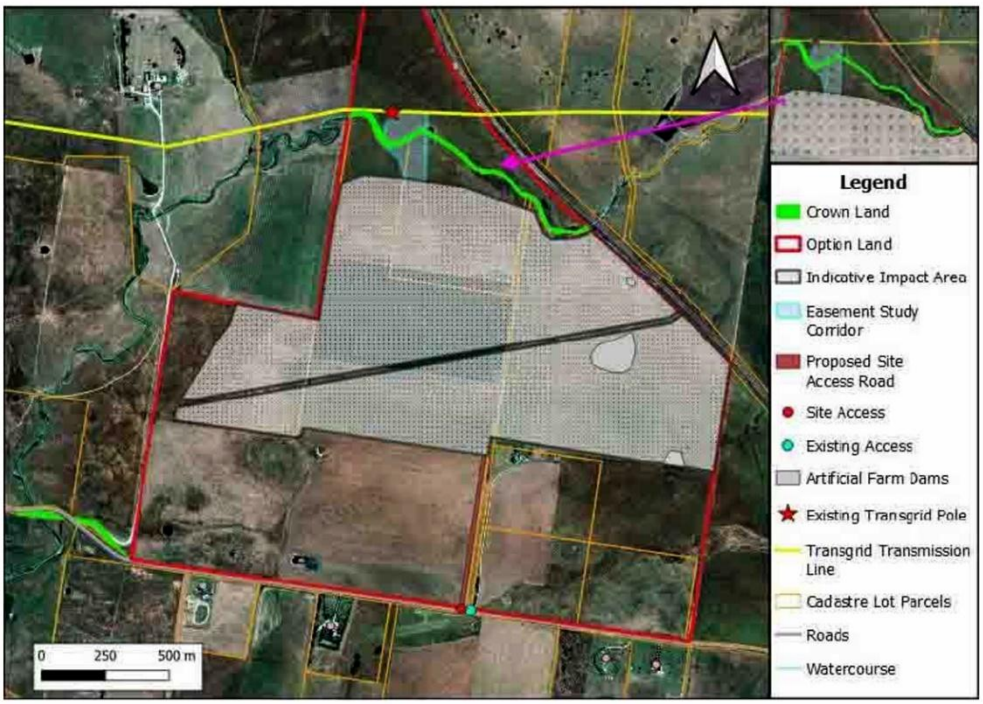
Other infrastructure for the project includes:

- Solar panel arrays
- Inverters, transformers, overhead lines, and underground cabling
- A battery storage system
- Associated maintenance and administrative buildings
- Access tracks, easement crossings, and perimeter security fencing
- Site access via Tarana Road.

The above infrastructure will be constructed within an indicative impact area covering approximately 170 hectares (ha) of land within the study area (see **Figure 1-2**).

The project will also involve two intersection upgrades, the first being along Tarana Road at the site access point and the other being the intersection of O'Connell Road and Tarana Road located to the west of the study area.

Figure 1-2: Conceptual layout of the project.



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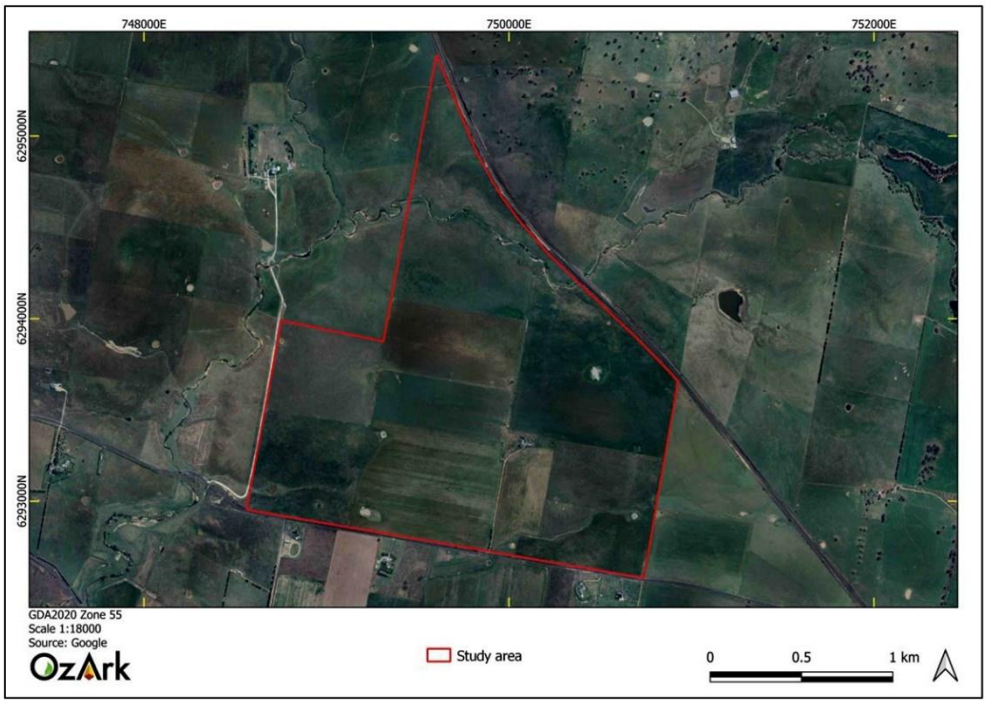
1.3 STUDY AREA

The study area describes the area in which all impacts associated with the proposal will be located (**Figure 1-3**). The study area includes Lots 1 and 2 DP1236901, and Lot 1 DP1206130, covering approximately 299 ha of land which has been historically cleared for agricultural purposes and currently used for livestock grazing.

Figure 1-3: Aerial of the study area.



1.4 CONSULTATION ON THIS METHODOLOGY

Consultation for this project has followed the guidelines established in the ACHCRs (DECCW 2010b) 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 26 October 2023 an advertisement was placed in the *Western Advocate Bathurst* 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 Bathurst Local Aboriginal Land Council (LALC); the Office of The Registrar, *Aboriginal Land Rights Act 1983*; the National Native Title Tribunal; Native Title Services Corporation Limited (NTSCORP); the Bathurst Regional Council; and the Central Tablelands Local Land Services.

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

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- Bathurst LALC
- Didge Ngunawal Clan
- Geoffrey Toomey
- Konanggo Aboriginal Cultural Heritage Services
- Long Gully Cultural Services
- Mingaan Aboriginal Corporation
- Murra Bidgee Aboriginal Corporation
- Stakeholder 1[1]
- Thomas Dahlstrom
- Tim Stubbs
- Wingarra Wilay Aboriginal Corporation

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

1.5 LANDSCAPE CHARACTERISTICS OF THE STUDY AREA

The study area is located within Bathurst Granites landscape classification in the South Eastern Highlands bioregion (Mitchell, 2002). The Bathurst Granites landscape, as characterised by Mitchell (2002) consists of undulating to steep hills on granites, with rock outcrops common along ridge lines, with the elevations within the landscape classification range between 600 to 1000 m. The topography of the study area differs from the characteristics of the Bathurst Granites as it consists primarily of gentle slopes and flats, with a maximum elevation of 730 m (see **Figure 1-4**).

The Fish River is the closest major watercourse and is located approximately 1.5 km south of the study area. Saltwater Creek, a permanent watercourse which flows into the Fish River, intersects directly through the northern section of the study area, running in a general east-west direction. Ephemeral tributaries of Saltwater Creek and Fish River intersect the southern portion of the study area (see **Figure 1-4**).

The soils within the study area are associated with three soil landscapes; the Bathurst, Macquarie, and Raglan soil landscapes. The Raglan soil landscape comprises the largest proportion of the study area, primarily encompassing the southern and northern sections. The Raglan soil landscape consists largely of Red Solodic soils with some Yellow Solodic soils found on lower slopes and within drainage depressions. Raglan topsoil reaches 30 centimetres (cm) in depth and tends to be a sandy loam or loam with a weak structure, while the subsoils tend to be

[1] RAP listed as 'Stakeholder 1' has requested their details not be disclosed.

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a medium to heavy clay with a strong structure and manganese nodules. Both the topsoils and subsoils of the Raglan soil landscape are highly susceptible to erosion.

The Macquarie soil landscape comprises a smaller proportion of the study area, confined to the alluvial plains and terraces of Saltwater Creek in the northern and western-most sections of the study area. The dominant soils within the Macquarie soil landscape are Prairie Soils, which are characterised by a black loam to clay loam topsoil reaching 30 cm in depth, and black light clay subsoils. The topsoils have a moderate erodibility, while the subsoils are less susceptible to erosional processes.

The Bathurst soil landscape comprises the smallest portion of the study area. Located in the southwest corner of the study area, the soils within this landscape are primarily non-calcic Brown Soils, with Yellow Solodic Soils on lower slope and drainage lines. The topsoils are weak in structure, consisting of loamy sands with moderate erodibility. The subsoils range from sandy clay loam to heavy clay with a moderately strong structure, with a low erodibility.

Savannah grasslands are the dominant vegetation of the soil landscapes within study area, and the vegetation associated with the Bathurst Granites comprises woodland to open forests of box, gum, and stringybark species, as well as river oak (Mitchell, 2002). However, examination of the aerial imagery (see **Figure 1-3**) shows that the study area has been cleared of most mature, native vegetation, though some trees remain along the riparian corridors of Saltwater Creek.

The study area is used primarily for grazing and cultivation purposes. Additional disturbances appear to be limited to construction of homesteads and agriculture infrastructure, fence lines, dams and unsealed tracks. An aerial from 1972 which covers the study area shows there has been little change in terms of land use over the past 51 years (**Figure 1-5**).

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Figure 1-4: Topography and drainage of the study area.

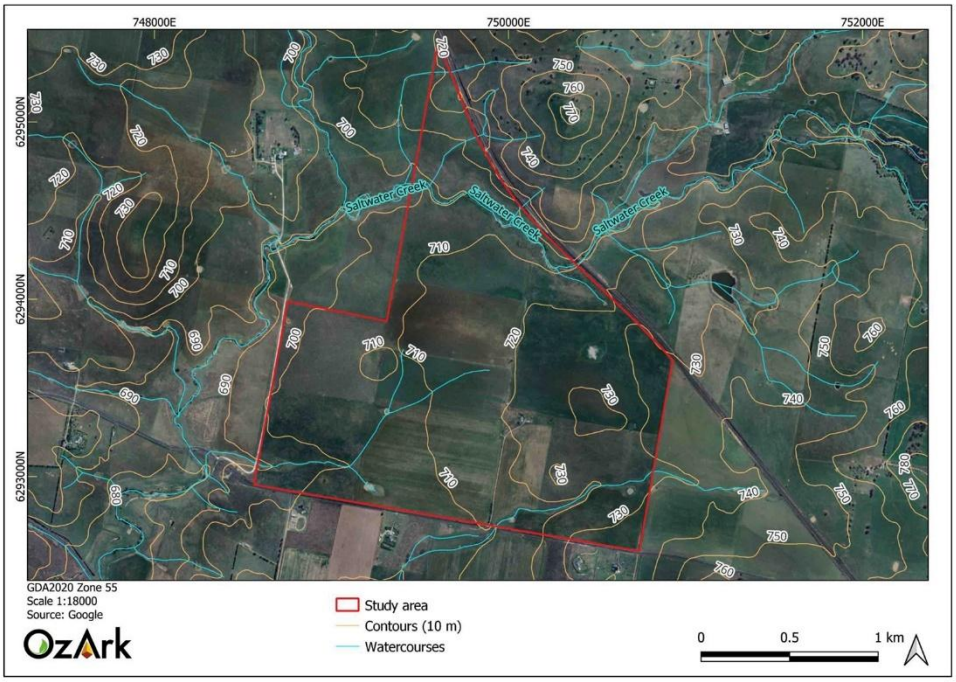

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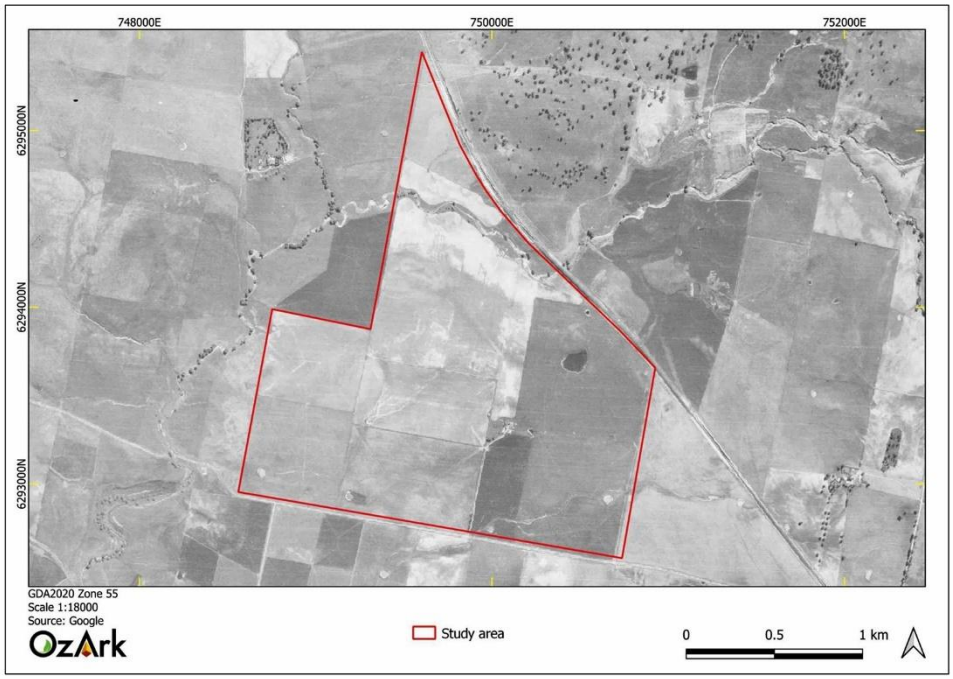
Figure 1-5: 1972 aerial with overlay of study area (source: SS 2023).



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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

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

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

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

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

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

2.1.3 Recognising lore

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

2.2 IDENTIFYING CULTURAL VALUES

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

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

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

2.2.1 Use of information collected

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

2.2.2 Public / confidential information

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

2.2.3 Copyright

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

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3 ARCHAEOLOGICAL CONTEXT

3.1 ABORIGINAL PEOPLE OF THE STUDY AREA

According to Tindale's (1974) and Horton's (1994) maps of tribal or ethno-linguistic boundaries, the Wiradjuri occupied the northern parts of the South Eastern Highlands bioregion near Orange and Bathurst. As such, the study area falls within the Wiradjuri ethno-linguistic group.

Although tribal boundaries still retain some uncertainty, it is thought that the Wiradjuri people were the largest language group in New South Wales, with dialects spoken from Coonabarabran in the north, the Murray River to the south, western Blue Mountains in the east and Condobolin in the west.

Oral tradition records the presence of over 20 clans within the broader Bathurst–Mudgee region, organised according to matrilineal descent (Navin Officer 2005: 48). Clans were made up of several fairly independent groups, of up to 20 members, in friendly contact with each other, moving separately for much of the year over a shared territory (Pearson 1981; Haglund 1985).

Early accounts of contact between European and Aboriginal people in the Macquarie River area were provided by Oxley (1820) and Sturt (1834), and later by Garnsey (1942) who was born in Dubbo in 1874 (Whitehead 2003). Early references to Aboriginal people in the Orange and Wellington regions are provided by John Oxley, who passed by Limestone Creek, south of Mt Canobolas, on 12 April 1817, describing the area as "*a beautiful picturesque country of low hills and fine valleys well-watered*" (Whitehead 2003: 351). Further southwest, at the Lachlan River, Oxley met Aboriginal people carrying stone hatchets and possum skin cloaks. Oxley then returned to Bathurst along the Bell and Macquarie Rivers north of Orange in late August, passing near Wellington on 25 August 1817. Oxley noted the abundant natural resources in areas adjacent to the Macquarie River—including emus, ducks, swans, fish and freshwater muscles—and that the country had an abundance of running water, with a spring on every hill (Rawson 1997: 8).

Garnsey's interest in local Aboriginal culture led him to record information gleaned from his father and from Wiradjuri Aboriginal elders in the Dubbo area. His work remains a useful account of everyday life and religious/ceremonial practices. Garnsey's (1942: 6) description of camp life suggests that many activities were performed communally, for the benefit of the mob. Campsites comprised a series of bark or bush shelters arranged in a semi-circle opening to the east, arranged around a central fire, with men occupying shelters to the north, women in the centre, and children to the south. Camps moved frequently over short distances due to alterations in social relations and weather, and in response to hygiene concerns, among other factors. Longer distance movements tended to be linked to participation in large-scale gatherings (e.g. ceremony or warfare) or alterations in resource availability. Garnsey (1942: 6–23) also provides detailed descriptions of ceremonial practices related to alterations in social status and passages from

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infancy to adulthood. These descriptions of are a composite of various verbal accounts, the accuracy of which is difficult to ascertain. Garnsey (1942: 14) suggests that the 'mob' structure began to break down during the 1890s, by which time only older men appeared to retain the tribal markings and knowledge associated with ceremonial practice. Oral histories provided by traditional custodians are likely to elaborate upon and refute aspects of these early accounts.

In the early colonial period, relationships between Europeans and Aboriginal people were relatively amicable while there were few colonists. Pearson analysed observations written by nineteenth century observers from the upper Macquarie region:

> *the upper Macquarie was inhabited by large localised groups of Aborigines, who in normal conditions of daily life were divided into small groups of up to twenty individuals. These small groups could coalesce relatively quickly into groups of from 80 to 150 people to take advantage of a guaranteed or desirable resource (such as seasonal food resources or the goods offered by the Wellington mission), for ceremonial or social obligations, or for special events (such as a pre-arranged gathering to see an explorer or first settler in an area). There seem to have been no over-riding seasonal factors affecting Aboriginal movements in the well-watered upper Macquarie* (Pearson 1984: 64).

Plants were used for food, as well as in the manufacture of practical items, decorative items and medicines, with some species providing more than one resource. Grass stalks could be used for weaving or producing baskets. Large trees were useful in providing bark and fibres used for the manufacture of tools, containers and possibly the construction of watercraft. The resin obtained from Grass Trees, for example, were an adhesive that could be used in hafting processes. Bark fibres were twisted into twine which could then be woven into traps, containers or baskets and a variety of wooden tools. Stone was also used for tools (RPS 2014).

3.2 REGIONAL ARCHAEOLOGICAL CONTEXT

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

There are several broad scale regional archaeological studies which either cover the study area itself or are in general proximity to it. These studies have been summarised below.

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3.2.1 Early observations on Aboriginal archaeological sites of the Bathurst region (Gresser 1963)

Prior to 1979, no systematic regional archaeological studies had been undertaken in the Bathurst area, although some interested locals or amateurs had recorded some sites. In the 1960s, Percy Gresser, a Bathurst shearer and amateur historian, described how the hilly land to the north of Bathurst contained numerous camp sites located on low ridges adjacent to creeks and springs. Gresser notes that although most sites are located adjacent to creeks, occasionally they are located elsewhere including elevated ridge tops.

3.2.2 Archaeological analysis within the Upper Macquarie Region (Pearson 1981)

Pearson (1981) analysed the patterns of Aboriginal and early colonial settlement within the Upper Macquarie Region, including some excavation. Three shelters were excavated, yielding occupation dates to around 7,000 BP. Pearson argued that archaeological sites could be divided into two main categories: occupation sites and non-occupation sites (which included grinding grooves, scarred or carved trees, ceremonial and burial sites etc.). Pearson's analysis of site location yielded a site prediction model with occupation sites occurring in areas with:

- Access to water – site size decreased with distance from water
- Good drainage and views over watercourses or river flats
- Level ground
- Adequate fuel
- Appropriate localised weather patterns for summer or winter occupation.

As such, occupation sites were most frequently found on low ridge tops, creek banks, gently undulating hills and river flats and usually in open woodland vegetation (Pearson 1981: 101). The location of non-occupation sites, meanwhile, depended on several factors relating to site function. For instance:

- Grinding grooves only occur where there is appropriate outcropping sandstone, but as close to occupation sites as possible
- Scarred trees are variably located with no obvious patterning, other than proximity to watercourses where camps are more frequently located
- Burial grounds are generally in soft soils, as close to occupation sites as geological conditions permit
- Ceremonial sites, such as bora rings and stone arrangements, are located away from occupation sites.

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3.2.3 Bathurst LGA Heritage Study (Extent 2017)

Extent Heritage completed a heritage study in 2017 of over 220 Aboriginal sites recorded on the Aboriginal Heritage Information Management System (AHIMS) across the Bathurst LGA (Extent 2017). 55% of these sites are artefact based open sites (i.e. sites not within closed contexts, such as a cave or rockshelter). Modified trees are the next most prolific site type, followed by stone arrangements.

The predictive model noted that there was a comparatively small number of AHIMS recordings in the Bathurst LGA (on site per 19 square kilometres [km^2]) (Extent 2017: 45). With a limited sample, the model focused on comparing this data with the Aboriginal Sites Decision Support Tool (ASDST; DECCW 2010) cumulative model. Extent Heritage concluded that the Bathurst LGA had areas of flats and slopes with higher archaeological site potential than the ASDST modelling would suggest. Based on the Extent sensitivity map, the study area is in a low and moderate sensitivity area for Aboriginal cultural heritage sites (see **Figure 3-1**).

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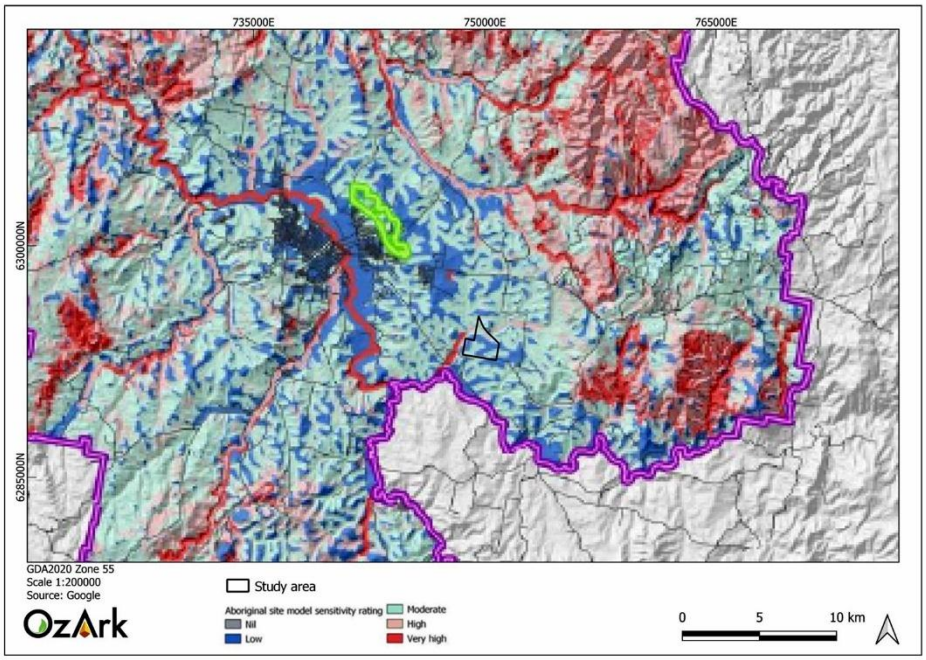
Figure 3-1: The study area in relation to Extent Aboriginal heritage sensitivity map (2017:48).



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3.3 LOCAL ARCHAEOLOGICAL CONTEXT

A search of the AHIMS database on 27 October 2023 returned 45 results for Aboriginal sites within a 20 km radius of the study area (GDA Zone 55 Eastings: 738999 – 758999; Northings: 6283976 – 6303976 with no buffer) (see **Table 3-1** for site types and frequencies). No previously recorded sites are located within the study area.

The most frequently recorded site types are isolated finds which contribute 22% of the site types in the vicinity of the study area. Other frequent site types are artefact scatters (22%) and modified trees (15.5%). Less frequent site types recorded in the vicinity include potential artefact deposits (PADs), a burial, and a grinding groove site. Cultural sites such as Aboriginal ceremony and dreaming sites with associated artefacts, stone arrangements, or grinding grooves were also present. One restricted site was returned in the AHIMS search, which was confirmed through correspondence with AHIMS to be outside the study area (see **Table 3-1**). Additionally, the site of the 1824 Potato Field Massacre is located approximately 10 km north-west of the current study area.

Open artefact sites (such as isolated finds and artefact scatters) as well as modified trees tend to be in proximity to a watercourse. The recorded Aboriginal ceremony and dreaming sites are also located within 300 m of the Macquarie River, Saltwater Creek, Cave Creek, and the Winburndale Rivulet. **Figure 3-2** shows the location of previously recorded sites in the vicinity of the study area.

Table 3-1: AHIMS site types and frequencies

Site Type	Number	% Frequency
Isolated find	10	22.2
Artefact scatter	9	20
Modified tree	7	15.5
Artefact site (quantity unspecified)	5	11.1
PAD	2	4.5
Isolated find with PAD	2	4.5
Aboriginal ceremony and dreaming	2	4.5
Aboriginal ceremony and dreaming with artefact site	2	4.5
Aboriginal ceremony and dreaming with grinding groove	1	2.2
Aboriginal ceremony and dreaming with stone arrangement	1	2.2
Grinding groove	1	2.2
Burial with modified tree	1	2.2
Conflict	1	2.2
Restricted site	1	2.2
Total	**45**	**100**

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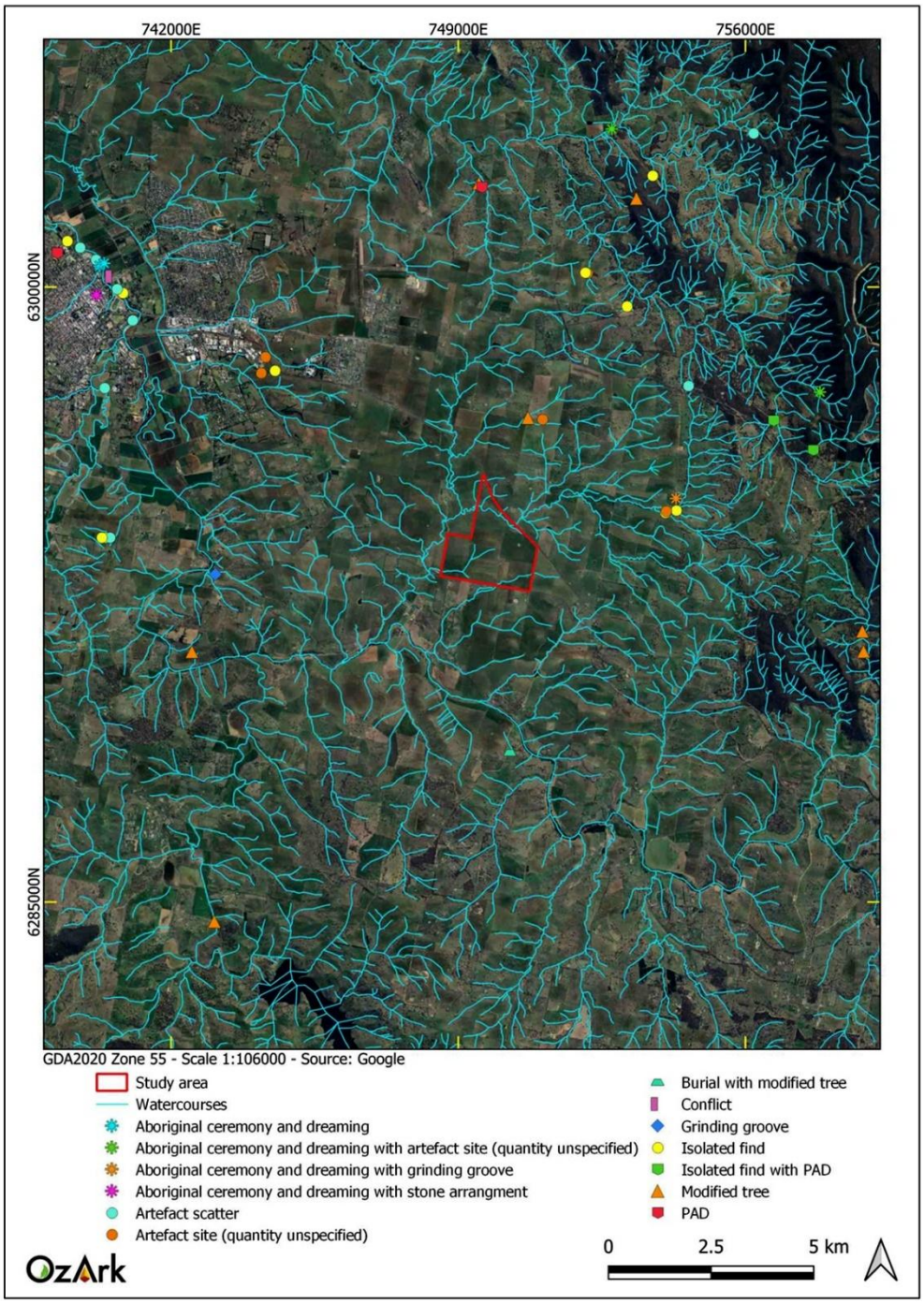
Figure 3-2. AHIMS sites in relation to the study area.



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3.3.1 Archaeological investigations near the study area

3.3.1.1 Assessment between Bathurst – Raglan – Mount Panorama (Pickering 1980)

Pickering (1980) conducted an assessment for a transmission line between substations at Bathurst, Panorama and Raglan. The survey was conducted approximately 3.5 km northwest of the current study area at its closest point. A total of eight Aboriginal artefact sites were recorded during the survey, all of which were recorded in secondary contexts with a variety of materials, including quartz, quartzite and fine-grain siliceous raw materials.

3.3.1.2 Archaeological assessment of "Kempfield" near Trunkey, NSW (Appleton 1999)

Appleton (1999) conducted a survey for a proposed mine southwest of Bathurst, approximately 47 km from the current study area. The survey area covered some 3 kilometres squared (km^2) of rolling slopes and drainage swales, with Rocky Bridge Creek intersecting through the study area in a general south-western direction. Appleton recorded two isolated finds, flakes manufactured of chert materials, both within highly disturbed contexts. It was argued that further sites were not recorded due to erosion and other land disturbances, low visibility, and a lack of natural resources to result in an attractive camp site.

3.3.1.3 Crudine Ridge Wind Farm (NSW Archaeology 2012)

A survey was undertaken for the proposed Crudine Ridge Wind Farm (NSW Archaeology 2012) located approximately 41 km north of the current study area. The survey covered 16 km north-south broad length of land situated on an elevated broad and undulating plateau west of the Crudine River. During the survey, 45 previously unrecorded Aboriginal sites were identified, all of which comprised isolated finds or low-density artefact scatters. It was concluded that the low density of the artefact distribution could be attributed to the highly erosional context in which the sites were identified which caused significant disturbance and would prevent intact subsurface deposits.

3.3.1.4 Bridge and Creek Works, Perthville (OzArk 2018)

An Aboriginal heritage assessment was undertaken by OzArk in 2018 along the Queen Charlotte Vale Creek in Perthville, some 11.8 km from the current study area. No Aboriginal sites were recorded during the assessment, with the lack of site identification concluded to be the result of poor ground surface visibility. Additionally, it was noted that Aboriginal sites and object could have been washed away, disturbed, or buried by erosion and flooding.

3.3.1.5 Eglington Solar Farm (OzArk 2021)

In 2020, OzArk undertook a survey of 670 ha of land approximately 14 km from the current study area. The survey resulted in 14 previously unrecorded Aboriginal sites being identified, including

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eight isolated finds and two open artefact scatters. Eight sensitive archaeological landforms were also identified during the survey. The survey also found that sites were predominately located in drainage landforms or on the lower slopes of rolling hill landforms.

A test excavation program was undertaken in 2021 in which two Aboriginal sites were recorded. The artefact assemblages were largely comprised of quartz, with chert, silcrete, and volcanic materials also present. The excavations found that, while subsurface deposits were present in areas adjacent to minor drainages and tributaries, further subsurface deposits would likely be at a very low density.

3.3.1.6 Glanmire Solar Farm (AREA, 2022)

AREA (2022) undertook a survey for a proposed solar farm 1 km northeast of the current study area. The survey covered approximately 150 ha of gently undulating slopes which have been subject to waterlogging and erosion due to clearing, crop cultivation, and grazing. Two previously unrecorded Aboriginal sites were identified during the survey, including a modified tree and an isolated quartz flake. Both sites were recorded within 100 m of an ephemeral watercourse.

3.4 ARCHAEOLOGICAL CONTEXT: CONCLUSION

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

- Stone artefact sites (isolated finds and artefact scatters) are frequent sites recorded in the area, especially in association with watercourses
- Modified trees are also frequently recorded site types, commonly recorded in the vicinity of watercourses
- Quartz is the predominant material for stone artefacts in the area, although chert, silcrete, and volcanic materials are also amongst the recorded assemblages
- Other site types such as grinding grooves are possible though at a lower frequency.

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4 PREDICTIVE MODEL

4.1 LANDFORM MODELLING

The topography of the study area is primarily gentle slopes or flats, with the highest points being at the southeastern boundary with an elevation of 730 m and the north at an elevation of 720 m. The landform then slopes to the west and flattens near Saltwater Creek (where Saltwater Creek is located to the west of the study area) (see **Figure 1-4**).

Previous studies in the district (Pickering 1980; Appleton 1999; OzArk 2021) indicate that these gentle slopes or flats have a likelihood to contain isolated finds and artefact scatters, though larger, high-density artefact sites are less likely to be recorded.

Preliminary landform mapping within the study area indicates there are three main landform types (**Figure 4-1**):

- Survey Unit 1: drainage (drainage lines with a 50 m buffer and Saltwater Creek with a 100 m buffer)
- Survey Unit 2: flats
- Survey Unit 3: gentle to moderate slopes

The study area and surrounding land is primarily used for grazing and cultivation. The presence of hoofed livestock is likely to have resulted in trampling and compaction of the ground surface which accelerates soil loss. Erosional process within the study area would be exacerbated by the types of landforms present which have been largely cleared of vegetation. Further, cultivation acts to redistribute artefacts both horizontally and vertically within the soil profile and ultimately destroys the integrity of artefact assemblages within the top 20 to 50 cm of the soil profile, meaning sites are likely to be recorded in secondary contexts.

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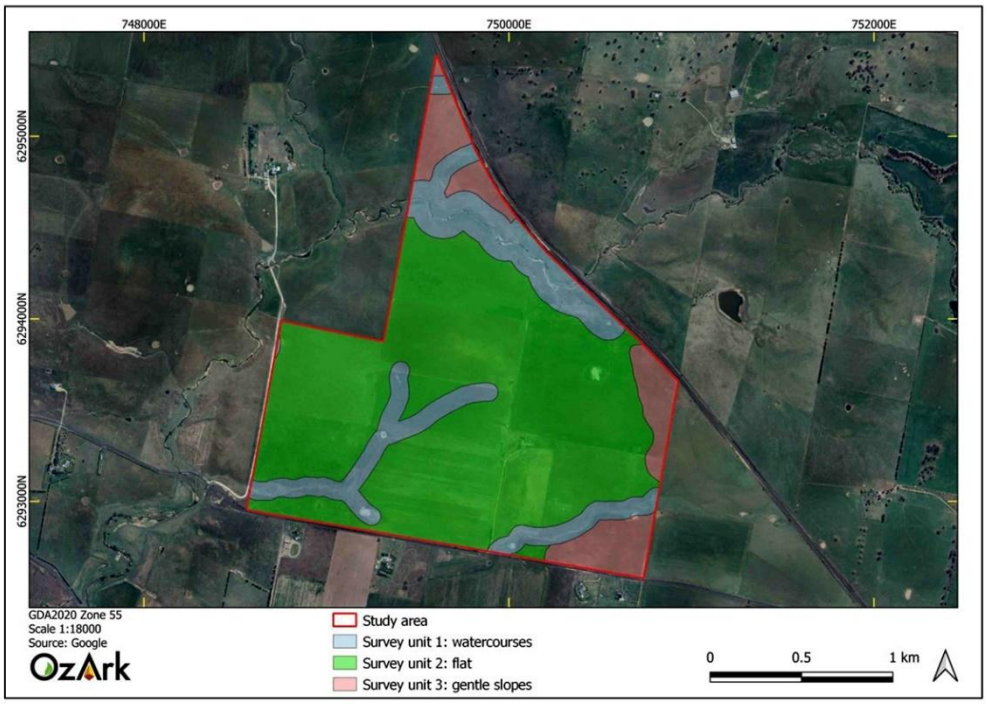
Figure 4-1: Survey units within the study area.



4.2 PREDICTIVE MODEL FOR THE STUDY AREA

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

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

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colonial farming practices. Scarred trees, by their nature, may survive for up to several hundred years but rarely beyond.

4.2.1 Site types in the region of the study area

The site types listed in **Table 4-1** are present in the region of the study area. The likelihood of these sites being present in the study area is discussed in **Section 4.2.2**.

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

Site type	Site description
Isolated finds	May be indicative of random loss or deliberate discard of a single artefact, the remnant of a now dispersed and disturbed artefact scatter, or an otherwise obscured or subsurface artefact scatter. They may occur anywhere within the landscape but are more likely to occur in topographies where open artefact scatters typically occur.
Open artefact scatters	Artefact scatters are defined as two or more artefacts, not located within a rock shelter, and located no more than 50 m away from any other constituent artefact. This site type may occur almost anywhere that Aboriginal people have travelled and may be associated with hunting and gathering activities, short- or long-term camps, and the manufacture and maintenance of stone tools. Artefact scatters typically consist of surface scatters or sub-surface distributions of flaked stone discarded during the manufacture of tools but may also include other artefactual rock types such as hearth and anvil stones. Less commonly, artefact scatters may include archaeological stratigraphic features such as hearths and artefact concentrations which relate to activity areas. Artefact density can vary considerably between and across individual sites. Small ground exposures revealing low density scatters may be indicative of a background scatter rather than a spatially or temporally distinct artefact assemblage. These sites are classed as 'open', that is, occurring on the land surface unprotected by rock overhangs, and are sometimes referred to as 'open camp sites'. Artefact scatters are most likely to occur on level or low gradient contexts, along the crests of ridgelines and spurs, and elevated areas fringing watercourses or wetlands. Larger sites may be expected in association with permanent water sources. Topographies which afford effective through-access across, and relative to, the surrounding landscape, such as the open basal valley slopes and the valleys of creeks, will tend to contain more and larger sites, mostly camp sites evidenced by open artefact scatters.
Culturally modified trees	Aboriginal scarred trees contain evidence of the removal of bark (and sometimes wood) in the past by Aboriginal people, in the form of a scar. Bark was removed from trees for a wide range of reasons. It was a raw material used in the manufacture of various tools, vessels, and commodities such as string, water containers, roofing for shelters, shields and canoes. Bark was also removed because of gathering food, such as collecting wood boring grubs or creating footholds to climb a tree for possum hunting. Due to the multiplicity of uses and the continuous process of occlusion (or healing) following removal, it is difficult to accurately determine the intended purpose for any example of bark removal. Scarred trees may occur anywhere old growth trees survive. The identification of scars as Aboriginal cultural heritage items can be problematical because some forms of natural trauma and European bark extraction create similar scars. Many remaining scarred trees probably date to the historic period when bark was removed by Aboriginal people for both their own purposes and for roofing on early European houses. Consequently, the distinction between European and Aboriginal scarred trees may not be clear.
Grinding grooves	Grinding grooves are the remnants of ground edge hatchet manufacture and sometimes from food preparation. The site is most likely to occur on flat outcrops of coarse-grained sandstone in the vicinity of water sources, however, grinding grooves have also been recorded on fine-grained granite and quartzite outcrops.
Burials	Generally found in soft sediments such as aeolian sand, alluvial silts, and rock shelter deposits. In valley floor and plains contexts, burials may occur in locally elevated topographies rather than poorly drained sedimentary contexts. Burials are also known to have occurred on rocky hilltops in some limited areas. Burials are generally only visible where there has been some disturbance of sub-surface sediments or where some erosional process has exposed them.
Bora/Ceremonial sites	Places which have ceremonial or spiritual connections. Ceremonial sites may comprise of natural landscapes or have archaeological material. Bora sites are ceremonial sites which consist of a cleared area and earthen rings.

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4.2.1.1 *Settlement strategies*

The number of archaeological studies undertaken within the vicinity of the study area provides information to obtain a reasonable understanding of the nature and distribution of archaeological sites within the area. Although there is some conjecture about the relationship between stream order, site numbers and densities, the general pattern is that most sites are present close to watercourses, with good drainage and views over watercourses or river flats. Traditional Aboriginal people also prominently settled on level ground in areas with appropriate localised weather patterns for summer or winter occupation. Due to this, occupation sites are most frequently found on low ridge tops, creek banks, gently undulating hills, and river flats, and usually in open woodland vegetation where less historical ground disturbance has taken place.

4.2.1.2 *Previously recorded sites*

The results of past archaeological investigations near the study area indicate:

- Stone artefact sites (isolated finds and artefact scatters) are the most commonly recorded site types in the area and that other site types, such as ceremonial sites, culturally modified trees, are possible
- The predictive models and results of previous surveys in the local region indicate that the predominant raw materials used for stone artefact manufacture are locally sourced quartz, quartzite, silcrete and volcanics
- Sites tend to be within reasonable distance to reliable water supplies
- 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.

4.2.1.3 *Past land use*

The preservation of archaeological sites and deposits is dependent on past land use. The study area and adjacent land has been mainly used for agricultural purposes. 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. Cropping and the use of ploughing does affect the integrity of archaeological Aboriginal sites, in particular open camp sites, especially if such sites have potential for subsurface deposits. However, ploughing will usually only affect the top 20 to 50 cm of topsoil, and so there is the potential for intact subsurface deposits below the plough-zone.

The clearing of vegetation inside the study area is widespread, despite some remnant trees remaining. This is likely to have had an impact on any modified trees which may have been present.

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4.2.2 Conclusion

Based on knowledge of the environmental contexts of the study area and a desktop review of the known local and regional archaeological record, the following predictions are made concerning the probability of landforms within the study area to contain Aboriginal objects (**Table 4-2**), and what types of sites may be present within the study area (**Table 4-3**).

Table 4-2: Likelihood of landforms within the study area to contain Aboriginal objects.

Survey Unit	Landform type	Likelihood to contain Aboriginal objects
1	Drainage	Archaeological studies in the region indicate that banks and elevated terraces adjacent to drainage lines or watercourses were favoured occupation locations and therefore have high potential for occupation sites to be present. Due to the ephemeral nature of the drainages within the southern portion of the study area, occupation sites along these drainages are most likely to be isolated finds or low-density scatters. Due to the permanent nature of Saltwater Creek in the northern portion of the study area, larger sites or archaeologically sensitive landforms are most likely to present in the vicinity of the creek. Previous studies in the district also indicate that these landforms may contain intact deposits however as most of these landforms have been impacted by erosion and cultivation these sites may be dispersed and intact deposits would only be present if deposits are deep.
2	Flats	Flat landforms were favoured occupation locations when in proximity to permanent and semi-permanent water sources. However, the flat landforms characterised in this survey unit include areas over 100 m from Saltwater Creek and 50 m from drainages. Due to this distant and the uniformity of this landform there are no distinct resources which would have encouraged occupation. Past studies show that isolated finds and low-density artefact scatters may still be present in the landforms however they are generally in a secondary context from agricultural practices.
3	Slopes	Slopes are a degrading landform, especially in the study area where vegetation removal has accelerated soil loss. Although these gentle slopes are suitable for habitation and resource gathering, they are unlikely to have been utilised for long-term occupation and therefore are unlikely to contain a high density of sites.

Table 4-3: Likelihood of certain site types being present in the study area.

Site type	Likelihood of being present in the study area
Isolated finds	As isolated finds can occur anywhere, particularly within disturbed contexts, it is predicted that this site type could be recorded within the study area.
Open artefact scatters	Artefact scatters of differing densities are the most common site type within the surrounding region and there is a general correlation between landform type and the nature of the evidence of past Aboriginal occupation. The higher density artefact scatters are situated on elevated landforms adjacent to permanent waterways. The flat to gently sloping landforms that dominate the study area are unlikely to have been used as occupational locations, but rather as the travel routes or resource gathering areas. Should this site type be present, it will be recorded along the flat to gently undulating landforms bordering Saltwater Creek. The moderate degree of disturbance in the study area indicates that any scatters will be displaced.
PADs	This site type is considered possible in areas where A-Horizon soils are relatively undisturbed. Given the high levels of disturbance across the study area, this has reduced the likelihood of identifying PADs. Previous surveys indicate that PADs are typically recorded along permanent or semi-permanent water courses.
Culturally modified trees	Due to the near-total clearance of trees from within the study area, this site type is predicted to be rare. Should this site type be recorded, it is most likely to be along the riparian corridor of Saltwater Creek.
Grinding grooves	Grinding grooves are unlikely to be recorded in the study area given the geological mapping indicates granite is the underlying rock material (**Section 1.5**).
Burials	Although it is possible that this site type could be found within the study area, it is considered a rare site type especially given the disturbance that has occurred within the study area and the lack of sandy soils.
Bora/Ceremonial sites	This site type does not necessarily follow landform predictability and are, overall, a rare site type with a low likelihood of being present and remaining extant. These sites are generally identified through consultation with the RAPs.

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Overall, at a desktop level the area has a moderate archaeological potential due to the presence of a permanent watercourse within the study area. However, disturbances through long-term agricultural operations reduces this likelihood. Therefore, artefact sites such as isolated finds and open artefact scatters are likely to be recorded during survey.

4.3 RESEARCH QUESTIONS

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

- What resources were available to the Aboriginal people using the land within the study area (food, stone and water) and what resources were transported to the area?
- What tasks were Aboriginal people undertaking at the sites?
- Is there potential for burials to be present in the landscape?
- Do the findings within the study area (if any) accord with the regional archaeological context examined in **Section 3.2**?
- Do the survey results support the predictive model set out in **Section 4.2.2**?

The survey methodology set out in **Section 5** will be framed to help answer these questions; should sites of sufficient significance be encountered. However, based on the results of previous assessments and past disturbances, it not expected that the land within the study area 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 study area will follow the *Code of Practice for the Investigation of Aboriginal Objects in New South Wales* (Code of Practice; DECCW 2010). The field inspection will follow the *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in New South Wales* (The Guide, OEH 2011).

Survey for Aboriginal cultural heritage values will concentrate on the study area where project impacts will be located.

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 study area are known. Therefore, the aims of the survey will be to:

- Inspect all landform types in the study area so that their archaeological potential can be determined
- Evaluate whether the predictive model set out in **Section 4.2** is valid
- Determine if the research questions set out in **Section 4.2.1** can be answered
- Determine if any landforms of the study area require test excavation to understand the archaeological potential at a particular location
- Undertake sufficient assessment to satisfy Sections 2.2, 2.4, 2.5, 2.6, and 2.7 in the Guide
- Collect sufficient data so that the results can be presented in an ACHAR as set out in Section 3 in the Guide
- Undertake survey and record keeping satisfying Requirements 1–13 of the Code of Practice.

5.3 SURVEY METHODOLOGY

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

Full pedestrian survey will be conducted across Survey Units 1 and 3. Full pedestrian survey will also be conducted across the portions of Survey Unit 2 which are within the indicative development footprint and along the proposed access track. The remaining portions of Survey Unit 2 will be subject to sample survey (**Figure 5-1**). The proposed intersection upgrade areas outside the study area will also be surveyed.

'Full pedestrian survey' refers to systematic transects walked by surveyors spaced approximately 20 m apart throughout the landform or area being surveyed. 'Targeted sample survey' refers to

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transects walked by surveyors spaced approximately 20 m apart that will not cover the entire area but instead will focus on understanding the archaeological potential of representative landforms within these areas.

In the field, OzArk staff will identify, record and evaluate physical (i.e., archaeological) evidence. Site recording will capture all the information required to complete current AHIMS site recording forms (e.g., site location, site boundary, site plan, representative photographs, artefact recording and feature recording). RAPs will participate in the survey, identifying Aboriginal objects, determining the cultural significance of Aboriginal objects and identifying cultural places or non-physical site types within the study area. OzArk staff understand that cultural knowledge may not be provided in some instances due to cultural sensitivities (e.g., men's and/or women's places). Under these circumstances, to assess the potential impacts, OzArk staff will need to be told, only in general terms, why a particular place is important, and what the significance of the impact will be.

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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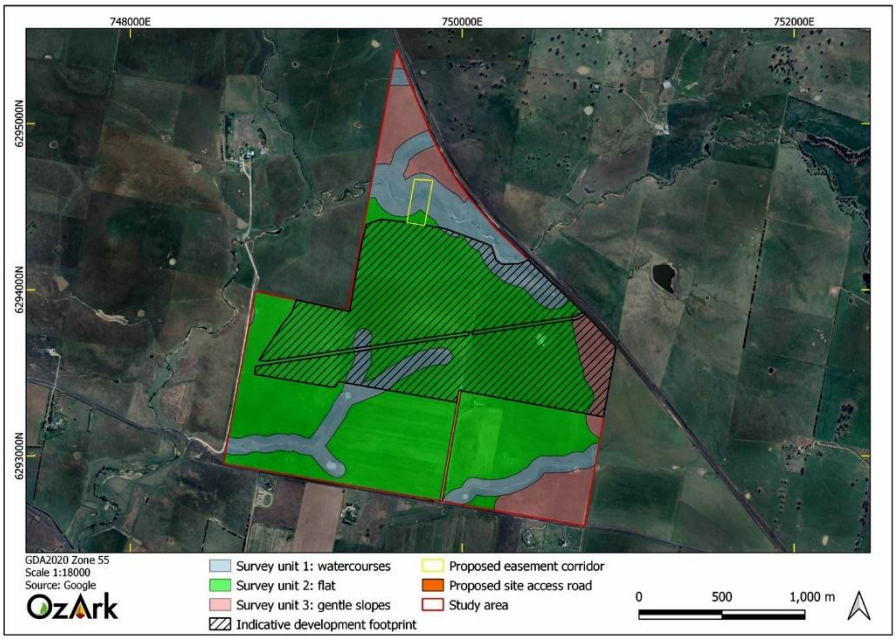
Figure 5-1: Aerial showing the proposed survey areas.



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Appendix 1 Figure 6: Stage 2/3 responses from RAPs.

Re: Stage 2 Assessment Methodology - Brewongle Solar Farm

[redacted]

Reply | Reply All | Forward | ...

Thu 30/11/2023 3:21 PM

Hi Catherine,

Just looking at that study area,

I think it would be fair to assume there will be artefacts located on site,

especially with Saltwater creek passing through the study area.

Also with Bathurst being a large scale place of cultural significance, serving as a meeting place for grand ceremonies.

I feel like it will turn up a few artefacts just based on those key factors.

Kind regards

Geoff Toomey

From: Nathan Toomey
To: Catherine Burrowes
Subject: Re: Stage 2 Assessment Methodology - Brewongle Solar Farm
Date: Monday, 4 March 2024 6:27:17 PM

Hi Catherine,

If you have already selected the raps to be on this project then disregard this msg,

but if they are still to be selected I am hereby letting you know I do not want to be involved in this project due to the significance of the area.

Regards

Geoff Toomey

From: Darleen Johnson
To: Catherine Burrowes
Subject: Re: Stage 2 Assessment Methodology - Brewongle Solar Farm
Date: Wednesday, 29 November 2023 9:32:20 AM

Hi Catherine
I have read the project information and methodology for the above project, I endorse the recommendations made.
Kind regards
Darleen Johnson
[redacted]

From: tim stubbs
To: Catherine Burrowes
Subject: Re: Stage 2 Assessment Methodology - Brewongle Solar Farm
Date: Wednesday, 29 November 2023 3:50:50 PM

Hi Catherine,

Merry Christmas and happy new year in case I don't speak to u before then
I have reviewed the methodology and agree with it
I am available for field work if needed

Kind regards Tim
Sent from my iPhone

Appendix 1 Figure 7: Stage 2/3 project update email.

From: Catherine Burrowes
Bcc: [redacted]
Subject: Project Update - Brewongle Solar Farm
Date: Monday, 3 June 2024 2:45:00 PM

Hello Members,

Project email update. The project is still active, and the draft ACHAR will be sent for 28-days review in the near future.

Regards, Catherine

Catherine Burrowes
OzArk Environment & Heritage
Office Manager
(02) 6882 0118

Appendix 1 Figure 8: Stage 2 Test Excavation Cover Letter

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PO Box 2069
DUBBO NSW 2830

11 September 2025

Aboriginal Cultural Heritage Test Excavation draft Methodology:

Proposed Brewongle Solar Farm

Dear Members,

Thank-you for your registration of interest to become a Registered Aboriginal Party (RAP) to be consulted regarding the proposed Brewongle Solar Farm project. The study area is at 315 Tarana Road, Brewongle. The project is 10 kilometres (km) southeast of Bathurst, in the Bathurst Local Government Area.

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

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

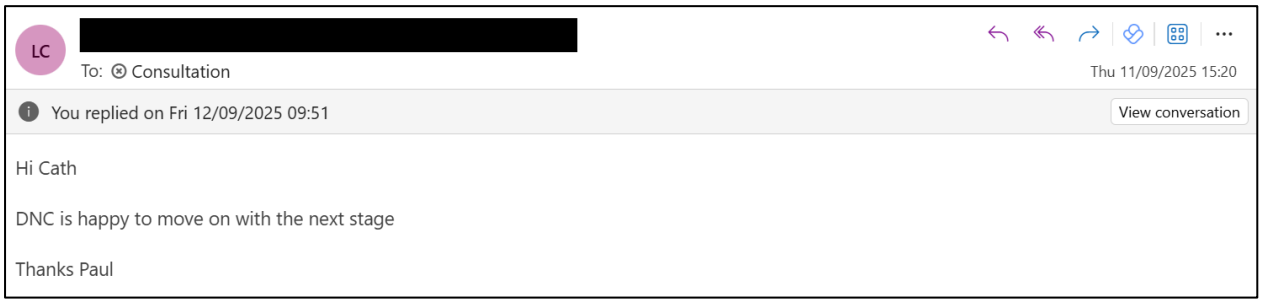
OzArk Environment & Heritage is required to give you 28 days to supply feedback on the attached documents. This period closes 5pm on **Friday 10 October 2025**.

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

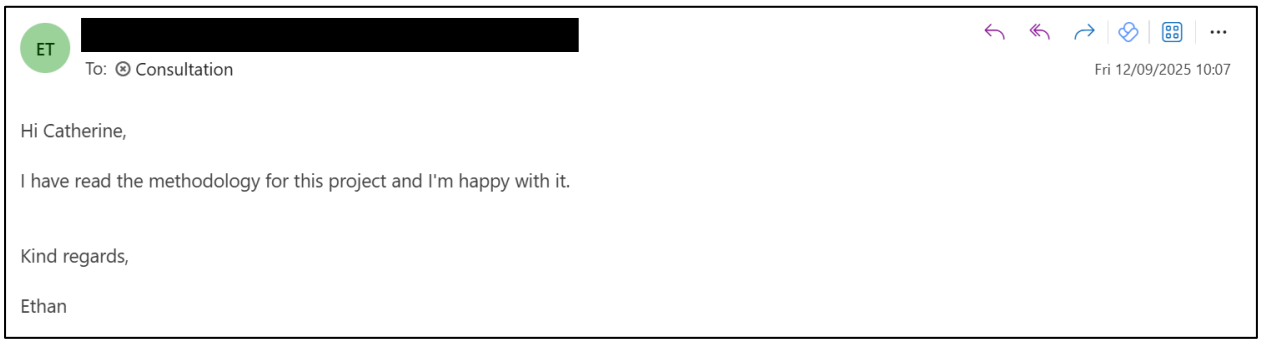
Kind regards,

Catherine Burrowes
Consultation officer

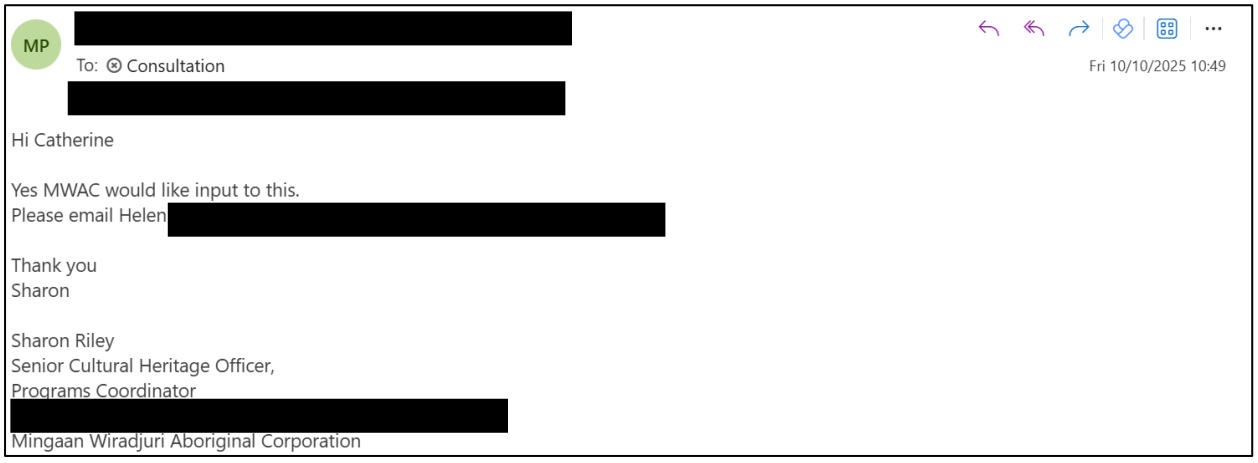
Appendix 1 Figure 9: Stage 2 Responses to Test Excavation Methodology



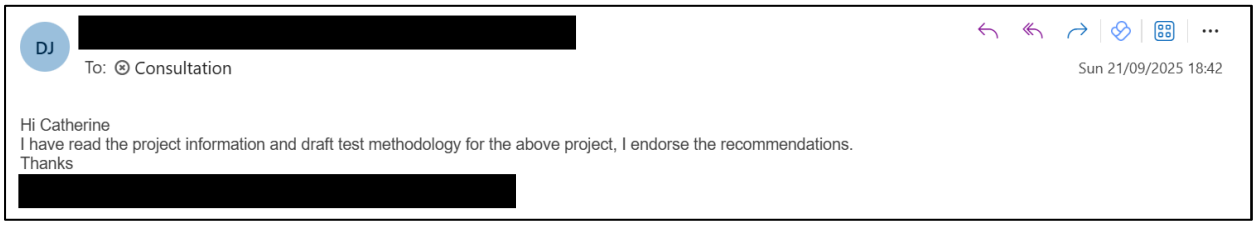
DNC



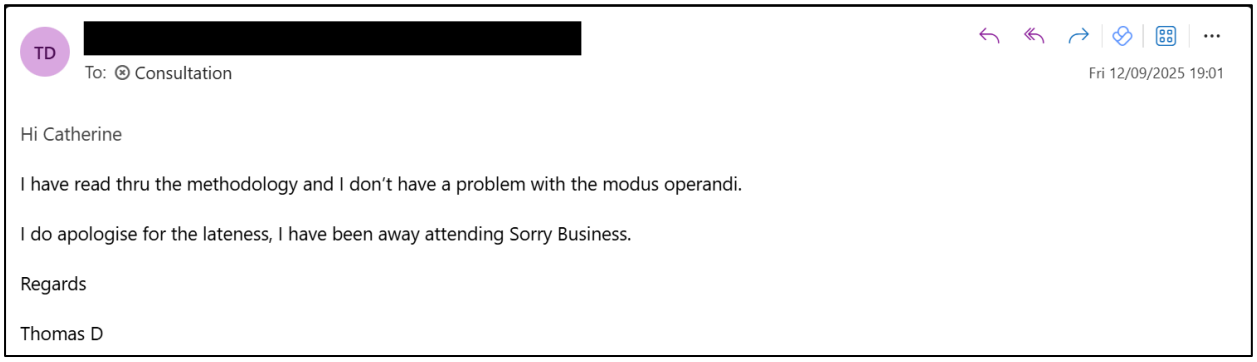
Long Gully



Mingaan



Murra Bidgee


TD

[redacted]

To: Consultation

Fri 12/09/2025 19:01

Hi Catherine

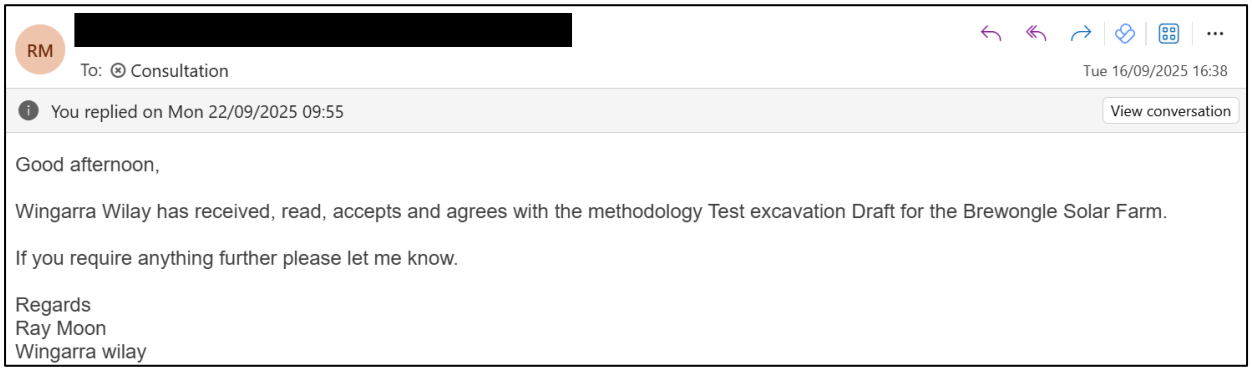
I have read thru the methodology and I don't have a problem with the modus operandi.

I do apologise for the lateness, I have been away attending Sorry Business.

Regards

Thomas D

Thomas Dahlstrom


RM

[redacted]

To: Consultation

Tue 16/09/2025 16:38

You replied on Mon 22/09/2025 09:55

View conversation

Good afternoon,

Wingarra Wilay has received, read, accepts and agrees with the methodology Test excavation Draft for the Brewongle Solar Farm.

If you require anything further please let me know.

Regards
Ray Moon
Wingarra wilay

Wingara Wilay

Appendix 1 Figure 10: Stage 4 cover letter example

OzArk Environment & Heritage
Dubbo | Queanbeyan
Wollongong | Newcastle
Katoomba
T: 02 6882 0118
enquiry@ozarkehm.com.au
www.ozarkehm.com.au
ABN 29 675 720 564
145 Wingewarra St
PO Box 2069
DUBBO NSW 2830

14 June 2024

ABORIGINAL CULTURAL HERITAGE ASSESSMENT FOR BREWONGLE SOLAR FARM

Dear Members,

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

Edify Energy Pty Ltd (the Proponent) would like to offer you the opportunity to provide feedback on the draft Aboriginal Cultural Heritage assessment Report (ACHAR) 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 draft ACHAR. This period closes on the **Friday 12th July 2024**. Should our office not be contacted within this time frame, we will presume that you are satisfied with the contents of the ACHAR as it stands.

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

Kind regards,

Catherine Burrowes
Office Manager/ Community Liaison

Appendix 1 Figure 11: Stage 4 responses from RAPs

From: [redacted]
To: Catherine Burrowes
Subject: Re: Draft Stage 4 ACHAR - Brewongle Solar Farm
Date: Monday, 17 June 2024 11:12:18 AM

Dear Catherine,

Thank you for the email information of the Draft Stage 4 ACHAR - Brewongle Solar Farm

KACHS has reviewed the very detailed ACHAR of the Brewongle Solar Farm and acknowledge all processes

Yours In Culture,

[redacted]
Konanggo Aboriginal Cultural Heritage Services
[redacted]

From: Catherine Burrowes <catherine@ozarkehm.com.au>
Sent: Friday, 14 June 2024 10:59 AM
To: [redacted]
Subject: Draft Stage 4 ACHAR - Brewongle Solar Farm

Hello Members,

Please find attached draft stage 4 information package for Proposed Brewongle Solar Farm.

I look forward to hearing from you with any feedback you may have by Friday 12 July 2024.

Regards, Catherine

Catherine Burrowes
OzArk Environment & Heritage
Office Manager
(02) 6882 0118

From: [redacted]
To: Catherine Burrowes
Subject: Re: Draft Stage 4 ACHAR - Brewongle Solar Farm
Date: Thursday, 20 June 2024 6:39:16 AM

Hi Catherine
I have read the draft ACHAR for the above project, I endorse the recommendations.
Kind regards
[redacted]

On Friday, 14 June 2024 at 11:02:27 am AEST, Catherine Burrowes <catherine@ozarkehm.com.au> wrote:

Hello Members,

Please find attached draft stage 4 information package for Proposed Brewongle Solar Farm.

I look forward to hearing from you with any feedback you may have by Friday 12 July 2024.

Regards, Catherine

Catherine Burrowes

OzArk Environment & Heritage

Office Manager

(02) 6882 0118

APPENDIX 2: AHIMS SEARCH RESULTS

27 October 2023

AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : Brewongle
Client Service ID : 833890

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
44-3-0108	BH-OS-1;Browns Hill Napoleon Reefs;	AGD	55	754500	6297400	Open site	Valid	Artefact : -	Open Camp Site	
	Contact	Recorders	Central West Archaeological and Heritage Services Pty Ltd					Permits		
44-3-0212	Ceremonial ground Wambool	GDA	55	740180	6299804	Open site	Valid	Aboriginal Ceremony and Dreaming : -, Stone Arrangement : -		
	Contact	Recorders	Mr.Jade Flynn,Wiradyuri Traditional Owners Central West (WTOCWAC)					Permits		
44-3-0253	BSP AS5	GDA	55	741068	6299185	Open site	Valid	Artefact : -		
	Contact	Recorders	Extent Heritage Pty Ltd - Pyrmont - Individual users,Extent Heritage Pty Ltd - Pyrm					Permits	5154	
44-3-0321	Glanmire CMT 01	GDA	55	750698	6296810	Open site	Valid	Modified Tree (Carved or Scarred) : -		
	Contact	Recorders	AREA Environmental & Heritage - Dubbo,Ms.Kim Newman					Permits		
44-3-0045	Fontana Reef Modified Tree 1	AGD	55	753228	6301974	Open site	Valid	Modified Tree (Carved or Scarred) : -	Carved Tree	65,353,1298
	Contact	Recorders	ASRSYS					Permits		
44-3-0117	Restriction applied. Please contact ahims@environment.nsw.gov.au.					Open site	Valid			
	Contact Bill Allen	Recorders	Bill Allen					Permits		
44-3-0255	BSP AS3	GDA	55	740247	6300536	Open site	Valid	Artefact : -		
	Contact	Recorders	Extent Heritage Pty Ltd - Pyrmont - Individual users,Extent Heritage Pty Ltd - Pyrm					Permits	5154	
44-3-0064	Raglan/Bathurst	GDA	55	744306	6298291	Open site	Destroyed	Artefact : -	Open Camp Site	606,105032
	Contact	Recorders	ASRSYS,Apex Archaeology,Ms.Jenni Bate					Permits		
44-3-0166	W20 A25	GDA	55	749504	6302531	Open site	Valid	Modified Tree (Carved or Scarred) : 1		
	Contact	Recorders	Navin Officer Heritage Consultants Pty Ltd					Permits		
44-3-0322	Glanmire ISO 01	GDA	55	751057	6296769	Open site	Valid	Artefact : -		
	Contact	Recorders	AREA Environmental & Heritage - Dubbo,Ms.Kim Newman					Permits		
44-3-0231	Salt Water Creek IF-2	GDA	55	754321	6294548	Open site	Valid	Artefact : -		104280
	Contact	Recorders	OzArk Environmental and Heritage Management - Dubbo,Doctor.Alyce Cameron					Permits		
44-3-0217	Grinding grooves penrose	GDA	55	743079	6292992	Closed site	Valid	Grinding Groove : -		
	Contact	Recorders	Mr.Jade Flynn,Wiradyuri Traditional Owners Central West (WTOCWAC)					Permits		
44-3-0305	Scarred Tree 03	GDA	55	758852	6291600	Open site	Valid	Modified Tree (Carved or Scarred) : -		
	Contact	Recorders	Niche Environment and Heritage,Miss.Catriona Graham					Permits		
44-3-0256	BSP AS2	GDA	55	740174	6300664	Open site	Valid	Artefact : -		
	Contact	Recorders	Extent Heritage Pty Ltd - Pyrmont - Individual users,Extent Heritage Pty Ltd - Pyrm					Permits	5154	

Report generated by AHIMS Web Service on 27/10/2023 for Stephanie Rusden for the following area at Datum :GDA, Zone : 55, Eastings : 738999.0 - 758999.0, Northings : 6283976.0 - 6303976.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 45

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Page 1 of 4

AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : Brewongle
Client Service ID : 833890

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
44-3-0251	BSH AS1	GDA	55	740383	6297535	Open site	Valid	Artefact : -		
	Contact	Recorders	Extent Heritage Pty Ltd - Pyrmont - Individual users,Miss.Coral (extent heritage) H					Permits	5154	
44-3-0248	Potato Field Massacre Site	GDA	55	740555	6300254	Open site	Valid	Conflict : -		
	Contact	Recorders	Charles Sturt University,Charles Sturt University,Mr.Jade Flynn,Mr.Jade Flynn					Permits		
44-3-0220	W20 A9 & W20 A13 - Artefact Relocation	GDA	55	752151	6300337	Open site	Valid	Artefact : -		
	Contact	Recorders	OzArk Environmental and Heritage Management - Dubbo,Miss.Philippa Sokol					Permits		
44-3-0247	Wyndradyne's family camp site	GDA	55	740259	6300512	Open site	Not a Site	Aboriginal Ceremony and Dreaming : -		
	Contact	Recorders	Charles Sturt University,Mr.Jade Flynn					Permits		
44-3-0059	Orton Park;Bathurst.	AGD	55	740300	6293700	Open site	Valid	Artefact : 1	Open Camp Site	606
	Contact	Recorders	Michael Pickering					Permits		
44-3-0232	Salt Water Creek IF-1	GDA	55	754055	6294493	Open site	Valid	Artefact : -		104280
	Contact	Recorders	OzArk Environmental and Heritage Management - Dubbo,Doctor.Alyce Cameron					Permits		
44-3-0177	Goulds Creek Artefacts	GDA	55	756204	6303746	Open site	Valid	Artefact : 5		
	Contact	Recorders	Mr.Gavin Newton					Permits		
44-3-0167	W20 A9	GDA	55	752101	6300348	Open site	Destroyed	Artefact : 1		104298
	Contact	Recorders	Navin Officer Heritage Consultants Pty Ltd,OzArk Environmental and Heritage Mar					Permits	3764	
44-3-0144	bathurst base hospital pad	AGD	55	739116	6300641	Open site	Not a Site	Potential Archaeological Deposit (PAD) : 1		
	Contact S Scanlon	Recorders	Ms.Fiona Leslie					Permits	2413	
44-6-0011	Davis's Creek Davys Creek	AGD	55	742939	6284340	Open site	Valid	Modified Tree (Carved or Scarred) : -	Carved Tree	65,353,1298
	Contact	Recorders	ASRSYS					Permits		
44-3-0170	W20 A7	GDA	55	756692	6296736	Open site	Valid	Artefact : 1, Potential Archaeological Deposit (PAD) : 1		104298
	Contact	Recorders	Navin Officer Heritage Consultants Pty Ltd,OzArk Environmental and Heritage Mar					Permits	3764	
44-3-0063	Ragland; Bathurst	GDA	55	744200	6297900	Open site	Destroyed	Artefact : -	Open Camp Site	606
	Contact	Recorders	ASRSYS,Apex Archaeology,Ms.Jenni Bate					Permits	4834	
44-3-0066	Little Wonder Gully IF 1	AGD	55	753629	6302528	Open site	Valid	Artefact : -	Open Camp Site	83,232,1298
	Contact	Recorders	ASRSYS					Permits		
44-3-0233	Salt Water Creek OS-1	GDA	55	754073	6294530	Open site	Valid	Artefact : -		104280
	Contact	Recorders	OzArk Environmental and Heritage Management - Dubbo,Doctor.Alyce Cameron					Permits		
44-3-0171	W20 A8	GDA	55	757657	6296015	Open site	Valid	Artefact : 1, Potential Archaeological Deposit (PAD) : 1		
	Contact	Recorders	Navin Officer Heritage Consultants Pty Ltd					Permits	3764	

Report generated by AHIMS Web Service on 27/10/2023 for Stephanie Rusden for the following area at Datum :GDA, Zone : 55, Eastings : 738999.0 - 758999.0, Northings : 6283976.0 - 6303976.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 45

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Page 2 of 4

AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : Brewongle
Client Service ID : 833890

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
44-3-0216	Stone fire pit Penrise	GDA	55	754307	6294842	Closed site	Valid	Aboriginal Ceremony and Dreaming : -, Grinding Groove : -		
	Contact	**Recorders**	Mr.Jade Flynn,Wiradyuri Traditional Owners Central West (WTOCWAC)					**Permits**		
44-3-0306	Scarred Tree 02	GDA	55	758881	6291109	Open site	Valid	Modified Tree (Carved or Scarred) : -		
	Contact	**Recorders**	Niche Environment and Heritage,Miss.Catriona Graham					**Permits**		
44-3-0259	BSP IF1	GDA	55	739474	6301118	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Extent Heritage Pty Ltd - Pyrmont - Individual users,Extent Heritage Pty Ltd - Pyrn					**Permits**	5154	
44-3-0058	Orton Park Bathurst	AGD	55	740400	6293700	Open site	Valid	Artefact : 6	Open Camp Site	606,1298
	Contact	**Recorders**	Michael Pickering					**Permits**		
44-3-0258	BSP IF2	GDA	55	740830	6299851	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Extent Heritage Pty Ltd - Pyrmont - Individual users,Extent Heritage Pty Ltd - Pyrn					**Permits**	5154	
44-3-0168	W20 A10	GDA	55	753118	6299525	Open site	Valid	Artefact : 1		
	Contact	**Recorders**	Navin Officer Heritage Consultants Pty Ltd					**Permits**	3764	
44-3-0215	Scar tree women's area marker Riverbend	GDA	55	742507	6291104	Closed site	Valid	Modified Tree (Carved or Scarred) : -		
	Contact	**Recorders**	Mr.Jade Flynn,Wiradyuri Traditional Owners Central West (WTOCWAC)					**Permits**		
44-3-0257	BSP AS1	GDA	55	739786	6300958	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Extent Heritage Pty Ltd - Pyrmont - Individual users,Extent Heritage Pty Ltd - Pyrn					**Permits**		
44-3-0245	HP-IF-01	GDA	55	744536	6297956	Open site	Destroyed	Artefact : -		
	Contact	**Recorders**	Apex Archaeology,Apex Archaeology,Ms.Jenni Bate,Ms.Jenni Bate					**Permits**	4834	
44-3-0079	Cave Creek 1	AGD	55	757703	6297253	Open site	Valid	Artefact : -, Aboriginal Ceremony and Dreaming : -		232,1298
	Contact	**Recorders**	ASRSYS					**Permits**		
44-3-0158	W20 PAD 4	GDA	55	749582	6302429	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		
	Contact	**Recorders**	Navin Officer Heritage Consultants Pty Ltd					**Permits**		
44-6-0012	Fish River - Carved Tree	AGD	55	750144	6288455	Open site	Valid	Burial : -, Modified Tree (Carved or Scarred) : -	Burial/s,Carved Tree	65,1298
	Contact	**Recorders**	David Bell,NPWS - Blackheath Office,P Gresser,John Davidson,W McKibbin,Bruce G					**Permits**		
44-3-0080	Winburndale 2	AGD	55	752630	6303670	Open site	Valid	Artefact : -, Aboriginal Ceremony and Dreaming : -		232,1298
	Contact	**Recorders**	L Cubis					**Permits**		

Report generated by AHIMS Web Service on 27/10/2023 for Stephanie Rusden for the following area at Datum :GDA, Zone : 55, Eastings : 738999.0 - 758999.0, Northings : 6283976.0 - 6303976.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 45

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Page 3 of 4

AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : Brewongle
Client Service ID : 833890

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
44-3-0250	Wiradyuri Sacred men's business site Wambuul	GDA	55	740369	6300578	Closed site	Not a Site	Aboriginal Ceremony and Dreaming : -		
	Contact	**Recorders**	Charles Sturt University,Mr.Jade Flynn					**Permits**		
44-3-0060	Orton Park;Bathurst;	AGD	55	740200	6293700	Open site	Valid	Artefact : 1	Open Camp Site	606
	Contact	**Recorders**	Michael Pickering					**Permits**		
44-3-0254	BSP AS4	GDA	55	740687	6299949	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Extent Heritage Pty Ltd - Pyrmont - Individual users,Extent Heritage Pty Ltd - Pyrn					**Permits**	5154	

**** 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 27/10/2023 for Stephanie Rusden for the following area at Datum :GDA, Zone : 55, Eastings : 738999.0 - 758999.0, Northings : 6283976.0 - 6303976.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 45

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Page 4 of 4

21 March 2025

AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : Brew
Client Service ID : 987601

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
44-3-0108	BH-OS-1;Browns Hill Napoleon Reets;	AGD	55	754500	6297400	Open site	Valid	Artefact : -	Open Camp Site	
	Contact	Recorders	Central West Archaeological and Heritage Services Pty Ltd					Permits		
44-3-0212	Ceremonial ground Wambool	GDA	55	740180	6299804	Open site	Valid	Aboriginal Ceremony and Dreaming : -, Stone Arrangement : -		
	Contact	Recorders	Mr.Jade Flynn,Wiradyuri Traditional Owners Central West (WTOCWAC)					Permits		
44-3-0253	BSP AS5	GDA	55	741068	6299185	Open site	Valid	Artefact : -		
	Contact	Recorders	Extent Heritage Pty Ltd - Pyrmont - Individual users,Extent Heritage Pty Ltd - Pyrm					Permits	5154	
44-3-0255	BSP AS3	GDA	55	740247	6300536	Open site	Valid	Artefact : -		
	Contact	Recorders	Extent Heritage Pty Ltd - Pyrmont - Individual users,Extent Heritage Pty Ltd - Pyrm					Permits	5154	
44-3-0045	Fontana Reef Modified Tree 1	AGD	55	753228	6301974	Open site	Valid	Modified Tree (Carved or Scarred) : -	Carved Tree	65,353,1298
	Contact	Recorders	ASRSYS					Permits		
44-3-0064	Raglan/Bathurst	GDA	55	744306	6298291	Open site	Destroyed	Artefact : -	Open Camp Site	606,105032
	Contact	Recorders	ASRSYS,Apex Archaeology,Ms.Jenni Bate					Permits		
44-3-0117	Restriction applied. Please contact ahims@environment.nsw.gov.au.					Open site	Valid			
	Contact Bill Allen	Recorders	Bill Allen					Permits		
44-3-0321	Glanmire CMT 01	GDA	55	750698	6296810	Open site	Valid	Modified Tree (Carved or Scarred) : -		
	Contact	Recorders	AREA Environmental & Heritage - Dubbo,Ms.Kim Newman					Permits		
44-3-0217	Grinding grooves penrose	GDA	55	743079	6292992	Closed site	Valid	Grinding Groove : -		
	Contact	Recorders	Mr.Jade Flynn,Wiradyuri Traditional Owners Central West (WTOCWAC)					Permits		
44-3-0256	BSP AS2	GDA	55	740174	6300664	Open site	Valid	Artefact : -		
	Contact	Recorders	Extent Heritage Pty Ltd - Pyrmont - Individual users,Extent Heritage Pty Ltd - Pyrm					Permits	5154	
44-3-0231	Salt Water Creek IF-2	GDA	55	754321	6294548	Open site	Valid	Artefact : -		104280
	Contact	Recorders	OzArk Environmental and Heritage Management - Dubbo,Doctor.Alyce Cameron					Permits		
44-3-0248	Potato Field Massacre Site	GDA	55	740555	6300254	Open site	Valid	Conflict : -		
	Contact	Recorders	Charles Sturt University,Charles Sturt University,Mr.Jade Flynn,Mr.Jade Flynn					Permits		
44-3-0251	BSH AS1	GDA	55	740383	6297535	Open site	Valid	Artefact : -		
	Contact	Recorders	Extent Heritage Pty Ltd - Pyrmont - Individual users,Miss.Coral (extent heritage) H					Permits	5154	
44-3-0166	W20 A25	GDA	55	749504	6302531	Open site	Valid	Modified Tree (Carved or Scarred) : 1		
	Contact	Recorders	Navin Officer Heritage Consultants Pty Ltd					Permits		

Report generated by AHIMS Web Service on 21/03/2025 for Harrison Rochford for the following area at Datum :GDA, Zone : 55, Eastings : 738999.0 - 758999.0, Northings : 6283976.0 - 6303976.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 45

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : Brew
Client Service ID : 987601

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
44-3-0305	Scarred Tree 03	GDA	55	758852	6291600	Open site	Valid	Modified Tree (Carved or Scarred) : -		
	Contact	Recorders	Niche Environment and Heritage,Miss.Catriona Graham					Permits		
44-3-0322	Glanmire ISO 01	GDA	55	751057	6296769	Open site	Valid	Artefact : -		
	Contact	Recorders	AREA Environmental & Heritage - Dubbo,Ms.Kim Newman					Permits		
44-3-0220	W20 A9 & W20 A13 - Artefact Relocation	GDA	55	752151	6300337	Open site	Valid	Artefact : -		
	Contact	Recorders	OzArk Environmental and Heritage Management - Dubbo,Miss.Philippa Sokol					Permits		
44-3-0059	Orton Park:Bathurst.	AGD	55	740300	6293700	Open site	Valid	Artefact : 1	Open Camp Site	606
	Contact	Recorders	Michael Pickering					Permits		
44-3-0232	Salt Water Creek IF-1	GDA	55	754055	6294493	Open site	Valid	Artefact : -		104280
	Contact	Recorders	OzArk Environmental and Heritage Management - Dubbo,Doctor.Alyce Cameron					Permits		
44-3-0247	Wyndradyne's family camp site	GDA	55	740259	6300512	Open site	Not a Site	Aboriginal Ceremony and Dreaming : -		
	Contact	Recorders	Charles Sturt University,Mr.Jade Flynn					Permits		
44-3-0170	W20 A7	GDA	55	756692	6296736	Open site	Valid	Artefact : 1, Potential Archaeological Deposit (PAD) : 1		104298
	Contact	Recorders	Navin Officer Heritage Consultants Pty Ltd,OzArk Environmental and Heritage Mar					Permits	3764	
44-3-0171	W20 A8	GDA	55	757657	6296015	Open site	Valid	Artefact : 1, Potential Archaeological Deposit (PAD) : 1		
	Contact	Recorders	Navin Officer Heritage Consultants Pty Ltd					Permits	3764	
44-3-0177	Goulds Creek Artefacts	GDA	55	756204	6303746	Open site	Valid	Artefact : 5		
	Contact	Recorders	Mr.Gavin Newton					Permits		
44-6-0011	Davis's Creek Davys Creek	AGD	55	742939	6284340	Open site	Valid	Modified Tree (Carved or Scarred) : -	Carved Tree	65,353,1298
	Contact	Recorders	ASRSYS					Permits		
44-3-0063	Ragland; Bathurst	GDA	55	744200	6297900	Open site	Destroyed	Artefact : -	Open Camp Site	606
	Contact	Recorders	ASRSYS,Apex Archaeology,Ms.Jenni Bate					Permits	4834	
44-3-0066	Little Wonder Gully IF 1	AGD	55	753629	6302528	Open site	Valid	Artefact : -	Open Camp Site	83,232,1298
	Contact	Recorders	ASRSYS					Permits		
44-3-0144	bathurst base hospital pad	AGD	55	739116	6300641	Open site	Not a Site	Potential Archaeological Deposit (PAD) : 1		
	Contact S Scanlon	Recorders	Ms.Fiona Leslie					Permits	2413	
44-3-0233	Salt Water Creek OS-1	GDA	55	754073	6294530	Open site	Valid	Artefact : -		104280
	Contact	Recorders	OzArk Environmental and Heritage Management - Dubbo,Doctor.Alyce Cameron					Permits		

Report generated by AHIMS Web Service on 21/03/2025 for Harrison Rochford for the following area at Datum :GDA, Zone : 55, Eastings : 738999.0 - 758999.0, Northings : 6283976.0 - 6303976.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 45

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Page 2 of 4

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

Your Ref/PO Number : Brew
Client Service ID : 987601

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
44-3-0167	W20 A9	GDA	55	752101	6300348	Open site	Destroyed	Artefact : 1		104298
	Contact	Recorders	Navin Officer Heritage Consultants Pty Ltd,OzArk Environmental and Heritage Mar					Permits	3764	
44-3-0216	Stone fire pit Penrise	GDA	55	754307	6294842	Closed site	Valid	Aboriginal Ceremony and Dreaming : -, Grinding Groove : -		
	Contact	Recorders	Mr.Jade Flynn,Wiradyuri Traditional Owners Central West (WTOCWAC)					Permits		
44-3-0258	BSP IF2	GDA	55	740830	6299851	Open site	Valid	Artefact : -		
	Contact	Recorders	Extent Heritage Pty Ltd - Pyrmont - Individual users,Extent Heritage Pty Ltd - Pyrm					Permits	5154	
44-3-0259	BSP IF1	GDA	55	739474	6301118	Open site	Valid	Artefact : -		
	Contact	Recorders	Extent Heritage Pty Ltd - Pyrmont - Individual users,Extent Heritage Pty Ltd - Pyrm					Permits	5154	
44-3-0058	Orton Park Bathurst	AGD	55	740400	6293700	Open site	Valid	Artefact : 6	Open Camp Site	606,1298
	Contact	Recorders	Michael Pickering					Permits		
44-3-0168	W20 A10	GDA	55	753118	6299525	Open site	Valid	Artefact : 1		
	Contact	Recorders	Navin Officer Heritage Consultants Pty Ltd					Permits	3764	
44-3-0306	Scarred Tree 02	GDA	55	758881	6291109	Open site	Valid	Modified Tree (Carved or Scarred) : -		
	Contact	Recorders	Niche Environment and Heritage,Miss.Catriona Graham					Permits		
44-3-0215	Scar tree women's area marker Riverbend	GDA	55	742507	6291104	Closed site	Valid	Modified Tree (Carved or Scarred) : -		
	Contact	Recorders	Mr.Jade Flynn,Wiradyuri Traditional Owners Central West (WTOCWAC)					Permits		
44-3-0257	BSP AS1	GDA	55	739786	6300958	Open site	Valid	Artefact : -		
	Contact	Recorders	Extent Heritage Pty Ltd - Pyrmont - Individual users,Extent Heritage Pty Ltd - Pyrm					Permits		
44-3-0079	Cave Creek 1	AGD	55	757703	6297253	Open site	Valid	Artefact : -, Aboriginal Ceremony and Dreaming : -		232,1298
	Contact	Recorders	ASRSYS					Permits		
44-3-0245	HP-IF-01	GDA	55	744536	6297956	Open site	Destroyed	Artefact : -		
	Contact	Recorders	Apex Archaeology,Apex Archaeology,Ms.Jenni Bate,Ms.Jenni Bate					Permits	4834	
44-3-0250	Wiradyuri Sacred men's business site Wambuul	GDA	55	740369	6300578	Closed site	Not a Site	Aboriginal Ceremony and Dreaming : -		
	Contact	Recorders	Charles Sturt University,Mr.Jade Flynn					Permits		
44-3-0254	BSP AS4	GDA	55	740687	6299949	Open site	Valid	Artefact : -		
	Contact	Recorders	Extent Heritage Pty Ltd - Pyrmont - Individual users,Extent Heritage Pty Ltd - Pyrm					Permits	5154	
44-3-0080	Winburndale 2	AGD	55	752630	6303670	Open site	Valid	Artefact : -, Aboriginal Ceremony and Dreaming : -		232,1298
	Contact	Recorders	L Cubis					Permits		

Report generated by AHIMS Web Service on 21/03/2025 for Harrison Rochford for the following area at Datum :GDA, Zone : 55, Eastings : 738999.0 - 758999.0, Northings : 6283976.0 - 6303976.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 45

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.

Page 3 of 4

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

Your Ref/PO Number : Brew
Client Service ID : 987601

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
44-3-0060	Orton Park:Bathurst;	AGD	55	740200	6293700	Open site	Valid	Artefact : 1	Open Camp Site	606
	Contact	Recorders	Michael Pickering					Permits		
44-6-0012	Fish River - Carved Tree	AGD	55	750144	6288455	Open site	Valid	Burial : -, Modified Tree (Carved or Scarred) : -	Burial/s,Carved Tree	65,1298
	Contact	Recorders	David Bell,NPWS - Blackheath Office,P Gresser,John Davidson,W McKibbin,Bruce G					Permits		
44-3-0158	W20 PAD 4	GDA	55	749582	6302429	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		
	Contact	Recorders	Navin Officer Heritage Consultants Pty Ltd					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 21/03/2025 for Harrison Rochford for the following area at Datum :GDA, Zone : 55, Eastings : 738999.0 - 758999.0, Northings : 6283976.0 - 6303976.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 45

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.

Page 4 of 4

Confirmation of restricted site 44-3-0117 being outside study area

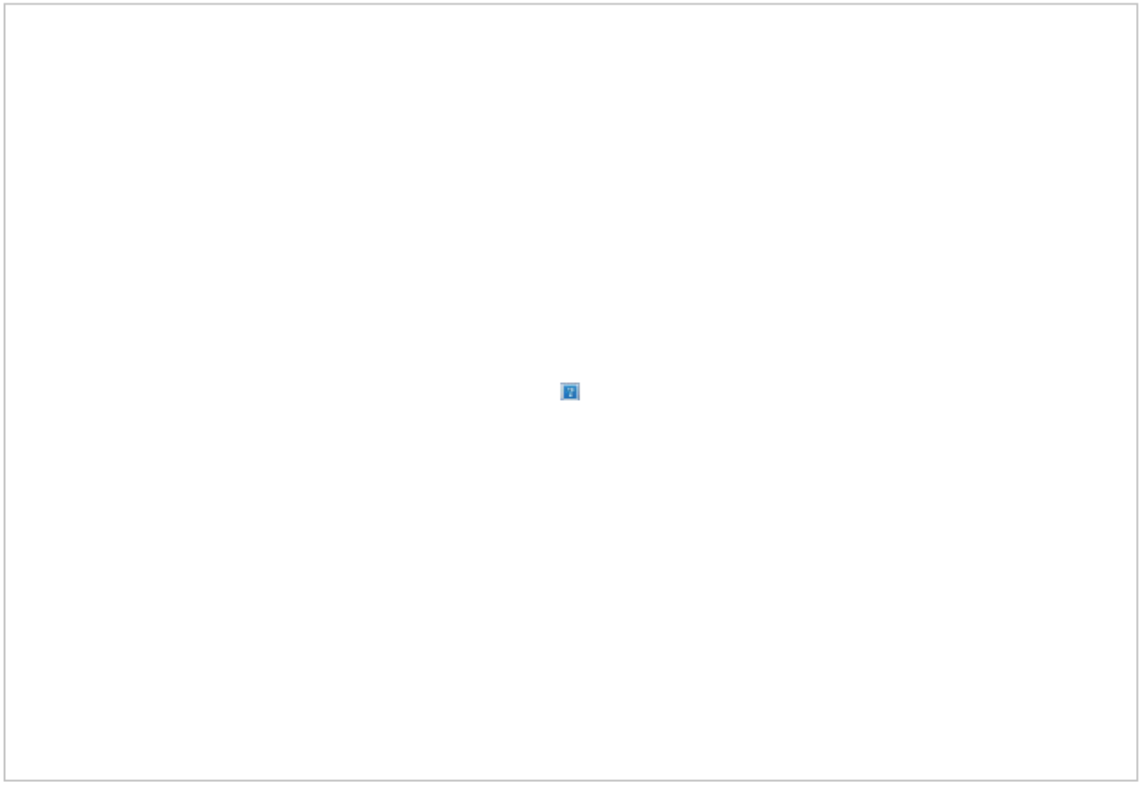
From: David Gordon
To: Stephanie
Subject: RE: Restricted site 44-3-0117
Date: Monday, 30 October 2023 7:25:10 AM
Attachments: image004.png
image005.png
image006.png
image007.gif
image008.png
image009.png
image010.jpg

Hi Stephanie,

I can confirm that restricted Aboriginal Site:

- 44-3-0117

WILL NOT BE IMPACTED BY ANY WORKS CONDUCTED IN YOUR STUDY AREA, SEE BELOW:



David Gordon
Senior Systems Information Officer (Aboriginal)
Information Systems,**Heritage NSW,**
Environment and Heritage Group
Department of Planning and Environment

Let us know your thoughts and fill out this quick Customer Feedback Survey

Level 14, 4 Parramatta Square, Parramatta | Locked Bag 5020, Parramatta, 2124

T: 02 9585 6467 | david.gordon@environment.nsw.gov.au

APPENDIX 3: ASSESSMENT METHODOLOGY

ABORIGINAL CULTURAL HERITAGE ASSESSMENT METHODOLOGY

BREWONGLE SOLAR FARM

BATHURST REGIONAL LOCAL GOVERNMENT AREA, NSW

DECEMBER 2023

Report prepared by

OzArk Environment & Heritage

for Edify Energy Pty Ltd

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DOCUMENT CONTROLS

Proponent	Edify Energy Pty Ltd
Document Description	Brewongle Solar Farm Assessment Methodology
File Location	OzArk Job No.
Clients\Edify\Brewongle Solar Farm ACHAR September 2023\Assessment methodology	4174

Document Status: V3.0 FINAL	Date: 28 November 2023
Draft V1: OzArk internal edits	V1.0 TR author 13/11/23 V1.1 SR review 16/11/23 V1.2 TR edits 17/11/2023
Draft V2: OzArk and client edits	V2.0 OzArk to client 18/11/23 V2.1 OzArk to RAPs 28/11/23
Final V3: Final document	V3.0 OzArk finalises 29/12/23
Prepared for	Prepared by
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Acknowledgement

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

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CONTENTS

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FIGURES

TABLES

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1 INTRODUCTION

1.1 PREAMBLE

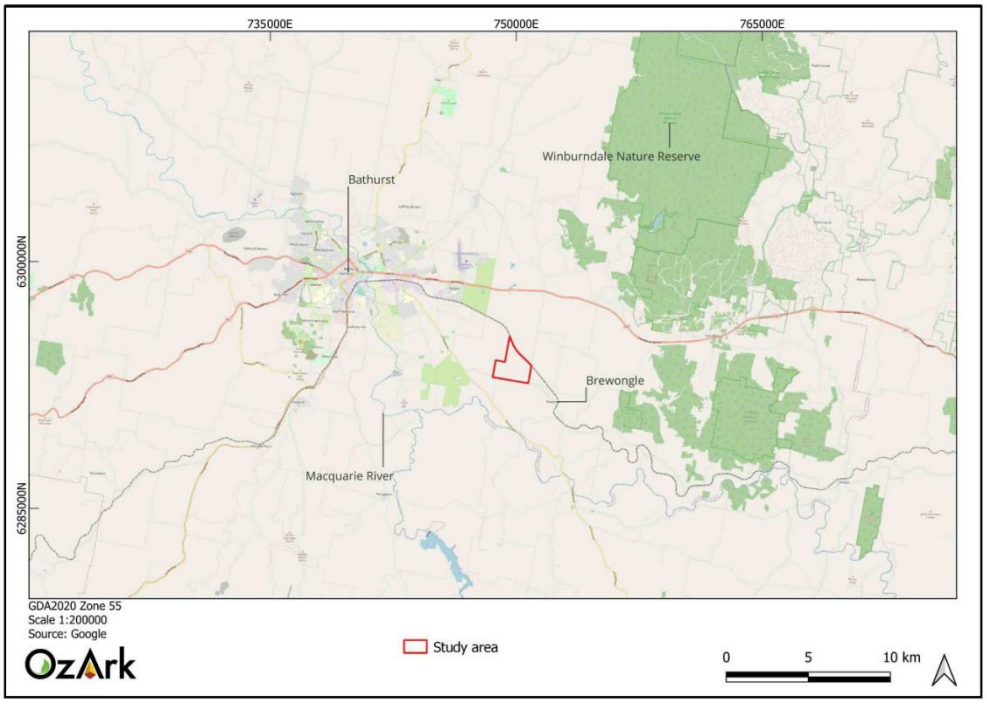
OzArk Environment & Heritage (OzArk) has been engaged by Edify Energy Pty Ltd (the proponent) to prepare an assessment methodology for the proposed Brewongle Solar Farm (the project).

The proposal is located approximately 12 kilometres (km) southeast of Bathurst, in the Bathurst Regional Local Government Area (Error! Reference source not found.).

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

The investigation set out in this methodology aims to identify Aboriginal cultural values, both tangible and intangible, associated with the proposed location of the proposal. The results of this investigation will be presented in an *Aboriginal Cultural Heritage Assessment Report* (ACHAR).

Figure 1-1: Location of the study area for the project



1.2 PROJECT OVERVIEW

The project involves the construction of a ground mounted photovoltaic solar array which would have capacity to generate up to 90 megawatts (MW) of renewable energy. The project intends to

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connect into the existing 132 kilovolt (kV) transmission line (TransGrid owned) which extends east-west, crossing through the northern section of the study area. This connection will be achieved via an overhead line and will require the construction of a new substation.

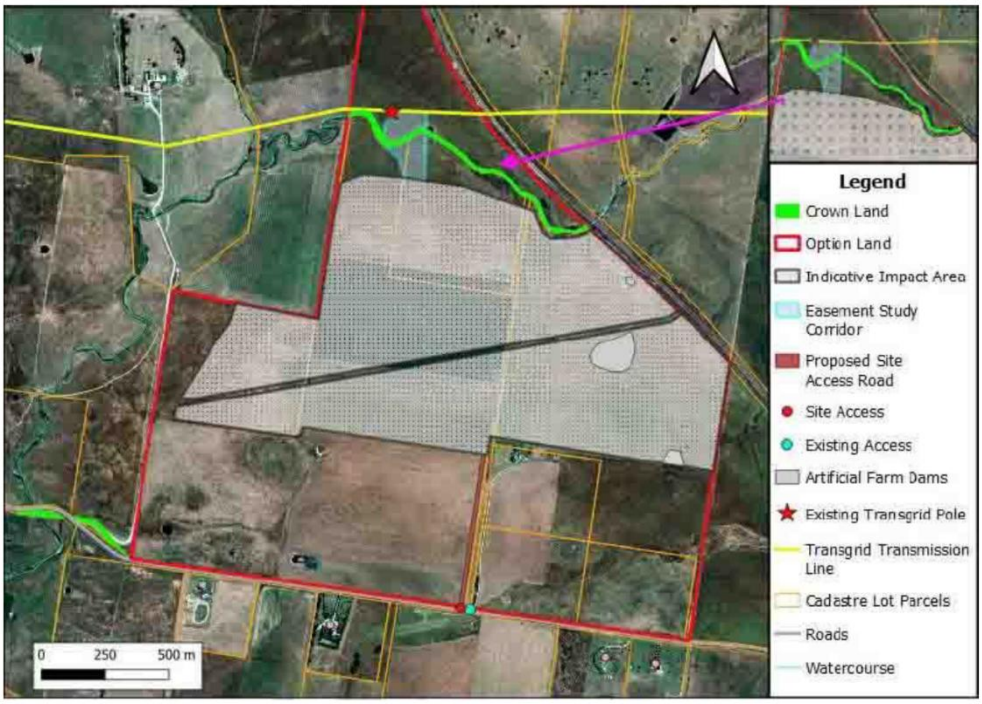
Other infrastructure for the project includes:

- Solar panel arrays
- Inverters, transformers, overhead lines, and underground cabling
- A battery storage system
- Associated maintenance and administrative buildings
- Access tracks, easement crossings, and perimeter security fencing
- Site access via Tarana Road.

The above infrastructure will be constructed within an indicative impact area covering approximately 170 hectares (ha) of land within the study area (see **Figure 1-2**).

The project will also involve two intersection upgrades, the first being along Tarana Road at the site access point and the other being the intersection of O'Connell Road and Tarana Road located to the west of the study area.

Figure 1-2: Conceptual layout of the project.



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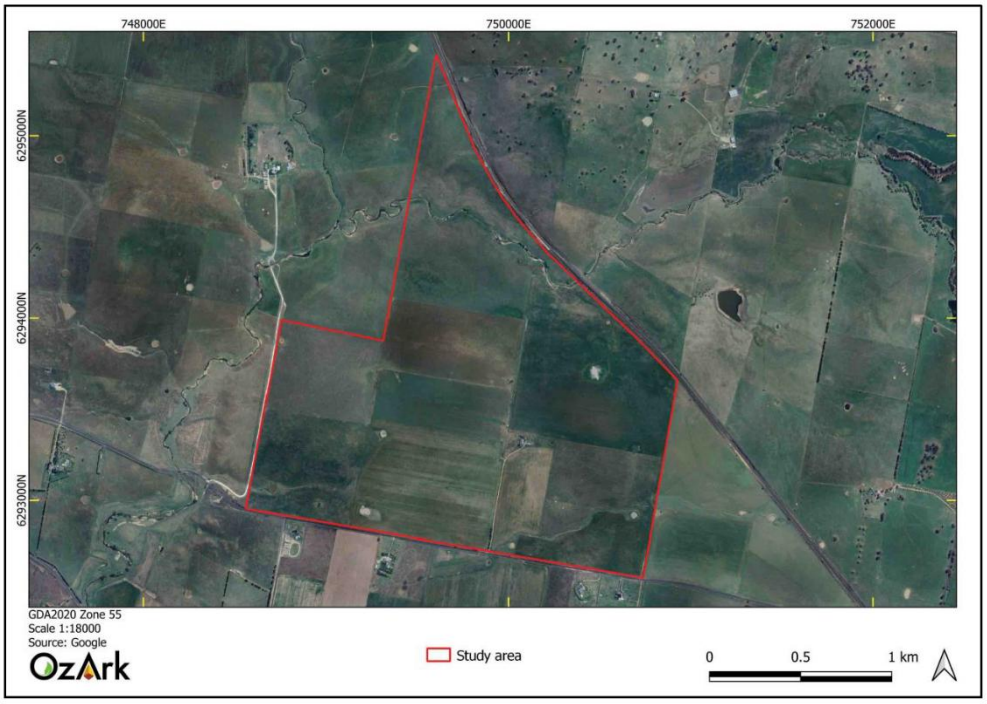
1.3 STUDY AREA

The study area describes the area in which all impacts associated with the proposal will be located (**Figure 1-3**). The study area includes Lots 1 and 2 DP1236901, and Lot 1 DP1206130, covering approximately 299 ha of land which has been historically cleared for agricultural purposes and currently used for livestock grazing.

Figure 1-3: Aerial of the study area.



1.4 CONSULTATION ON THIS METHODOLOGY

Consultation for this project has followed the guidelines established in the ACHCRs (DECCW 2010b) 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 26 October 2023 an advertisement was placed in the *Western Advocate Bathurst* 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 Bathurst Local Aboriginal Land Council (LALC); the Office of The Registrar, *Aboriginal Land Rights Act 1983*; the National Native Title Tribunal; Native Title Services Corporation Limited (NTSCORP); the Bathurst Regional Council; and the Central Tablelands Local Land Services.

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

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- Bathurst LALC
- Didge Ngunawal Clan
- Geoffrey Toomey
- Konanggo Aboriginal Cultural Heritage Services
- Long Gully Cultural Services
- Mingaan Aboriginal Corporation
- Murra Bidgee Aboriginal Corporation
- Stakeholder 1[1]
- Thomas Dahlstrom
- Tim Stubbs
- Wingarra Wilay Aboriginal Corporation

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

1.5 LANDSCAPE CHARACTERISTICS OF THE STUDY AREA

The study area is located within Bathurst Granites landscape classification in the South Eastern Highlands bioregion (Mitchell, 2002). The Bathurst Granites landscape, as characterised by Mitchell (2002) consists of undulating to steep hills on granites, with rock outcrops common along ridge lines, with the elevations within the landscape classification range between 600 to 1000 m. The topography of the study area differs from the characteristics of the Bathurst Granites as it consists primarily of gentle slopes and flats, with a maximum elevation of 730 m (see **Figure 1-4**).

The Fish River is the closest major watercourse and is located approximately 1.5 km south of the study area. Saltwater Creek, a permanent watercourse which flows into the Fish River, intersects directly through the northern section of the study area, running in a general east-west direction. Ephemeral tributaries of Saltwater Creek and Fish River intersect the southern portion of the study area (see **Figure 1-4**).

The soils within the study area are associated with three soil landscapes; the Bathurst, Macquarie, and Raglan soil landscapes. The Raglan soil landscape comprises the largest proportion of the study area, primarily encompassing the southern and northern sections. The Raglan soil landscape consists largely of Red Solodic soils with some Yellow Solodic soils found on lower slopes and within drainage depressions. Raglan topsoil reaches 30 centimetres (cm) in depth and tends to be a sandy loam or loam with a weak structure, while the subsoils tend to be

[1] RAP listed as 'Stakeholder 1' has requested their details not be disclosed.

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a medium to heavy clay with a strong structure and manganese nodules. Both the topsoils and subsoils of the Raglan soil landscape are highly susceptible to erosion.

The Macquarie soil landscape comprises a smaller proportion of the study area, confined to the alluvial plains and terraces of Saltwater Creek in the northern and western-most sections of the study area. The dominant soils within the Macquarie soil landscape are Prairie Soils, which are characterised by a black loam to clay loam topsoil reaching 30 cm in depth, and black light clay subsoils. The topsoils have a moderate erodibility, while the subsoils are less susceptible to erosional processes.

The Bathurst soil landscape comprises the smallest portion of the study area. Located in the southwest corner of the study area, the soils within this landscape are primarily non-calcic Brown Soils, with Yellow Solodic Soils on lower slope and drainage lines. The topsoils are weak in structure, consisting of loamy sands with moderate erodibility. The subsoils range from sandy clay loam to heavy clay with a moderately strong structure, with a low erodibility.

Savannah grasslands are the dominant vegetation of the soil landscapes within study area, and the vegetation associated with the Bathurst Granites comprises woodland to open forests of box, gum, and stringybark species, as well as river oak (Mitchell, 2002). However, examination of the aerial imagery (see **Figure 1-3**) shows that the study area has been cleared of most mature, native vegetation, though some trees remain along the riparian corridors of Saltwater Creek.

The study area is used primarily for grazing and cultivation purposes. Additional disturbances appear to be limited to construction of homesteads and agriculture infrastructure, fence lines, dams and unsealed tracks. An aerial from 1972 which covers the study area shows there has been little change in terms of land use over the past 51 years (**Figure 1-5**).

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Figure 1-4: Topography and drainage of the study area.

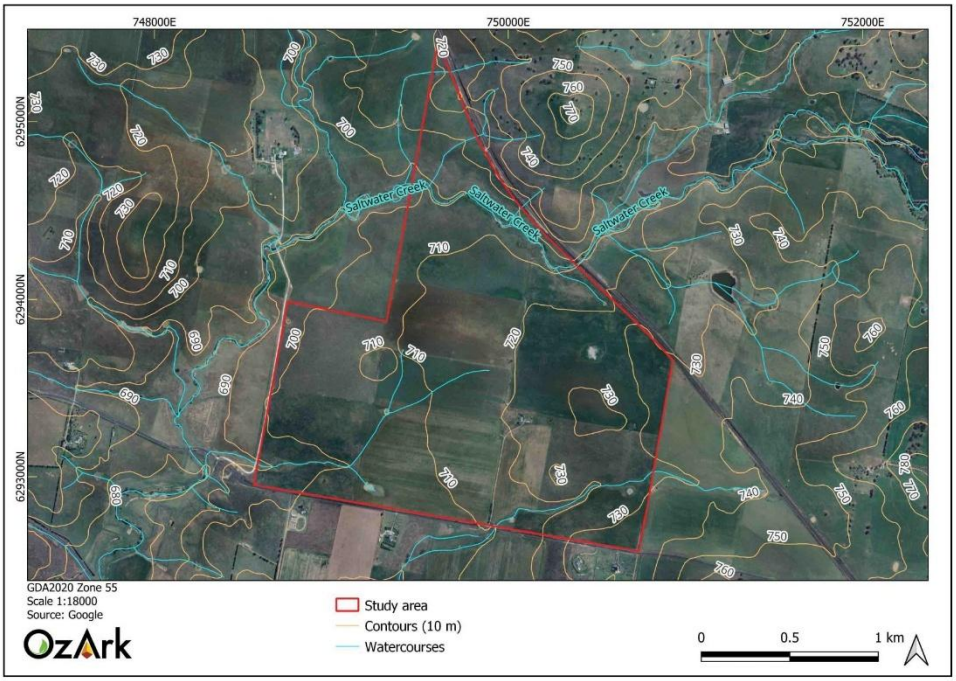

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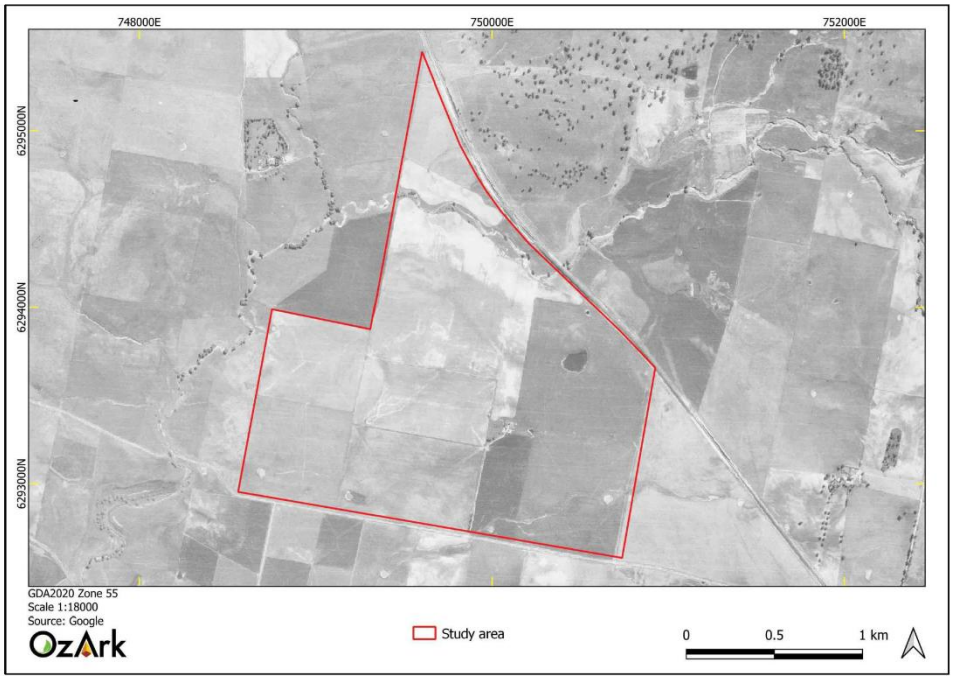
Figure 1-5: 1972 aerial with overlay of study area (source: SS 2023).



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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

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

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

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

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

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

2.1.3 Recognising lore

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

2.2 IDENTIFYING CULTURAL VALUES

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

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

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

2.2.1 Use of information collected

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

2.2.2 Public / confidential information

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

2.2.3 Copyright

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

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3 ARCHAEOLOGICAL CONTEXT

3.1 ABORIGINAL PEOPLE OF THE STUDY AREA

According to Tindale's (1974) and Horton's (1994) maps of tribal or ethno-linguistic boundaries, the Wiradjuri occupied the northern parts of the South Eastern Highlands bioregion near Orange and Bathurst. As such, the study area falls within the Wiradjuri ethno-linguistic group.

Although tribal boundaries still retain some uncertainty, it is thought that the Wiradjuri people were the largest language group in New South Wales, with dialects spoken from Coonabarabran in the north, the Murray River to the south, western Blue Mountains in the east and Condobolin in the west.

Oral tradition records the presence of over 20 clans within the broader Bathurst–Mudgee region, organised according to matrilineal descent (Navin Officer 2005: 48). Clans were made up of several fairly independent groups, of up to 20 members, in friendly contact with each other, moving separately for much of the year over a shared territory (Pearson 1981; Haglund 1985).

Early accounts of contact between European and Aboriginal people in the Macquarie River area were provided by Oxley (1820) and Sturt (1834), and later by Garnsey (1942) who was born in Dubbo in 1874 (Whitehead 2003). Early references to Aboriginal people in the Orange and Wellington regions are provided by John Oxley, who passed by Limestone Creek, south of Mt Canobolas, on 12 April 1817, describing the area as "*a beautiful picturesque country of low hills and fine valleys well-watered*" (Whitehead 2003: 351). Further southwest, at the Lachlan River, Oxley met Aboriginal people carrying stone hatchets and possum skin cloaks. Oxley then returned to Bathurst along the Bell and Macquarie Rivers north of Orange in late August, passing near Wellington on 25 August 1817. Oxley noted the abundant natural resources in areas adjacent to the Macquarie River—including emus, ducks, swans, fish and freshwater muscles—and that the country had an abundance of running water, with a spring on every hill (Rawson 1997: 8).

Garnsey's interest in local Aboriginal culture led him to record information gleaned from his father and from Wiradjuri Aboriginal elders in the Dubbo area. His work remains a useful account of everyday life and religious/ceremonial practices. Garnsey's (1942: 6) description of camp life suggests that many activities were performed communally, for the benefit of the mob. Campsites comprised a series of bark or bush shelters arranged in a semi-circle opening to the east, arranged around a central fire, with men occupying shelters to the north, women in the centre, and children to the south. Camps moved frequently over short distances due to alterations in social relations and weather, and in response to hygiene concerns, among other factors. Longer distance movements tended to be linked to participation in large-scale gatherings (e.g. ceremony or warfare) or alterations in resource availability. Garnsey (1942: 6–23) also provides detailed descriptions of ceremonial practices related to alterations in social status and passages from

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infancy to adulthood. These descriptions of are a composite of various verbal accounts, the accuracy of which is difficult to ascertain. Garnsey (1942: 14) suggests that the 'mob' structure began to break down during the 1890s, by which time only older men appeared to retain the tribal markings and knowledge associated with ceremonial practice. Oral histories provided by traditional custodians are likely to elaborate upon and refute aspects of these early accounts.

In the early colonial period, relationships between Europeans and Aboriginal people were relatively amicable while there were few colonists. Pearson analysed observations written by nineteenth century observers from the upper Macquarie region:

> *the upper Macquarie was inhabited by large localised groups of Aborigines, who in normal conditions of daily life were divided into small groups of up to twenty individuals. These small groups could coalesce relatively quickly into groups of from 80 to 150 people to take advantage of a guaranteed or desirable resource (such as seasonal food resources or the goods offered by the Wellington mission), for ceremonial or social obligations, or for special events (such as a pre-arranged gathering to see an explorer or first settler in an area). There seem to have been no over-riding seasonal factors affecting Aboriginal movements in the well-watered upper Macquarie* (Pearson 1984: 64).

Plants were used for food, as well as in the manufacture of practical items, decorative items and medicines, with some species providing more than one resource. Grass stalks could be used for weaving or producing baskets. Large trees were useful in providing bark and fibres used for the manufacture of tools, containers and possibly the construction of watercraft. The resin obtained from Grass Trees, for example, were an adhesive that could be used in hafting processes. Bark fibres were twisted into twine which could then be woven into traps, containers or baskets and a variety of wooden tools. Stone was also used for tools (RPS 2014).

3.2 REGIONAL ARCHAEOLOGICAL CONTEXT

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

There are several broad scale regional archaeological studies which either cover the study area itself or are in general proximity to it. These studies have been summarised below.

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3.2.1 Early observations on Aboriginal archaeological sites of the Bathurst region (Gresser 1963)

Prior to 1979, no systematic regional archaeological studies had been undertaken in the Bathurst area, although some interested locals or amateurs had recorded some sites. In the 1960s, Percy Gresser, a Bathurst shearer and amateur historian, described how the hilly land to the north of Bathurst contained numerous camp sites located on low ridges adjacent to creeks and springs. Gresser notes that although most sites are located adjacent to creeks, occasionally they are located elsewhere including elevated ridge tops.

3.2.2 Archaeological analysis within the Upper Macquarie Region (Pearson 1981)

Pearson (1981) analysed the patterns of Aboriginal and early colonial settlement within the Upper Macquarie Region, including some excavation. Three shelters were excavated, yielding occupation dates to around 7,000 BP. Pearson argued that archaeological sites could be divided into two main categories: occupation sites and non-occupation sites (which included grinding grooves, scarred or carved trees, ceremonial and burial sites etc.). Pearson's analysis of site location yielded a site prediction model with occupation sites occurring in areas with:

- Access to water – site size decreased with distance from water
- Good drainage and views over watercourses or river flats
- Level ground
- Adequate fuel
- Appropriate localised weather patterns for summer or winter occupation.

As such, occupation sites were most frequently found on low ridge tops, creek banks, gently undulating hills and river flats and usually in open woodland vegetation (Pearson 1981: 101). The location of non-occupation sites, meanwhile, depended on several factors relating to site function. For instance:

- Grinding grooves only occur where there is appropriate outcropping sandstone, but as close to occupation sites as possible
- Scarred trees are variably located with no obvious patterning, other than proximity to watercourses where camps are more frequently located
- Burial grounds are generally in soft soils, as close to occupation sites as geological conditions permit
- Ceremonial sites, such as bora rings and stone arrangements, are located away from occupation sites.

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3.2.3 Bathurst LGA Heritage Study (Extent 2017)

Extent Heritage completed a heritage study in 2017 of over 220 Aboriginal sites recorded on the Aboriginal Heritage Information Management System (AHIMS) across the Bathurst LGA (Extent 2017). 55% of these sites are artefact based open sites (i.e. sites not within closed contexts, such as a cave or rockshelter). Modified trees are the next most prolific site type, followed by stone arrangements.

The predictive model noted that there was a comparatively small number of AHIMS recordings in the Bathurst LGA (on site per 19 square kilometres [km^2]) (Extent 2017: 45). With a limited sample, the model focused on comparing this data with the Aboriginal Sites Decision Support Tool (ASDST; DECCW 2010) cumulative model. Extent Heritage concluded that the Bathurst LGA had areas of flats and slopes with higher archaeological site potential than the ASDST modelling would suggest. Based on the Extent sensitivity map, the study area is in a low and moderate sensitivity area for Aboriginal cultural heritage sites (see **Figure 3-1**).

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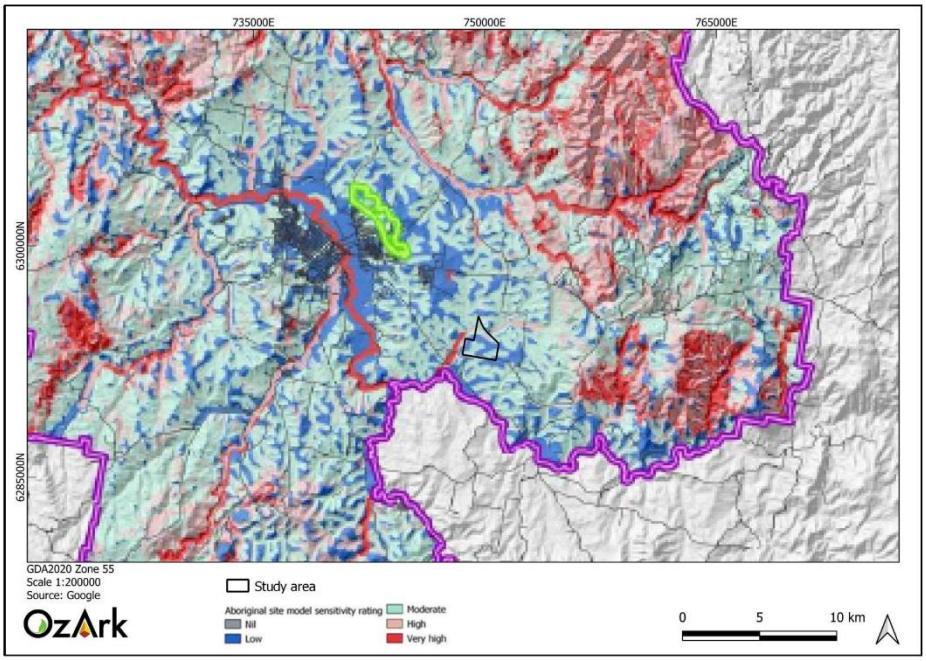
Figure 3-1: The study area in relation to Extent Aboriginal heritage sensitivity map (2017:48).



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3.3 LOCAL ARCHAEOLOGICAL CONTEXT

A search of the AHIMS database on 27 October 2023 returned 45 results for Aboriginal sites within a 20 km radius of the study area (GDA Zone 55 Eastings: 738999 – 758999; Northings: 6283976 – 6303976 with no buffer) (see **Table 3-1** for site types and frequencies). No previously recorded sites are located within the study area.

The most frequently recorded site types are isolated finds which contribute 22% of the site types in the vicinity of the study area. Other frequent site types are artefact scatters (22%) and modified trees (15.5%). Less frequent site types recorded in the vicinity include potential artefact deposits (PADs), a burial, and a grinding groove site. Cultural sites such as Aboriginal ceremony and dreaming sites with associated artefacts, stone arrangements, or grinding grooves were also present. One restricted site was returned in the AHIMS search, which was confirmed through correspondence with AHIMS to be outside the study area (see **Table 3-1**). Additionally, the site of the 1824 Potato Field Massacre is located approximately 10 km north-west of the current study area.

Open artefact sites (such as isolated finds and artefact scatters) as well as modified trees tend to be in proximity to a watercourse. The recorded Aboriginal ceremony and dreaming sites are also located within 300 m of the Macquarie River, Saltwater Creek, Cave Creek, and the Winburndale Rivulet. **Figure 3-2** shows the location of previously recorded sites in the vicinity of the study area.

Table 3-1: AHIMS site types and frequencies

Site Type	Number	% Frequency
Isolated find	10	22.2
Artefact scatter	9	20
Modified tree	7	15.5
Artefact site (quantity unspecified)	5	11.1
PAD	2	4.5
Isolated find with PAD	2	4.5
Aboriginal ceremony and dreaming	2	4.5
Aboriginal ceremony and dreaming with artefact site	2	4.5
Aboriginal ceremony and dreaming with grinding groove	1	2.2
Aboriginal ceremony and dreaming with stone arrangement	1	2.2
Grinding groove	1	2.2
Burial with modified tree	1	2.2
Conflict	1	2.2
Restricted site	1	2.2
Total	**45**	**100**

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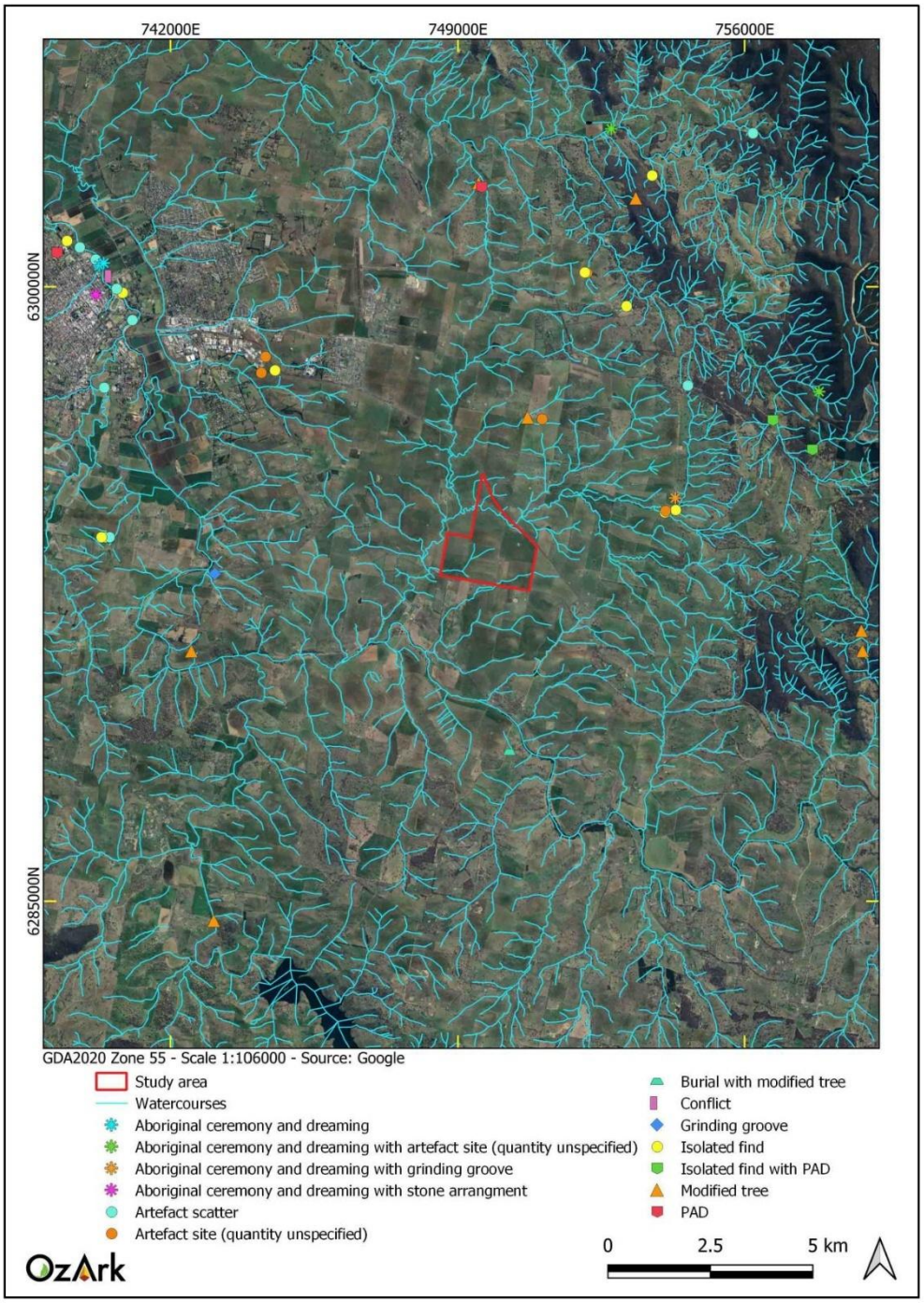
Figure 3-2. AHIMS sites in relation to the study area.



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3.3.1 Archaeological investigations near the study area

3.3.1.1 Assessment between Bathurst – Raglan – Mount Panorama (Pickering 1980)

Pickering (1980) conducted an assessment for a transmission line between substations at Bathurst, Panorama and Raglan. The survey was conducted approximately 3.5 km northwest of the current study area at its closest point. A total of eight Aboriginal artefact sites were recorded during the survey, all of which were recorded in secondary contexts with a variety of materials, including quartz, quartzite and fine-grain siliceous raw materials.

3.3.1.2 Archaeological assessment of "Kempfield" near Trunkey, NSW (Appleton 1999)

Appleton (1999) conducted a survey for a proposed mine southwest of Bathurst, approximately 47 km from the current study area. The survey area covered some 3 kilometres squared (km^2) of rolling slopes and drainage swales, with Rocky Bridge Creek intersecting through the study area in a general south-western direction. Appleton recorded two isolated finds, flakes manufactured of chert materials, both within highly disturbed contexts. It was argued that further sites were not recorded due to erosion and other land disturbances, low visibility, and a lack of natural resources to result in an attractive camp site.

3.3.1.3 Crudine Ridge Wind Farm (NSW Archaeology 2012)

A survey was undertaken for the proposed Crudine Ridge Wind Farm (NSW Archaeology 2012) located approximately 41 km north of the current study area. The survey covered 16 km north-south broad length of land situated on an elevated broad and undulating plateau west of the Crudine River. During the survey, 45 previously unrecorded Aboriginal sites were identified, all of which comprised isolated finds or low-density artefact scatters. It was concluded that the low density of the artefact distribution could be attributed to the highly erosional context in which the sites were identified which caused significant disturbance and would prevent intact subsurface deposits.

3.3.1.4 Bridge and Creek Works, Perthville (OzArk 2018)

An Aboriginal heritage assessment was undertaken by OzArk in 2018 along the Queen Charlotte Vale Creek in Perthville, some 11.8 km from the current study area. No Aboriginal sites were recorded during the assessment, with the lack of site identification concluded to be the result of poor ground surface visibility. Additionally, it was noted that Aboriginal sites and object could have been washed away, disturbed, or buried by erosion and flooding.

3.3.1.5 Eglington Solar Farm (OzArk 2021)

In 2020, OzArk undertook a survey of 670 ha of land approximately 14 km from the current study area. The survey resulted in 14 previously unrecorded Aboriginal sites being identified, including

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eight isolated finds and two open artefact scatters. Eight sensitive archaeological landforms were also identified during the survey. The survey also found that sites were predominately located in drainage landforms or on the lower slopes of rolling hill landforms.

A test excavation program was undertaken in 2021 in which two Aboriginal sites were recorded. The artefact assemblages were largely comprised of quartz, with chert, silcrete, and volcanic materials also present. The excavations found that, while subsurface deposits were present in areas adjacent to minor drainages and tributaries, further subsurface deposits would likely be at a very low density.

3.3.1.6 Glanmire Solar Farm (AREA, 2022)

AREA (2022) undertook a survey for a proposed solar farm 1 km northeast of the current study area. The survey covered approximately 150 ha of gently undulating slopes which have been subject to waterlogging and erosion due to clearing, crop cultivation, and grazing. Two previously unrecorded Aboriginal sites were identified during the survey, including a modified tree and an isolated quartz flake. Both sites were recorded within 100 m of an ephemeral watercourse.

3.4 ARCHAEOLOGICAL CONTEXT: CONCLUSION

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

- Stone artefact sites (isolated finds and artefact scatters) are frequent sites recorded in the area, especially in association with watercourses
- Modified trees are also frequently recorded site types, commonly recorded in the vicinity of watercourses
- Quartz is the predominant material for stone artefacts in the area, although chert, silcrete, and volcanic materials are also amongst the recorded assemblages
- Other site types such as grinding grooves are possible though at a lower frequency.

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4 PREDICTIVE MODEL

4.1 LANDFORM MODELLING

The topography of the study area is primarily gentle slopes or flats, with the highest points being at the southeastern boundary with an elevation of 730 m and the north at an elevation of 720 m. The landform then slopes to the west and flattens near Saltwater Creek (where Saltwater Creek is located to the west of the study area) (see **Figure 1-4**).

Previous studies in the district (Pickering 1980; Appleton 1999; OzArk 2021) indicate that these gentle slopes or flats have a likelihood to contain isolated finds and artefact scatters, though larger, high-density artefact sites are less likely to be recorded.

Preliminary landform mapping within the study area indicates there are three main landform types (**Figure 4-1**):

- Survey Unit 1: drainage (drainage lines with a 50 m buffer and Saltwater Creek with a 100 m buffer)
- Survey Unit 2: flats
- Survey Unit 3: gentle to moderate slopes

The study area and surrounding land is primarily used for grazing and cultivation. The presence of hoofed livestock is likely to have resulted in trampling and compaction of the ground surface which accelerates soil loss. Erosional process within the study area would be exacerbated by the types of landforms present which have been largely cleared of vegetation. Further, cultivation acts to redistribute artefacts both horizontally and vertically within the soil profile and ultimately destroys the integrity of artefact assemblages within the top 20 to 50 cm of the soil profile, meaning sites are likely to be recorded in secondary contexts.

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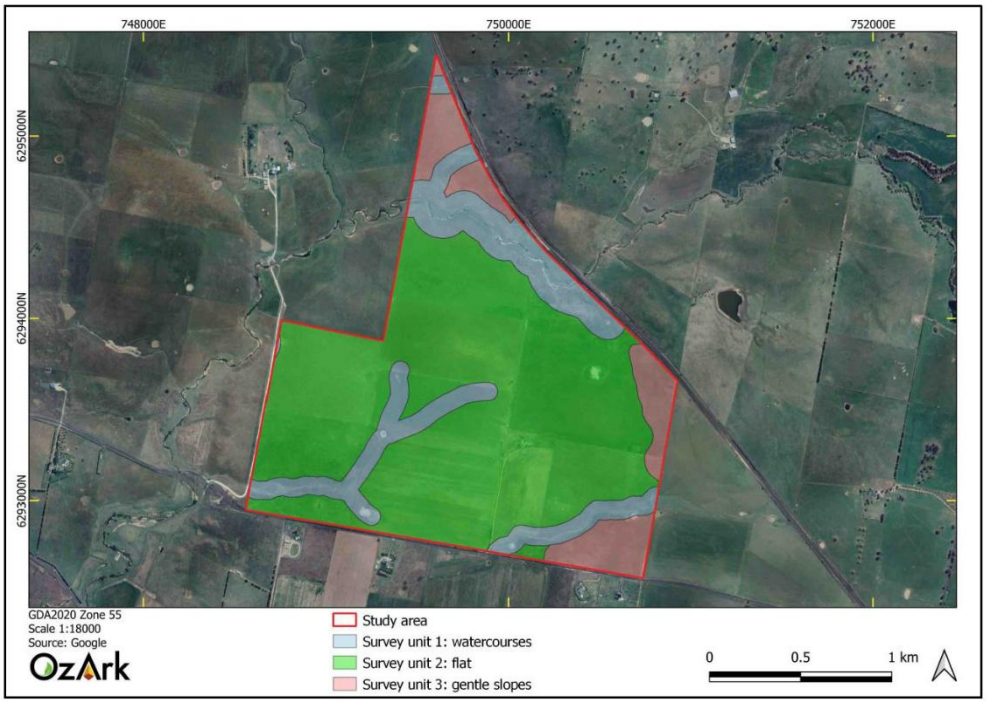
Figure 4-1: Survey units within the study area.



4.2 PREDICTIVE MODEL FOR THE STUDY AREA

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

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

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colonial farming practices. Scarred trees, by their nature, may survive for up to several hundred years but rarely beyond.

4.2.1 Site types in the region of the study area

The site types listed in **Table 4-1** are present in the region of the study area. The likelihood of these sites being present in the study area is discussed in **Section 4.2.2**.

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

Site type	Site description
Isolated finds	May be indicative of random loss or deliberate discard of a single artefact, the remnant of a now dispersed and disturbed artefact scatter, or an otherwise obscured or subsurface artefact scatter. They may occur anywhere within the landscape but are more likely to occur in topographies where open artefact scatters typically occur.
Open artefact scatters	Artefact scatters are defined as two or more artefacts, not located within a rock shelter, and located no more than 50 m away from any other constituent artefact. This site type may occur almost anywhere that Aboriginal people have travelled and may be associated with hunting and gathering activities, short- or long-term camps, and the manufacture and maintenance of stone tools. Artefact scatters typically consist of surface scatters or sub-surface distributions of flaked stone discarded during the manufacture of tools but may also include other artefactual rock types such as hearth and anvil stones. Less commonly, artefact scatters may include archaeological stratigraphic features such as hearths and artefact concentrations which relate to activity areas. Artefact density can vary considerably between and across individual sites. Small ground exposures revealing low density scatters may be indicative of a background scatter rather than a spatially or temporally distinct artefact assemblage. These sites are classed as 'open', that is, occurring on the land surface unprotected by rock overhangs, and are sometimes referred to as 'open camp sites'. Artefact scatters are most likely to occur on level or low gradient contexts, along the crests of ridgelines and spurs, and elevated areas fringing watercourses or wetlands. Larger sites may be expected in association with permanent water sources. Topographies which afford effective through-access across, and relative to, the surrounding landscape, such as the open basal valley slopes and the valleys of creeks, will tend to contain more and larger sites, mostly camp sites evidenced by open artefact scatters.
Culturally modified trees	Aboriginal scarred trees contain evidence of the removal of bark (and sometimes wood) in the past by Aboriginal people, in the form of a scar. Bark was removed from trees for a wide range of reasons. It was a raw material used in the manufacture of various tools, vessels, and commodities such as string, water containers, roofing for shelters, shields and canoes. Bark was also removed because of gathering food, such as collecting wood boring grubs or creating footholds to climb a tree for possum hunting. Due to the multiplicity of uses and the continuous process of occlusion (or healing) following removal, it is difficult to accurately determine the intended purpose for any example of bark removal. Scarred trees may occur anywhere old growth trees survive. The identification of scars as Aboriginal cultural heritage items can be problematical because some forms of natural trauma and European bark extraction create similar scars. Many remaining scarred trees probably date to the historic period when bark was removed by Aboriginal people for both their own purposes and for roofing on early European houses. Consequently, the distinction between European and Aboriginal scarred trees may not be clear.
Grinding grooves	Grinding grooves are the remnants of ground edge hatchet manufacture and sometimes from food preparation. The site is most likely to occur on flat outcrops of coarse-grained sandstone in the vicinity of water sources, however, grinding grooves have also been recorded on fine-grained granite and quartzite outcrops.
Burials	Generally found in soft sediments such as aeolian sand, alluvial silts, and rock shelter deposits. In valley floor and plains contexts, burials may occur in locally elevated topographies rather than poorly drained sedimentary contexts. Burials are also known to have occurred on rocky hilltops in some limited areas. Burials are generally only visible where there has been some disturbance of sub-surface sediments or where some erosional process has exposed them.
Bora/Ceremonial sites	Places which have ceremonial or spiritual connections. Ceremonial sites may comprise of natural landscapes or have archaeological material. Bora sites are ceremonial sites which consist of a cleared area and earthen rings.

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4.2.1.1 Settlement strategies

The number of archaeological studies undertaken within the vicinity of the study area provides information to obtain a reasonable understanding of the nature and distribution of archaeological sites within the area. Although there is some conjecture about the relationship between stream order, site numbers and densities, the general pattern is that most sites are present close to watercourses, with good drainage and views over watercourses or river flats. Traditional Aboriginal people also prominently settled on level ground in areas with appropriate localised weather patterns for summer or winter occupation. Due to this, occupation sites are most frequently found on low ridge tops, creek banks, gently undulating hills, and river flats, and usually in open woodland vegetation where less historical ground disturbance has taken place.

4.2.1.2 Previously recorded sites

The results of past archaeological investigations near the study area indicate:

- Stone artefact sites (isolated finds and artefact scatters) are the most commonly recorded site types in the area and that other site types, such as ceremonial sites, culturally modified trees, are possible
- The predictive models and results of previous surveys in the local region indicate that the predominant raw materials used for stone artefact manufacture are locally sourced quartz, quartzite, silcrete and volcanics
- Sites tend to be within reasonable distance to reliable water supplies
- 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.

4.2.1.3 Past land use

The preservation of archaeological sites and deposits is dependent on past land use. The study area and adjacent land has been mainly used for agricultural purposes. 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. Cropping and the use of ploughing does affect the integrity of archaeological Aboriginal sites, in particular open camp sites, especially if such sites have potential for subsurface deposits. However, ploughing will usually only affect the top 20 to 50 cm of topsoil, and so there is the potential for intact subsurface deposits below the plough-zone.

The clearing of vegetation inside the study area is widespread, despite some remnant trees remaining. This is likely to have had an impact on any modified trees which may have been present.

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4.2.2 Conclusion

Based on knowledge of the environmental contexts of the study area and a desktop review of the known local and regional archaeological record, the following predictions are made concerning the probability of landforms within the study area to contain Aboriginal objects (**Table 4-2**), and what types of sites may be present within the study area (**Table 4-3**).

Table 4-2: Likelihood of landforms within the study area to contain Aboriginal objects.

Survey Unit	Landform type	Likelihood to contain Aboriginal objects
1	Drainage	Archaeological studies in the region indicate that banks and elevated terraces adjacent to drainage lines or watercourses were favoured occupation locations and therefore have high potential for occupation sites to be present. Due to the ephemeral nature of the drainages within the southern portion of the study area, occupation sites along these drainages are most likely to be isolated finds or low-density scatters. Due to the permanent nature of Saltwater Creek in the northern portion of the study area, larger sites or archaeologically sensitive landforms are most likely to present in the vicinity of the creek. Previous studies in the district also indicate that these landforms may contain intact deposits however as most of these landforms have been impacted by erosion and cultivation these sites may be dispersed and intact deposits would only be present if deposits are deep.
2	Flats	Flat landforms were favoured occupation locations when in proximity to permanent and semi-permanent water sources. However, the flat landforms characterised in this survey unit include areas over 100 m from Saltwater Creek and 50 m from drainages. Due to this distant and the uniformity of this landform there are no distinct resources which would have encouraged occupation. Past studies show that isolated finds and low-density artefact scatters may still be present in the landforms however they are generally in a secondary context from agricultural practices.
3	Slopes	Slopes are a degrading landform, especially in the study area where vegetation removal has accelerated soil loss. Although these gentle slopes are suitable for habitation and resource gathering, they are unlikely to have been utilised for long-term occupation and therefore are unlikely to contain a high density of sites.

Table 4-3: Likelihood of certain site types being present in the study area.

Site type	Likelihood of being present in the study area
Isolated finds	As isolated finds can occur anywhere, particularly within disturbed contexts, it is predicted that this site type could be recorded within the study area.
Open artefact scatters	Artefact scatters of differing densities are the most common site type within the surrounding region and there is a general correlation between landform type and the nature of the evidence of past Aboriginal occupation. The higher density artefact scatters are situated on elevated landforms adjacent to permanent waterways. The flat to gently sloping landforms that dominate the study area are unlikely to have been used as occupational locations, but rather as the travel routes or resource gathering areas. Should this site type be present, it will be recorded along the flat to gently undulating landforms bordering Saltwater Creek. The moderate degree of disturbance in the study area indicates that any scatters will be displaced.
PADs	This site type is considered possible in areas where A-Horizon soils are relatively undisturbed. Given the high levels of disturbance across the study area, this has reduced the likelihood of identifying PADs. Previous surveys indicate that PADs are typically recorded along permanent or semi-permanent water courses.
Culturally modified trees	Due to the near-total clearance of trees from within the study area, this site type is predicted to be rare. Should this site type be recorded, it is most likely to be along the riparian corridor of Saltwater Creek.
Grinding grooves	Grinding grooves are unlikely to be recorded in the study area given the geological mapping indicates granite is the underlying rock material (**Section 1.5**).
Burials	Although it is possible that this site type could be found within the study area, it is considered a rare site type especially given the disturbance that has occurred within the study area and the lack of sandy soils.
Bora/Ceremonial sites	This site type does not necessarily follow landform predictability and are, overall, a rare site type with a low likelihood of being present and remaining extant. These sites are generally identified through consultation with the RAPs.

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Overall, at a desktop level the area has a moderate archaeological potential due to the presence of a permanent watercourse within the study area. However, disturbances through long-term agricultural operations reduces this likelihood. Therefore, artefact sites such as isolated finds and open artefact scatters are likely to be recorded during survey.

4.3 RESEARCH QUESTIONS

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

- What resources were available to the Aboriginal people using the land within the study area (food, stone and water) and what resources were transported to the area?
- What tasks were Aboriginal people undertaking at the sites?
- Is there potential for burials to be present in the landscape?
- Do the findings within the study area (if any) accord with the regional archaeological context examined in **Section 3.2**?
- Do the survey results support the predictive model set out in **Section 4.2.2**?

The survey methodology set out in **Section 5** will be framed to help answer these questions; should sites of sufficient significance be encountered. However, based on the results of previous assessments and past disturbances, it not expected that the land within the study area 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 study area will follow the *Code of Practice for the Investigation of Aboriginal Objects in New South Wales* (Code of Practice; DECCW 2010). The field inspection will follow the *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in New South Wales* (The Guide, OEH 2011).

Survey for Aboriginal cultural heritage values will concentrate on the study area where project impacts will be located.

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 study area are known. Therefore, the aims of the survey will be to:

- Inspect all landform types in the study area so that their archaeological potential can be determined
- Evaluate whether the predictive model set out in **Section 4.2** is valid
- Determine if the research questions set out in **Section 4.2.1** can be answered
- Determine if any landforms of the study area require test excavation to understand the archaeological potential at a particular location
- Undertake sufficient assessment to satisfy Sections 2.2, 2.4, 2.5, 2.6, and 2.7 in the Guide
- Collect sufficient data so that the results can be presented in an ACHAR as set out in Section 3 in the Guide
- Undertake survey and record keeping satisfying Requirements 1–13 of the Code of Practice.

5.3 SURVEY METHODOLOGY

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

Full pedestrian survey will be conducted across Survey Units 1 and 3. Full pedestrian survey will also be conducted across the portions of Survey Unit 2 which are within the indicative development footprint and along the proposed access track. The remaining portions of Survey Unit 2 will be subject to sample survey (**Figure 5-1**). The proposed intersection upgrade areas outside the study area will also be surveyed.

'Full pedestrian survey' refers to systematic transects walked by surveyors spaced approximately 20 m apart throughout the landform or area being surveyed. 'Targeted sample survey' refers to

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transects walked by surveyors spaced approximately 20 m apart that will not cover the entire area but instead will focus on understanding the archaeological potential of representative landforms within these areas.

In the field, OzArk staff will identify, record and evaluate physical (i.e., archaeological) evidence. Site recording will capture all the information required to complete current AHIMS site recording forms (e.g., site location, site boundary, site plan, representative photographs, artefact recording and feature recording). RAPs will participate in the survey, identifying Aboriginal objects, determining the cultural significance of Aboriginal objects and identifying cultural places or non-physical site types within the study area. OzArk staff understand that cultural knowledge may not be provided in some instances due to cultural sensitivities (e.g., men's and/or women's places). Under these circumstances, to assess the potential impacts, OzArk staff will need to be told, only in general terms, why a particular place is important, and what the significance of the impact will be.

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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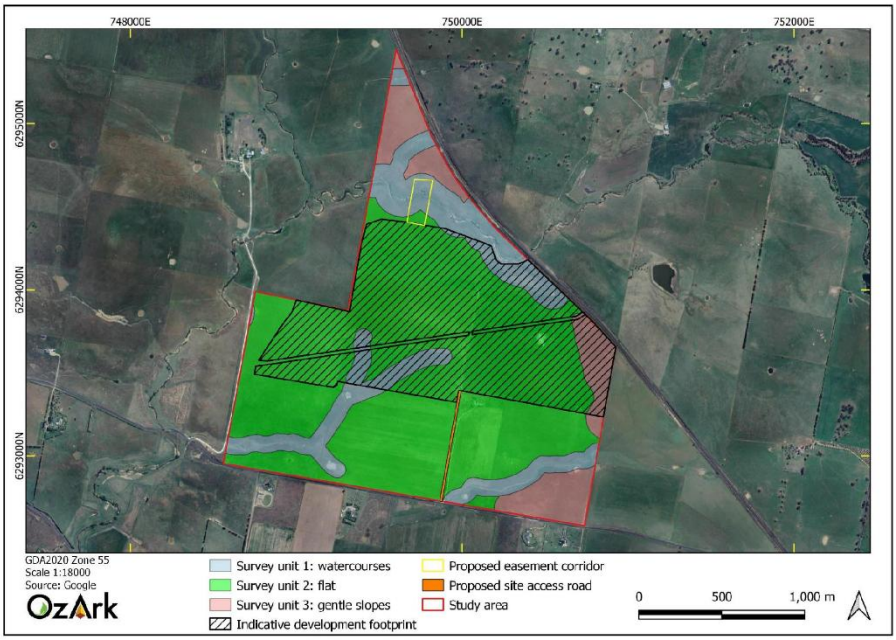
Figure 5-1: Aerial showing the proposed survey areas.



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APPENDIX 4 TEST EXCAVATION METHODOLOGY

View north at Saltwater Creek PAD 2.

ARCHAEOLOGICAL TEST EXCAVATION METHODOLOGY

BREWONGLE SOLAR FARM

BATHURST LOCAL GOVERNMENT AREA

SEPTEMBER 2025

Report prepared by

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DOCUMENT CONTROLS

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Acknowledgement

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

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CONTENTS

FIGURES

TABLES

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1 INTRODUCTION

1.1 PREAMBLE

Edify Energy (the proponent) a proposing to construct and operate the Brewongle Solar Farm (the project), located at 315 Tarana Road, Brewongle. The project is 10 kilometres (km) southeast of Bathurst, in the Bathurst Local Government Area.

OzArk Environment & Heritage (OzArk) has been engaged by the proponent to prepare an archaeological test excavation methodology and conduct archaeological test excavations in accordance with the *Code of Practice for the Investigation of Aboriginal Objects in New South Wales* (Code of Practice; DECCW 2010a) for the project. Archaeological test excavation is required to determine if subsurface archaeological material is present at Saltwater Creek PAD 2 and to provide management recommendations in relation to the findings.

This methodology has been prepared in accordance with the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (ACHCRs; DECCW 2010b).

1.2 BACKGROUND TO THE TEST EXCAVATION PROGRAM

The *Aboriginal Cultural Heritage Assessment Report* (ACHAR) for the project was completed by OzArk (OzArk 2025) and submitted as part of the Environmental Impact Statement (EIS) in May 2025.

The ACHAR identified four potential archaeological deposits (PADs) during the assessment of the study area, however, the impact footprint of the project was designed to avoid impacts to the four PADs, Saltwater Creek PADs 1–4. The PADs are shown in relation to the proposed project impacts on **Figure 1-1**.

A response to the EIS submission was received on from Heritage NSW on 21 May 2025 that noted that the proposed boundary fence and vehicle track overlapped with Saltwater Creek PAD 2. The proponent has elected so undertake test excavation at Saltwater Creek PAD 2 to investigate Saltwater Creek PAD 2 and the potential impacts from the project.

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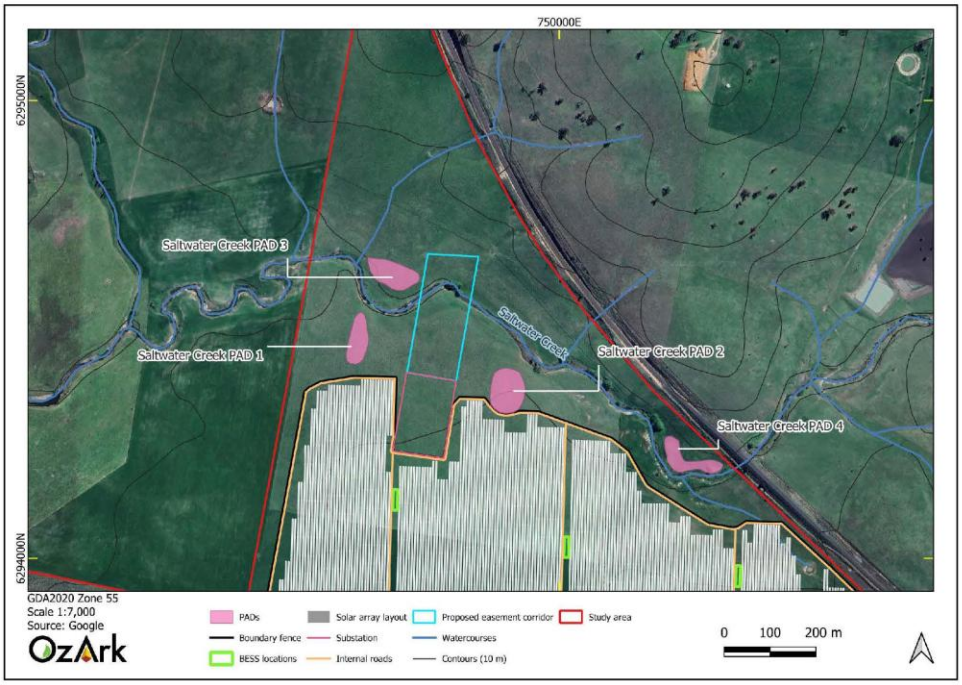
Figure 1-1: Location of identified PADs in relation to the impact footprint



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1.3 CODE REQUIREMENTS FOR THE TEST EXCAVATION PROGRAM

Excavations undertaken as per the Code of Practice do not require an Aboriginal Heritage Impact Permit (AHIP) under the *National Parks and Wildlife Act 1974* (NPW Act).

The Code of Practice lists several requirements pertaining to test excavation. These requirements are enumerated below and further information pertaining to these requirements follow in subsequent sections of this document.

- **Requirement 14** (Test excavation which is not excluded from the definition of harm):

  Sub-surface investigation will not be excluded from harm where they are carried out in the following areas:

  a) in or within 50 metres (m) of an area where burial sites are known or are likely to exist

  b) in or within 50 m of a declared Aboriginal place

  c) in or within 50 m of a rock shelter, shell midden or earth mound

  d) in areas known or suspected to be Aboriginal missions or previous Aboriginal reserves or institutes

  e) in areas known or suspected to be conflict or contact sites.

  - The test excavation location is not located within the vicinity of the landforms listed under Requirement 14 of the Code of Practice.

- **Requirement 15a** (Consultation): As the proposed archaeological test excavation program is part of the project, consultation has been ongoing with the Registered Aboriginal Parties (RAPs) and has been completed to the stage described in subclause 60C (6) of the *National Parks and Wildlife Regulation 2019* (NPW Regulation).
- **Requirement 15b** (Test excavation sampling strategy): This document sets out the proposed sampling strategy for the test excavation program (**Section 3**).
- **Requirement 15c** (Notification):
  - the location of the proposed test excavation and the subject area.
    - This document sets out the proposed location of the test excavation program (see **Section 3.3**).
  - the name and contact details of the legal entity with overall responsibility for the project.
    - Edify Energy Pty Ltd. Level 4, 22 Darley Road, Manly NSW 2095, Gayemagal Country
  - the name and contact details of the person who will be carrying out the test excavations where this is different to the legal entity with overall responsibility for the project.

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- Harrison Rochford, OzArk Environment & Heritage, 145 Wingewarra St, Dubbo NSW 2830

- the proposed date of commencement, and estimated date of completion, of the test excavations.
  - Anticipated commencement: October 2025
  - Anticipated completion: October 2025

  Weather permitting, the projected duration of the excavation is two days.

- the location of the temporary storage location for any Aboriginal objects uncovered during the test excavations.
  - Aboriginal objects recovered during the excavations will be temporarily stored in a locked cupboard at 145 Wingewarra Street, Dubbo, NSW (OzArk office) for analysis. Other objects, such as faunal or charcoal samples, may be sent to third party specialists for analysis.

- **Requirement 16a** (Test Excavation):
  - The test excavation program will adhere to Requirement 16a of the Code of Practice as set out in this document (see **Section 3.5**).

- **Requirement 16b** (Objects recovered during test excavations):
  - If further analysis Aboriginal objects recovered during the excavations will be analysed at 145 Wingewarra Street, Dubbo, NSW (OzArk office). When not being analysed, the objects will be temporarily stored in a locked cupboard at 145 Wingewarra Street, Dubbo, NSW. The long-term management of any recovered artefacts will be determined in consultation with the RAPs.

- **Requirement 17** (When to stop test excavations): the test excavation program will adhere to the requirements set out in the Code of Practice: *Any test excavation carried out under this requirement will cease when suspected human remains area encountered; or when enough information has been recovered to adequately characterise the objects present with regard to their nature and significance*.
  - OzArk shall ensure that this Requirement is adhered to during the test excavation program. This will include ceasing work as soon as human skeletal material is noted and immediately notifying the police. If the skeletal material is determined to be Aboriginal, Heritage NSW will be immediately notified.

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1.4 CONSULTATION ON THIS METHODOLOGY

Consultation for the 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.

An advertisement was placed in the Western Advocate, Bathurst on 26 October 2023 to solicit expressions of interest. A letter seeking information from various agencies was sent on 26 October 2023. These agencies were: Office of the Registrar, Aboriginal Land Rights Act 1983; Heritage NSW; National Native Title Tribunal; National Native Title Services Corporation Ltd (NTSCORP); Bathurst Local Aboriginal Land Council (LALC), Bathurst Regional Council, and the Central Tablelands Local Land Services. As a result, the following individuals/groups registered to be consulted about the project:

- Bathurst LALC
- Didge Ngunawal Clan
- Geoffrey Toomey
- Konanggo Aboriginal Cultural Heritage Services
- Long Gully Cultural Services
- Mingaan Aboriginal Corporation
- Murra Bidgee Aboriginal Corporation
- Stakeholder 1[1]
- Thomas Dahlstrom
- Tim Stubbs
- Wingarra Wilay Aboriginal Corporation
- Wiradjuri Traditional Owners Central West Aboriginal Corporation

These individuals/groups constitute the RAPs for the project.

A Stage 2/3 methodology was sent to the RAPs outlining the proposed assessment approach for the project on 28 November 2023. The draft ACHAR was sent to the RAPs for their review on 14 June 2024.

[1] RAP listed as 'Stakeholder 1' has requested their details not be disclosed.

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2 ARCHAEOLOGICAL BACKGROUND TO THE TEST EXCAVATION

The test excavation program follows a program of pedestrian survey across the study area completed in 2024 (**Section 1.2**). No previous subsurface archaeological investigation has occurred within the study area, nor have subsurface investigations been undertaken in adjacent landforms.

There has been very little documented Aboriginal archaeological excavation undertaken in the Bathurst LGA. The results of previous subsurface investigations across the region are summarised below to gain an understanding on the nature of subsurface deposits that may be encountered within the study area, although it is acknowledged that only general information could be garnered from the available sources.

2.1 SUBSURFACE INVESTIGATIONS WITHIN THE REGION OF THE PROJECT

Midwestern Highway Upgrade: Kings Plains (Kelton 2000 and Austral Archaeology 2004)

Kelton (2000) completed a survey along the Midwestern Highway at Kings Plains (30 km west of the study area), identifying two artefact scatters and one PAD. Austral Archaeology (2004) subsequently completed excavation at the PAD. The results of the excavation were described as a small number of artefacts, consistent with expectations for sites in the region.

Mount Panorama Go Cart Track (Extent 2017)

Extent Heritage Pty Ltd (Extent Heritage) was commissioned by Bathurst Regional Council (BRC) to undertake an ACHAR, to assess the impact of proposed works on areas of potential Aboriginal cultural heritage sensitivity at Mount Panorama. The assessment included the excavation of 28 1 x 1-metre (m) test units (TUs) across a level landform previously used as a campground. The excavation did not identify any Aboriginal objects, which was attributed to high levels of subsurface disturbance.

Bathurst Base Hospital (AHMS 2006 and Unearthed 2023)

Two investigations at Bathurst Base Hospital (12 km northwest of the study area) have been completed in the past twenty years, with one (AHMS 2006) including a subsurface investigation program. Test excavation was undertaken to investigate a PAD (45-3-0144) recorded at the site. The scale of the excavation is not known, but the investigation did not record any Aboriginal objects and site 45-3-0144 was updated to 'not a site'. AHMS (2006) concluded that the absence of Aboriginal objects was attributable to the large-scale removal of topsoil from the site during the life of the hospital.

Eglington Solar Farm (OzArk 2021)

In 2020, OzArk undertook a survey of 670 hectares (ha) of land approximately 14 km northeast of the current study area. The survey resulted in 14 previously unrecorded Aboriginal sites being

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identified, including eight isolated finds and two open artefact scatters. Eight sensitive archaeological landforms were also identified during the survey. The survey also found that sites were predominately located in drainage landforms or on the lower slopes of rolling hill landforms. The landscape of the Eglinton area is comparable to the current project area.

A test excavation program was undertaken in 2021 in which two Aboriginal sites were recorded. The test program involved the excavation of 47 50 x 50 centimetre (cm) TUs in ten different locations. A total of 11 artefacts were identified, limited to two TU transects along an unnamed tributary to Saltram Creek. The artefact assemblage was largely comprised of quartz, with chert, silcrete, and volcanic materials also present. The excavations found that, while subsurface deposits were present in areas adjacent to minor drainages and tributaries, further subsurface deposits would likely be at a very low density.

2.2 ARCHAEOLOGICAL CONTEXT: SUMMARY

Salient points from the archaeological context presented above are:

- There has been little investigation into the archaeological characteristics of subsurface deposits in the Bathurst area
- Excavations along minor waterways in similar landscapes to the current study area indicate that low density subsurface artefact deposits could be present (Austral 2004, OzArk 2021)
- Quartz is the predominant material for stone artefacts in the area (both in surface assemblages and subsurface) although other expected materials could include silcrete and volcanics (OzArk 2021).

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3 TEST EXCAVATION METHODOLOGY

3.1 PURPOSE OF THE TEST EXCAVATION METHODOLOGY

The purpose of the test excavation program is to investigate the nature of the subsurface material at Saltwater Creek PAD 2, if it is present. Data obtained from the test excavation program will inform the mitigation and management options in the forthcoming revised ACHAR.

The aims are therefore to:

1. Establish the extent and nature the of subsurface archaeological deposits at Saltwater Creek PAD 2
2. Use the data gained from the test excavation program to better evaluate the archaeological significance and potential of Saltwater Creek PAD 2
3. Develop, in consultation with the RAPs and the proponent, an informed strategy for either the avoidance of identified objects or the management of impacts to any Aboriginal cultural heritage likely to be impacted by the project.

3.2 RESEARCH QUESTIONS

While any test excavation program is limited in the level of research objectives it can achieve due to the restricted nature of the excavations, the test excavations at Saltwater Creek PAD 2 will attempt to shed light on:

- How does the artefactual material and stratigraphy identified at Saltwater Creek PAD 2 compare to other archaeological excavations undertaken in the local area and the region?
- Are there intact stratigraphic deposits present beneath the 'plough zone' that are of conservation value?
- Is there evidence providing insight into the tasks were Aboriginal people undertaking at Saltwater Creek PAD 2?

3.3 PROPOSED TEST EXCAVATION AREAS

As there is only one PAD overlapping with the impact footprint for the project, test excavation is only proposed at Saltwater Creek PAD 2. The calculations of the total area expected to be excavated is provided in **Table 3-1** and the location of the proposed transects is shown on **Figure 3-1**.

Figure 3-1 shows the preliminary layout of transects to adequately investigate the subsurface potential of Saltwater Creek PAD 2. However, the ultimate location of the transects and their associated TUs will be determined in the field so that both are placed at the most advantageous locations (i.e. away from disturbances etc). Consultation between the OzArk archaeologists and the RAPs will take place if this is to occur.

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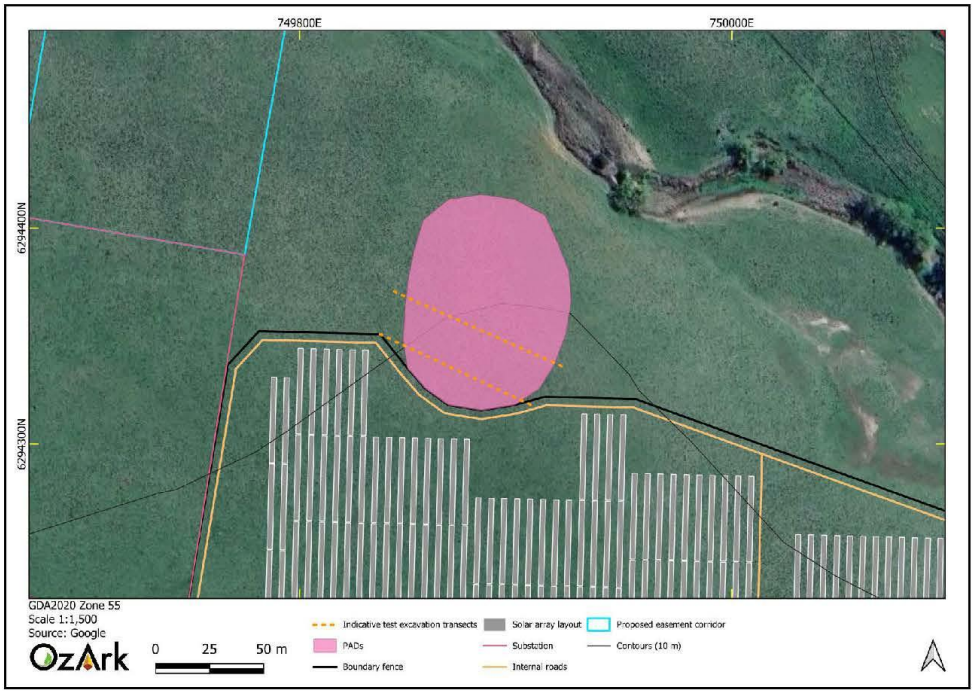
Table 3-1: Proposed areas for test excavation and sampling strategy.

Site name	Test excavation methodology	Landform area	0.5% of landform area	Proposed excavation area
Saltwater Creek PAD 2	Two parallel transects of ten TUs each	6285.4 m²	31 m²	5 m²

Figure 3-1: Proposed test excavation area and transects at Saltwater Creek PAD 2.



3.4 SAMPLING STRATEGY

The excavation program will be undertaken by archaeologists and representatives of RAPs and will include the following aspects:

1. Saltwater Creek PAD 2 will be investigated by the test excavation program (**Table 3-1**).
2. The location for the proposed test excavation program and approximate transect locations are shown on **Figure 3-1**. It is noted that there can be some flexibility in the field about the precise location of an area to test and the precise location of excavation transects. Any decisions about where to place excavation areas will be done in consultation with the RAPs who are in present at the time.
3. TUs will generally be spaced with a 10 m interval so that a broad representation of the landforms within Saltwater Creek PAD 2 will be obtained. Some minor movement off this grid may be needed to avoid vegetation or areas of disturbance. No TU will be closer than 5 m to another.

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4. Prior to any excavation, the area will be recorded via digital photography.
5. Initial TUs will be excavated in 5 cm spits to determine whether archaeological stratigraphy is present. If not, spit size will be increased to 10 cm. If archaeological stratigraphy is present, this will be used, so long as the stratigraphic layers are less than 10 cm deep. Otherwise, excavation will remain at 5 cm or 10 cm spits.
6. The excavated material from all squares will be sieved on site using dry sieving through a five millimetre (mm) sieve. A 3 mm sieve will be available should the deposits and artefacts being recorded suggest that it would be warranted to use a smaller sieve size.
7. If the soils within Saltwater Creek PAD 2 are deep, the decision on when to stop excavation will rest with the supervising archaeologist although Requirement 16a, point 9 will be followed. This states: *Test excavation units must be excavated to at least the base of the identified Aboriginal object-bearing units, and must continue to confirm the soils below are culturally sterile.*
8. The excavation crew will work in two-persons teams to excavate and sieve the deposit from their TU, retrieving the artefacts and, in conjunction with the supervising archaeologist, correctly recording their provenance. Deposits will be sieved on to tarpaulins and the spoil used to backfill the TU once it has been photographed and recorded.
9. A standard excavation recording form will be used for each TU. Details will include date, site recorder, spit number and excavation depth, description of the soil profile with Munsell colours being used as appropriate, measured section of the excavation, and soil pH recordings (when necessary or appropriate).
10. It is envisioned that the excavation crew will consist of an Excavation Director, two assistant archaeologists and three RAP site officers. The excavator of each TU, in conjunction with the Excavation Director, will be responsible for ensuring all forms are correctly completed. It will be the archaeologists' responsibility to perform all photographic tasks, undertake any planning and section drawing if required, and to ensure that a correct location of each TU is maintained.
11. Given that the work will be reasonably physical, all persons conducting activities must be fit for work.
12. If intact archaeological deposits or archaeological features are encountered, then additional archaeological TUs may be excavated to ensure documentation of any features and/or retrieval of artefacts and other relevant archaeological material. A feature would include a high density of artefacts within a TU, or a square containing rare or unusual artefacts (such as artefacts constructed from a stone type rarely represented in the area or less-common tool forms such as ground edge hatchet heads, hammerstones, etc.), or other signs of

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human occupation i.e. ground ovens/hearths or charcoal concentrations. Any expansion must adhere to Requirement 16 (5). Any expansion would only occur with the consent of the Excavation Director who will determine if an expansion is required to gain the appropriate scientific information. Discussions regarding expansion of TUs would be held between the Excavation Director and the RAP representatives.

13. Rather than expanding around an individual square as set out in Point 12, it is more likely that any expansion will involve setting out an additional transect at 90 degrees to a transect that has demonstrated significant and intact archaeological deposits. The perpendicular transect will be used to assist in determining the spatial spread of the subsurface deposits.
14. Section drawings and photographs will be completed for all TUs to show the soil profile.
15. Analysis of all excavated lithics will be made to determine the archaeological characteristics of Saltwater Creek PAD 2 and to enable the PAD to be compared with other sites in the region. Analysis will also assist in determining what type of activities the Aboriginal people carried out at in the area and their relationship with local resources (fauna, flora, water, and stone). All artefacts will be analysed and selectively photographed. If charcoal from a secure stratigraphic context is obtained, it may be sent to a laboratory for Carbon 14 dating (subject to the proponent's agreement).
16. Artefacts will remain at the OzArk office (145 Wingewarra Street, Dubbo NSW) until the analysis is complete. Once complete, the artefacts will remain at the OzArk office where whey will be kept at a locked location until point 18 below is enacted.
17. The results of the test excavation program will inform the forthcoming ACHAR. Excavation results will be used to advise further courses of action in relation to the management and mitigation options for the study area.
18. Once all construction activities for the project are complete (should the project be approved), artefacts will be amalgamated and managed as per the *Aboriginal Cultural Heritage Management Plan* (ACHMP) Artefacts will be either be subject to a future care agreement negotiated between the RAPs and Heritage NSW; or reburied in accordance with Requirement 26 of the Code of Practice. The long-term management of any recovered artefacts will be determined in consultation with the RAPs.

3.5 Compliance with Code of Practice: Requirement 16

1 *Test excavation units must be placed on a systematic grid appropriate to the scale of the area—either PAD or site—being investigated e.g. 10 m intervals, 20 m intervals, or other justifiable and regular spacing.*

- The sampling strategy outlined above complies with this requirement. It is proposed to place TUS along two parallel transects. The transects will be at

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least 10 m apart. A parallel connecting transect may be excavated if required.

2 *Any test excavation point must be separated by at least 5 m.*

- The sampling strategy outlined above complies with this requirement as all TUs will be separated by 10 m. However, depending on the depth to the B-Horizon identified in the TUs, additional TUs may be placed adjacent (making the TUs 0.5 x 1 m) to determine the depth of the horizon and identified stratigraphic information should the TUs become too deep to excavate at 0.5 x 0.5 m. Some minor variation of the spacing may be required to avoid vegetation or disturbed areas. No TU will be closer than 5 m to another except if adjacent TUs are required to achieve suitable work space if the deposits are deep.

3 *Test excavations units must be excavated using hand tools only.*

- The sampling strategy outlined in **Section 3.4** complies with this requirement.

4 *Test excavations must be excavated in 0.5 m x 0.5 m units.*

- The sampling strategy outlined in **Section 3.4** complies with this requirement. However, depending on the depth to the B-Horizon identified in a TU, an additional TU may be placed adjacent (making the TU 0.5 x 1 m) should the TU become too deep to excavate at 0.5 x 0.5 m.

5 *Test excavations units may be combined and excavated as necessary to understand the site characteristics, however:*

i) the maximum continuous surface area of a combination of test excavation units at any single excavation point conducted in accordance with point 1 (above) must be no greater than 3 m^2

- The sampling strategy outlined in **Section 3.4** complies with this requirement.

ii) the maximum surface area of all test excavation units must be no greater than 0.5% of the area—either PAD or site—being investigated.

- The number and size of test excavations undertaken as part of this program will be managed to ensure that this requirement is satisfied (see **Table 3-1**).

6 *Where the 0.5 m x 0.5 m excavation unit is greater than 0.5% of the area then point 5 (ii) (above) does not apply.*

- Not applicable. Less than 0.5 per cent of the known potential archaeological deposit's dimensions will be investigated (see **Table 3-1**).

7 *The first excavation unit must be excavated and documented in 5 cm spits at each area —either PAD or site—being investigated. Based on the evidence of the first excavation*

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unit, 10 cm spits or sediment profile/stratigraphic excavation (whichever is smaller) may then be implemented.

- Complies. See **Section 3.4** Point 5.

8 *All material excavated from the test excavation units must be sieved using a 5 mm aperture wire-mesh sieve.*

- Complies. See **Section 3.4** Point 6.

9 *Test excavation units must be excavated to at least the base of the identified Aboriginal object-bearing units and must continue to confirm the soils below are culturally sterile.*

- This requirement will be fulfilled in the field and all TUs will be excavated to the basal clays or where it is considered that culturally sterile units are present. The decision on when this point is reached will rest with the Excavation Director.

11 *Photographic and scale-drawn records of the stratigraphy/soil profile, features and informative Aboriginal objects must be made for each single excavation point.*

- Complies. See **Section 3.4** Points 9, 14, and 15.

12 *Test excavations units must be backfilled as soon as practicable.*

- Complies. See **Section 3.4** Point 8.

13 *Following test excavation, an Aboriginal Site Impact Recording form must be completed and submitted to the AHIMS Registrar as soon as practicable, for each AHIMS site that has been the subject of test excavation in accordance with the requirements of the Code.*

- It will be the responsibility of OzArk to ensure that this requirement is met.

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OzArk 2021 — OzArk Environmental & Heritage. *Aboriginal Cultural Heritage Assessment & Historic Heritage Report. Proposed Eglinton Solar Farm*. Report for GHD Orange on behalf of Neoen Pty Ltd.

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APPENDIX 5: ABORIGINAL HERITAGE UNANTICIPATED FINDS PROTOCOL

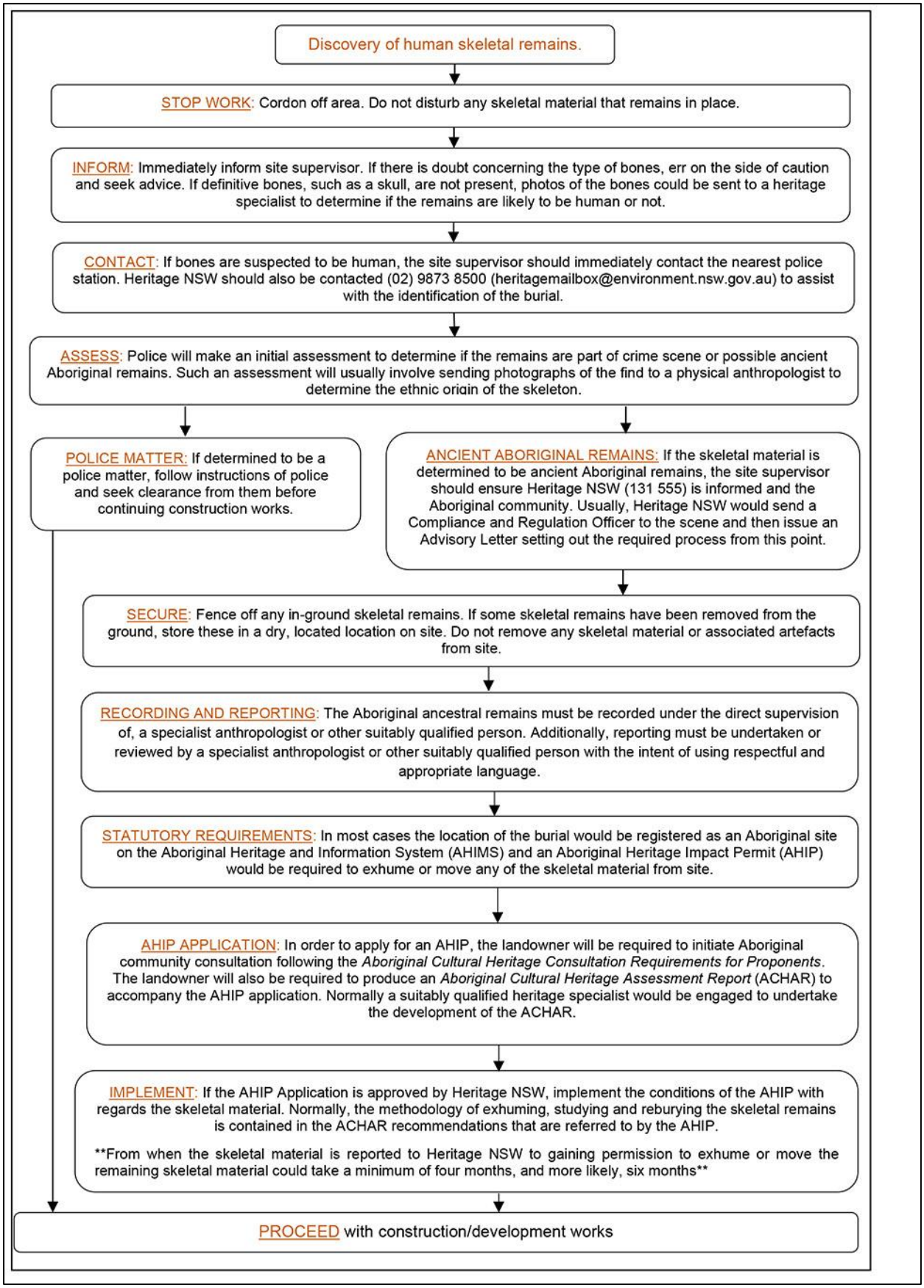
An Aboriginal artefact is anything which is the result of past Aboriginal activity. This includes stone (artefacts, rock engravings etc.), plant (culturally scarred trees) and animal (if showing signs of modification; i.e. smoothing, use). Human bone (skeletal) remains may also be uncovered while onsite.

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

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

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

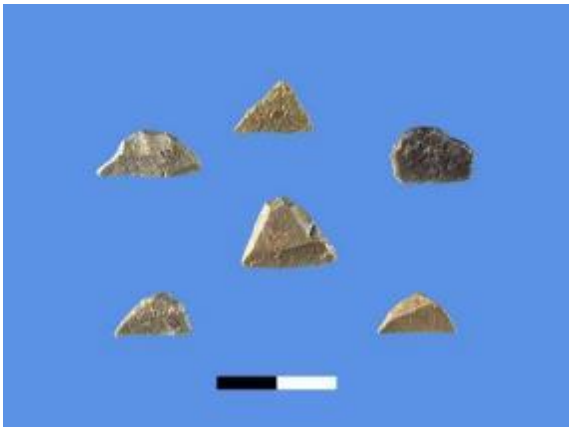
APPENDIX 6: UNANTICIPATED SKELETAL REMAINS PROTOCOL



APPENDIX 7: ABORIGINAL HERITAGE: ARTEFACT IDENTIFICATION

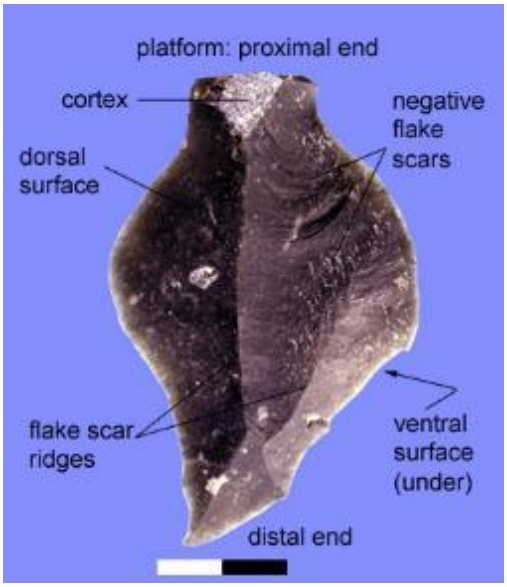
A retouched silcrete flake

A quartz flake



Microliths (scale = 1 cm)

Volcanic flakes



Flake characteristics (scale = 1 cm)

A mudstone/tuff core from which flakes have been removed

Report concluded.

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